



SRI VENKATESWARA COLLEGE
(University of Delhi)

Managed by Tirumala Tirupati Devasthanams (TTD)

NAAC Accredited "A+" Grade (2022)

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CRITERIA 1
Supporting Document

1.1.1 Teaching Plans of Sri Venkateswara College for the Academic Year 2023-2024


Coordinator, IQAC
Prof. Vartika Mathur
Sri Venkateswara College
(University of Delhi)
Dhaura Kuan, New Delhi-110021


Principal
श्री वेंकटेश्वर महाविद्यालय
Prof. Vajala Ravindra
Sri Venkateswara College
दिल्ली विश्वविद्यालय / University of Delhi
धौला कुआँ, नई दिल्ली / Dhaura Kuan, New Delhi-21



SRI VENKATESWARA COLLEGE

**ODD SEMESTER
2023-2024**

TEACHING PLANS

प्रधानाचार्य
Principal

श्री वेंकटेश्वर महाविद्यालय
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Semester: I/III/V

(Aug-Dec 2023)

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
August	Theory	Unit II: Transcription in eukaryotes: Introduction on basal transcription machinery and three classes of eukaryotic RNA polymerases – I, II and III	B Sc (H) Biochemistry III Year Semester V	C 12 Gene Expression and Regulation
		Unit IV: Laws of thermodynamics. Concept of state functions, free energy change, equilibrium constant, coupled reactions, energy charge, ATP cycle, phosphorylation potential	B Sc (H) Biochemistry II Year Semester III	DSC-302 Bioenergetics
		Unit III: Protein and non-protein nature of enzymes. Cofactor and prosthetic groups.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Unit-1: Spectroscopic Techniques: Introduction to electromagnetic radiation. Principle of UV-visible absorption spectrophotometry.	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques
	Practical	Exercise1: Introduction to spectrophotometer and verification of Beer law.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Exercise1: Determination of absorption maxima of Cobalt Chloride	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Semester: I/III/V

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
September		Unit II: Transcription by RNA polymerase II, features of RNA polymerase II core promoters and general transcription factors: Genetic Code: Salient features of the genetic code, triplet nature, degenerate, wobble in the anticodon	B Sc (H) Biochemistry III Year Semester V	C 12 Gene Expression and Regulation
	Theory	Unit IV: Chemical basis of high standard energy of hydrolysis of ATP, PEP, 1,3 BPG and thioesters. Redox reactions, standard redox potentials and Nernst equation. Universal electron carriers	B Sc (H) Biochemistry II Year Semester III	DSC-302 Bioenergetics
		Unit III: Classification of enzymes. Fischer's lock & key and Koshland's induced fit hypothesis. Enzyme activity and specificity. Enzyme Kinetics-Michaelis-Menten equation and Lineweaver-Burk plot.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
	Practical	Unit-1: Working, instrumentation and Applications of a spectrophotometer, Lambert's Law, Beer's Law Factors affecting UV-visible absorption, bathochromic shift and hypsochromic shift.	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques
		Exercise 2. Estimation of proteins by Biuret method. Exercise 3. Estimation of proteins by Lowry's method. Exercise 4. Ammonium sulphate fractionation of crude homogenate from germinated mung beans.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Exercise 2: Verification of Beer's Law. Determination of molar extinction coefficient Exercise 3: Preparation of cell free extract from a biological sample	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques

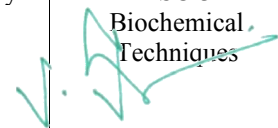
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Semester: I/III/V

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
October	Theory	Unit III: RNA Processing: Various types of RNA processing-poly adenylation and capping, processing of rRNA and tRNA. Chemistry of RNA splicing, the spliceosome machinery, splicing pathways, group I and group II introns, alternative splicing, exon shuffling and RNA editing	B Sc (H) Biochemistry III Year Semester V	C 12 Gene Expression and Regulation
		Unit V: The electron transport chain - its organization and function. Peter Mitchell's chemiosmotic hypothesis. FoF1 ATP synthase, structure and mechanism of ATP synthesis.	B Sc (H) Biochemistry II Year Semester III	DSC-302 Bioenergetics
		Unit III: Determination of Km, Vmax, Kcat. Types of enzyme inhibitions- competitive, uncompetitive, non-competitive, mixed.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
	Practical	Unit 1: Fluorescence spectrophotometry: Phenomena of fluorescence, Stokes shift, quantum yield, intrinsic and extrinsic fluorophores with example, working and applications of fluorimeter.	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques
		Exercise 5. Assay for acid phosphatase activity and specific activity. Exercise 6. Progress curve of enzyme. Exercise 7. Effect of pH on enzyme activity.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Exercise 4: Separation of amino acids by thin layer chromatography Exercise 5: Separation of molecules by ion exchange chromatography	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Semester: I/III/V

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
November	Theory	Unit IV: Translation: Experimental approaches used to decipher the genetic code. Suppressor tRNAs. Messenger RNA, transfer RNA, charging of tRNA	B Sc (H) Biochemistry III Year Semester V	C 12 Gene Expression and Regulation
		Unit VI: General features of photo phosphorylation, historical background and Hill's reaction. Role of photosynthetic pigments and light harvesting systems in plants and microbes. Bacterial photophosphorylation in purple bacteria and Green sulfur bacteria. Photophosphorylation in plants	B Sc (H) Biochemistry II Year Semester III	DSC-302 Bioenergetics
		Unit IV: Acid-base and covalent catalysis (chymotrypsin); Allosteric regulation and feedback inhibition (ATCase); reversible covalent modification (glycogen phosphorylase); Zymogen; Multienzyme complex (PDH). Isoenzymes.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
	Practical	Unit 4: Electrophoresis: Principle of electrophoresis. Factors affecting the mobility of molecules: Buffer, electrical field strength and charge. Types of electrophoresis: Polyacrylamide gel (native), SDS-PAGE, isoelectric focusing and agarose gel electrophoresis.	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques
		Exercise 8. Determination of Km and Vmax using Lineweaver-Burk plot. Exercise 9. Calculation of Ki for an enzyme.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Exercise 6: Separation of molecules by gel filtration chromatography Exercise 7: To perform PAGE (native)/SDS-PAGE	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Semester: I/III/V

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
December	Theory	Unit IV: Translation: The structure of ribosome. Three stages of translation. Translation in eukaryotes. Regulation of translation. Comparison of prokaryotic and eukaryotic protein synthesis. Inhibitors of translation	B Sc (H) Biochemistry III Year Semester V	C 12 Gene Expression and Regulation
		Unit VI: Molecular architecture of Photosystem I and Photosystem II. The Z-scheme of photosynthetic electron flow. Cyclic photo phosphorylation and its significance	B Sc (H) Biochemistry II Year Semester III	DSC-302 Bioenergetics
		Unit IV: Applications of enzymes in medicine, industry and research.	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Unit 4: Continuous and discontinuous buffer system in electrophoresis. Staining, detection, identification and molecular weight determination of molecules.	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques
	Practical	Mock Practical and Evaluation	B Sc (H) Biological Science, II Year Semester III	DSC-302 Protein structure and Enzymology
		Mock Practical and Evaluation	B Sc (H) Biochemistry I Year Semester I	DSC-3 Biochemical Techniques


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SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Anju Kaicker

Department: Biochemistry

Semester : I/III/V Session 2023-2024

Month		Topics	Course	Paper Code/Name
August	Theory	Carbohydrates : Dietary sources, Digestion, Absorption, GI, GL, Blood glucose levels Lipids : Dietary sources, Digestion, Absorption, HDL, LDL, VLDL, Chylomicrons, Trans fats	TBCH	DSE 1, Nutritional Biochemistry
	Practicals	Introduction to techniques	FBCH	Biochemical techniques
September	Theory:	Lipids : Atherosclerosis, Omega 6 & 3 FA, PUFA, Cancer, obesity and other diseases, Introduction to minerals	TBCH	DSE 1, Nutritional Biochemistry
		Introduction to hormone biochemistry, role of hormones in homeostasis, Pituitary hormones and anatomy of the gland, hypothalamus & release factors	SBS	DSE, Hormone Biochemistry
		Precipitation reaction(DID, SRDID, IEP, CIE) active and passive agglutination, Their potential in diagnosis	PGD	PGDMB-103, Immunology
		Ayurvedic principles of diet	VAC	Ayurveda & Nutrition 6967000001
	Practicals:	Determination of absorption maxima, Verify Beer's Law	FBCH	Biochemical techniques
		DID, SRID, IEP	PGD	PGDMBL-103, Immunology

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	<u>Assignment :</u>	Class assignments given		
October	Theory:	Minerals : Calcium, Phosphorous, Iron, Zinc & Magnesium : Their food sources, absorption, functions, deficiency	TBCH	DSE 1, Nutritional Biochemistry
		Growth hormones and somatomedians, Feed back mechanism , acromegaly, gigantism and other growth disorders	SBS	DSE Hormone Biochemistry
		ELISA , RIA, Fluorescent techniques	PGD	PGDMB 103, Immunology
		Rich sources of nutrients , Virud Ahara, Ahara vidhi	VAC	Ayurveda & Nutrition
	Practicals:	Thin layer chromatography Separation of proteins by gel filtration Rocket and counter current electrophoresis, Direct agglutination	FBCH PGD	Biochemical techniques PGDMBL-103, Immunology
	<u>Test</u>	Mid term test will be taken		
November	Theory:	Trace Elements : Selenium, iodine, fluoride, chromium : Functions & deficiency Assessment of ROS and folate, GTT & acetylated hemoglobin	TBCH	DSE 1, Nutritional Biochemistry
		Regulation of calcium homeostasis, pathophysiology, rickets, osteomalacia, Synthesis of thyroid hormones, goitrogens, hypo and hyperthyroidism, functions of thyroid hormones,	SBS	DSE Hormone Biochemistry
		MHC structure & function, Exogenous & Endogenous pathways for antigen processing Antibody diversity and mechanisms used to generate diversity	PGD	PGDMB 103. Immunology
		Concept of doshas & assessment	VAC	Ayurveda & Nutrition 6967000001

December	Practicals:	Protein separation by Ion exchange chromatography Native PAGE, Preparation of cell free extract Indirect agglutination, separation of PBMCs	FBCH PGD	Biochemical techniques PGDMBL-103, Immunology
		Revision & Final Examination FSSAI regulations of ayurvedic aahar	TBCH, SBS and PGD VAC	Ayurveda & Nutrition 6967000001



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Nandita Narayanasamy

Department: Biochemistry

Semester: III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Introduction	B.Sc. (H) Biochemistry II Sem	BCH DSC-301 Lipid Metabolism
	Theory	Introduction to Forensic Science	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Theory	Introduction	B.Sc. (H) Biological Sc II Sem	BSC-DSE-3 Hormone Biochemistry
	Theory	Introduction and history of genetics and inheritance	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Theory	Introduction	B.Sc. (H) Biological Sc V Sem	BSC- C-11 Genetics
	Practical	Introduction	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Practical	Introduction	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Practical	Introduction Comparative analysis of raw, semi processed, processed and preserved foods.	B.Sc. (H) Biochemistry V Sem	BCH- DSE-1 Nutritional Biochemistry


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September	Theory	Mobilization of lipid stores. Degradation of Saturated fatty acids by Beta oxidation	B.Sc. (H) Biochemistry II Sem	BCH DSC-301 Lipid Metabolism
	Theory	Biological evidences Forensic serology Biochemical analysis of various biological evidences like blood, semen & other biological fluids, viscera, bite marks	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Theory	Functions of hormones and their regulation. Chemical signalling - endocrine, paracrine, autocrine, intracrine and neuroendocrine mechanisms.	B.Sc. (H) Biological Sc II Sem	BSC-DSE-3 Hormone Biochemistry
	Theory	Extensions to Mendelian Genetics; Incomplete dominance, Co dominance, Lethal alleles, Multiple alleles. Concept of monogenic and polygenic traits, phenocopy, Penetrance and Variable expressivity. Chromosomal theory of inheritance.	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Theory	Extensions to Mendelian Genetics; Incomplete dominance, Co dominance, Lethal alleles, Multiple alleles.	B.Sc. (H) Biological Sc V Sem	BSC- C-11 Genetics
	Practical	Crime scene evaluation Preliminary and confirmatory tests of body fluids, Forensic serology: Individualization	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Practical	Evaluation of Mendelian ratios and allelic interactions and verification using Chi square analysis Maintenance of a Drosophila culture, identifying sex and mutants in Drosophila, Studying life cycle of Drosophila.	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Practical	Anthropometric assessment of children and adults, assessment of Energy balance, assessment of ROS status.	B.Sc. (H) Biochemistry V Sem	BCH- DSE-1 Nutritional Biochemistry
October	Theory	Oxidation of Unsaturated fatty acids, odd chain fatty acids and branched chain fatty acids	B.Sc. (H) Biochemistry II Sem	BCH DSC-301 Lipid Metabolism
	Theory	Trace evidence: hair (animal and human), fibers & fabrics, pollen and soil; Time of death - rigor mortis, liver mortis, algor mortis, biochemical assessment of time of death.	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Theory	Physiology and action of Aldosterone; the Renin Angiotensin System. Physiology and Biochemical actions of Cortisol; Role of POMC and CRH in cortisol synthesis; Adrenal medullary hormones: epinephrine and norepinephrine. The Fight or flight response; Dual receptor hypothesis.	B.Sc. (H) Biological Sc II Sem	BSC-DSE-3 Hormone Biochemistry
	Theory	Gene interactions: additive gene effect, recessive and dominant epistasis, duplicate dominant and recessive epistasis, suppressor and modifier gene. Pedigree Analysis. Sex determination: heteromorphous chromosomes, genetic sex determination, temp dependent sex determination. Sex determination in C.elegans, Drosophila and humans. Sex linked, sex influenced inheritance,	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics

	Theory	Gene interactions: additive gene effect, recessive and dominant epistasis, duplicate dominant and recessive epistasis, suppressor and modifier gene. Pedigree Analysis. Concept of monogenic and polygenic traits, phenocopy, Penetrance and Variable expressivity	B.Sc. (H) Biological Sc V Sem	BSC- C-11 Genetics
	Practical	Analysis of trace evidence: Hair, pollen and fiber. Finger print analysis	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Practical	Pedigree analysis Karyotyping Microscopic analysis of Barr body and polyploidy Setting up a Reciprocal cross between +/+ and w/w Drosophila Melanogaster.	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Practical	Biochemical assessment of macronutrient status: Lipid profile, A/G ratio, Glycosylated Hb Evaluation	B.Sc. (H) Biochemistry V Sem	BCH- DSE-1 Nutritional Biochemistry
	Assignment	1. Presentation topics on lipid metabolism 2. Case study in forensic science 3. Presentation on GI tract hormones and adipokines 4. Presentation on epigenetic and evolutionary genetics 5. Case reports on pedigree and gene interaction	Sem III Biochem Sem III Biochem Sem III Bio Sc Sem V Biochem Sem V Biosc	DSC-301 BCH DSE-2 BSC DSE-3 BCH C-11 BSC C-11
	Mid-Term Test	1. TAG breakdown 2. forensic serology, trace evidence and time of death 3. Understanding hormones and hormones of adrenal gland 4. Extensions to Mendelian Genetics and Sex determination 5. Extension to Mendelian Genetics	Sem III Biochem Sem III Biochem Sem III Bio Sc Sem V Biochem Sem V Biosc	DSC-301 BCH DSE-2 BSC DSE-3 BCH C-11 BSC C-11
November	Theory	Synthesis of ketone body and Cholesterol. Cholesterol breakdown.	B.Sc. (H) Biochemistry II Sem	BCH DSC-301 Lipid Metabolism
	Theory	Forensic entomology. Forensic anthropology and analysis of skeletal remains. Biochemical basis for determination of cause of death, case studies Detection of drugs of abuse and narcotics in biological samples, blood splatter analysis.	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Theory	General adaptation syndrome: acute and chronic stress response. Pathophysiology – Addison's disease, Conn's syndrome, Cushing syndrome Pancreatic hormones: Insulin and Glucagon	B.Sc. (H) Biological Sc II Sem	BSC-DSE-3 Hormone Biochemistry
	Theory	Drosophila development, maternal effect genes, morphogens and zygotic gene activity in development. Dosage compensation, Genetic imprinting epigenetic mechanisms of transcriptional regulation.	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Theory	Sex determination: heteromorphous chromosomes, genetic sex determination, temp dependent sex determination. Sex determination in C.elegans, Drosophila and humans. Sex linked, sex influenced inheritance,	B.Sc. (H) Biological Sc V Sem	BSC- C-11 Genetics
	Practical	DNA fingerprinting Ink and Dye analysis by TLC Drug analysis in tissue samples by spectrophotometry Blood splatter analysis	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences

	Practical	Polytene chromosomes, Verification of Hardy Weinberg equation Evaluation of F2 in Drosophila reciprocal crosses.	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Practical	Vitamin E and Riboflavin analysis in serum Analysis of Zn/Cu in serum Case Studies	B.Sc. (H) Biochemistry V Sem	BCH- DSE-1 Nutritional Biochemistry
Dec	Theory	Regulation of lipid Metabolism.	B.Sc. (H) Biochemistry II Sem	BCH DSC- 301 Lipid Metabolism
	Theory	Toxicological examination of viscera, food adulteration; Analysis of inks and their use in questioned document identification, stain analysis, case studies	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	Theory	Reproductive hormones: LH, FSH, Testosterone and estrogens Hormones secreted by the placenta Hormones for regulation of parturition and lactation	B.Sc. (H) Biological Sc II Sem	BSC-DSE-3 Hormone Biochemistry
	Theory	Quantitative genetics and Population Genetics	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Theory	Dosage compensation, Genetic imprinting epigenetic mechanisms of transcriptional regulation	B.Sc. (H) Biological Sc V Sem	BSC- C-11 Genetics
	Practical	Revision and Evaluation	B.Sc. (H) Biochemistry II Sem	BCH DSE-2 Biochemical Applications in Forensic Sciences
	practical	Revision and Evaluation	B.Sc. (H) Biochemistry V Sem	BCH C-11 Concepts in Genetics
	Practical	Revision and Evaluation	B.Sc. (H) Biochemistry V Sem	BCH- DSE-1 Nutritional Biochemistry

Nanditaki

Signature of the teacher

V. A.

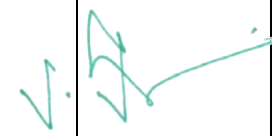
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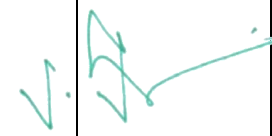
Name of the Faculty: Dr. Vandana Malhotra
Department: Biochemistry
Semester: I, III, V

Month		Topics	Course	Paper Code/Name
August 16, 2023	Theory	UNIT I. Biosynthesis of RNA in Prokaryotes RNA polymerases, transcription cycle in bacteria, sigma factor, bacterial promoters, identification of DNA binding sites by DNA footprinting, the three stages of RNA synthesis, initiation, elongation and termination, rho-dependent and rho-independent termination. Inhibitors of transcription and applications as anti-microbial drugs.	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		Unit 2. Carbohydrates: Introduction, classification and importance of carbohydrates. Monosaccharides - the structure of aldoses and ketoses; Optical properties of sugars: conformations of sugars, mutarotation, anomers, epimers and enantiomers; Chemical properties (Oxidation and reduction of sugars); reducing and non-reducing sugars; Glycosidic linkages (O- and N-type), formation of disaccharides (sucrose, maltose, lactose, trehalose), tri- and oligosaccharides (raffinose, rhamnose, and stachyose) Polysaccharides: homo- and heteropolysaccharides, structural (cellulose and chitin) and storage polysaccharides (starch and glycogen); Role of glycoconjugates with examples - proteoglycans, glycoproteins and glycolipids; Carbohydrates as recognition molecules	B.Sc. BIOCHEMISTRY (Hons) I Year, Semester I	DSC-1 Biomolecules
		UNIT 4. Molecular Genetics of bacteria and viruses: Introduction, Mechanism of genetic exchange - conjugation, transformation, and transduction. Gene mapping in bacteria. Complementation test, limitations of cis-trans test, intragenic complementation, rII locus of phage T4 and concept of cistron.	B.Sc. BIOLOGICAL SC. (Hons) III Year, Semester V	BS C-12 Genetics


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	Practical	Estimation of RNA by Orcinol Method	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		Effect of temperature on permeability of tonoplast membrane of Beetroot	B.Sc. BIOCHEMISTRY (Hons) II Year, Semester III	BCH C-9 Membrane Biology
September	Theory	Unit 1. Biosynthesis of RNA in Prokaryotes (Contd.)	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		Unit 2. Carbohydrates (Contd.)	B.Sc. BIOCHEMISTRY (Hons) I Year, Semester I	DSC-1 Biomolecules
		Unit 4. Molecular Genetics of bacteria and viruses (Contd.)	B.Sc. BIOLOGICAL SC. (Hons) III Year, Semester V	BS C-12 Genetics
	Practical	- Extraction of Nucleic Acids from Plant Tissue - Determination of NA content in heterogeneous samples (value added) - Studies of DNA and RNA as a function of time (value added) - Standardization of a micro assay for estimation of nucleic acids (value added)	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		- Effect of pH and detergent on tonoplast membrane of beetroot. - Effect of lipid composition on the permeability of a lipid monolayer. - Determination of CMC of SDS (ionic detergent) using conductivity meter.	B.Sc. BIOCHEMISTRY (Hons) II Year, Semester III	BCH C-9 Membrane Biology
		- Autoclaving and sterilization, Preparation of liquid and solid media. - To obtain single colonies by streak plating - Isolation of Plasmid DNA by alkaline lysis (mini prep)	PGDMB Sem I	Recombinant DNA Technology
October	Theory	UNIT I: Contd.	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		UNIT V: Regulation of Gene Expression in Prokaryotes. Strategies for gene regulation, negative and positive regulation, concept of operons, regulatory proteins, activators, repressors, DNA binding domains, regulation of lac operon and the concept of combinatorial control, trp operon.		

		Regulatory RNAs in bacteria, small RNA, and Riboswitches.		
		Unit 2. Carbohydrates Contd.	B.Sc. BIOCHEMISTRY (Hons) I Year, Semester I	DSC-1 Biomolecules
		Unit 4. UNIT 4. Molecular Genetics Genetics of bacteria and viruses (Contd.)	B.Sc. BIOLOGICAL SC. (Hons) III Year, Semester V	BS C-12 Genetics
	Practical	- Extraction of Total RNA from Plant tissue - Comparison of acidic vs alkaline phenol in NA extraction (value added) - Growth Curve for <i>E. coli</i> - Diauxic Curve for <i>E. coli</i>	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		- Determination of CMC of Triton X100 (neutral detergent) by spectrophotometry - Effect of solvent on membrane permeability of the tonoplast membrane of beetroot (value added) - Preparation of RBC ghost cells - Extraction of phospholipids from chicken liver and separation by TLC	B.Sc. BIOCHEMISTRY (Hons) II Year, Semester III	BCH C-9 Membrane Biology
		- Isolation of Plasmid DNA - Restriction Digestion and Agarose Gel electrophoresis - To study bacterial growth curve of <i>E.coli</i> DH5alpha - Isolation of genomic DNA from <i>E. coli</i>	PGDMB Sem I	Recombinant DNA Technology
	Assignment	Topics/Questions pertaining to the topics covered were given to the students		
	Mid-Term Test	All topics covered so far.		
November	Theory	UNIT 5: Regulation of gene expression in prokaryotes (Contd) Unit 6: Regulation of Gene Expression in Eukaryotes	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		Unit 4. Nucleic Acids: Structure and properties of bases (purines and pyrimidines). Formation of nucleosides and nucleotides (phosphodiester and glycosidic bond); Nucleic acid structure: Watson-Crick model of DNA double helix, comparison of different forms of DNA (A, B and Z DNA); Structure and functions of major species of RNA	B.Sc. BIOCHEMISTRY (Hons) I Year, Semester I	DSC-1 Biomolecules


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		(mRNA, tRNA and rRNA). Nucleic acid chemistry - UV absorption, the effect of acid and alkali on DNA; Biologically important nucleotides (source of energy, a component of coenzymes and second messengers) Unit 5. Vitamins (Fat soluble)		
		Unit 4. Genome dynamics-Transposable Genetic Elements. Prokaryotic transposable elements-IS elements, Composite transposons, Tn-3 elements. Eukaryotic transposable elements- Ac-Ds system in maize and P-elements in drosophila, uses of transposons.	B.Sc. BIOLOGICAL SC. (Hons) III Year, Semester V	BS C-12 Genetics
	Practical	- To study effect of protein synthesis Inhibitors on translation - Continuous assessment	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		- Separation of RBC membrane proteins by SDS PAGE. - Demonstration of Histidine uptake from the intestinal membrane. - Continuous assessment	B.Sc. BIOCHEMISTRY (Hons) II Year, Semester III	BCH C-9 Membrane Biology
		- Isolation of genomic DNA from <i>E. coli</i> - Recovery of DNA from low melting agarose gel - Continuous assessment	PGDMB Sem I	Recombinant DNA Technology
December	Theory	Revision/Practice questions Evaluation of Assignments and completion of Internal assessment	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		Revision/Practice questions Evaluation of Assignments and completion of Internal assessment	B.Sc. BIOCHEMISTRY (Hons) I Year, Semester I	BCH C-1 Biomolecules
		Revision/Practice questions Evaluation of Assignments and completion of Internal assessment	B.Sc. BIOLOGICAL SC. (Hons) III Year, Semester V	BS C-12 Genetics

	Practical	Revision and Mock Practical	B.Sc. BIOCHEMISTRY (Hons) III Year, Semester V	BCH C-12 Gene Expression and Regulation
		Revision and Mock Practical	B.Sc. BIOCHEMISTRY (Hons) II Year, Semester III	BCH C-9 Membrane Biology
		Revision and Mock Practical	PGDMB Sem I	Recombinant DNA Technology

Vandana Malhotra

Signature of the teacher

V. B.

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SEMESTER WISE TEACHING PLAN-2023-24
SRI VENKATESWARA COLLEGE

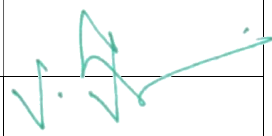
Name of the Faculty: Lieut. (Dr.) Kameshwar Sharma YVR, Assistant Professor (AL-12)

Department: Biochemistry

Semester: I/III/V (Odd Semester)

Month		Topics	Course	Paper Code/Name
July and August	Theory	On Duty Leave		
	Practicals	On Duty Leave		
SEPTEMBER	Theory:	Introduction to Purification	PGDiploma in Molecular and Biochemical Technology	Biophysical Techniques - I
		Introduction to Purification	B. Sc(H) Biochemistry - Sem I	FBCH DSC 3 Biochemical Techniques
		Introduction to Purification	B.Sc(H) Biological sciences - Sem III	SBS DSC-302 Proteins and Enzymes
	Practicals:	Amino acids structure and their properties		
		1. Isolation of lipids and determination of phospholipid/ cholesterol ratio from egg yolk. 2. Separation of Phospholipids by TLC	B. Sc(H) Biochemistry - Sem III	SBCH - DSC 301 METABOLISM OF LIPIDS (NEP)
		1. Subcellular Fractionation of cell organelles from goat liver cells. 2. Techniques of Plant Tissue Culture	B.Sc.(H) Biochemistry - Sem V	SBCH – BCH DSE 2 Advanced Cell Biology
		1. Gel Filtration Chromatography	PGDiploma in Molecular and Biochemical Technology	Biophysical Techniques - I

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	Tutorials:	Class Tests / assignments		
OCTOBER	Theory:	1. Concentration Methods. 2. Ammonium sulphate precipitation 3. Dialysis 4. Techniques – Introduction. 1. Concentration Methods. 2. Ammonium sulphate precipitation 3. Dialysis 4. Techniques – Introduction Protein Structure (Types and Diversity) Protein Folding	PGDiploma in Molecular and Biochemical Technology B. Sc(H) Biochemistry - Sem I B.Sc(H) Biological sciences - Sem III	Biophysical Techniques -I FBCH DSC 3 Biochemical Techniques SBS DSC-302 Proteins and Enzymes
	Practicals	1. Total Cholesterol estimation and HDL-Cholesterol estimation 2. Triglyceride estimation and lipid profile 1. Calculation of Bacterial cell viability upon exposure to UV radiation. 2. Study of Cell-Cell Agglutination by lectin and calculation of haem agglutination titre. 1. Ion Exchange Chromatography 2. Thin Layer Chromatography	B. Sc(H) Biochemistry - Sem III B.Sc.(H) Biochemistry - Sem V PGDiploma in Molecular and Biochemical Technology	SBCH - DSC 301 METABOLISM OF LIPIDS (NEP) SBCH – BCH DSE 2 Advanced Cell Biology Biophysical Techniques -I
	Tutorials	Assignments / Tests		 प्रधानाचार्य Principal

NOVEMBER	Theory:	Purification Techniques: 1. Ion Exchange Chromatography 2. Gelfiltration Chromatography 3. Characterization Techniques 4. Centrifugation	PGDiploma in Molecular and Biochemical Technology	PGDiploma in Molecular and Biochemical Technology
		Purification Techniques: 1. Ion Exchange Chromatography 2. Gelfiltration Chromatography 3. Characterization Techniques 4. Centrifugation	B. Sc(H) Biochemistry - Sem I	FBCH DSC 3 Biochemical Techniques
		1. Protein Sequencing Techniques 2. Purification and Analysis of Proteins	B. Sc(H) Biological sciences - Sem III	SBS DSC-302 Proteins and Enzymes



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	Practicals:	1. Estimation of Ketone bodies in blood/urine 2. Case studies: Obesity, Dyslipidemia, Metabolic syndrome, Fasting, Ketosis.	B. Sc(H) Biochemistry - Sem III	SBCH - DSC 301 METABOLISM OF LIPIDS (NEP)
		1. Preparation of temporary mount nerve cell. 2. Study of pinocytosis by paramecium under microscopy. 3. Study of phagocytosis by paramecium under microscopy.	B.Sc.(H) Biochemistry - Sem V	SBCH – BCH DSE 2 Advanced Cell Biology
		5. Affinity Chromatography 6. Ammonium sulphate Precipitation	PGDiploma in Molecular and Biochemical Technology	Biophysical Techniques -I
	Tutorials:			
	Test	MID TERM Exams		
DECEMBER	Theory:	Theory Examination Invigilation		

Lieut. (DR.) KAMESHWAR SHARMA YVR
Assistant professor (AL-12)
Department of Biochemistry (Dated: 21st October, 2023)


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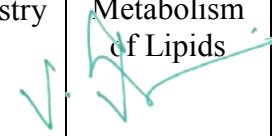
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Nimisha Sinha

Department: Biochemistry

Semester: I, III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Digestion and absorption of lipids	B.Sc. (H) Biochemistry III	DSC-7 Metabolism of Lipids
		History and Development of Forensic Science	B.Sc. (H) Biochemistry III	DSE Biochemical basis of Forensic science
		UNIT I: Introduction to Nutrition and Energy Metabolism Defining nutrition, role of nutrients. Unit of energy, biological oxidation of foodstuff.	B.Sc. (H) Biochemistry V	DSE Nutritional Biochemistry
	Practical	Estimation of RNA by Orcinol Method 2.	B.Sc. (H) Biochemistry V	Gene Expression and Regulation
		Laboratory safety and standards (precision, accuracy, and sensitivity). Preparation of solutions (w/w, w/v, Molar, and Normal).	B.Sc. (H) Biochemistry I	DSC-1 Biomolecules
		1. Preparation and sterilization of LB medium	PG Diploma	Recombinant DNA Technology
September	Theory	Physiological energy value of foods, SDA. Measurement of energy expenditure, BMR and RMR- factors affecting BMR. Recommended Nutrient Intakes (RNI) and Recommended Dietary Allowances for different age groups.	B.Sc. (H) Biochemistry V	DSE Nutritional Biochemistry
		Structure, classification and biogenesis of lipoproteins, Endogenous and exogenous pathways, Lipoprotein cycle. Transport of mitochondrial Acetyl groups to cytosol, Fatty acyl synthase complex,	B.Sc. (H) Biochemistry III	DSC-7 Metabolism of Lipids


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		Establishment of identity of individuals: fingerprints, footprints Introduction to DNA-and source of DNA in Forensic case work,	B.Sc. (H) Biochemistry III	DSE Biochemical basis of Forensic science
	Practical	2. Obtaining isolated colonies of <i>E.coli</i> by streak plate and spread plate method. 3. To study the growth curve of <i>E.coli</i> DH5 α	PG Diploma	Recombinant DNA Technology
		4. Isolation of total RNA from bacteria/yeast 5. To study the effect of inhibitors on protein synthesis	B.Sc. (H) Biochemistry V	Gene Expression and Regulation
		3. Preparation of buffers, phosphate and acetate buffers. 4. Determination of pKa of acetic acid and glycine.	B.Sc. (H) Biochemistry I	DSC-1 Biomolecules
October	Theory	Review of functions of proteins in the body, Digestion and absorption. Essential and Nonessential amino acids. Complete protein, Amino Acid Availability, Antagonism, Toxicity, Imbalance, Amino acid complementation and Supplementation in foods. Effects of deficiency. Food source and Recommended Dietary Allowances for different age group. Amino acid pool. NPU, Biological Value, Nitrogen balance. PEM:Marasmus and Kwashiorkor. UNIT III: Micronutrients: Vitamins No. of hours : 12 Vitamin A, D, E, K and dietary sources, RDA, Adsorption, Distribution, Metabolism and excretion (ADME), Deficiency. Role of Vitamin A as an antioxidant, in Visual cycle, dermatology and immunity.	B.Sc. (H) Biochemistry V	DSE Nutritional Biochemistry
		Techniques of DNA fingerprinting-RFLP, STR, PCR, DNA fingerprinting in paternity disputes, mass disaster and other forensic case work, studying kinship by DNA profiling: Related individuals have similar DNA profiles, DNA profiling and the remains of the Romanovs. Sex identification by DNA analysis: PCRs directed at Y chromosome-specific sequences,	B.Sc. (H) Biochemistry III	DSE Biochemical basis of Forensic science
		Synthesis of saturated and unsaturated fatty acids, Regulation of fatty acid metabolism. Fatty acid elongation systems, role of mixed function oxidases in fatty acid desaturation.	B.Sc. (H) Biochemistry III	DSC-7 Metabolism of Lipids

	Practical	4. Isolation of chromosomal DNA of <i>E.coli</i> 7. Recovery of DNA from low-melting temperature agarose gel: organic	PG Diploma	Recombinant DNA Technology
		Estimation of RNA by Orcinol Method 2. Extraction of total nucleic acids from plant tissue 3. To study growth curve and diauxic growth curve effect in <i>E. coli</i>	B.Sc. (H) Biochemistry V	Gene Expression and Regulation
		5. Qualitative tests for carbohydrates. 7. Qualitative tests for nucleic acids.	B.Sc. (H) Biochemistry I	DSC-1 Biomolecules
November	Theory	Synthesis of triacylglycerol, glycerophospholipids and sphingolipids	B.Sc. (H) Biochemistry III	DSC-7 Metabolism of Lipids
		Narco analysis: theory, forensic significance, future prospect; Brain mapping: introduction, EEG, P-3000 wave, forensic applications, limitation of technique;	B.Sc. (H) Biochemistry III	DSE Biochemical basis of Forensic science
		Role of Vitamin K in Gamma carboxylation. Role of Vitamin E as an antioxidant. Extra-skeletal role of Vitamin D and its effect on bone physiology. Hypervitaminosis. Vitamin C- Dietary sources, RDA, Adsorption, Distribution, Metabolism and excretion (ADME); role as cofactor in amino acid modifications. The B Complex vitamins- Dietary sources, RDA, Adsorption, Distribution, Metabolism and excretion (ADME); Thiamine -TPP role in metabolism and deficiency disease; Niacin- Metabolic interrelation between tryptophan, Niacin and NAD/ NADP; Vitamin B6-conversion to Pyridoxal Phosphate. Role in metabolism, Biochemical basis for deficiency symptoms; Vitamin B12 and folate – metabolic role, homocysteine cycle, Biochemical basis for deficiency symptoms.	B.Sc. (H) Biochemistry V	DSE Nutritional Biochemistry
	Practical	5. Isolation of plasmid DNA by the alkaline lysis method (maxi-preparation and mini-preparation) and the boiling lysis method. 6. Digestion of plasmid DNA with restriction enzymes	PG Diploma	Recombinant DNA Technology
		6. Qualitative tests for amino acids, proteins.	B.Sc. (H) Biochemistry I	DSC-1 Biomolecules

		Revision	B.Sc. (H) Biochemistry V	Gene Expression and Regulation
December	Theory	Revision		
	Practical	Revision		

Nimish

Signature of the teacher

V. B.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Ravindra Varma

Department: Biochemistry

Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	Mendelian genetics and chromosomal basis of heredity: Mendelian laws and ratios; Concept of segregation and independent assortment, and its chromosomal basis.	B.Sc. (H) Biochemistry Sem V	BCH C-11 Concepts in Genetics
	Practical	Isolation of lipids and determination of phospholipid/ cholesterol ratio from egg yolk	B.Sc. (H) Biochemistry Sem III	DSC-7 Metabolism of lipids
September	Theory	Introduction and classification of aminoacids, peptide bond, Zwitter ions, L and D- forms of amino acids	B.Sc. (H) Biochemistry Sem I	GE-1 Molecules of Life
		Introduction to peptides and proteins, structural and functional diversity, classification of proteins-simple and conjugated, monomeric and multimeric proteins. Nterminal and C-terminal amino acid analysis, Edman degradation	B.Sc. (H) Biochemistry Sem I	DSC-2 Proteins
		Laws of probability & binomial expansion, formulating and testing genetic hypothesis, chromosomal basis of Mendelism - Sutton and Boveri hypothesis with other supporting experimental evidences.	B.Sc. (H) Biochemistry Sem V	BCH C-11 Concepts in Genetics

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Practical	➤ Laboratory safety and preparation of solutions	B.Sc. (H) Biochemistry Sem I	GE-1 Molecules of Life
	➤ Scanning of proteins by UV method ➤ Biuret method of protein estimation	B.Sc. (H) Biochemistry Sem I	DSC-2 Proteins
	➤ Separation of Phospholipids by TLC ➤ Total Cholesterol estimation and HDL Cholesterol estimation	B.Sc. (H) Biochemistry Sem III	DSC-7 Metabolism of lipids

Assignment	➤ Topic on Amino acids	B.Sc. (H) Biochemistry Sem I	GE-1 Molecules of Life
	➤ Topic on Protein Sequencing	B.Sc. (H) Biochemistry Sem I	DSC-2 Proteins
	➤ Topic on Crosses	B.Sc. (H) Biochemistry Sem V	BCH C-11 Concepts in Genetics

October	Theory	Standard and nonstandard amino acids and their biological significance; chemistry of water and biological significance, concept of buffers, Henderson Hasselbalch equation	B.Sc. (H) Biochemistry Sem I	GE-1 Molecules of Life
		Generation of overlapping peptides, Disulphide bonds and localisation, Solid phase peptide synthesis, protein databases. Protein folding, denaturation and renaturation, Thermodynamics of protein folding, Chaperones and Chaperonins, PDI.	B.Sc. (H) Biochemistry Sem I	DSC-2 Proteins
		Concept of cistron. Bacterial and viral genomes, Mechanism of genetic exchange - conjugation, transformation and transduction. Gene mapping in bacteria. Linkage and crossing over, genetic mapping in eukaryotes	B.Sc. (H) Biochemistry Sem V	BCH C-11 Concepts in Genetics

	Practical	➤ Concept of pH and pH meter Ø Acetate buffer preparation ➤ Phosphate buffer preparation ➤ Protein estimation by Lowry method ➤ Determination of isoelectric point of protein ➤ Solvent perturbation and denaturation of proteins ➤ Triglyceride estimation and lipid profile ➤ Estimation of Ketone bodies in blood/urine	B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem III	GE-1 Molecules of Life DSC-2 Proteins DSC-7 Metabolism of lipids
Class Test		➤ Topic on Amino acids and buffers ➤ Topic on Protein classification and Sequencing ➤ Topic on Mendelian genetics and bacterila gene mapping	B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem V	GE-1 Molecules of Life DSC-2 Proteins BCH C-11 Concepts in Genetics
November	Theory	Introduction and classification of carbohydrates, Mono, di and polysaccharides, L and D- forms, epimers and anamers, carbohydrates as fuel and strctural polysaccharides, antigens and cell recognition units Diseases associated with protein misfolding- Alzheimers and Creutzfeldtz Jacob disease. Hemoglobin disorders – Sickel Cell anemia Centromere mapping with ordered tetrads, cytogenetic mapping with deletions and duplications in Drosophila, detection of linked loci by pedigree analysis in humans, LOD score, somatic cell hybridization for positioning genes on	B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem V	GE-1 Molecules of Life DSC-2 Proteins BCH C-11 Concepts in Genetics

		chromosomes and physical maps using molecular markers. Variations in chromosome number: aneuploidy and polyploidy. Variations in chromosome structure- inversions, deletions, duplications and translocations.		
	Practical	➤ Analysis of amino acids ➤ Test for carbohydrates ➤ Test for nucleic acids ➤ Protein sequence databases and homology modeling ➤ Protein structure visualisation softwares ➤ Case studies: Obesity, Dyslipidaemia, Metabolic syndrome, Fasting, Ketosis	B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem I B.Sc. (H) Biochemistry Sem III	GE-1 Molecules of Life DSC-2 Proteins DSC-7 Metabolism of lipids

P. Ravindra Varma

Signature of Teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Sarika Yadav

Department: Biochemistry

Semester: I, III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Introduction to peptides and proteins.	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Theory	Membrane fluidity: lateral, transverse and rotational motion of lipids and proteins.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-303: MEMBRANE BIOLOGY
	Theory	Overview of the endomembrane system	B.Sc. (H) Biochemistry Sem- V	BCH DSE-2: Advanced Cell Biology
	Practical	Introduction to biochemical estimations and preparation of solutions of different concentrations.	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Practical	Separation of photosynthetic pigments by TLC.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-302: BIOENERGETICS
	Practical	Introduction; Comparative analysis of nutrient status of raw, semi- processed, processed and preserved foods	B.Sc. (H) Biochemistry Sem- V	BCH DSE-1: Nutritional Biochemistry
September	Theory	Organization of protein structure into primary, secondary, tertiary and quaternary structures. Forces stabilizing the protein structure - covalent and non-covalent. The peptide bond, dihedral angles psi and phi	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Theory	Factors affecting membrane fluidity- composition, barriers (tight junctions), cytoskeleton interactions, microdomains – rafts, caveolae. Homeoviscous Adaptation. Techniques to study membrane dynamics: FRAP, TNBS, SPT.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-303: MEMBRANE BIOLOGY
	Theory	Targeting, modification and sorting of proteins from and into Endoplasmic Reticulum	B.Sc. (H) Biochemistry Sem- V	BCH DSE-2: Advanced Cell Biology
	Practical	Scanning of proteins by UV method; Biuret method of protein estimation	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins

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	Practical	Isolation of chloroplast from spinach leaves. Estimation of chlorophyll content.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-302: BIOENERGETICS
	Practical	Anthropometric assessment in adults and Children, Assessment of energy balance, Determination of ROS status	B.Sc. (H) Biochemistry Sem- V	BCH DSE-1: Nutritional Biochemistry
October	Theory	Helices, sheets and turns, Ramachandran map. Motifs and domains. Globular and Fibrous Proteins. Membrane Proteins	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Theory	Fence and gate model. Study of RBC membrane architecture. Thermodynamics of transport. Simple diffusion and facilitated diffusion. Passive transport glucose transporter and anion transporter. Primary active transporters- P-type ATPases, V-type ATPases, F-type ATPases.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-303: MEMBRANE BIOLOGY
	Theory	Overview of the cell cycle; Eukaryotic cell cycle	B.Sc. (H) Biochemistry Sem- V	BCH DSE-2: Advanced Cell Biology
	Practical	Protein estimation by Lowry method; Determination of isoelectric point of protein; Solvent perturbation and denaturation of proteins	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Practical	Isolation of mitochondria from liver and assay of mitochondrial marker enzyme SDH. Study the photosynthetic O ₂ evolution in hydrilla plant.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-302: BIOENERGETICS
	Practical	Biochemical assessment of macronutrient status- lipid profile, A/G ratio, glycosylated Hb and evaluation	B.Sc. (H) Biochemistry Sem- V	BCH DSE-1: Nutritional Biochemistry
	Assignment			
	Mid-Semester Examination			
November	Theory	Structural proteins - α -keratin, silk fibroin, collagen. Transport protein: myoglobin and haemoglobin - Oxygen binding curves.	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Theory	Secondary active transporters - lactose permease, Na ⁺ -glucose symporter. ABC family of transporters – MDR and CFTR. Group translocation and bacteriorhodopsin. Ion channels: voltage-gated ion channels (Na ⁺ and K ⁺ channel) and ligand-gated ion channels (acetylcholine receptor), and aquaporins.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-303: MEMBRANE BIOLOGY
	Theory	Events of Mitotic Phase; Cytokinesis; Events of Meiosis and Fertilization; Regulation of Cell Division and Cell Growth; Development and causes of cancer; Genetic basis of cancer; Oncogenes, Tumor Viruses	B.Sc. (H) Biochemistry Sem- V	BCH DSE-2: Advanced Cell Biology

	Practical	Protein sequence databases and homology Modeling, Protein structure visualization software	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Practical	Study the Hill reaction by using artificial electron acceptor. Estimation of the activity of PS-II.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-302: BIOENERGETICS
	Practical	Vitamin and mineral estimations, case studies	B.Sc. (H) Biochemistry Sem-V	BCH DSE-1: Nutritional Biochemistry
December	Theory	Influence of 2,3-BPG, CO ₂ and H ⁺ on oxygen binding to Hb	B.Sc. (H) Biochemistry Sem- I	BCH-DSC-102: Proteins
	Theory	Ionophores: valinomycin, gramicidin. Relationship of membrane transport and diseases.	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-303: MEMBRANE BIOLOGY
	Theory	Molecular approach to cancer treatment.	B.Sc. (H) Biochemistry Sem- V	BCH DSE-2: Advanced Cell Biology
	Practical	Revision and evaluation	B.Sc. (H) Biochemistry Sem-I	BCH-DSC-102: Proteins
	Practical	Revision and evaluation	B.Sc. (H) Biochemistry Sem- III	BCH-DSC-302: BIOENERGETICS
	Practical	Revision and evaluation	B.Sc. (H) Biochemistry Sem- V	BCH DSE-1: Nutritional Biochemistry

Signature of the teacher

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SRI VENKATESWARA COLLEGE
SEMERSTER WISE TEACHING PLAN
Semester I/III/V
(2023-24)

Name of the Faculty: Sidhartha Taritla

Department: Biochemistry

Month		Topics	Course	Paper code /Name
August	Theory	Introduction to biomolecules	FBCH	Biomolecules
		Introduction to genetics	TBS	Genetics
		----	PG Diploma	Recombinant DNA technology I
	Practical	Effect of temperature on Tonoplast membrane of beetroot	SBCH	Membrane Biology
September	Theory	Amino acids as bifunctional molecules and their biological significance	FBCH	Biomolecules
		Classification of amino acids (Standard, Semi-standard, Non-standard; Proteinogenic, Non-proteinogenic; Essential, Non-essential; Polar, Non-polar).		
		Introduction to the basic principles of heredity.	TBS	Genetics
		Model organisms: Escherichia coli, Saccharomyces cerevisiae, Drosophila melanogaster, Caenorhabditis elegans, Danio rerio and Arabidopsis thaliana.		
		Mendel's work on transmission of traits, genetic variation, molecular basis of Genetic Information. Principles of Inheritance	PG Diploma	Recombinant DNA technology I
	Practical	Introduction to genetic engineering		
		Principle of total RNA isolation from bacteria, yeast, mammalian cell lines and tissues. Applications of RNA isolation		
		mRNA integrity, enrichment techniques, cDNA synthesis first strand and second strand Limitations of cDNA synthesis 5' and 3' RACE		
	Practical	Effect of pH on Tonoplast membrane of beetroot	SBCH	Membrane Biology
		Effect of detergent on Tonoplast membrane of beetroot		
		Effect of ionic strength on Tonoplast membrane of		

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		beetroot Effect of lipid composition on the permeability of a lipid monolayer		
		Study of mendelian and non mendelian by using chi square test To study Life cycle of drosophila and to prepare drosophila media Study of inheritance of traits using pedigrees	TBCH	Basic Concepts of Genetics
		Study of mendelian and non mendelian by using chi square test Study of inheritance of traits using pedigrees	TBS	Genetics
October	Theory	Physical properties (variations in structures, sizes, polarity, charges; resonance hybrid), optical properties (stereoisomerism; chirality; R- S; D- and L;- light absorption) Chemical properties (protonation/deprotonation; zwitterions; acid base properties, titration curve, pH and pKa, pI reactivity of side chains) of amino acids, Amino acids as constituents of proteins, peptide bond. Uncommon amino acids and their functions.	FBCH	Biomolecules
		Chromosome theory of inheritance Laws of probability Organelle heredity: Chloroplast mutation/variegation in four o'clock plant and Chlamydomonas, mitochondrial mutations in Neurospora and yeast, maternal effects, infective heredity-Kappa particles in Paramecium. Chromosomal aberrations: Variations in chromosome number- monosomy and trisomy of sex chromosomes and autosomes Variations in chromosome structure- deletions, duplications	TBS	Genetics

		Selection and screening of recombinant clones: Radiolabelled probe preparation by nick translation, random priming, 3' end labeling, 5' end labelling, Guessmers and degenerate probes. Non-radioactive probes preparation using Biotin, Digoxigenin.	PG Diploma	Recombinant DNA technology I
	Practical	Determination of CMC of ionic detergent by conductance method Determination of CMC of non-ionic detergent by PAN dye (colorimetric method) Preparation of RBC ghost cell Isolation of membrane phospholipids from chicken liver	SBCH	Membrane Biology
		Study of abnormal human karyotype Smear technique to demonstrate sex chromatin in buccal epithelial cells Setting an monohybrid cross in Drosophila for studying autosomal and sex linked inheritance	TBCH	Basic Concepts of Genetics
		Study of abnormal human karyotype Smear technique to demonstrate sex chromatin in buccal epithelial cells To study Life cycle of drosophila Preparation of media for E.coli auxotrophic mutants	TBS	Genetics
November	Theory	Lipids: Introduction, importance, and classification of lipids (simple, complex and derived lipid); Structure, properties, and classification of fatty acids (based on chain length and degree of unsaturation); Storage lipids- triacylglycerol and waxes. Structural lipids in membranes- glycerolipids, glycerophospholipids, galactolipids, ether-lipids, sphingolipids, and sterols; Importance of eicosanoids. Role of water-soluble lipids as storage, signals, hormones, pigments, and in membranes. Major dietary sources, deficiency diseases,	FBCH	Biomolecules

		symptoms, and hypervitaminosis.		
		Variations in chromosome structure- inversions, translocations Inheritance of complex trait, analysis of quantitative traits, narrow and broad sense heritability, quantitative trait loci (QTL) and their identification, hybrid vigor Linkage and Crossing over, cytological basis of crossing over, Molecular mechanism of crossing over. Recombination frequency as a measure of linkage intensity, two factor and three factor crosses, Interference and Coincidence	TBS	Genetics
		Solid phase synthesis of DNA: (phosphoramidite based). Sequence dependent and independent screening: PCR based, colony and plaque hybridization, functional screening, immunological screening, gain of function screening. HRT, HART	PG Diploma	Recombinant DNA technology I
	Practical	Separation of RBC membrane proteins by SDS-PAGE Separation of membrane phospholipids by TLC Demonstration of Histidine uptake from the intestinal membrane	SBCH	Membrane Biology
		To study population genetics and calculation of allelic and genotype frequencies. Induction of polyploidy in onion roots Squash preparation of salivary glands of Dipteran larva to observe polytene chromosomes	TBCH	Basic Concepts of Genetics
		To study population genetics and calculation of allelic and genotype frequencies. Study of Allium karyotype (normal and abnormal). Study of Linkage, recombination, gene mapping using marker based data from Drosophila. Screening for an auxotrophic mutation in E.coli	TBS	Genetics

December	Theory	Continuous Assessment	FBCH	Biomolecules
		Continuous Assessment	TBS	Genetics
		Continuous Assessment	PG Diploma	Recombinant DNA technology I
	Practical	Mock Practical and Continuous Assessment	SBCH	Membrane Biology
		Mock Practical and Continuous Assessment	TBCH	Basic Concepts of Genetics
		Mock Practical and Continuous Assessment	TBS	Genetics



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 ODD Semester

Name of the Faculty: Dr. Lakshay Malhotra

Department: Biochemistry

Semester: I, III, and V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	1. Introduction and classification of lipids	FBCH	BCH GE-1: Molecules of life
		1. Historical background and various membrane models.	SBCH	BCH-DSC-303: Membrane biology
		1. Transport of proteins across nuclear envelope	TBCH	BCH DSE-2: Advanced Cell Biology
	Practical	1. Laboratory safety and standards (precision, accuracy, and sensitivity). Preparation of solutions (w/w, w/v, Molar, and Normal).	FBCH	BCH DSE-1: Biomolecules
		1. Introduction to spectrophotometer and verification of Beer law	SBS	BS-DSC-302: Protein Structure and Enzymology
SEPTEMBER	Theory	1. Fatty Acids (PUFA & MUFA) 2. TAGs 3. Phospholipids	FBCH	BCH GE-1: Molecules of life
		1. Overview of membrane functions. 2. Composition of membranes: Lipids -Phospholipids, Glycolipids, sterols	SBCH	BCH-DSC-303: Membrane biology
		1. Regulation of nuclear protein import and export 2. Synthesis and targeting Mitochondrial protein. 3. Function and origin of the cytoskeleton	TBCH	BCH DSE-2: Advanced Cell Biology
		1. Immunogenicity and antigenicity 2. Factors that influence immunogenicity Haptens, carrier, epitopes, cross-reactivity	PGD	PGD MB 103: Immunology-I
	Practical	1. Concept of buffer, buffering capacity and Handerson-Hasselbalch equation. Preparation of acetate buffer/phosphate buffer. 2. Titration graph of acetic acid and Glycine	FBCH	BCH DSE-1: Biomolecules
		1. Glucose estimation of GOD POD method 2. Glucose tolerance test	SBS	BS-DSC-302: Protein Structure and Enzymology


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		1. Estimation of proteins by Biuret method. 2. Estimation of proteins by Lowry's method. 3. Ammonium sulphate fractionation of crude homogenate from germinated mung beans.	SBS	BS-DSC-302 Protein Structure and Enzymology
OCTOBER	Theory	1. Sphingolipids 2. Glycolipids 3. Cholesterol 4. Role of lipids as storage fuel, hormones, Vitamins, in signalling and in the membranes	FBCH	BCH GE-1 Molecules of life
		1. Proteins - Peripheral Proteins, Integral Membrane Proteins and Lipid-Anchored proteins, and carbohydrates. 2. Model systems to study membranes - Lipid Monolayers, Planar Bilayer and Liposome, and their application.	SBCH	BCH-DSC-303: Membrane biology
		1. Organization and assembly of Actin Filaments and Myosin 2. Motor proteins of microtubules and their functions. 3. Cell movement.	TBCH	BCH DSE-2: Advanced Cell Biology
		1. Structure of immunoglobulins 2. Immunoglobulin subtype 3. B cell receptor 4. Isotype, allotype, Idiotype 5. Monoclonal antibodies 6. Preparation of lymphocytes 7. Myeloma cells, fusion protocol, selection, cloning and culturing of monoclonal antibody secreting hybridoma cell line, engineering of antibodies	PGD	PGD MB 103: Immunology-I
	Practical	1. Qualitative tests for Nucleic acid (Orcinol and DPA) 2. Qualitative tests for Carbohydrates; monosaccharides, disaccharides, and polysaccharides (Molisch, Fehling/ Benedict, Barfoed, Seliwanoff's, and Iodine Test)	FBCH	BCH DSE-1: Biomolecules
		1. Estimation of serum Ca²⁺ by o-CPC method 2. HCG based pregnancy test.	SBS	BS-DSE-2: Hormone Biochemistry
		1. Assay for acid phosphatase activity and specific activity. 2. Progress curve of enzyme 3. Effect of pH on enzyme activity	SBS	BS-DSC-302: Protein Structure and Enzymology
NOVEMBER	Theory	1. Introduction purine and pyrimidine bases 2. Nucleosides, nucleotides, and nucleic acid 3. Structure and functions of DNA (B-form) 4. Organization of DNA into chromatin 5. RNA structure and functions 6. Biologically important nucleotides (cAMP and ATP)	FBCH	BCH GE-1: Molecules of life


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		1. Polymorphic Lipid-Water Systems. The various determinants of polymorphic phases: CMC, lipid shape, critical packing parameter. 2. Vesicular transport. Vesicles, Clathrin-Coated Vesicles and COP-Coated Vesicles (COPI and COPII) 3. Molecular Mechanism of Vesicular Transport. Membrane Fusion (dynamin protein, Rab proteins, NSF/ SNAP complex, SNARE proteins). 4. Receptor Mediated Endocytosis: LDL, Transferrin	SBCH	BCH-DSC-303: Membrane biology
		1. Apoptosis and Necrosis 2. Application of stem cells in health and disease. 3. Hematopoiesis 4. Embryonic Stem Cells and Therapeutic Cloning. 5. Ultracentrifugation 6. Fluorescence Microscopy- FACS, FRET, Confocal Microscopy, Electron Microscopy,	TBCH	BCH DSE-2: Advanced Cell Biology
		1. The response of B cells to antigen 2. B cell maturation, activation, and proliferation, signaling pathways leading to B cell activation 3. germinal centers and formation of plasma cells, memory cells, class switching	PGD	PGD MB 103: Immunology-I
	Practical	1. Qualitative analysis of Amino acids (Ninhydrin; Xanthoproteic, Millon's, and lead acetate test) 2. To determine the Iodine number of Oil/fat. 3. Osazone test	FBCH	BCH DSE-1: Biomolecules
		1. Determining the thyroid profile by estimating T4 and TSH under normal and pathophysiological conditions. 2. Estimation of estrogen during different days of the menstrual cycle. 3. Estimation of serum electrolytes. 4. Presentation on GI Tract hormones and Adipokines 5. Case studies: Diabetes Insipidus, Acromegaly and dwarfism, Diabetes Mellitus, Rickets, Osteoporosis, Cushing syndrome	SBS	BS-DSE-2: Hormone Biochemistry
		1. Determination of Km and Vmax using Lineweaver-Burk plot. 2. Calculation of Ki for an enzyme	SBS	BS-DSC-302: Protein Structure and Enzymology
DECEMBER	Theory	1. Plant and Animal Cell Culture, Immunohistochemistry.	TBCH	BCH DSE-2: Advanced Cell Biology
	Practical			


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24, Odd Semester

Name of the faculty: Dr. Priyanka Jawa (Guest)

Department: Biochemistry

Semester: I, III, V

Month		Topics	Course	Paper Code/Name
November	Theory	1. Basic features of enzymes, catalysis, estimation of V_{max} and K_m using Lineweaver-Burke plot, enzyme inhibition, specific activity. 2. Animal Tissue Culture, primary culture, cell lines, continuous cell lines (transformation, anchorage independence, contact inhibition etc) applications.	PG Diploma in Molecular and Biochemical Technology	PGD MB 101 Biophysical Techniques I
	Practical	1. Assay of enzyme activity (standardization of assay conditions). Determination of optimum pH, K_m and V_{max}. 2. Effect of solvent perturbation on absorption by a chromophore.	PG Diploma in Molecular and Biochemical Technology	PGD MB 101 Biophysical Techniques I
November	Practical	1. Isolation of chloroplast from spinach leaves 2. Study of Hill reaction by using artificial electron acceptor. 3. Estimation of activity of PSII.	B.Sc. (H) Biochemistry III Sem	BCH DSC-8 Bioenergetics
November	Practical	1. Study of pinocytosis by paramecium under microscopy. 2. Preparation of temporary mount of nerve cell from mammalian spinal cord. 3. Study of cell-cell agglutination by lectin and calculation of haem-agglutination titre. 4. Demonstration of phagocytosis/ apoptosis.	B.Sc. (H) Biochemistry V Sem	BCH DSE-2 Advanced Cell Biology

I

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Garima Singh

Department: Biochemistry

Semester:

Month		Topics	Course	Paper Code/Name
September	Theory	Restriction enzymes: various types, their properties, nomenclature, creating new restriction sites by DNA manipulation.	PGD in Molecular & Biochemical Technology Sem I	PGD MB 102
	Theory	Overview of the immune system: historical background. Introduction to innate immunity.	PGD in Molecular & Biochemical Technology Sem I	PGD MB 103
	Practical	Study of mendelian and non-mendelian inheritance by using chi square analysis. Study of inheritance of traits using pedigree.	B.Sc. Biological Sciences Sem V	Genetics
	Practical	Study of mendelian and non-mendelian inheritance by using chi square analysis. To study life cycle of Drosophila and to prepare Drosophila media. Study of inheritance of traits using pedigree.	B.Sc. (H) Biochemistry Sem V	Concepts in Genetics
	Practical	Session on the role of yoga and meditation on overall happiness. Session for the actualisation of innate creative potential (music, drawing, calligraphy, dramatics)		The Art of Being Happy (VAC)
	Practical	Study and layout of waste water treatment plant. Determination of physico-chemical properties of waste water.		Food Waste and By-product Utilisation (SEC)
October	Theory	Various DNA modifying enzymes used in cloning (DNA polymerases: DNA Polymerase I, Klenow fragment, T4DNA Polymerase, T7 DNA Polymerase), Ligases (T4 DNA ligase, E.coli DNA ligase), Taq polymerase etc	PGD in Molecular & Biochemical Technology	PGD MB 102
	Theory	Innate immunity. Organization of the immune system: primary.	PGD in Molecular & Biochemical Technology	PGD MB 103

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	Practical	To study abnormal human karyotype. Smear technique to demonstrate sex chromatin in buccal epithelial cells. To study life cycle of Drosophila. Preparation of media for E.coli auxotrophic mutants.	B.Sc. Biological Sciences Sem V	Genetics
	Practical	To study abnormal human karyotype. Smear technique to demonstrate sex chromatin in buccal epithelial cells. Setting a monohybrid cross in Drosophila for studying autosomal and sex-linked inheritance.	B.Sc. (H) Biochemistry Sem V	Concepts in Genetics
	Practical	Critical appreciation of a documentary/ film based on happiness and wellbeing can be undertaken by the students. Special lecture session on Joy of Mindfulness. Field session on laughter therapy.		The Art of Being Happy (VAC)
	Practical	Production of Ethanol/Acetic acid from waste material. Identification of waste from agriculture and food processing. Identification of co-products from F&V industry, estimation and utilization to develop value added products.		Food Waste and By- product Utilisation (SEC)
November	Theory	Various DNA modifying enzymes used in cloning: RNA Polymerases (T3, T7, SP6), Reverse Transcriptase (AMV, MoMLV),	PGD in Molecular & Biochemical Technology Sem I	PGD MB 102
	Theory	Secondary lymphoid organs. myeloid cells.	PGD in Molecular & Biochemical Technology Sem I	PGD MB 103
	Practical	To study population genetics and calculation of allelic and genotype frequencies. Study of Allium karyotype (normal and abnormal) Study of linkage, recombination, gene mapping using marker based data from Drosophila. Screening for an auxotrophic mutant in E.coli.	B.Sc. Biological Sciences Sem V	Genetics
	Practical	To study population genetics and calculation of allelic and genotype frequencies. Induction of polyploidy in onion roots. Squash preparation of salivary glands of Dipterian larva to observe polytene chromosome.	B.Sc. (H) Biochemistry Sem V	Concepts in Genetics
	Practical	Community surveys of the facilities promoting positive mental health practices such as yoga and meditation centres, recreation clubs and parks for youth and senior citizens. Extending help and Social service by visiting old age homes/ hospitals/ slum areas or any other disadvantage group.		The Art of Being Happy (VAC)

	Practical	Identification of waste from animal industry and utilization to develop value added products. Identification of co-products from dairy industry, estimation and utilization to develop value added products. Identification of co-products from cereal industry, estimation and utilization to develop value added products.		Food Waste and By-product Utilisation (SEC)

Signature of the teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2022-23 Even Semester

Name of the Faculty: Dr Usha Yadav

Department: Biochemistry

Semester: I

Month		Topics	Course	Paper Code/Name
September	Theory	Linkers, adapters, conversion adapters, homopolymer tailing	PGDMB Sem I	Recombinant DNA Technology
	Theory	Definitions/Factors of Happiness: Environmental and Social, Physical, emotional and psychological well-being for happiness	VAC-III Sem III	The art of being Happy
	Practical	Sessions for the actualization of innate creative potential- (Music, Drawing, Calligraphy, Dramatics)	VAC-III Sem III	The art of being Happy
	Practical	To understand Ayurveda and Indian food cultures, To classify the commonly consumed food items according to Sattvic, Rajasi, Tamasic foods	VAC-I Sem I	Ayurveda and Nutrition
	Practical	Nutrients and their sources, Nutrient profiling of commonly consumed food items	SEC-1 Sem-I	Healthy and sustainable food choices
	Practical	Electroimmunoprecipitation: Counter immuno-electrophoresis,	PGDMB Sem I	Immunology-I
October	Theory	Biology of plasmids (conjugative, nonconjugative, relaxed and stringent control of copy number, incompatibility) Plasmid based vectors (one step and two-step selection), Biology of Lambda phage (lytic versus lysogenic cycle) λ bacteriophage based vectors (insertional and replacement) Conduct of Mid-term Examination	PGDMB Sem I	Recombinant DNA Technology
	Theory	Physiological and hormonal basis of happiness, Coping with Stress: A life saving skill, Panch Kosh Theory & Idea of Well-Being Conduct of Mid-term Examination	VAC-III Sem III	The art of being Happy

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	Practical	Workshop on “The joy of mindfulness”, Outdoor activities- meditation, games	VAC-I Sem I	The art of being Happy
	Practical	To study ingredients and preparation of different Regional Food of India, To study food behaviour of family members and analyse “Nutrition and lifestyle transition over the years”	VAC-III Sem III	Ayurveda and Nutrition
	Practical	Food labels and basics of nutrient profiling models to classify foods as HFSS, The concept of portion/serving sizes and portion control, Estimation of energy and nutrient density of selected food products using nutrient composition database Conduct of Mid-term Examination	SEC-1 Sem-I	Healthy and sustainable food choices
	Practical	Electroimmuno-precipitation : Counter immuno-electrophoresis, Immuno diffusion : Single radial immunodiffusion, Quantitative precipitation test	PGDMB Sem I	Immunology-I
November	Theory	In vitro packaging; Biology of M13 bacteriophage, M13 phage based vectors, phagemids High capacity vectors: cosmids, P1 phage based vectors, PACs, yeast artificial chromosomes,	PGDMB Sem I	Recombinant DNA Technology
	Theory	Idea of Self and other, Hierarchy and stages of happiness, Culture and Happiness, Interpersonal Relationship: Comparative Perspective, Towards Self-Actualization	VAC-III Sem III	The art of being Happy
	Practical	Critical appreciation of a film based on Happiness and Well-being, Hands-on Happiness: Gardening, Sharing of student’s cooking experience in the form of audio-video presentations	VAC-III Sem III	The art of being Happy
	Practical	To study the food consumption patterns and intake of incompatible food: Viruddha Ahara, Pathya; Apathya; Viprita Ahaar, Self analysis of adopted lifestyle: Dincharya and Ritucharya, To study FSSAI regulations on Ayurvedic Aahar	VAC-I Sem I	Ayurveda and Nutrition
	Practical	Planning and preparation of: Snacks, Soups and Salads, Desserts, Meal combinations, Identification of nutritious food sources which have minimal impact on the environment	SEC-1 Sem-I	Healthy and sustainable food choices
	Practical	Preparation of lymphocytes from spleen, Passive agglutination using inert latex particles	PGDMB Sem I	Immunology-I

December	Theory	bacterial artificial chromosomes. Advantages of each vector	PGDMB Sem I	Recombinant DNA Technology
	Theory	Measuring happiness: Key indicators, Happiness Index, India in Global Happiness Indices	VAC-III Sem III	The art of being Happy
	Practical	Sharing of students experience and learning outcome of the course	VAC-III Sem III	The art of being Happy
	Practical	Compilation of project report and revision	VAC-I Sem I	Ayurveda and Nutrition
	Practical	Case study on understanding food supply chain and carbon footprints of any commonly consumed foods	SEC-1 Sem-I	Healthy and sustainable food choices
	Practical	Revision and mock test for practical	PGDMB Sem I	Immunology-I

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
(Aug-Nov 2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Prof. Shukla Saluja

Department: BOTANY

Semester: I/III/V

Month		Topics	Course	Paper
August	Theory	Introduction of Biostatistics. History, statistical terms, Basic principles of biostatistics	B.Sc. (H) Botany Sem V	BHDSE-2 Biostatistics
		Unit 2: Cell as a unit of structure and function. Characteristics of prokaryotic and eukaryotic cells. Origin of eukaryotic cell (endosymbiotic theory)	B.Sc. (H) Botany Sem I	DSC 2-Cell Biology: Organelles and Biomolecules
	Practicals	Study of cell and its organelles with the help of electron micrographs and other digital resources.	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
		Study of plant cell structure with the help of epidermal peel mount of Allium cepa/ Rhoeo/ Crinum.		
		Nostoc : Study of vegetative, reproductive structures from temporary mounts and permanent slides; Ultrastructure of Heterocyst through Electron Micrographs.	B.Sc. (H) Botany Sem III	DSC 2- Phycology - The World of Algae
		Chlorella : Study of vegetative, reproductive structures from temporary mounts. Study of ultrastructure through Electron Micrographs.		
September	Theory:	To study cytoplasmic streaming in <i>Hydrilla</i> .	B.Sc.(P) Life Sciences Sem III	LS DSC- Plant cell and developmental biology
		Study of plant cells: types of stomata (through peel mounts), trichomes, sclerenchyma, xylem (through maceration).		
	Tutorials			
September	Theory:	Aims of biostatistics ,variables- measurements, applications, Limitations and Importance of biostatistics Importance of biostatistics in modern research.	B.Sc. (H) Botany Sem V	BHDSE -2 Biostatistics
		Biomolecules: Types of chemical bonds and their biological significance, structural and biological roles of carbohydrates	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
	Practicals:	Microchemical tests for carbohydrates (reducing, non-reducing, sugars and starch), lipids and proteins	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
		Separation of chloroplast pigments by paper chromatography		
		Separation of amino acids by paper chromatography		
		Volvox : Study of vegetative, reproductive structures from temporary mounts and permanent slides. Oedogonium : Study of vegetative, reproductive structures from temporary mounts and permanent slides. Coleochaete : Study of vegetative, reproductive structures from temporary mounts and permanent slides.	B.Sc. (H) Botany Sem III	DSC 2- Phycology - The World of Algae

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		Chara: Study of vegetative, reproductive structures from temporary mounts, specimens and permanent slides.		
		Study organs structure through temporary preparations- Transverse section of dicot stem- <i>Helianthus/Cicer</i> , stem with secondary growth – <i>Helianthus/Cicer</i> etc. Transverse section of monocot stem - <i>Zea mays</i> Transverse section of dicot root: primary and with secondary growth- <i>Cicer/Vigna</i> etc., monocot root - <i>Zea mays</i> Vertical section of dicot and monocot leaf Study anomalous secondary growth through permanent slides/photomicrographs: <i>Salvadora/ Bignonia, Dracaena</i>	B.Sc.(P) Life Sciences Sem III	LS DSC- Plant cell and developmental biology
October	Theory:	Collection of data. Classification of data and frequency distribution. Presentation of data-types of graphs. Measures of central tendency.	B.Sc. (H) Botany Sem V	BHDSE-2 Biostatistics
		Biomolecules: structural and biological roles of lipids, proteins and nucleic acid	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
	Practicals:	Study the effect of organic solvent and temperature on membrane permeability	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
		Demonstration of the phenomenon of protoplasmic streaming in Hydrilla leaf.		
		Demonstration of the phenomenon of plasmolysis and deplasmolysis.		
		Vaucheria: Study of vegetative, reproductive structures from temporary mounts and permanent slides. Diatoms and Dinoflagellates: Study vegetative, reproductive structures of at least two taxa from water bodies. Ectocarpus: Study of vegetative, reproductive structures from temporary mounts and permanent slides.	B.Sc (Hons.) Botany, Sem- III	DSC 2- Phycology - The World of Algae
		Study of pollen viability (TTC/FDA). Study reproductive structures through photographs/micrographs/permanent slides/specimens: Transverse section of anther with wall layers, secretory and amoeboid tapetum Microsporogenesis through micrographs of transverse section anther, Pollen exine patterns (any four types) Types of ovule, associated structure (obturator, aril, caruncle) Mature Polygonum type of embryo sac and ultrastructure of egg apparatus Study of shoot apical meristem and root apical meristem, parenchyma, collenchyma, phloem, laticifers through permanent slides/micrographs.	B.Sc.(P) Life Sciences Sem III	LS DSC- Plant cell and developmental biology
	Tutorials:			


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November	Theory:	Measures of central tendency - mean, median, mode, merits & demerits of harmonic and geometric mean. Measures of dispersion - range, standard deviation, mean deviation, standard error.	B.Sc. (H) Botany Sem V	BHDSE-2 Biostatistics
		ATP: structure and its role as an energy currency molecule.	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
	Practicals:	Demonstration of separation of biomolecules by dialysis Revision of some experiments Mock Test	B.Sc. (H) Botany Sem I	DSC 2- Cell Biology: Organelles and Biomolecules
		<i>Sargassum</i> : Study of vegetative, reproductive structures from temporary mounts, specimens and permanent slides. <i>Polysiphonia/ Gracilaria</i> : Study of vegetative, reproductive structures from temporary mounts and permanent slides. Mock Test	B.Sc. (H) Botany Sem III	DSC 2- Phycology - The World of Algae
		Calculation of percent pollen germination in any one medium through sitting drop culture//Hanging drop culture. Dissection of embryo/endosperm from developing seeds. Study of cell organelles through electron micrographs – nucleus, mitochondria, chloroplast, mitochondria, dictyosomes, endoplasmic reticulum Study of cell organelles (through permanent slides/photographs)– nucleus (Feulgen/acetocarmine staining); mitochondria (Janus green B staining); cell wall (PAS staining) Mock Practical	B.Sc.(P) Life Sciences Sem III	LS DSC- Plant cell and developmental biology
	Tutorials:			

Shukla Sahaji

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SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Pooja Gokhale Sinha
Department: Botany

Semester: I/III/V 2022-23

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Introduction to paper and discussion about the paper Unit-Mineral Nutrition Introduction, Essential and beneficial elements, methods of study and use of nutrient solutions	B.Sc. (H) Botany Semester V	Plant Physiology
		Unit-3 Microgametogenesis, Pollen wall, Male germ unit, NPC system, pollen wall proteins, pollen viability, storage, unique features, palynology	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		Unit 3 Community Ecology: Structure and characters of a community, Community dynamics	B.Sc. (H) Biological Sciences Semester III	Functional Ecology
	Practicals	- To determine osmotic potential of plant cell sap by plasmolytic method - Study of antherwall and its ontogeny, amoeboid and glandular tapetum, MGU - Study of uninucleate, bicelled and dehiscent anther stages - Ecological Instruments - Ecological adaptation	B.Sc. (H) Botany Semester V B.Sc. (H) Botany Semester V B.Sc. Biological Sciences III	Plant Physiology Reproductive biology of Angiosperms Functional Ecology
	Tutorials	-----		
SEPTEMBER	Theory:	Unit-2 Mineral nutrition Criteria for essentiality, roles for essential elements. Chelating agents, phytosiderophores Unit-4: Types and structure of ovule, special structures, Female gametophyte development, Ultrastructure of mature embryo sac, Female germ unit Unit 3: Community Ecology: Succession, Hydrosere, Xerosere, Concept of climax	B.Sc. (H) Botany Semester V B.Sc. (H) Botany Semester V B.Sc. Biological Sciences, Semester III	Plant Physiology Reproductive biology of Angiosperms Functional Ecology

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	Practicals:	- To determine water potential of given tissue by weight method. - To study the effect of two environmental factors (light and wind) on transpiration by excised twig - To calculate stomatal index and stomatal frequency from two surfaces of leaves of a mesophyte and xerophytes. - To calculate the area of open stoma and percentage of leaf area open through stomata in a mesophyte and xerophytes (both surfaces).	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of pollen grains, pseudomonads, polyads, pollinia - Ultrastructure of pollen wall - Study of pollen viability, calculation of percent pollen germination in different media - Types of ovules, and special structures- obturator, aril caruncle, hypostase, endothelium	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		- Determine the minimum quadrat size of a given area by species area curve - Determine frequency of herbaceous vegetation - Determine density and abundance of herbaceous vegetation	B.Sc. Biological Sciences, Semester III	Functional Ecology
	Tutorials:	-----		
OCTOBER	Theory:	Unit 3: Soil as nutrient reservoir, transport of ions across cell membrane (Fick's law), Facilitated diffusion, carrier and channel proteins	B.Sc. (H) Botany Semester V	Plant Physiology
		Unit-5: Pollination and fertilization, mechanisms and types, double fertilization	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		Unit 4 Ecosystem Ecology: Concepts, components and types of ecosystems, Pond ecosystem in details, BOD, eutrophication	B.Sc. Biological Sciences, Semester III	Functional Ecology

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	Practicals:	- To study the phenomenon of seed germination - To study the induction of amylase activity in germinating barley grains - To study the effect of different concentrations of IAA on coleoptiles elongation - To demonstrate bolting	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of female gametophyte, , types, ultrastructure of egg apparatus - Intra-ovarian and test tube pollination through photographs - Dissection of developing seeds for endosperm - Study of dicot embryo development, study of suspensor	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		Study plant microbe interactions by preparing temporary slides of VAM/ root nodules	B.Sc. Biological Sciences, Semester III	Functional Ecology
	Tutorials:	-----		
NOVEMBER	Assignment :	Given to all students for respective papers		
	Theory:	Unit-2: Active absorption, proton ATPase, electrochemical gradient, ion flux, uniport, co-transport, role of mycorrhizae Unit-6: Self-incompatibility, basic concepts, methods to overcome incompatibility Unit 4: Energy flow in ecosystems, Linear and Y-shaped model, Black box model, food web, ecological pyramids, ecological efficiencies	B.Sc. (H) Botany Semester V B.Sc. (H) Botany Semester V B.Sc. Biological Sciences, Semester III	Plant Physiology Reproductive biology of Angiosperms Functional Ecology
	Practicals:	- To demonstrate effect of auxins on rooting - To demonstrate suction due to transpiration - To demonstrate fruit ripening	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of seed dispersal mechanisms - Dissection of seeds for embryos at different developmental stages. - Study of pollen cytology - To perform pollen culture - To isolate protoplasts from pollen grains - To study pollen-pistil interactions	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		- Determination of dissolved oxygen in water samples by winklers' method - Plotting of survivorship curve from hypothetical life table data - Mark recapture method for determining population density of animals	B.Sc. Biological Sciences, Semester III	Functional Ecology
	Tutorials:	-----		


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	<u>Test</u>	Conducted for all papers		
DECEMBER	Theory:	Revision and test	B.Sc. (H) Botany Semester V	Plant Physiology
		Revision and test	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
	Practicals:	• Repetitions of experiments which students feel • Revision and test	B.Sc. (H) Botany Semester V	Plant Physiology
		• Repetitions of experiments which students feel • Revision and test	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		• Repetitions of experiments which students feel • Revision and test	B.Sc. Biological Sciences, Semester III	Functional Ecology
	Tutorials:	-----		

Pokhale

V. Venkateswara

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sunita Yadav

Department: Botany

Semester: I/III/V 2022-23

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Introduction to paper and discussion about the paper Unit-1 Plant water relationship: water potential and its components, water absorption by roots, aquaporins, pathway of water movement, root pressure, guttation, ascent of sap, transpiration	B.Sc. (H) Botany Semester V	Plant Physiology
		Unit-6 Embryo: general pattern of development of dicot and monocot embryo	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
	Practicals	To determine osmotic potential of plant cell sap by plasmolytic method	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of anther wall and its ontogeny, amoeboid and glandular tapetum, MGU - Study of uninucleate, bicelled and dehiscent anther stages - To study cytoplasmic streaming in <i>Hydrilla</i>. - To study cell organelles through EM- nucleus, mitochondria, chloroplast, dictyosomes, ER and through staining methods (Feulgen, Janus green, PAS) - Study of plant cell types: stomata, trichomes, sclerenchyma, xylem - Study of RAM, SAM, parenchyma, collenchyma, phloem, laticifers	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
	Tutorials	-----	B.Sc. Life Sciences Semester III	Plant cell and developmental Biology
SEPTEMBER	Theory:	Unit-1: Mechanism of stomatal movement, starch sugar hypothesis, proton transport theory, blue light stimulated response Unit-5 Plant Growth regulators: Discovery, structure, precursor, bioassay and physiological roles and commercial applications of auxins, cytokinins, gibberellins	B.Sc. (H) Botany Semester V	Plant Physiology
		Unit-6 Embryo: Suspensor: structure and functions; embryo-endosperm relationship, nutrition of embryo, unusual features, embryo development in <i>Paeonia</i>	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms


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	Practicals:	- To determine water potential of given tissue by weight method. - To study the effect of two environmental factors (light and wind) on transpiration by excised twig - To calculate stomatal index and stomatal frequency from two surfaces of leaves of a mesophyte and xerophytes. - To calculate the area of open stoma and percentage of leaf area open through stomata in a mesophyte and xerophytes (both surfaces).	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of pollen grains, pseudomonads, polyads, pollinia - Ultrastructure of pollen wall - Study of pollen viability, calculation of percent pollen germination in different media - Types of ovules, and special structures- obturator, aril caruncle, hypostase, endothelium	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		- Study of organs through temporary preparations: TS dicot stem (young and with secondary growth), - TS monocot stem, dicot and monocot root - VS monocot and dicot leaf - Study of anomalous secondary growth in <i>Salvadora</i>, <i>Bignonia</i>	B.Sc. Life Sciences Semester III	Plant cell and developmental Biology
	Tutorials:	-----		
OCTOBER	Theory:	Unit 5: Discovery, structure, precursor, bioassay and physiological roles and commercial applications of ethylene, abscisic acid, mode of action of auxins, Brassinosteroids, Jasmonic acid Unit-6 Physiology of flowering: photoperiodism, Flowering stimulus, florigen, CO-FT model, ABC model of flowering, vernalization, seed dormancy	B.Sc. (H) Botany Semester V	Plant Physiology
		Unit-7 Endosperm: types (2 examples each), development, structure and function	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms

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	Practicals:	- To study the phenomenon of seed germination - To study the induction of amylase activity in germinating barley grains - To study the effect of different concentrations of IAA on coleoptiles elongation - To demonstrate bolting	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of female gametophyte, types, ultrastructure of egg apparatus - Intra-ovarian and test tube pollination through photographs - Dissection of developing seeds for endosperm - Study of dicot embryo development, study of suspensor	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		- Study of reproductive structures through photographs/micrographs/permanent slide/specimens - TS anther wall layers, secretory and amoeboid tapetum - Microsporogenesis through TS anther - Pollen exine patterns - Types of ovule, obturator, aril, caruncle - Mature <i>Polygonum</i> type embryo sac and ultrastructure of egg apparatus	B.Sc. Life Sciences Semester III	Plant cell and developmental Biology
	Tutorials:	-----		
	Assignment :	Given to all students for respective papers		
NOVEMBER	Theory:	Unit-7: Phytochrome: Discovery, Chemical nature, role of phytochrome in photomorphogenesis, LER, HIR, mode of action Unit-4: Translocation in phloem: Experimental evidence, source and sink relationship, pressure-flow model, phloem loading and unloading	B.Sc. (H) Botany Semester V	Plant Physiology
		Unit-9 Seed: structure, importance and dispersal mechanisms, adaptation with two examples each	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
	Practicals:	- To demonstrate effect of auxins on rooting - To demonstrate suction due to transpiration - To demonstrate fruit ripening	B.Sc. (H) Botany Semester V	Plant Physiology
		- Study of seed dispersal mechanisms - Dissection of seeds for embryos at different developmental stages. - Study of pollen cytology - To perform pollen culture - To isolate protoplasts from pollen grains - To study pollen-pistil interactions	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		- Study of pollen viability - Calculation of percent pollen germination - Dissection of embryo/endosperm	B.Sc. Life Sciences Semester III	Plant cell and developmental Biology
	Tutorials:	-----		
	Test	Conducted for all papers		प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

DECEMBER	Theory:	Revision and test	B.Sc. (H) Botany Semester V	Plant Physiology
		Revision and test	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
	Practicals:	• Repetitions of experiments which students feel • Revision and test	B.Sc. (H) Botany Semester V	Plant Physiology
		• Repetitions of experiments which students feel • Revision and test	B.Sc. (H) Botany Semester V	Reproductive biology of Angiosperms
		• Repetitions of experiments which students feel • Revision and test	B.Sc. Life Sciences Semester III	Plant cell and developmental Biology
	Tutorials:	-----		

Jadav

V. B. K.

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SEMESTER WISE TEACHING PLAN (2022-2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Navneet Kumar
Semester: I//III/V

Department: Botany

Month		Topics	Course	Paper
August	Theory:	- Overview of recombinant DNA technology - Restriction-modification systems	B.Sc.(P.) Biological Science. Sem V	Biotechnology
		DNA: Miescher to Watson and Crick- historic perspective	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		General laboratory safety	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Practical:	Isolation of plasmid DNA from E. coli cells	B.Sc.(P.) Biological Science. Sem V	Biotechnology
		- To study prokaryotic cells (bacteria), viruses, eukaryotic cells with the help of light and electron micrographs. - Study of the photomicrographs of cell organelles - To study the structure of plant cell through temporary mounts	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		Introduction	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Tutorials:			
September	Theory:	- Restriction endonucleases and other enzymes used in manipulating DNA molecules, - Cloning vectors used in prokaryotes and eukaryotes, - plasmid vectors (pBR322, pUC8, pGEM3Z), - bacteriophage based vectors (M13 and lambda)	B.Sc.(P.) Biological Science. Sem V	Biotechnology

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	- Griffith's and Avery's transformation experiments, - Hershey-Chase bacteriophage experiment, - DNA structure, types of DNA, types of genetic material. - DNA replication (Prokaryotes and eukaryotes): bidirectional replication, semi—conservative, semi discontinuous	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
	- good laboratory practices, - biosafety measures (first-aid practices to be followed in case of burn, acid and injury), - safety symbols, lab safety equipments (Fireextinguisher, fume hood, safety glasses), - classes of laboratory chemicals, maintenance and handling of chemicals (Labels, Quality - LR/ AR/ Molecular biology grade/ HPLC grade; Expiry date; Precautions for use), - Disinfectants, Biocontainment, Disposal of hazardous chemicals, radioactive and biological waste, Laboratory waste management	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
Practical:	- Digestion of plasmid DNA with restriction enzymes and agarose gel electrophoresis - Amplification of a DNA fragment by PCR	B.Sc.(P.) Biological Science. Sem V	Biotechnology
	- To study the structure of animal cells by temporary mounts-squamous epithelial cell and nerve cell - Preparation of temporary mounts of muscle fiber - To prepare temporary stained preparation of mitochondria from striated muscle cells/cheek epithelial cells using vital stain Janus green	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology

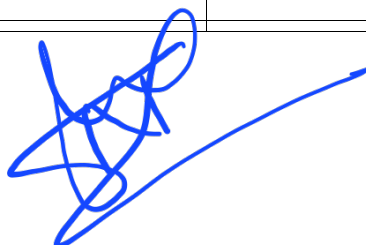
		- Preparation of solution- molar, molal, normal, percentage, stock, standard and serial dilution - Determining pH of solutions (pH paper, Universal indicator, pH meter) and preparation of buffers (Phosphate, Tris-Cl, Electrophoresis buffers- TBE/TAE) - Working of instruments - light microscope, autoclave, laminar air flow, spectrophotometer, centrifuge, gel electrophoresis unit (Agarose & Poly acrylamide gels) - Temporary peel mount slide preparation and staining (safranin and acetocarmine).	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Tutorials:			
October	Theory	high capacity vectors (BAC and cosmid), vectors for yeast, animals and plants, Joining DNA fragments, linkers and adaptors, introduction of DNA into bacterial cells and selection for recombinants, direct selection, colony and plaque hybridization, Polymerase chain reaction and DNA sequencing.	B.Sc.(P.) Biological Science. Sem V	Biotechnology
		- RNA priming, θ mode of replication, replication of linear, ds-DNA, replicating the 5' end of linear chromosome including replication enzymes. - Types of structures of RNA (mRNA, tRNA, rRNA)	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		Weighing balance (Top loading and Analytical), pH meter (calibration and use), magnetic stirrer, pipettes, autoclave, laminar airflow, BOD incubator, incubator shaker, micrometer, haemocytometer, spectrophotometer, Agarose gel electrophoresis unit, SDS PAGE unit, centrifuge, distillation unit, conductivity meter, Lux meter.	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Practical	- Transformation of E. coli cells with plasmid DNA - Selection of transformants by antibiotic resistance	B.Sc.(P.) Biological Science. Sem V	Biotechnology

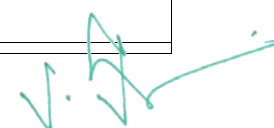

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		- Study of mitosis and meiosis (temporary mounts and permanent slides) - Study the effects of temperature, organic solvents on semi permeable membrane - Demonstration of dialysis of starch and simple sugar - Study of plasmolysis and deplasmolysis on <i>Rhoeo</i> leaf	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		- Calculate cell size using micrometer. - To calculate number of cells using haemocytometer per unit volume (using pollen/spores) - Preparation of LB medium, growth and maintenance of bacterial cultures (liquid –serial dilution method; and semi-solid cultures - streak, spread and pour plates) - Isolation of genomic DNA from E. coli and plant leaf material, Agarose gel electrophoresis.	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Tutorial			
	Theory	- Vectors for expression of foreign genes in E. coli, cassettes and gene fusions, Challenges in producing recombinant protein in E. coli, Production of recombinant protein by eukaryotic cells, Fusion tags and their role in purification of recombinant proteins, - Characteristics of cells in culture, Culture media – composition and preparation	B.Sc.(P.) Biological Science. Sem V	Biotechnology
November		- RNA polymerase- various types; Translation (Prokaryotes and eukaryotes), genetic code. - Prokaryotes: Lac operon	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		- Microscopes (Dissecting, compound, electron microscope), Fixation and Preservation (for light and electron microscopy); staining, mounting; basic introduction to other types of microscopes (confocal, fluorescence) - Units of measurements and conversion from one unit to another,	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Practical	- Aseptic culture of explants on nutrient media - Practice and Internal Assessment	B.Sc.(P.) Biological Science. Sem V	Biotechnology


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		• Measure the cell size (either length or breadth/diameter) by micrometry. • Study the structure of nuclear pore complex by photograph (from Gerald Karp) Study of special chromosomes (polytene&lampbrush) either by slides or photographs. • Study DNA packaging by micrographs. • Preparation of the karyotype and ideogram from given photograph of somatic metaphase chromosome.	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		• Calculation of mean, mode, median, standard deviation using data set (collected from experiments 5,6. • Using software to draw tables, graphs and calculating descriptive statistics(Microsoft Excel) • Laboratory safety equipments (Fire extinguisher, Fume hood, safety glasses) • Mounting of a properly dried and processed plant specimen with herbarium label	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Tutorial			
	Theory	• Balanced salt solution - chemical, physical and metabolic functions of different constituents of culture medium	B.Sc.(P.) Biological Science. Sem V	Biotechnology
December		• Prokaryotes:Lac operon	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		• measurement of volumes of liquids, Weighing, calculations: scientific notations, powers, logarithmand fractions	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Practical	• Internal Assessment	B.Sc.(P.) Life Sciences. Sem V	Cell and Molecular Biology
		• Internal Assessment	General Elective I	Basic Laboratory and field skills in Plant Biology & Allied Sciences
	Tutorial			




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SEMESTER WISE TEACHING PLAN (2023- 24)
SRI VENKATESWARA COLLEGE
Name of the Faculty: Dr. Madhu Raina
Department: Botany
Semesters: I, III and V (Aug-Nov, 2023)

Month		Topics	Course	Paper Name
August	Theory	- Structure and functions of tissues (simple and complex) - Structure of stem, root, and leaf (dicot)	B.Sc. (P.) Life Sciences Sem III	DSC-LS- Plant Cell and Developmental Biology
		- Origin of bryophytes through green algal ancestor - Morphology and Reproduction of <i>Marchantia</i>	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		- History (Contribution of GB Amici, W Hofmeister, E Strasburger, SG Nawaschin, P Maheshwari, BM Johri, WA Jensen, J Heslop-Harrison) - Scope of Reproductive Biology	B.Sc. Botany (Hons.) Sem V	CC-II- Reproductive Biology of Angiosperms
		- General growth and reproduction in plants: plant growth curves, Juvenile, Vegetative, and Reproductive phases in growth - Senescence and abscission	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Practicals	<i>Riccia</i> – Morphology: Vegetative and reproductive structures (Specimen). <i>Marchantia</i> - Morphology; V.S. of thallus through Gemma cup, whole mount of Gemmae (temporary slides); V.S. of Vegetative thallus, Antheridiophore, Archegoniophore, L.S. of Sporophyte (permanent slides). <i>Pellia</i> - Morphological details through specimens/permanent slides; L.S. Sporophyte (permanent slide).	B.Sc. Botany (Hons) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		- Study different stages of micro and megagametogenesis in angiosperms-through permanent slides - To study per cent pollen germination using different media	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Tutorials:	•		
September	Theory	- Philosophy of science, the scientific method - Importance of observation, questions and experimental design, - Rational thinking, myths vs. Facts	Value Addition Course Sem I	Science and Society

		- Structure of stem, root, and leaf (monocot) - Brief mentioning of anomalous secondary growth in stem of <i>Salvadora/Bignonia</i> and <i>Dracaena</i>. - Epidermal system: classification of stomata (Metcalf and Chalk), trichomes	B.Sc. (P.) Life Sciences Sem III	DSC-LS- Plant Cell and Developmental Biology
		- Morphology and Reproduction of <i>Anthoceros</i> and <i>Funaria</i> with fertilization & spore dispersal mechanism. - Progressive sterilization of sporogenous tissue	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		- Anther Wall: Structure and Functions - Microsporogenesis - Callose depositions and its significance	B.Sc. Botany (Hons.) Sem V	CC-II- Reproductive Biology of Angiosperms
		- Sexual reproduction in angiosperms: Structure and organisation of flower - Organization of typical tetrasporangiate anther and eight nucleate embryo sac (<i>Polygonum</i> type) - Pre-fertilization events in plants - Microgametogenesis and megagametogenesis, - Anther dehiscence, pollination, pollen-pistil interaction, pollen germination, double fertilization - Pre -fertilization barriers to incompatibility.	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Practicals	- Observing and documenting flora and fauna of College campus/city. - Visits to science laboratories in the College or neighbouring College/Institute	Value Addition Course Sem I	Science and Society
		<i>Anthoceros</i> – Morphology; V.S. of thallus (permanent slide), Dissection of sporophyte (to show stomata, spores, pseudoelaters, columella) (temporary slide). <i>Funaria</i> - Morphology; T.S. Stem (temporary and permanent slides both); Sporophyte: operculum, peristome, spores (temporary slides); Antheridial and archegonial heads, L.S. of capsule, W.M. of protonema (Permanent slides).	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms



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		• <i>Psilotum</i> – Morphology (specimen); T.S. of rhizome, stem and synangium (permanent slides). • <i>Selaginella</i> – Morphology (specimen); W.M. of leaf with ligule, T.S. of stem, T.S. of rhizophore (permanent slide), L.S. of strobilus, W.M. of microspore, megaspore (temporary slides).		
		• To study embryo development in flowering plant/slides • To dissect out endosperm and embryo from angiosperm seeds	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Tutorial:			
October	Theory	• Water harvesting structures and Practices • Construction, architecture and design - use of natural environment-friendly designs and materials • Agriculture including domestication of plants and animals. • Contributions of Indian scientists since ancient times and the contributions of women in science.	Value Addition Course Sem I	Science and Society
		• Flower development (ABCDE model) • Anther and its wall layers and microsporogenesis and microgametogenesis • Pollen wall (intine, exine), male germ unit • Ovule: General structure, megasporogenesis (monosporic, bisporic, tetrasporic) and Megagametogenesis. • Ultrastructure and significance of female germ unit	B.Sc. (P.) Life Sciences Sem III	DSC-LS- Plant Cell and Developmental Biology
		• Ecological and economic importance of bryophytes with special reference to <i>Sphagnum</i>. • Fossil pteridophytes (<i>Rhynia</i>). Morphology and Reproduction of <i>Selaginella</i>, <i>Equisetum</i>.	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		• Polyembryony and Apomixis: Introduction, Classification, causes and applications	B.Sc. Botany (Hons.) Sem V	CC-II- Reproductive Biology of Angiosperms
		• Post fertilization events in plants: Types	B.Sc. (Hons.)	CC-XI-Growth

		- of embryogenesis, - Endosperm development, types of endosperm, - Seed formation, seed dispersal: mechanism and agents, - Apomixis: Types and relevance, genetic regulation.	Biological Science) Sem V	and Reproduction
	Practicals	- Visits to science museums, planetarium. - Visits to biodiversity parks and nature walks. - Participation in a citizen science project/initiative.	Value Addition Course Sem I	Science and Society
		<i>Equisetum</i> – Morphology (specimen), T.S. of internode, L.S. of strobilus, T.S. of strobilus, W.M. of sporangiophore, W.M. of spores (wet and dry) (temporary slide). <i>Pteris</i> - Morphology, T.S. of rachis, V.S. of sporophyll (temporary slides), T.S. of rhizome, W.M. of prothallus with sex organs and young sporophyte (permanent slide). <i>Cycas</i> – Morphology, T.S. of coralloid root, T.S. of root (permanent slide); T.S. of rachis, V.S. of leaflet, V.S. of microsporophyll, W.M. of spores (temporary slides); L.S. of ovule (permanent slide).	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		- Study of apical and lateral meristem by permanent slides - Survey of dispersal mechanisms of seeds	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Tutorial			
November	Theory	- Public Health: Nutrition, Hygiene, Physical and Mental Health, Vaccines and Antibiotics, - Antimicrobial resistance; Food Security - Green Revolution, White Revolution - IT Revolution, E-Governance - Clean Energy, Renewable Energy - Space Science and Exploration - Evolution, Ecology and Environment	Value Addition Course Sem I	Science and Society
		- Pollen tube pathway - Pollen tube entry into ovule and embryo sac (porogamy, mesogamy and chalazogamy)	B.Sc. (P.) Life Sciences Sem III	DSC-LS- Plant Cell and Developmental Biology

		• Double fertilization		
		• Morphology and Reproduction of <i>Pteris</i> • Economic importance.	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		• Germline transformation: Pollen grain and ovules through pollen tube pathway method	B.Sc. Botany (Hons.) Sem V	CC-II- Reproductive Biology of Angiosperms
		• Post-embryonic meristem in plants with special reference to <i>Arabidopsis</i> • embryogenesis. • Role of meristem in differentiation, shoot apical meristem, root apical meristem, lateral meristem (vascular and cork cambium) • Floral meristem, ABC model of flowering, homeobox genes.	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Practicals	• Four practicals from suggested Experiments	Value Addition Course Sem I	Science and Society
		• <i>Pinus</i> - Morphology, T.S. of Needle, L.S. and T.S. of male cone, W.M. of microsporophyll (temporary slides); T.S. of stem, L.S. of female cone (permanent slide). • <i>Gnetum</i> - Morphology (stem, male & female cones); T.S. of stem, L.S. of ovule (permanent slide). • Botanical Excursion and submission of digital herbarium and report of two genera observed from bryophyte, pteridophyte and gymnosperm each.	B.Sc. Botany (Hons.) Sem III	DSC-8- Bryophytes, Pteridophytes and Gymnosperms
		• Repeating the practical (s), if required	B.Sc. (Hons.) Biological Science) Sem V	CC-XI-Growth and Reproduction
	Tutorial			

Madhu Rao
V. A.

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SEMESTER WISE TEACHING PLAN
(Aug-Nov 2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Manoj Thakur

Department: BOTANY

Semester : I/III/V

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Month		Topics	Course	Paper
August	Theory	Unit 1. Mendelian Genetics Mendelism: History; Principles of inheritance (numericals)	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		Unit 3: Radioisotopes: Use in biological Research, Autoradiography	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit 1. Mendelian Genetics Mendelism: History; Principles of inheritance (numericals) Unit 5: Genetic Defects-Variation in Chromosome number 3 hours Syndromes associated with chromosomal abnormalities: Down, Turner, Klinefelter, Edward and Patau.	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology
	Practicals	- To study mitosis in <i>Allium cepa</i> through squash preparation of root tips - ABO blood group testing using kits	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		- Study of Blotting techniques: southern, Northern, Western, DNA Fingerprinting, DNA sequencing, PCR through Photographs - Study of different microscopic techniques: Freeze fracture, freeze etching, negative staining, positive staining, FISH and Fluorescence microscopy	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		To study the syndrome through photographs (Klinefelter, Turner, Downs /Patau/Edwards)	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology
	Tutorials			
September	Theory:	Deviations [Incomplete dominance (Mirabilis flower color) and codominance (MN Blood groups)]; Multiple allelism (ABO blood groups); lethal alleles (dominant lethal – Huntington's disease and recessive lethal - Yellow coat color in mice); Epistasis (all 6 gene interactions); Pleiotropy (definition, example PKU); Penetrance and expressivity (definitions, differences, one example: polydactyly)	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		Unit 3: Radioisotopes: Phosphorimaging and Scintillation counting Unit 6: X-Ray diffraction, X-Ray crystallography, Electrophoresis (AGE, PAGE, SDS-PAGE), Blotting Techniques (Northern, Southern and Western)	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Deviations [Incomplete dominance (Mirabilis flower color) and codominance (MN Blood groups)]; Multiple allelism (ABO blood groups); lethal alleles (dominant lethal – Huntington's disease and recessive lethal - Yellow coat color in mice); Epistasis (all 6 gene interactions); Pleiotropy (definition, example PKU); Penetrance and expressivity (definitions, differences, one example: polydactyly)	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology

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	Practicals:	- To study the syndromes (Down's, Klinefelter's, Turner's, Edward's & Patau) through karyotype - Quadrivalents, lagging chromosomes, dicentric/inversion bridge through photographs/permanent slides - To calculate allelic and genotypic frequencies of human dominant and recessive traits using Hardy- Weinberg's principle - To understand the deviations of Mendelian dihybrid ratios (12:3:1, 9:3:4, 9:7, 15:1, 13:3, 9:6:1) involved using the seed mixture given. Genetic ratio calculated using Chi square analysis.	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		- Isolation of Chloroplasts by differential centrifugations. - To separate proteins using PAGE - To separate DNA using AGE	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		- To understand the genetic interaction involved using the given seed mixture. Genetic ratios to be calculated using Chi square analysis. - Pedigree analysis (autosomal dominant and recessive)	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology
October	Theory:	Chromosome theory of inheritance (points of parallelism); Polygenic inheritance (Nilsson-Ehle's crosses, definition, examples - skin colour, height, fruit weight; numericals); brief introduction to sex determination (Introduction to XX/XO in insects for discovery and XX/XY mechanism in human and Drosophila briefly, explain Barr body as consequence of Dosage Compensation).	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		Unit 2. Extra-Nuclear Inheritance 2 hours Chloroplast and mitochondrial genomes (Semi-autonomous nature of genomes); Chloroplast Inheritance: Variegation in Four O'clock plant; Mitochondrial inheritance in yeast; Maternal effect (Shell coiling in Snails). Unit 8: DNA fingerprinting as molecular signatures-applications :Forensics (case studies), Paternity testing, unique identity establishment, conservation, finding adulterants in food/drugs.	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit6: Mass spectrometry, Characterization of Proteins and Nucleic acids. Unit 5: Chromatography: principles, Paper chromatography, column Chromatography, TLC, GLC, HPLC	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit 1: Chromosomal theory of inheritance, Polygenic inheritance; Linkage and crossing over. Unit2: Extra-chromosomal Inheritance Chloroplast Inheritance: Variegation in Four O' clock plant; Mitochondrial inheritance: petite mutants in yeast; Maternal effect- shell coiling in snails. Unit 3: Sex determination: Mechanism of sex determination in Insects (Drosophila), Plants (<i>Melandrium</i> , <i>Coccinia</i>) and humans (Sex determination regions/genes-TDF, SRY and Testicular feminisation), Dosage compensation in humans.	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology
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	Practicals:	- Study of autosomal & sex-linked dominant & recessive inheritance through pedigree analyses. - To study Xeroderma pigmentosum, Sickle cell anaemia, albinism, haemophilia and colour blindness (Ishihara charts may be used to study colour blindness) - Reciprocal translocation through squash preparations of <i>Rhoeo</i> anthers	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		- To separate chloroplast pigment through column chromatography. - To separate sugars by TLC - To estimate protein's concentration through Lowry's Method.	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		- Pedigree analysis (Sex linked dominant and recessive) - To study/list human dominant and recessive traits and to observe the listed physical traits among the students present in the class. Analyse the results. - To study sex chromosomes in <i>Drosophila</i>, <i>Melandrium</i>, <i>Coccinia</i> and human through photographs.	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology
	Tutorials:			
November	Theory:	Unit 3. Linkage and crossing over (Discovery: Bateson & Punnett crosses in sweet pea, explain crossing over using Morgan's two factor crosses - Black body & Vestigial wings, Complete Linkage, Incomplete Linkage), Cytological basis of crossing over (Creighton and McClintock experiment in Maize); three factor crosses; interference and coincidence; Sex linkage (Morgan's Red & White eye crosses in <i>Drosophila</i>).	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		Unit 5: Ion exchange chromatography, Molecular sieve chromatography, Affinity Chromatography	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit 4: Genetic defects-Structural 3 hours Autosomal and sex linked, congenital defects: Hemophilia, Thalassemia, Sickle cell anemia, Phenylketonuria, Cystic fibrosis, pedigree analysis Unit 6: Heritable changes (mutations) and their causes: Physical and chemical mutagens, Transposable genetic elements and their role in mutations.	B.Sc (Hons.) Zoology, Sem-III	Inheritance in Biology
	Practicals:	- Demonstration of basic methods of plant breeding (hybridizations): Emasculation, bagging and tagging using available plant material in pots/gardens/field - To study meiosis in <i>Allium cepa</i> through squash preparation of anthers	B.Sc (Hons.) Botany, Sem-III	Genetics and Plant Breeding
		- Demonstration of ELISA. - Revision of some experiments - Mock Test	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences

	- To demonstrate variation in the ability to taste PTC (Phenylthiocarbamide) in a given population. - Chromosomal and gene mutations: Complex translocation ring, quadrivalents, lagging chromosomes, dicentric/inversion bridge, sickle cell anaemia, xeroderma pigmentosum	B.Sc. (Hons.) Zoology, Sem-III	Inheritance in Biology
Tutorials:			

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Muthabathula Prajna

Department: Botany

Semester : I/III/V

M. Prajna

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Diversity of Life: Domains of Life	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity &
		Gymnosperms General account	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
		DNA: Meischer to Watson & Crick- historic perspective, Griffith's and Avery's transformation experperimients, Herschey-Chase bacteriophage experiment.	B.Sc., (P) Life Sciences Sem V	DSE Cell and Molecular Biology
		Paleobiological– Concept of Stratigraphy and geological timescale	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants
	Practicals	- Viruse: EM of TMV and Bacteriophage, Specimens of virus infected plants (any two). - Bacteria: EM of a bacterium, types through permanent slides/ photographs, specimens of infected plants (any two).	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics
		<i>Riccia</i> – Morphology: Vegetative and reproductive structures (Specimen). <i>Marchantia</i> - Morphology; V.S. of thallus through Gemma cup, whole mount of Gemmae (temporary slides); V.S. of Vegetative thallus, Antheridiophore, Archegoniophore, L.S. of Sporophyte (permanent slides). <i>Pellia</i> - Morphological details through specimens/permanent slides; L.S. Sporophyte (permanent slide).	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms

V. A.

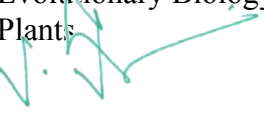
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		- Study of different types of fossils, - Connecting links/transitional forms and Living fossils (Specimens/slides/photographs)	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants
	Tutorials			
SEPTEMBER	Theory:	- Archaeobacteria, Eubacteria and Eukaryotes. - Bacteria: Structure, wall less forms (L-forms, Mycoplasmas) - Asexual reproduction and genetic recombination.	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics
		- Morphology, Stem anatomy of <i>Cycas</i> - Reproduction of <i>Cycas</i> - Morphology, Stem anatomy of <i>Pinus</i> - Reproduction of <i>Pinus</i>	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
		- DNA structure, types of DNA, types of genetic material. - DNA replication (Prokaryotes and Eukaryotes), bidirectional replication, semi-conservative, semi-discontinuous, RNA priming, (theta) mode of replication.	B.Sc., (P) Life Sciences Sem V	DSE Cell and Molecular Biology
		- Fossil study - Anatomical & Embryological – Vestigial organs; homologous and analogous organs (concept of parallelism and convergence in evolution) Taxonomic – - Transitional forms/evolutionary intermediates, living fossils. - Phylogenetic – morphology, protein (Cytochrome C) and gene (Globin gene family) based.	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants


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Practicals:	- Study of vegetative and reproductive structures of (<i>Volvox</i>, <i>Spirogyra</i>) through temporary preparations and permanent slides. - Study of vegetative and reproductive structures of (a) <i>Rhizopus</i>, (b) <i>Penicillium</i>, and (c) <i>Agaricus</i> through temporary preparations and permanent slides/specimens/photographs. - Lichens: crustose, Foliose, Fruticose (specimens/photographs). - Study of (a) <i>Marchantia</i> morphology of thallus, W.M. rhizoids and scales, V.S. thallus through gemma cup, W.M. gemmae (all temporary slides), V.S. antheridiophore, archegoniophore, L.S. sporophyte (all permanent slides).	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics
	<i>Anthoceros</i> – Morphology; V.S. of thallus (permanent slide), Dissection of sporophyte (to show stomata, spores, pseudocylinders, columella) (temporary slide). <i>Funaria</i> - Morphology; T.S. Stem (temporary and permanent slides both); Sporophyte: operculum, peristome, spores (temporary slides); Antheridial and archegonial heads, L.S. of capsule, W.M. of protonema (Permanent slides). <i>Psilotum</i> – Morphology (specimen); T.S. of rhizome, stem and synangium (permanent slides). <i>Selaginella</i> – Morphology (specimen); W.M. of leaf with ligule, T.S. of stem, T.S. of rhizophore (permanent slide), L.S. of strobilus, W.M. of microspore, megaspore (temporary slides).	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
	- Sampling of quantitative characters (continuous and discontinuous) in a population (height, weight, number of nodes etc) - Study of adaptive strategies (colouration, co-adaptation and co-evolution); (Specimens/photographs).	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

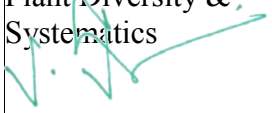
M. Pragna

	Tutorials:			
OCTOBER	Theory:	• Viruses: General Account • Replication, Lytic and Lysogenic cycle. • Diagnostic features of identification; morphology, reproduction and classification with special reference to <i>Rhizopus</i>, <i>Penicillium</i> and <i>Agaricus</i>; Lichens (a general account).	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics
		• Morphology, Stem anatomy of <i>Gnetum</i> • Reproduction of <i>Gnetum</i> • Economic importance	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
		• Replication of linear, ds-DNA, replicatin 5; end of linear chromosome including replication enzymes. • Transcription (prokaryotes and eukaryotes) • Types of structures of RNA(mRNA, tRNA, rRNA), • RNA Polymerase- various types	B.Sc., (P) Life Sciences Sem V	DSE Cell and Molecular Biology
		• Mutation, Geneflow, Selection, Genetic Drift, Co-adaptation and co-evolution, • Anthropogenic activities, Extinction (in brief)- Periodic and Mass-scale – Causes and events. ● Species concept, Modes of speciation – Allopatric; sympatric; peripatric; Patterns of speciation – Anagenesis and Cladogenesis.	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants

M. Prajna

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	Practicals:	- Study of <i>Pinus</i> morphology of long & dwarf shoot, male and female cones (specimens) and T.S. of needle (permanent slides only). Herbarium technique (Mounting of a properly dried and pressed specimen of any wild plant on the herbarium sheet with complete herbarium label). - Taxonomic study of characters of Malvaceae (<i>Hibiscus rosa-sinensis</i>).	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics
		<i>Equisetum</i> – Morphology (specimen), T.S. of internode, L.S. of strobilus, T.S. of strobilus, W.M. of sporangiophore, W.M. of spores (wet and dry) (temporary slide). <i>Pteris</i> - Morphology, T.S. of rachis, V.S. of sporophyll (temporary slides), T.S. of rhizome, W.M. of prothallus with sex organs and young sporophyte (permanent slide). <i>Cycas</i> – Morphology, T.S. of coralloid root, T.S. of root (permanent slide); T.S. of rachis, V.S. of leaflet, V.S. of microsporophyll, W.M. of spores (temporary slides); L.S. of ovule (permanent slide).	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
		- Calculations of genotypic, phenotypic and allelic frequencies from the data provided. - Simulation experiments using coloured beads/playing cards to understand the effects of Selection and Genetic drift on gene frequencies.	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants
	Tutorials:			
NOVEMBER	Theory:	Characteristic features of identification, Morphology and reproduction of Bryophytes, Pteridophytes and Gymnosperms with special reference to <i>Marchantia</i>, <i>Funaria</i>, <i>Pteris</i> and <i>Pinus</i> (only Morphology).	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics


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M. Pragna

	- Model systems (<i>Physcomitrella</i>, <i>Ceratopteris</i>, <i>Ephedra</i>) and their applications in genetic, molecular and evolutionary studies. - Heterospory and seed habit - Stelar evolution.	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
	- Translation (Prokaryotes and Eukaryotes) - Genetic code - Lac operon.	B.Sc., (P) Life Sciences Sem V	DSE Cell and Molecular Biology
	- Phyletic gradualism and Punctuated equilibrium (Quantum evolution); - Basis of speciation – Isolating mechanisms. - Origin of land plants – Terrestrial algae and Bryophytes; alternation of generations. - Early vascular plants – Stelar evolution; Sporangium evolution; seed habit and evolution of seed. - Angiosperms – Phylogeny of major groups.	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants
Practicals:	Taxonomic study of characters of Solanaceae (<i>Solanum nigrum</i>), Asteraceae (<i>Tagetes erecta</i>), Fabaceae (<i>Trigonella foenum-graecum</i>), and Liliaceae (Lily)	B.Sc., (P) Life Sciences Sem I	DSC-1 Plant Diversity & Systematics
	<i>Pinus</i> - Morphology, T.S. of Needle, L.S. and T.S. of male cone, W.M. of microsporophyll (temporary slides); T.S. of stem, L.S. of female cone (permanent slide). <i>Gnetum</i> - Morphology (stem, male & female cones); T.S. of stem, L.S. of ovule (permanent slide). - Botanical Excursion and submission of digital herbarium and report of two genera observed from bryophyte, pteridophyte and gymnosperm each.	B.Sc., (H) Botany Sem III	DSC-8 Bryophytes, Pteridophytes and Gymnosperms
	To study and interpret Phylogenetic trees (reading and using trees) - minimum of three examples.	B.Sc., (P) Life Sciences Sem III (DSE/GE)	DSE-1 Evolutionary Biology of Plants



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M. Harna



SEMESTER WISE TEACHING PLAN
(July-Dec 2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Aditi Kothari-Chhajer

Department: BOTANY

Semester : I/III/V

Aditi K. Chhajer

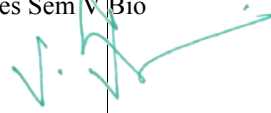
Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	Comparative account of chemistry and functional roles of photoreceptors in plants: chlorophylls, carotenoids, phycobiliproteins, bacteriochlorophylls	B.Sc.(H) Biological Science Sem I	Photobiology
		- Variation in chromosome structure: Deletion; Duplication; Inversion - Variation in chromosome structure: Translocation	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- Mitochondria:- Structure, marker enzymes, composition; Semiautonomous nature; - Symbiont hypothesis; mitochondrial DNA.	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio
	Practicals:	- Demonstration of etiolation and de-etiolation - To study light penetration in water using Secchi disc	B.Sc.(H) Biological Science Sem I	Photobiology
		- To study mitosis in <i>Allium cepa</i> through squash preparation of root tips - ABO blood group testing using kits	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- To study Prokaryotic cells : Bacteria(<i>E.coli</i>), Viruses (TMV, T2)-Light and Electron Micrographs - To study Eukaryotic cells: Plant and Animal - Light and Electron Micrographs - Study of Cell Organelles- Nucleus, Mitochondria, Chloroplasts, Golgi - Demonstration of dialysis of starch and simple sugar	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio
SEPTEMBER	Theory:	- Photosynthesis –an introduction. Photosynthetic equation, structure of chloroplasts - Light and Dark Reactions, Mechanism of Photolysis of water and oxygen evolution - Q- cycle - O₂-evolving complex	B.Sc.(H) Biological Science Sem I	Photobiology
		- Variation in chromosome number : Euploidy and Aneuploidy - Mutation types- Induced, Spontaneous, silent, mis-sense, non-sense, lethal, biochemical, etc - Physical mutagens (Ionising and Non ionising radiations) - Muller's CIB method	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- Chloroplast-Structure, marker enzymes, composition; semiautonomous nature, chloroplast DNA - ER:-Structures and roles.	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio

V. A.

प्रधानाचार्य

Sri Venkateswara College
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	Practicals:	- Demonstration of oxygen liberation during photosynthesis using <i>Hydrilla</i>. - Mesurement of Light using Luxmeter - To study structure of chloroplast- through photographs - To study the effect of light and darkness on the chromatophores of fish.	B.Sc.(H) Biological Science Sem I	Photobiology
		- To study the syndromes (Down's, Klinefelter's, Turner's, Edward's & Patau) through karyotype - Quadrivalents, lagging chromosomes, dicentric/inversion bridge through photographs/permanent slides - To calculate allelic and genotypic frequencies of human dominant and recessive traits using Hardy- Weinberg's principle - To understand the deviations of Mendelian dihybrid ratios (12:3:1, 9:3:4, 9:7, 15:1, 13:3, 9:6:1) involved using the seed mixture given. Genetic ratio calculated using Chi square analysis.	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- To study the structure of plant cells (<i>Allium/Rhoeo/Crinum</i>) through temporary mounts - To study the structure of animal cells (squamous epithelial cells through photograph - Study the effects of temperature, organic solvents on semi permeable membrane - Study of plasmolysis and deplasmolysis on <i>Rhoeo</i> leaf - Study of mitosis and meiosis (temporary mounts and permanent slides)	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio
	Tutorials:			
OCTOBER	Theory:	- Dark reactions in Photosynthesis - C2 cycle - Cam Cycle - C4 cycle - Light as an inducer for biosynthesis/activation of enzymes (RuBISCO)	B.Sc.(H) Biological Science Sem I	Photobiology
		- Chemical mutagens (Base analogs, deaminating, hydroxylating, alkylating and intercalating agents) - Molecular basis of mutations - Transposable genetic elements and their significance - Hardy Weinberg law (Allele frequencies, genotype frequencies)	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- Golgi body: Structures and roles. - Lysosomes:-Structures and roles. - Peroxisomes : Structures, composition, functions in animals and plants and biogenesis.	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio


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	Practicals:	- To demonstrate the effect of light on soil fauna using Berlese funnel setup. - To test / survey for color blindness using Ishihara charts - Separation of Chloroplast pigments by Paper Chromatography - To study the effect of Light intensity and CO₂ concentration on the rate of Photosynthesis	B.Sc.(H) Biological Science Sem I	Photobiology
		- Study of autosomal & sex-linked dominant & recessive inheritance through pedigree analyses. - To study Xeroderma pigmentosum, Sickle cell anaemia, albinism, haemophilia and colour blindness (Ishihara charts may be used to study colour blindness) - Reciprocal translocation through squash preparations of <i>Rhoeo</i> anthers	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- To study the structure of animal cells (Nerve cells) through photograph - To study striated muscle fiber through photograph - To prepare temporary stained preparation of mitochondria from cheek epithelial cells using vital stain Janus Green - Measure the cell size (either length or breadth/diameter) by micrometry in <i>Allium</i> - Study the structure of nuclear pore complex by photograph (from Gerald Karp). Study of special chromosomes (Polytene and Lampbrush) by photographs - Study of DNA packaging by micrographs	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio
	Tutorials:			
NOVEMBER	Theory:	- Phytochrome mediated responses in Plants - Morphological, Anatomical, Physiological and behavioral adaptations to extreme light conditions in plants	B.Sc.(H) Biological Science Sem I	Photobiology
		- Speciation (modes of speciation and genetics of speciation) - Plant breeding- Principle and Practices - Domestication and plant introduction (primary and secondary introduction) - Selection and its types: pure line selection, mass selection and clonal selection - Hybridizations (inter-specific and intra-specific) - Heterosis and its significance	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
		- Glyoxisomes: Structures, composition, functions in animals and plants and biogenesis - All organelles revision	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio

Practicals:	- Demonstration of Hill's Reaction and study the effect of Light intensity (any 2 light conditions) - Diel vertical migration using photographs - To study various Bioluminescent organisms using photographs- Photinus pyralis, Aequorea victoria, Vampire squid, Anglerfish, Lanternfish, Viperfish, Black dragonfish, Omphalotus nidiformes	B.Sc.(H) Biological Science Sem I	Photobiology
	- Demonstration of basic methods of plant breeding (hybridizations): Emasculation, bagging and tagging using available plant material in pots/gardens/field - To study meiosis in Allium cepa through squash preparation of anthers	B.Sc. (H) Botany Sem III	Genetics and Plant Breeding
	- Preparation of Karyotype and Idiogram from the given photograph of somatic metaphase chromosome - Mock Practical	B.Sc.(P) Life Sciences Sem V	Cell and Mol Bio
Tutorials:			

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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sachin Kumar

Department: Botany

Semester : I/III/V (Odd Sem., August-December, 2023)

Sachin Kumar.

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	Unit 1: Origin of life- Principles and concepts of evolution, Tree of Life, and classification (upto six kingdoms)	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		Unit 1: Classifying the diversity of life: Domains of Life – Eubacteria, Archaea and Eukaryotes.	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
		Unit 2: Microbes- Viruses		
		Unit 2: Cell as a unit of Life- The Cell Theory; Prokaryotic and eukaryotic cells; Cell size and shape; Eukaryotic Cell components.	B.Sc(P) Life Sciences Sem-V Section A and B	LSDS2/ Cell and Molecular Biology
	Practicals:	1. To study structure of TMV and Bacteriophage (electron micrographs/models).	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		2. To study morphology of <i>Volvox</i> , <i>Oedogonium</i> , <i>Chara</i> , <i>Fucus</i> and <i>Polysiphonia</i> (Temporary preparation/specimens/slides).		
		Algae: Study of vegetative and reproductive structures of (a) <i>Nostoc</i> (b) <i>Volvox</i> (c) <i>Spirogyra</i> through temporary preparations and permanent slides	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
		1.To study Prokaryotic cells : Bacteria(<i>E.coli</i>), Viruses (TMV, T2)-Light and Electron Micrographs	B.Sc(P) Life Sciences Sem-V	LSDS2/ Cell and Molecular Biology
		2.To study Eukaryotic cells: Plant and Animal - Light and Electron Micrographs		
		3.Study of Cell Organelles- Nucleus, Mitochondria, Chloroplasts, Golgi		
		4.Demonstration of dialysis of starch and simple sugar		
	Tutorials:			

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SEPTEMBER	Theory:	Unit 2: Bacteria- General characteristic features, cell structure, asexual reproduction and modes of gene transfer (conjugation, transformation and transduction), brief introduction to Archaeobacteria.	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		Unit 2: Microbes- Viruses- General account; Replication, Lytic and Lysogenic cycle; Bacteria: structure, Wall less forms (L-forms, Mycoplasma), asexual reproduction and genetic recombination.	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
		Unit 4: Cell Membrane and Cell Wall- The functions of membranes; Models of membrane structure; The fluidity of membranes; Membrane proteins and their functions; Carbohydrates in the membrane.	B.Sc(P) Life Sciences Sem-V Section A and B	LSDS2/ Cell and Molecular Biology
	Practicals:	1. To study <i>Rhizopus</i> , <i>Penicillium</i> , <i>Alternaria</i> (Temporary preparations), symptoms of rust of wheat, white rust of crucifer (specimen). 2. To study <i>Marchantia</i> (morphology, WM of rhizoids and scales), <i>Anthoceros</i> (morphology), <i>Sphagnum</i> (morphology, WM of leaf), <i>Funaria</i> (morphology WM of rhizoid and leaf)	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		1. Viruses: EM of TMV and Bacteriophage, Specimens of virus infected plants (any two). 2. Study of vegetative and reproductive structures of (a) <i>Rhizopus</i> , (b) <i>Penicillium</i> , and (c) <i>Agaricus</i> through temporary preparations and permanent slides/specimens/photographs. 3. Lichens: Crustose, Foliose and Fruticose (specimens/photographs).	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics



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		1.To study the structure of plant cells (<i>Allium/Rhoeo/Crinum</i>) through temporary mounts 2.To study the structure of animal cells (squamous epithelial cells through photograph 3.Study the effects of temperature, organic solvents on semi permeable membrane 4.Study of plasmolysis and deplasmolysis on <i>Rhoeo</i> leaf 5.Study of mitosis and meiosis (temporary mounts and permanent slides)	B.Sc(P) Life Sciences Sem-V	LSDS2/ Cell and Molecular Biology
	Tutorials:			
OCTOBER	Theory:	Unit 3: Viruses- General characteristic features, replication, RNA virus (structure of TMV), DNA virus (structure of T-phage), Lytic and Lysogenic life cycle (Lambda phage). Unit 4: Fungi- General characteristic features, reproduction and broad classification. Myxomycetes and their similarities with fungi, plants and animals.	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		Unit 4: Fungi- Diagnostic features of identification; morphology, reproduction and classification with special reference to <i>Rhizopus</i>, <i>Penicillium</i> and <i>Agaricus</i>; Lichens (a general account). Unit 5: Bryophytes, Pteridophytes and Gymnosperm- Characteristic features of identification, Morphology and reproduction of Bryophytes.	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
		Unit 4: Cell Membrane and Cell Wall- Faces of the membranes; Selective permeability of the membranes; Cell wall.	B.Sc(P) Life Sciences Sem-V Section A and B	LSDS2/ Cell and Molecular Biology

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Practicals:	1. To study <i>Selaginella</i> (morphology, WM of strobilus and spores), <i>Equisetum</i> (morphology, WM of spores), <i>Pteris</i> (morphology, tease mount of sporangia and spores). 2. To study <i>Cycas</i> (morphology, leaf, leaflet anatomy, coralloid root, bulbils, megasporophyll and microsporophyll); <i>Pinus</i> (morphology of dwarf shoot, needle anatomy, male and female cones, WM pollen grains).	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
	1.Bacteria: EM of a bacterium, types through permanent slides/photographs, specimens of infected plants (any two). 2.Bryophytes: Study of (a) <i>Marchantia</i> morphology of thallus, W.M. rhizoids and scales, V.S. thallus through gemma cup, W.M. gemmae (all temporary slides), V.S. antheridiophore, archegoniophore, L.S. sporophyte (all permanent slides), (b) <i>Funaria</i> : detailed study and classification from W.M. rhizoids, operculum, peristome, spores and permanent slides of archegonia, antheridia and capsule. 3.Pteridophytes: Study of <i>Pteris</i> : T. S. of Rachis, V.S. of Sporophyll and W.M. of sporangium.	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
	1.To study the structure of animal cells (Nerve cells) through photograph 2.To study striated muscle fiber through photograph 3.To prepare temporary stained preparation of mitochondria from cheek epithelial cells using vital stain Janus Green 4.Measure the cell size (either length or breadth/diameter) by micrometry in <i>Allium</i> 5.Study the structure of nuclear pore complex by photograph (from Gerald Karp). Study of special chromosomes (Polytene and Lampbrush) by photographs 6.Study of DNA packaging by micrographs	B.Sc(P) Life Sciences Sem-V	LSDS2/ Cell and Molecular Biology
Tutorials:			


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NOVEMBER	Theory:	Unit 4: Fungi- Brief account of <i>Rhizopus</i> , <i>Agaricus</i> . Introduction to lichens.	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		Unit 5: Bryophytes- General characteristic features and reproduction, adaptation to land habit, broad classification, evolutionary trends in Bryophytes. Brief account of <i>Marchantia</i> , and <i>Funaria</i> .		
		Unit 5: Bryophytes, Pteridophytes and Gymnosperm- Pteridophytes and Gymnosperms, with special reference to <i>Marchantia</i> , <i>Funaria</i> , <i>Pteris</i> and <i>Pinus</i> (only morphology).	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
		Unit 5: Cell Cycle- Overview of Cell cycle, Mitosis and Meiosis; Molecular controls.	B.Sc(P) Life Sciences Sem-V Section A and B	LSDS2/ Cell and Molecular Biology
	Practicals:	1. To study variation in leaf venations in dicots and monocots (at least two specimens each). 2. To study the types of inflorescences in angiosperms (through specimens). 3. To study the types of fruits in angiosperms (through specimens).	B.Sc(H) Botany Sem-I	BOT-DSC-1 / Plant Diversity and Evolution
		1. Herbarium technique (Mounting of a properly dried and pressed specimen of any wild plant on the herbarium sheet with complete herbarium label). 2. Taxonomic study of characters of 1 plant from each of the following families (any four): Malvaceae, Solanaceae, Asteraceae, Fabaceae, and Liliaceae .	B.Sc(P) Life Sciences Sem-I	BOT-LS-DSC-1 / Plant Diversity and Systematics
		Preparation of Karyotype and Idiogram from the given photograph of somatic metaphase chromosome	B.Sc(P) Life Sciences Sem-V	LSDS2/ Cell and Molecular Biology
	Tutorials:			
	Test	File submission and mock test for all the practicals		

Sachin Kumar.

V. A.
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श्री वेंकटेश्वर महाविद्यालय
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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Shantanu Mandal

Department: Botany

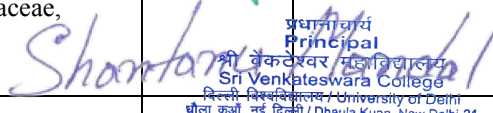
Semester: I/III/V 2023-24 (August to December) Odd Semester

Month		Topics	Course	Paper Code/Name
August	Theory	❖ Unit 1: Introduction to Algal World ❖ Relevance of studying algae - Industrial (food, feed, fodder), Environmental (climate change, biofuel, acidification of oceans), Evolutionary (range of thallus organization); General characteristics; Ecology, diversity and distribution; Range of thallus organization; Cell structure; Criteria for classification (cell wall, pigment system, reserve food, flagella); Reproduction and life cycle patterns; Classification by Fritsch; Evolutionary classification of Lee (only up to groups); Significant contributions of eminent Phycologists. ➤ Unit 1: Lab safety and good lab practices ➤ General laboratory safety, good laboratory practices, biosafety measures (first-aid practices to be followed in case of burn, acid spills and injury), safety symbols, lab safety equipments (fire extinguisher, fume hood, safety glasses), classes of laboratory chemicals, maintenance and handling of chemicals (Labels, Quality - LR/ AR/ Molecular biology grade/ HPLC grade/Tissue culture grade; Expiry date; Precautions for use), Disinfectants, Biocontainment, Disposal of hazardous chemicals, radioactive • Unit 3: Algae • Brief introduction of major classes Blue green, Green, Brown and Red algae. Diagnostic features of identification; morphology, reproduction and classification with special reference to <i>Nostoc</i>,	B.Sc. (H) Botany Semester III	Phycology - The World of Algae
			B.Sc. (H) Botany Semester I	Basic Laboratory and Field Skills in Plant Biology
			B.Sc. (Prog.) Life Science Semester I	Plant Diversity and Systematics
	Practicals	❖ <i>Nostoc</i>: Study of vegetative, reproductive structures from temporary mounts and permanent slides; Ultrastructure of Heterocyst through Electron Micrographs. ❖ <i>Chlorella</i>: Study of vegetative, reproductive structures from temporary mounts. Study of ultrastructure through Electron Micrographs. ➤ Temporary peel mount slide preparation and staining (safranin and acetocarmine) ➤ Calculate cell size using micrometer. • Algae: Study of vegetative and reproductive structures of (a) <i>Nostoc</i> (b) <i>Volvox</i> (c) <i>Spirogyra</i> through temporary preparations and permanent slides.	B.Sc. (H) Botany Semester III	Phycology - The World of Algae
			B.Sc. (H) Botany Semester I	Basic Laboratory and Field Skills in Plant Biology
	Tutorials	-----	B.Sc. (Prog.) Life Science Semester I	Plant Diversity and Systematics
			 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21	


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September	Theory:	❖ Unit 2: Cyanophyceae (Blue-Green Algae) ❖ General characteristics; Occurrence; Cell structure; Heterocyst (structure and function); Morphology, reproduction and life-cycle of <i>Nostoc</i>, economic importance. ❖ Unit 3: Chlorophyceae (Green Algae) ❖ General characteristics; Occurrence; Cell structure; Morphology, reproduction and life-cycle of <i>Chlamydomonas</i>, <i>Volvox</i>, <i>Chlorella</i>, <i>Ulva</i>, <i>Oedogonium</i>, <i>Coleochaete</i>; <i>Chara</i>; Structure and evolutionary significance of <i>Prochloron</i>, economic importance.	B.Sc. (H) Botany Semester III	Phycology - The World of Algae
		➤ Unit 3: Microscopy, sample and slide preparation Weeks: ➤ Microscopes (Dissecting, Compound and Electron microscopes), Fixation and Preservation (for light and electron microscopy); staining, mounting; basic introduction to other types of microscopes (Confocal, Fluorescence)	B.Sc. (H) Botany Semester I	Basic Laboratory and Field Skills in Plant Biology
		• Unit 3: Algae Weeks: • <i>Volvox</i>, and <i>Spirogyra</i>. • Unit 6: Angiosperms • Diagnostic features, Structure of flower, types of inflorescence	B.Sc. (Prog.) Life Science Semester I	Plant Diversity and Systematics
	Practicals:	❖ <i>Volvox</i>: Study of vegetative, reproductive structures from temporary mounts and permanent slides. ❖ <i>Oedogonium</i>: Study of vegetative, reproductive structures from temporary mounts and permanent slides. ❖ <i>Coleochaete</i>: Study of vegetative, reproductive structures from temporary mounts and permanent slides. ❖ <i>Chara</i>: Study of vegetative, reproductive structures from temporary mounts, specimens and permanent slides.	B.Sc. (H) Botany Semester III	Phycology - The World of Algae
		➤ Calculate number of cells (pollen/spores) using haemocytometer. ➤ Preparation of LB medium, growth and maintenance of bacterial cultures (liquid - serial dilution method; and semi-solid cultures - streak, spread and pour plates) ➤ Calculation of mean, mode, median, standard deviation using data set (collected from experiments).	B.Sc. (H) Botany Semester I	Basic Laboratory and Field Skills in Plant Biology
		• Viruses: EM of TMV and Bacteriophage, Specimens of virus infected plants (any two). • Fungi: Study of vegetative and reproductive structures of (a) <i>Rhizopus</i>, (b) <i>Penicillium</i>, and (c) <i>Agaricus</i> through temporary preparations and permanent slides/specimens/photographs. • Lichens: Crustose, Foliose and Fruticose (specimens/photographs).	B.Sc. (Prog.) Life Science Semester I	Plant Diversity and Systematics
	Tutorials:	-----		

November	Theory:	Unit 7: Rhodophyceae (Red Algae) 4 hours ❖ General characteristics; Occurrence; Morphology, reproduction, and life-cycle of <i>Gracilaria</i>, economic importance. ❖ Unit 8: Recent advances in algal studies 2 hours ❖ Model systems and their applications in genetic, molecular and evolutionary studies. ➤ Unit 2: Use and maintenance of Laboratory equipment ➤ Weighing balance (Top loading and Analytical), pH meter (calibration and use), magnetic stirrer, pipettes and micropipettes, autoclave, laminar airflow, BOD incubator, incubator shaker, micrometer, haemocytometer, spectrophotometer, Agarose gel electrophoresis unit, SDS PAGE unit, centrifuge, distillation unit, conductivity meter, Lux meter. ➤ Unit 5: Solutions and Buffers ➤ Molarity, Molality, Normality, percent solution, stock solution, standard solution, dilution, dilution series, pH, acids and bases, buffers - phosphate, Tris- acetate, Tris- Cl and Citrate buffer. • Unit 8: Systematics in Practices • Taxonomic Hierarchy- Concept of taxa and categories; Botanical Nomenclature- principles and rules; Type method; Author citation; Valid publication; Rejection of names, Principle of priority and its limitations; Names of hybrids and cultivars. • Unit 9: Systems of classification • Classification: Artificial, Natural and Phylogenetic. An outline of Bentham and Hooker's (up to series only) and Engler and Prantl's (up to Subclasses) systems of classification and their merits and Demerits. APG System.	B.Sc. (H) Botany Semester III B.Sc. (H) Botany Semester I B.Sc. (Prog.) Life Science Semester I	Phycology - The World of Algae Basic Laboratory and Field Skills in Plant Biology Plant Diversity and Systematics
	Practicals:	❖ Sargassum: Study of vegetative, reproductive structures from temporary mounts, specimens and permanent slides. ❖ Polysiphonia/ Gracilaria: Study of vegetative, reproductive structures from temporary mounts and permanent slides. ➤ Using software to draw tables, graphs and calculating descriptive statistics (Microsoft Excel) ➤ Laboratory safety equipment (Fire extinguisher, Fume hood, safety glasses) ➤ Mounting of a properly dried and processed plant specimen with herbarium label. • Herbarium technique (Mounting of a properly dried and pressed specimen of any wild plant on the herbarium sheet with complete herbarium label). • Taxonomic study of characters of 1 plant from each of the following families (any four): Malvaceae, Solanaceae, Asteraceae, Fabaceae, and Liliaceae	B.Sc. (H) Botany Semester III B.Sc. (H) Botany Semester I B.Sc. (Prog.) Life Science Semester I	Phycology - The World of Algae Basic Laboratory and Field Skills in Plant Biology Plant Diversity and Systematics
	Tutorials			
	Test	File submission and mock test for all the practicals		


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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. K. Prasad
Semester: I

Department: Botany

Month		Topics	Course	Paper Code/Name
August	Theory	• Angiosperms - Diagnostic features.	B.Sc. (P) Life Sciences Sem I	Plant diversity and Systematics
		• General characteristic features, cell structure, range of thallus.	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution
		• Fundamentals of data collection, data types - primary and secondary, • Methods of data collection	B.Sc. (H) Botany Sem I	Basic Laboratory and Field Skills in Plant Biology
	Practicals	• Study of vegetative and reproductive structures of <i>Nostoc</i> , <i>Volvox</i> , <i>Spirogyra</i> through temporary slides and permanent slides.	B.Sc. (P) Life Sciences Sem I	Plant diversity and Systematics
		• To study structure of TMV and Bacteriophage (electronmicrographs/models). (01) 2. To study morphology of <i>Volvox</i> , <i>Oedogonium</i> , <i>Chara</i> , <i>Fucus</i> and <i>Polysiphonia</i> (Temporary preparation/specimens/slides).	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution
September	Theory	• Structure of flower • Types of inflorescence • Aims, fundamental components of systematics description, identification, nomenclature, phylogeny, biosystematics.	B.Sc. (P) Life Sciences Sem I	Plant diversity and Systematics
		• Algae: Methods of reproduction and evolutionary classification (only upto groups). • Brief account of <i>Spirogyra</i> and <i>Sargassum</i> • Pteridophytes: General characteristic features and reproduction, broad classification.	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution
		• Sample, sampling methods – merits and demerits • Classification-tabulation and presentation of data • Descriptive statistics: Mean, mode, median, Variance, Standard deviation and errors • Coefficient of variation	B.Sc. (H) Botany Sem I	Basic Laboratory and Field Skills in Plant Biology
		• Data collection, statistical analysis and interpretation	GE -I	Basic Laboratory and Field Skills in plant science

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		Introduction, need for Communication, Process of Communication, Written and Verbal Communication, Visual communication, Signs, Signals and Symbols, Silence as a Mode of Communication, Inter-cultural, Intra-cultural, Cross-cultural and International communication, Communication through Questionnaires, Business Letter Writing, Electronic Communication.	SEC -1	Personality Development and Communication
	Practicals	• Fungi: Study of vegetative and reproductive structures of (a) Rhizopus, (b) Penicillium, and (c) Agaricus through temporary preparations and permanent slides/specimens/photographs. • Lichens: Crustose, Foliose and Fruticose (specimens/photographs). • Bryophytes: Study of (a) Marchantia morphology of thallus, W.M. rhizoids and scales, V.S. thallus through gemma cup, W.M. gemmae (all temporary slides), V.S. antheridiophore, archegoniophore, L.S. sporophyte (all permanent slides).	B.Sc. (P) Life Sciences Sem 1	Plant diversity and Systematics
		To study Rhizopus, Penicillium, Alternaria (Temporary preparations), symptoms of rust of wheat, white rust of crucifer (specimen). (02) 4. To study Marchantia (morphology, WM of rhizoids and scales), Anthoceros (morphology), Sphagnum (morphology, WM of leaf), Funaria (morphology WM of rhizoid and leaf).	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution
October	Theory	• Taxonomic Hierarchy- Concept of taxa and categories; Botanical Nomenclature- principles and rules; Type method; Author citation; Valid publication; Rejection of names, Principle of priority and its limitations; Names of hybrids and cultivars.	B.Sc. (P) Life Sciences Sem 1	Plant diversity and Systematics
		• Pteridophytes: evolutionary trends in Pteridophytes, affinities with Bryophytes. Brief account of Adiantum, Selaginella. • Gymnosperms: General characteristic features and reproduction, broad classification, evolutionary trends in Gymnosperm, affinities with	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution

		Pteridophytes. Brief account of Gnetum, Ephedra.		
		- Field skills: Identification, collection, cataloguing. - Preservation of plant specimens - Herbarium and Museum - Basic culturing techniques: Basic culture media (LB, YEB, MS); Liquid and solid culture media	B.Sc. (H) Botany Semester I	Basic Laboratory and Field Skills in Plant Biology
		- Basic computer skills for biology: MS-Word, PowerPoint, Excel - Introduction to Biological databases	GE -1	Basic Laboratory and Field Skills in plant science
		Unit 2: Business Cases and Presentations, Letters within the Organizations, Letters from Top Management, Circulars and Memos, Business Presentations to Customers and other stakeholders, presenting a Positive Image through Verbal and Non-verbal Cues, Preparing and Delivering the Presentations, Use of Audio-visual Aids, Report Writing. Unit 3: Barriers to Communication, Improving Communication Skills, Preparation of Promotional Material, Non-verbal communication, Body language, Postures and gestures, Value of time, Organizational body language, Importance of Listening, Emotional Intelligence. Working individually and in a team, Leadership skills, Leadership Lessons, Team work and Team building, Feedback, Feed forward Interpersonal skills – Delegation, Humour, Trust, Expectations, Values, Status, Compatibility and their role in building team – work Conflict Management – Types of conflicts, how to cope with conflict.	SEC -1	Personality Development and Communication
	Practicals	Bryophytes: <i>Funaria</i> : detailed study and classification from W.M. rhizoids, operculum, peristome, spores and permanent	B.Sc. (P) Life Sciences Sem 1	Plant diversity and Systematics

		slides of archegonia, antheridia and capsule. Pteridophytes: Study of <i>Pteris</i> : T. S. of Rachis, V.S. of Sporophyll and W.M. of sporangium. Gymnosperms: Study of <i>Pinus</i> morphology of long & dwarf shoot, male and female cones (specimens) and T.S. of needle (permanent slides only).		
		- To study Selaginella (morphology, WM of strobilus and spores), Equisetum (morphology, WM of spores), Pteris (morphology, tease mount of sporangia and spores). - To study Cycas (morphology, leaf, leaflet anatomy, coralloid root, bulbils, megasporophyll and microsporophyll); Pinus (morphology of dwarf shoot, needle anatomy, male and female cones, WM pollen grains).	B.Sc. (H) Botany Semester I	Plant Diversity and Evolution
November	Theory	Classification: Artificial, Natural and Phylogenetic. An outline of Bentham and Hooker's (up to series only) and Engler and Prantl's (up to Subclasses) systems of classification and their merits and Demerits. APG System.	B.Sc. (P) Life Sciences Sem 1	Plant diversity and Systematics
		Angiosperms: General characteristic features and reproduction, Concept of natural, artificial and phylogenetic system of classification. Affinities with Gymnosperms.	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution
		- Basic computer skills: MS-Word, PowerPoint, Excel - Introduction to Biological databases	B.Sc. (H) Botany Semester I	Basic Laboratory and Field Skills in Plant Biology
		- Field skills - Basic culturing techniques	GE -1	Basic Laboratory and Field Skills in plant science
		Unit 4: Negotiation Skills, Types of Negotiation, Negotiation Strategies, Selling skills – Selling to customers, Selling to Superiors Selling to peer groups, team mates and subordinates, Conceptual selling, Strategic selling, Selling skills – Body language.	SEC -1	Personality Development and Communication

	Practicals	•Herbarium technique: (Mounting of a properly dried and pressed specimen of any wild plant on the herbarium sheet with complete herbarium label). •Taxonomic study of characters of 1 plant from each of the following families (any four): Malvaceae, Solanaceae, Asteraceae, Fabaceae, and Liliaceae.	B.Sc. (P) Life Sciences Sem I	Plant diversity and Systematics
		•To study variation in leaf venations in dicots and monocots (at least two specimens each). •To study the types of inflorescences in angiosperms (through specimens). •To study the types of fruits in angiosperms (through specimens).	B.Sc. (H) Botany Sem I	Plant Diversity and Evolution
	Tutorial			



Teacher's Signature

Teacher in charge



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SEMESTER WISE TEACHING PLAN
(Aug-Nov 2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Pamil Tayal

Department: BOTANY

Semester : I/III/V

Pamiltayal

Month		Topics	Course	Paper
August	Theory	Unit 1: Imaging and related techniques – principles of microscopy, light microscopy, fluorescence microscopy, confocal microscopy, use of fluorochromes	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit 3: Chemistry, structure and functions of plant cell wall, Singer and Nicolson's Fluid Mosaic Model of cell membrane	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
	Practicals	- Study of cell and its organelles with the help of electron micrographs and other digital resources. - Study of plant cell structure with the help of epidermal peel mount of <i>Allium cepa</i>/ <i>Rhoeo</i>/ <i>Crinum</i>.	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
		- Study of Blotting techniques: southern, Northern, Western, DNA Fingerprinting, DNA sequencing, PCR through Photographs - Study of different microscopic techniques: Freeze fracture, freeze etching, negative staining, positive staining, FISH and Fluorescence microscopy	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		- To study Prokaryotic cells: Bacteria(<i>E.coli</i>), Viruses (TMV, T2)-Light and Electron Micrographs - To study Eukaryotic cells: Plant and Animal - Light and Electron Micrographs - Study of Cell Organelles- Nucleus, Mitochondria, Chloroplasts, Golgi - Demonstration of dialysis of starch and simple sugar	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
	Tutorials			
September	Theory:	Unit1: Flow cytometry, applications of fluorescence microscopy, chromosome banding, FISH, chromosome painting, transmission and scanning electron microscopy- sample preparation of electron microscopy, cryofixation, negative staining, shadow casting, freeze fracture and freeze etching.	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit 4: Nucleus – Structure and function (nuclear envelope, nuclear pore complex, nuclear lamina), types of chromatin, nucleolus Structural organization and functions of chloroplast and mitochondria	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules

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	Practicals:	- Microchemical tests for carbohydrates (reducing, non-reducing, sugars and starch), lipids and proteins - Separation of chloroplast pigments by paper chromatography - Separation of amino acids by paper chromatography	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
		- Isolation of Chloroplasts by differential centrifugations. - To separate proteins using PAGE - To separate DNA using AGE	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		- To study the structure of plant cells (<i>Allium/Rhoeo/Crinum</i>) through temporary mounts - To study the structure of animal cells (squamous epithelial cells through photograph - Study the effects of temperature, organic solvents on semi permeable membrane - Study of plasmolysis and deplasmolysis on <i>Rhoeo</i> leaf - Study of mitosis and meiosis (temporary mounts and permanent slides)	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
October	Theory:	Unit 2: Cell fractionation – centrifugation, differential and density gradient centrifugation, sucrose density gradient, CaCl ₂ gradient, analytical centrifugation, ultracentrifugation, marker enzymes	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit: 4: Semi-autonomous nature of chloroplast and mitochondria; Endo-membrane system – Endoplasmic Reticulum – structure and function of RER and SER, protein folding, processing in ER, export of proteins and lipids; Golgi-Apparatus – Organization, protein glycosylation, protein sorting and export from golgi apparatus, introduction to post-translational modifications.	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
	Practicals:	- Study the effect of organic solvent and temperature on membrane permeability - Demonstration of the phenomenon of protoplasmic streaming in Hydrilla leaf. - Demonstration of the phenomenon of plasmolysis and deplasmolysis.	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
		- To separate chloroplast pigment through column chromatography. - To separate sugars by TLC - To estimate protein's concentration through Lowry's Method.	B.Sc (Hons.) Botany, Sem- V	Analytical Techniques in Plant science

		- To study the structure of animal cells (Nerve cells) through photograph - To study striated muscle fiber through photograph - To prepare temporary stained preparation of mitochondria from cheek epithelial cells using vital stain Janus Green - Measure the cell size (either length or breadth/diameter) by micrometry in <i>Allium</i> - Study the structure of nuclear pore complex by photograph (from Gerald Karp). Study of special chromosomes (Polytene and Lampbrush) by photographs - Study of DNA packaging by micrographs	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
	Tutorials:			
November	Theory:	Unit 4: Spectrophotometry – principles, working and its applications in biological research. types	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		Unit 4: Peroxisomes and Lysosomes – Structure and function; Cytoskeleton – role and structure of microtubules, microfilaments, intermediary filaments and motor proteins	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
		Unit 5: Cell division – Eukaryotic cell cycle, mitosis and meiosis, regulation of cell cycle		
	Practicals:	- Demonstration of separation of biomolecules by dialysis - Revision of some experiments - Mock Test	B.Sc. (H) Botany Sem I	Cell Biology: Organelles and Biomolecules
		- Demonstration of ELISA. - Revision of some experiments - Mock Test	B.Sc. (H) Botany Sem V	Analytical techniques in Plant Sciences
		- Preparation of Karyotype and Idiogram from the given photograph of somatic metaphase chromosome - Mock Practical	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
	Tutorials:			

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SEMESTER WISE TEACHING PLAN (Aug-Dec 2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Guduru Krishna Kumar

Department: BOTANY

Semester: I/III/V

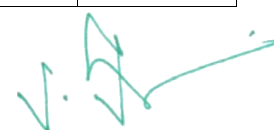
Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	- Structure of plant cell - Structure and functions of cell organelles: cell wall (primary and secondary wall) - Nucleus, Chloroplast, Mitochondria - Dictyosomes, Endoplasmic reticulum	B.Sc.(P) Life Sciences Sem III	Plant Cell and Developmental Biology
		- Introduction to Cell and tissue culture - Plant tissue culture media (composition, types and preparation) - Plant hormones and growth regulators in tissue culture	B.Sc.(H) Biological Science Sem V	Biotechnology
		- Principles of microscopy - Light Microscopy	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
	Practicals:	Isolation of Plasmid DNA from E. coli cells	B.Sc.(H) Biological Science Sem V	Biotechnology
		- To study Prokaryotic cells (Bacteria), Viruses, Eukaryotic cells with the help of light and electron micrographs - Study of the photomicrographs of cell organelles - To study the structure of plant cell through temporary mounts	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
SEPTEMBER	Theory:	- Flower development (ABC model) - Anther and its wall layers - Microsporogenesis and micro gametogenesis - Pollen wall (intine and exine), male germ unit	B.Sc.(P) Life Sciences Sem III	Plant Cell and Developmental Biology
		- Preparation of suitable explants for organogenesis - Micropropagation on large scale - Somatic embryogenesis, protoplast culture and somatic hybridization - Anther, pollen and ovary culture for production of haploid plants and homozygous lines	B.Sc.(H) Biological Science Sem V	Biotechnology
		- Phase contrast microscopy - Fluorescence microscopy - Confocal microscopy - Sample preparation for light microscopy	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology

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	Practicals:	- Aerobic workout/Physical activity (Walking) - Yoga-Asanas (Lying, sitting and standing positions) and Pranayamam - Cardiovascular testing by 12 min/9 min Cooper Run/Walk test	Value Addition Course Sem III	Fit India
		- Digestion of plasmid DNA with restriction enzymes and agarose gel electrophoresis - Amplification of a DNA fragment by PCR	B.Sc.(H) Biological Science Sem V	Biotechnology
		- To study the structure of animal cells by temporary mounts-squamous epithelial cell and nerve cell - Preparation of temporary mounts of muscle fiber - To prepare temporary stained preparation of mitochondria from striated muscle cells/cheek epithelial cells using vital stain Janus green	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
	Tutorials:			
OCTOBER	Theory:	- Ovule: general structure, megasporogenesis (monosporic, bisporic and tetrasporic) and megagametogenesis (only polygonum type) - Ultrastructure and significance of female germ unit - Pollination types (Self and Cross) - Pollen-pistil interactions with brief overview of incompatibility	B.Sc.(P) Life Sciences Sem III	Plant Cell and Developmental Biology
		- Agrobacterium mediated gene transfer - Mechanisms of DNA transfer into animal cells - General features of Ti and their use as vectors, reporter genes - Transgenic plants, crop improvement, herbicide resistance, insect resistance - Production of recombinant gene products like insulin and Factor VIII - Animal models for tackling human diseases (Gene knock out in mice models) - Gene therapy, recombinant vaccines	B.Sc.(H) Biological Science Sem V	Biotechnology
		- Electron microscopy (EM)- Scanning EM and Scanning Transmission EM (STEM) - Sample preparation for electron microscopy - X-ray diffraction analysis	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology

	Practicals:	- Flexibility Training: Back Saver Sit and Reach test - Muscular strength Training: Curl Ups/Standing board jump/Vertical jump/plyometric - Endurance Training: 1 Mile Rockport Test or 12/9 minute cooper run/walk test - Ideal body weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio - Preparing Daily Diet and Calorie Chart - Aerobic Work Out/Physical activity (Walking)	Value Addition Course Sem III	Fit India
		- Transformation of <i>E. coli</i> cells with plasmid DNA - Selection of transformants by antibiotic resistance	B.Sc.(H) Biological Science Sem V	Biotechnology
		- Study of mitosis and meiosis (temporary mounts and permanent slides) - Study the effects of temperature, organic solvents on semi permeable membrane - Demonstration of dialysis of starch and simple sugar - Study of plasmolysis and deplasmolysis on <i>Rhoeo</i> leaf	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
	Tutorials:			
NOVEMBER	Theory:	- Pollen tube pathway, pollen tube entry into ovule and embryo sac (porogamy, mesogamy and chalazogamy) - Double fertilization - Endosperm structure (Free nuclear, Cellular and Helobial type, one example of each) and functions	B.Sc.(P) Life Sciences Sem III	Plant Cell and Developmental Biology
		- Biosafety, Containment issues, emergence of antimicrobial resistance - Genetically modified organisms and plants, risks and controversies - Significance of patents - Methods of gene transfer to animal cells - Creating transgenic animals - Artificial Insemination	B.Sc.(H) Biological Science Sem V	Biotechnology
		- Nucleus-Nuclear envelope-structure of nuclear pore complex - Chromatin; molecular organization, DNA packaging in eukaryotes - Euchromatin and heterochromatin, nucleolus and ribosome structure in (brief) - Tryptophan operon in eukaryotes	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology



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Practicals:	- Assessment of Physical Activity with the Calorie intake - Asanas for digestive system, excretory system - Skills learning and Participation in sports - Group games/Relays/Minor games - Meditative Asanas and Pranayama - Fitness component testing and analysis of results - Data of at least 10 persons to be collected on DASS and self-esteem scale	Value Addition Course Sem III	Fit India
	- Aseptic culture of explants on nutrient media - Practice	B.Sc.(H) Biological Science Sem V	Biotechnology
	- Measure the cell size (either length or breadth/diameter) by micrometry - Study the structure of nuclear pore complex by photograph (from Gerald Karp). Study of special chromosomes (Polytene and Lamp brush) either by slides or photographs - Study of DNA packaging by micrographs - Preparation of Karyotype and Idiogram from the given photograph of somatic metaphase chromosome	B.Sc.(P) Life Sciences Sem V	Cell and Molecular Biology
Tutorials:			

P. Bala Reddy

V. A. S.

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Shweta Sharma
Semester: III/VI

Department: Botany

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	- Structure of plant cell, Structure and functions of cell organelles: - cell wall (primary and secondary wall) - nucleus, - chloroplast	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology
		Introduction, concept, scope and objectives; Ethnobotany as an interdisciplinary science. The relevance of ethnobotany in the present context; Major and minor ethnic groups or Tribals of India, and their life styles. Plants used by the tribals: a) Food plants, b) intoxicants and beverages and c) Resins and oils and miscellaneous uses.	B.Sc.(P.) Life Sciences Sem V	Ethnobotany
		Pre-Darwinian ideas, Lamarckism, Darwinism	B.Sc.(P.) Life Sciences Sem III	Evolutionary Biology of Plants
	Practical's	- To study cytoplasmic streaming in <i>Hydrilla</i>. - Study of plant cells: types of stomata (through peel mounts), trichomes, sclerenchyma, xylem (through maceration).	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology

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		Collection, identification and preparation of herbarium of three ethnobotanically important plants with appropriate references	B.Sc.(P.) Life Sciences Sem V	Ethnobotany
		(i) Definition and types of yoga: yoga, Karma yoga, Gyana yoga, Bhakti yoga, Laya yoga, Raja yoga, Hatha yoga, Mantra	SEC III	Yoga in practice
	Tutorials			
SEPTEMBER	Theory:	- mitochondria - Dictyosomes - endoplasmic reticulum Pollination and Fertilization Pollination types (Self and Cross; <i>agencies of pollination not to be included</i>); - Pollen-pistil interactions with brief overview of incompatibility	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology



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		- Methodology of Ethnobotanical studies - Field work - Herbarium - Ancient Literature - Archaeological findings - Temples and sacred places. - Role of ethnobotany in modern Medicine (10 lectures) - Medicoethnobotanical sources in India; Significance of the following plants in ethno botanical practices (along with their habitat and morphology) a) <i>Azadirachta indica</i> b) <i>Ocimum sanctum</i> c) <i>Vitex negundo</i>	B.Sc.(P.) Life Sciences Sem V	Ethnobotany
		- Post-Darwinian era – Modern synthetic theory, Neo-Darwinism - Chemogeny – An overview of pre-biotic conditions and events; experimental proofs to abiotic origin of micro- and macro-molecules.	B.Sc. (P.) Life Sciences Sem III	Evolutionary Biology of Plants
	Practical's	- Study organs structure through temporary preparations- - Transverse section of dicot stem- <i>Helianthus/Cicer</i>, stem with secondary growth – <i>Helianthus/Cicer</i> etc., Transverse section of monocot stem - <i>Zea mays</i> - Transverse section of dicot root: primary and with secondary growth- <i>Cicer/Vigna</i> etc., monocot root - <i>Zea mays</i> - Vertical section of dicot and monocot leaf - Study anomalous secondary growth through permanent slides/photomicrographs: <i>Salvadora/ Bignonia, Dracaena</i>	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology
		Preparation of crude extract of ethnobotanically important plants with appropriate references any method to be used)	B.Sc.(P.) Life Sciences Sem V	Ethnobotany

		• (ii) Ashtanga Yoga: • Yam- Ahinsa, Satya, Asteya, Brahmacharya, Aparigraha. • Niyam- Saucha, Santosha, Tapa, Swadhyaya, Ishwarpranidhana • Asana, • Pranayama- (the types of Pranayama: Puraka, rechaka & Kumbhaka), • Pratyahara, Dharana, Dhyana & Samadhi etc.	SEC III	Yoga in practice
	Tutorials			
OCTOBER	Theory:	• Polarity in plant growth • Growth through primary meristems, and secondary meristems (<i>discuss briefly</i>), • Organisation of shoot apex (Tunica-Corpus theory, • Waiting meristem theory) and root apex (Körper-Kappe theory)	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology
		• Gloriosa superba • Tribulus terrestris • Pongamia pinnata • Cassia auriculata • Indigofera tinctoria. • Role of ethnobotany in modern medicine with special example of Rauvolfia serpentina, • Trichopus zeylanicus, Artemisia, Withania. • Role of ethnic groups in conservation of plant genetic resources. • Endangered taxa and forest management (participatory forest management).	B.Sc.(P.) Life Sciences Sem V	Ethnobotany
		• Current concept of chemogeny – RNA first hypothesis. • Biogeny – Cellular evolution based on proto-cell models • (coacervates and proteinoid micro spheres). • Evolution of eukaryotes from prokaryote • Hardy Weinberg equilibrium; • Founder effect, • Natural and artificial selection.	B.Sc. (P.) Life Sciences Sem III	Evolutionary Biology of Plants


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	Practical's	• Study of pollen viability (TTC/FDA). • Study reproductive structures through photographs/micrographs/permanent slides/specimens: a. Transverse section of anther with wall layers, secretory and amoeboid tapetum b. Microsporogenesis through micrographs of transverse section anther c. Pollen exine patterns (any four types) d. Types of ovule, associated structure (obturator, aril, caruncle) e. Mature Polygonum type of embryo sac and ultrastructure of egg apparatus • Study of shoot apical meristem and root apical meristem, parenchyma, collenchyma, phloem, laticifers through permanent slides/micrographs. •	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology
		• Project work-documentation, literature survey, and collection of information on ethnobotanically useful plants from traditional healers)	B.Sc.(P.) Life Sciences Sem V	Ethnobotany
		• Shat Chakra,s: Mooladhara, Swadhishtana, Manipur, Anahata, Vishudha, Aagya, Sahasrara- (Sahasradhara chakra). • Asana,s and their advantages:- (i) Asana in standing position: Surya Namaskara,Tadasana, Padahastasana, Garudasana, Natarajasana, Cakrasana	SEC III	Yoga in practice
		• Ethnobotany and legal aspects • Ethnobotany as a tool to protect interests of ethnic groups.Sharing of wealth concept with few examples from India; Biopiracy. • Intellectual Property Rights and	B.Sc.(P.) Life Sciences Sem V	Ethnobotany प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

	Traditional Knowledge		
	• Inferring phylogenies • Gene trees, species trees; • Patterns of evolutionary change; Adaptive radiation, • Evolution and development (evo-devo); • Biodiversity- Estimating changes in biodiversity; • Taxonomic diversity through the Phanerozoic era	B.Sc. (P.) Life Sciences Sem III	Evolutionary Biology of Plants
Practical's	• Calculation of percent pollen germination in any one medium through sitting drop culture//Hanging drop culture. • Dissection of embryo/endosperm from developing seeds. • Study of cell organelles through electron micrographs – nucleus, mitochondria, chloroplast, mitochondria, dictyosomes, endoplasmic reticulum • Study of cell organelles (through permanent slides/photographs)– nucleus (Feulgen/acetocarmine staining); mitochondria (Janus green B staining); cell wall (PAS staining)	B.Sc.(P.) Life Sciences Sem III	Plant Cell and Developmental Biology
	• Project work-documentation, literature survey, and collection of information on ethnobotanically useful plants from traditional healers) • Final Record, Herbarium, Project Checking	B.Sc.(P.) Life Sciences Sem V	Ethnobotany



		- Asana in sitting position: Padmasana, Vajrasana, Siddhasana, Bhadrasana, Gomukhasana, Shashankasana, Mandukasana, Kukkutasana. - Asana in stomach side position: Dhanurasana, Bhujangasana, Mayurasana, Marjarasana, Makrasana. - Asana in backbone side position: Uttanapadasana, Naukasana, Sarvangasana, Sheershasana, Savasana etc. (v) - Practice of pranayama- Purak, Rechak and Kumbhaka	SEC III	Yoga in practice
	Tutorials:			

Shweta

V. A.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Mercykutty Jacob

Department: Chemistry

Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	UNIT – 1: Transition Elements General group trends with special reference to electronic configuration, colour, variable valency, magnetic properties, catalytic properties, and ability to form complexes. Stability of various oxidation states and e.m.f. (Latimer diagrams), Frost diagrams of Mn and Cr. A brief discussion of differences between the first, second and third transition series	B.Sc. (H) Chemistry III Sem	Chemistry of d- and f-block Elements & Quantitative Inorganic Analysis
September	Theory	UNIT – 2: Lanthanoids and Actinoids A brief discussion of electronic configuration, oxidation states, colour, spectral and magnetic properties. Lanthanoid contraction (causes and effects) separation of lanthanoids by ion exchange method.	B.Sc. (H) Chemistry III Sem	Chemistry of d- and f-block Elements & Quantitative Inorganic Analysis
October	Theory	UNIT – 3: Inorganic Polymer Comparison with organic polymers, classification, structure and applications of following inorganic polymers: ● Borates ● Silicates, silicones ● Phosphates ● Phosphazenes (for cyclic polymers, only trimer is to be discussed)	B.Sc. (H) Chemistry III Sem	Chemistry of d- and f-block Elements & Quantitative Inorganic Analysis

Signature of the teacher

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Vibha Saxena

Department: Chemistry

Semester: I/III/ V

Month		Topics	Course	Paper Code/Name
JULY	Theory	<i>Section A: Inorganic Chemistry-3: Transition Elements (3d series)</i> General group trends with special reference to electronic configuration.	B.Sc.(P) Life Science III year SEMESTER V	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS, QUANTUM CHEMISTRY & SPECTROSCOPY
JULY	Practicals	Synthesis of silver nanoparticles by chemical methods and characterization using UV-visible spectrophotometer.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
AUGUST	Practicals	Iodo / Iodimetric Titrations (i) Estimation of Cu(II) and $K_2Cr_2O_7$ using sodium thiosulphate solution (Iodometrically). (ii) Estimation of antimony	B.Sc. (Hons.) Chemistry II Year SEMESTER III	CHEMISTRY - CV: INORGANIC CHEMISTRY - II Course Title: s- and p-Block Elements
NOVEMBER	Practicals	1. Titrimetric Analysis: (i) Calibration and use of apparatus (ii) Preparation of solutions of titrants of different Molarity/Normality.	B.Sc. (H) Chemistry I Year SEMESTER I	DSC-1: Atomic Structure & Chemical Bonding: Inorganic Chemistry -I
	Tutorials	NA	NA	NA
AUGUST	Theory:	variable valency, colour, magnetic and catalytic properties, ability to form complexes and stability of various oxidation states (Latimer diagrams)	B.Sc.(P) Life Science III year SEMESTER V	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS, QUANTUM CHEMISTRY & SPECTROSCOPY
AUGUST	Practicals:	Synthesis of silver nanoparticles by green approach methods and characterization using UV-visible spectrophotometer.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
SETEMBER	Practicals	Complexometric titrations using disodium salt of EDTA (i) Estimation of Mg^{2+}, Zn^{2+} (ii) Estimation of Ca^{2+} by	B.Sc. (Hons.) Chemistry II Year SEMESTER III	Course Code: CHEMISTRY - CV: INORGANIC CHEMISTRY - II Course Title: s- and p-Block Elements Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

DECEMBER	Practicals	Acid-Base Titrations: Principles of acid-base titrations to be discussed. (i) Estimation of sodium carbonate using standardized HCl.	B.Sc. (H) Chemistry I Year SEMESTER I	DSC-1: Atomic Structure & Chemical Bonding: Inorganic Chemistry -I
	Tutorials:	NA	NA	NA
SEPTEMBER	Theory:	Lanthanoids and actinoids: Electronic configurations, oxidation states, colour, magnetic properties, lanthanide contraction, separation of lanthanides (ion exchange method only).	B.Sc.(P) Life Science III year	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS, QUANTUM CHEMISTRY & SPECTROSCOPY

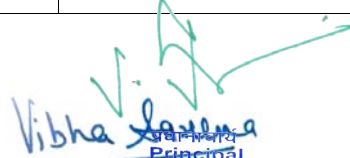


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SEPTEMBER				
	Practicals:	Intercalation of hydrogen in tungsten trioxide and its conductivity measurement using conductometer. Synthesis of metal sulphide	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
OCTOBER	Practicals:	Paper chromatographic separation of following metal ions: (i) Ni (II) and Co (II) (ii) Cu(II) and Cd(II)	B.Sc. (Hons.) Chemistry II Year SEMESTER III	Course Code: CHEMISTRY - CV: INORGANIC CHEMISTRY - II Course Title: s- and p-
JANUARY	Practicals:	(iii) Estimation of carbonate and bicarbonate present together in a mixture. (iv) Estimation of free alkali present in different soaps/detergents 3. Oxidation-Reduction Titrimetry: Principles of oxidation-reduction titrations (electrode potentials) to be discussed. (i) Estimation of	B.Sc. (H) Chemistry I Year SEMESTER I	DSC-1: Atomic Structure & Chemical Bonding: Inorganic Chemistry -I
	Tutorials:	NA	NA	NA
	<u>Assignment :</u>	CHEMISTRY OF d-BLOCK ELEMENTS	B.Sc.(P) Life Science III year	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS.
OCTOBER	Theory:	Coordination Chemistry Valence Bond Theory (VBT): Inner and outer orbital complexes of Cr, Fe, Co, Ni and Cu (coordination numbers 4 and 6). Structural and stereoisomerism in complexes with coordination numbers 4 and 6. Drawbacks of VBT. IUPAC system of nomenclature. (8 Lectures) Crystal Field Theory Crystal field effect, octahedral symmetry. Crystal field stabilization	B.Sc.(P) Life Science III year	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS, QUANTUM CHEMISTRY & SPECTROSCOPY  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

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OCTOBER	Practicals:	Synthesis of inorganic pigments (PbCrO ₄ , ZnCrO ₄ , Prussian Blue, Malachite). Synthesis of pure ZnO and	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
NOVEMBER	Practicals	Inorganic preparations (i) Cuprous Chloride, Cu ₂ Cl ₂ (ii) Aluminium potassium sulphate KAl(SO ₄) ₂	B.Sc. (Hons.) Chemistry II Year SEMESTER III	Course Code: CHEMISTRY - CV: INORGANIC CHEMISTRY - II Course Title: s- and p-
FEBRUARY		(ii) Estimation of oxalic acid and sodium oxalate in a given mixture. (iii) Estimation of Fe(II) with K ₂ Cr ₂ O ₇ using	B.Sc. (H) Chemistry I Year SEMESTER I	DSC-I: Atomic Structure & Chemical Bonding: Inorganic Chemistry -I Bonding
	Tutorials:	NA	NA	NA
	Test	CHEMISTRY OF d-BLOCK ELEMENTS	B.Sc.(P) Life Science III year	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS, QUANTUM CHEMISTRY & SPECTROSCOPY
NOVEMBER	Theory:	Factors affecting the magnitude of D. Spectrochemical series. Comparison of CFSE for <i>Oh</i> and <i>Td</i> complexes, Tetragonal distortion of	B.Sc.(P) Life Science III year	DSE CHEMISTRY 11 CHEMISTRY OF d-BLOCK ELEMENTS, QUANTUM CHEMISTRY & SPECTROSCOPY
NOVEMBER	Practicals:	Preparation of zeolite A and removal of Mg and Ca ions from water samples quantitatively using zeolite.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
			B.Sc. (H) Chemistry I Year SEMESTER I	CHEMISTRY - C I: INORGANIC CHEMISTRY - I Course Title: Atomic Structure & Chemical Bonding
	Tutorials:	NA	NA	NA


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 Signature of Teacher



SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Prof. Sharda Pasricha **Department:** CHEMISTRY

Semester: I_III_V

Month		Topics	Course	Paper Code/Name
August	Theory	Carbohydrates Occurrence, classification and their biological importance. Correlation of configuration.(6 lectures)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
	Practical	Preparation and characterization of biodiesel from vegetable oil/ waste cooking oil.	B.Sc. CHEMISTRY (Hons.) III rd Year, Semester V	CHEMISTRY PRACTICAL – DSE II LAB: GREEN CHEMISTRY
		1.Hydrolysis of amides/esters. 2. Preparation of S-benzylisothiuronium salts for water soluble and water insoluble carboxylic acids.	B.Sc. CHEMISTRY(Hons.) II nd Year, Sem- III	CHEMISTRY PRACTICAL – DSC-8: Carbonyl Compounds----
		1.Concept of recrystallisation using alcohol/water/alcohol-water systems. 2. Concept of recrystallisation using alcohol/water/alcohol-water systems.	B.Sc. CHEMISTRY (Hons.) Ist Year, Semester I	CHEMISTRY PRACTICAL – DSC-II LAB: Basic Concepts and Aliphatic Hydrocarbons

September	Theory:	Carbohydrates Monosaccharides: Constitution and absolute configuration of glucose and fructose, epimers and anomers, mutarotation, determination of ring size of glucose and fructose, Haworth projections and conformational structures; Interconversions of aldoses and ketoses; Killiani- Fischer synthesis and Ruff degradation; Disaccharides – Structure elucidation of maltose, lactose and sucrose. (10 lectures)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV  प्रधानाचार्य Principal
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Practical:

Amino acids, proteins:

Study of peptides: determination of their primary structures-end group analysis, methods of peptide synthesis. Synthesis of peptides using N-protecting, C-protecting and C-activating groups, Solid-phase synthesis; primary, secondary and tertiary structures of proteins, Denaturation (10 lectures)

Mechanochemical solvent free synthesis of azomethines.
Benzoin condensation using Thiamine Hydrochloride as a catalyst instead of cyanide.
Photoreduction of benzophenone to benzopinacol in the presence of sunlight.

- i. Selective reduction of m-dinitrobenzene to m-nitroaniline.
- ii. Preparation of semicarbazone derivatives for aldehydes/ketones (like benzaldehyde, ethyl methyl ketone, cyclohexanone etc.)

1. Concept of melting point and mixed melting point.
2. Calibration of a thermometer and determination of the melting points of the organic compounds using any one of the following methods-Kjeldahl method, electrically heated melting point apparatus and BODMEL).
3. Calibration of a thermometer and determination of the melting points of the organic compounds using any one of the following methods-Kjeldahl method, electrically heated melting point apparatus and BODMEL).

B.Sc.
CHEMISTRY
(Hons.) IIIrd
Year,
Semester V

B.Sc.
CHEMISTRY
(Hons.) IIInd
Year,
Semester III

B.Sc.
CHEMISTRY
(Hons.) Ist Year,
Semester I

CHEMISTRY
PRACTICAL – DSE II
LAB: GREEN
CHEMISTRY

CHEMISTRY
PRACTICAL – DSC-8:
Carbonyl Compounds----

CHEMISTRY
PRACTICAL – DSC-II
LAB: **Basic Concepts
and Aliphatic
Hydrocarbons**

प्रधानाचार्य
Principal
श्री वेंकटेश्वर महाविद्यालय
Sri Venkateswara College
दिल्ली विश्वविद्यालय / University of Delhi
धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

October	Theory: Enzymes : Introduction, classification and characteristics of enzymes. Salient features of active site of enzymes. Mechanism of enzyme action (taking trypsin as example), factors affecting enzyme action, coenzymes and cofactors, specificity of enzyme action (including stereospecificity), enzyme inhibitors and their importance. (6 Lectures) Nucleic Acids: Components of nucleic acids, Nucleosides and nucleotides; Structure, synthesis and reactions of: Adenine, Guanine, Cytosine, Uracil and Thymine. Structure of polynucleotides (DNA and RNA). (6 Lectures)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
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Practicals:	Preparation and characterization of nano particles of gold using tea leaves. Principle of atom economy. Use of molecular model kit to stimulate the reaction to investigate how the atom economy can illustrate Green Chemistry. Preparation of propene by two methods can be studied (I) Triethylamine ion + OH⁻ → propene + trimethylpropene + water i) Preparation of oximes for aldehydes/ketones (like benzaldehyde, ethyl methyl ketone, cyclohexanone etc.) ii) Systematic qualitative analysis of the given organic compounds containing monofunctional groups (Aromatic hydrocarbons, alcohols, phenol) and preparation of one suitable derivative. 1. Separation of a mixture of two amino acids by radial paper chromatography. 2. Separation of a mixture of two sugars by ascending paper chromatography. 3. Determination of boiling point of liquid compounds (boiling point lower than and more than 100 °C by distillation, capillary method and BODMEL method)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc. CHEMISTRY (Hons.) IIInd Year, Semester III B.Sc. CHEMISTRY (Hons.) Ist Year, Semester I	CHEMISTRY PRACTICAL - DSE LAB: GREEN CHEMISTRY CHEMISTRY PRACTICAL – DSC-8: Carbonyl Compounds---- CHEMISTRY PRACTICAL – DSC-II LAB: Basic Concepts and Aliphatic Hydrocarbons  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

November and December				
	<u>Assignment :</u>	Amino Acids, Peptides	B.Sc. CHEMISTRY	CHEMISTRY - C XI:
	<u>Online Test-I</u>	Nucleic Acids	(Hons.) III Year,	ORGANIC CHEMISTRY
		Carbohydrates	Semester V	IV
	Theory:	Nucleic Acids: Components of nucleic acids, Nucleosides and nucleotides; Structure, synthesis and reactions of: Adenine, Guanine, Cytosine, Uracil and Thymine. Structure of polynucleotides (DNA and RNA). (4 Lectures) Lipids: (4 Lectures) Concept of Energy in Biosystems: Cells obtain energy by the oxidation of foodstuff (organic molecules). Introduction to metabolism (catabolism, anabolism). ATP: The universal currency of cellular energy, ATP hydrolysis and free energy change. Agents for transfer of electrons in biological redox systems: NAD ⁺ , FAD. Conversion of food to energy: (8 Lectures)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
	Online Test II	Amino Acids and Polynentides		
	Internal Exam-I&II	Topics: Carbohydrates	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV

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	Practicals:	Extraction of D-limonene from orange peel using liquid CO₂ prepared from dry ice. Solvent free, microwave assisted one pot synthesis of phthalocyanine complex of copper (II). v. Systematic qualitative analysis of the given organic compounds containing monofunctional groups (Aromatic hydrocarbons, alcohols, phenol) and preparation of one suitable derivative.(2 turns) 1. Detection of extra elements 2. Detection of extra elements 3. Detection of extra elements 4.Detection of extra elements	B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc. CHEMISTRY (Hons.) IIInd Year, Semester III B.Sc. CHEMISTRY (Hons.) Ist Year, Semester I	CHEMISTRY PRACTICAL - DSE LAB: GREEN CHEMISTRY CHEMISTRY PRACTICAL – DSC-8: Carbonyl Compounds---- CHEMISTRY PRACTICAL – DSC-II LAB: Basic Concepts and Aliphatic Hydrocarbons
December	Theory:	Outline of catabolic pathways of carbohydrate- glycolysis, fermentation, Krebs cycle. Caloric value of food, standard caloric content of food types.(2 lectures) Any Pending Work from Previous Month Revision and Discussion of Previous year papers.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi छोटा कुर्छा, नई दिल्ली / Chhota Kurcha, New Delhi-110021

	Practical:	Mock Practical and Oral Viva	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
		Mock Practical and Oral Viva	B.Sc. CHEMISTRY (Hons.) IIInd Year, Semester III	CHEMISTRY PRACTICAL – DSC-8: Carbonyl Compounds----
		Mock Practical and Oral Viva	B.Sc. CHEMISTRY (Hons.) Ist Year, Semester I	CHEMISTRY PRACTICAL – DSC-II LAB: Basic Concepts and Aliphatic Hydrocarbons

Sharda

Prof. Sharda Pasricha



प्रधानाचार्य
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SEMESTER WISE TEACHING PLAN 2023-24 (2023, odd sem)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. SHEFALI SHUKLA

Department: CHEMISTRY

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	1. Examples of Green Synthesis/ Reactions. Real world case studies based on the Presidential green chemistry awards of EPA (Introductory class) 2. polylactic acid made from corn	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		Electronic displacements and their applications, reaction intermediates, Electrophiles & nucleophiles Basic Concepts of Stereochemistry	B. Sc. (H) Chemistry IYr, Semester I	IDSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
	Practicals	1. General introduction of Green Chemistry, 12 principles of Green Chemistry	B.Sc.(H) Chemistry, III yr Sem-V	CHEMISTRY-DSE: GREEN CHEMISTRY
		1. Estimation of glucose by Fehling's solution. 2. Estimation of proteins by Lowry's method	B.Sc.(H) Chemistry, III yr Sem-V	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
		1. Purification of an organic compound by crystallization from water. Determination of M.P 2. Purification of an organic compound by crystallization using alcohol Determination of M.P.	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC-1: Basic Concepts of Organic Chemistry
September	Theory:	Real world case studies contd.... 1. Healthier Fats and oils 2. Development of Fully Recyclable Carpet: Cradle to Cradle Carpeting. 3. A new generation of environmentally advanced wood preservatives	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		Geometrical isomerism: <i>cis-trans</i> , <i>syn-anti</i> and <i>E/Z</i> notations. Configuration and projection formulae, Racemic mixture and their resolution. Conformational Isomerism: Alkanes (Conformations, relative stability and energy diagrams of Ethane, Propane and butane). Relative stability of cycloalkanes (Baeyer strain theory),	B. Sc. (H) Chemistry IYr, Semester I	IDSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
	Practicals:	1. Biodiesel synthesis from waste cooking oil 2. Mechanochemical solvent-free, solid–solid synthesis of azomethine using p- toluidine and o-vanillin/p-vanillin.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		1. Estimation of proteins by Lowry's method (repeat) 2. Construction of maltose standard curve and study of the action of salivary amylase on starch under optimum conditions.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules

प्रभुपति,
 श्री. वेणकटेश्वर महाविद्यालय,
 श्री. वेणकटेश्वर महाविद्यालय,
 दिल्ली विश्वविद्यालय / University of Delhi,
 धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

		1. Determination of boiling point of liquid compounds. (Boiling point lower than and more than 100 °C by distillation and capillary method) 2. Preparations: - a. Bromination of phenol/aniline. - b. 2,4-Dinitrophenylhydrazone of aldehydes and ketones - c. Semicarbazone of aldehydes/ ketones	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC-1: Basic Concepts of Organic Chemistry
October	Theory:	1. Using a naturally occurring protein to stimulate plant growth 2. Surfactants for Super critical carbon dioxide (scCO ₂) 3. Oxidation reagents and catalysts	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		Cyclohexane conformations with energy diagram. Conformations of monosubstituted cyclohexanes. Preparation (Saytzeff and Hoffmann eliminations) and properties of alkenes Electrophilic additions	B. Sc. (H) Chemistry I Yr, Semester I	DSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
	Practicals:	1. Preparation and characterization of nanoparticles of gold using tea leaves/silver nanoparticles using plant extracts. 2. Benzoin condensation using Thiamine Hydrochloride as a catalyst instead of cyanide.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		1. Isolation and estimation of DNA using cauliflower/onion 2. Effect of temperature on the action of salivary amylase. 3. Saponification value of the given oil.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
November		1. Preparation of to p- Bromoacetanilide from Acetanilide. 2. Detection of extra element (N containing compounds)	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC-1: Basic Concepts of Organic Chemistry
	Theory:	1. Oxidation reagents and catalysts 2. Biomimetic reagents	B.Sc. CHEM (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		Electrophilic addition mechanism with suitable examples, (Markownikoff/ Anti-markownikoff addition), <i>syn</i> and <i>anti</i> -addition; addition of H ₂ , X ₂ , oxymercuration-demercuration, hydroboration-oxidation, ozonolysis, hydroxylation, reaction with NBS, Reactions of alkynes; acidity, Alkylation of terminal alkynes, electrophilic addition: hydration to form carbonyl compounds, Relative reactivity of alkenes and alkynes,	B. Sc. (H) Chemistry I Yr, Semester I	DSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
	Practicals:	1. Extraction of D-limonene from orange peel using liquid CO ₂ prepared from dry ice. 2. Solvent free, microwave assisted one pot synthesis of phthalocyanine complex of copper (II).	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY

		1.Study of the titration curve of glycine. 2.Estimation of glucose by Fehling's solution.	B.Sc. (Hons.) CHEM III Year, Sem V	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
		1. Detection of extra element (N and Halogen)	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC- 1: Basic Concepts of Organic Chemistry
	<u>Test</u>	Green Chemistry	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		ORGANIC CHEMISTRY - I	B. Sc. (H) Chemistry I Yr, Semester I	DSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
	<u>Assignment</u>	Green Chemistry	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		ORGANIC CHEMISTRY - I	B. Sc. (H) Chemistry I Yr, Semester I	DSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
December	Theory:	Doubt solving class Discussion on previous year question paper	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
		1,2-and 1,4-addition reactions in conjugated dienes, Diels Alder reaction (excluding stereochemistry)	B. Sc. (H) Chemistry I Yr, Semester I	DSC 2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons



Dr Shefali Shukla



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SEMESTER WISE TEACHING PLAN (2023-24) Odd Semester

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. RAMANAIAH SEELLA

Department: CHEMISTRY

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory:	Quantum Chemistry: Postulates of Quantum mechanics, Quantum mechanical Operators, Particle in 1-D box with complete solution, Quantization Normalization of Wave functions, concept of zero point energy, Rotational motion: Schrodinger equation of rigid rotator and its discussion and quantization of rotational energy levels	B.Sc. Life sciences, III Year, Semester V (Batch-A)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
		Quantum Chemistry: Postulates of Quantum mechanics, Quantum mechanical Operators, Particle in 1-D box with complete solution, Quantization Normalization of Wave functions, concept of zero point energy, Rotational motion: Schrodinger equation of rigid rotator and its discussion and quantization of rotational energy levels	B.Sc. Life sciences, III Year, Semester V (Batch-B)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
	Practicals:	1. Estimation of (i) Mg^{2+} or (ii) Zn^{2+} by complexometric titrations using EDTA. 2. Estimation of total hardness of a given sample of water by complexometric titration	B.Sc. (P) Life Sciences Semester V (Batch-B)	DSC : Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
		-----	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	SEC 1: Basic IT TOOLS
		-----	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	VALUE ADDITION COURSES (VACs) UNDER UGCF-2022- Fit India


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	Practicals:	SEC: Basic IT TOOLS Unit 1: Introduction to Spreadsheets Spreadsheets: Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets, working with multiple worksheets and multiple workbooks, controlling worksheet views, naming cells using name box, name create and name define; Exchanging data using clipboard, object linking and embedding; Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae; Implementing file level security and protecting data within the worksheet; Understanding absolute, relative and mixed referencing in formulas, referencing cells in other worksheets and workbooks, correcting common formula errors, working with inbuilt function categories like mathematical, statistical, text, lookup, information, logical, database, date and time and basic financial functions.	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	SEC 1: Basic IT TOOLS
October	Theory:	Spectroscopy: Types of spectroscopy, Difference between atomic and molecular spectra. Born-Oppenheimer approximations: separation of molecular energies into transitional, rotational, vibrational and electronic components, Microwave spectra of diatomic molecule, selection rules, structural information derived from rotational spectroscopy Spectroscopy: Types of spectroscopy, Difference between atomic and molecular spectra. Born-Oppenheimer approximations: separation of molecular energies into transitional, rotational, vibrational and electronic components. Microwave spectra of diatomic molecule, selection rules, structural information derived from rotational spectroscopy	B.Sc. Life sciences, II-Year, Semester IV (Batch-A) B.Sc. Life sciences, II-Year, Semester IV (Batch-B)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
	Practicals:	Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of K ₂ Cr ₂ O ₇ Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water. Comment on the effect of structure on the UV spectra of organic compounds.	B.Sc. (P) Life Sciences Semester V (Batch-B)	DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
	Practicals:	UNIT- III Nutrition and Fitness • Healthy Eating Plate • Balanced Diet • Caloric Content of Food Practical/Practice • Preparing Daily Diet and Calorie Chart • Aerobic Work Out/ Physical Activity (Walking) • Assessment of Physical Activity with the Calorie intake. • Asanas for digestive system excretory system	B. Sc. (H) and B. Sc. (P)-I-Year, Semester-I	VALUE ADDITION COURSES (VACs) UNDER UGC-F-2022- Fit India प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	Practicals:	SEC: Basic IT TOOLS Unit 2: Data Analysis in Spreadsheets Consolidating worksheets and workbooks using formulae and data consolidate command; Choosing a chart type, understanding data points and data series, editing and formatting chart elements, and creating sparkline graphics, Analysing data using pivot tables: Creating, formatting and modifying a pivot table, sorting, filtering and grouping items, creating calculated field and calculated item, creating pivot table charts, producing a report with pivot tables. Introduction to recording and execution of macros.	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	SEC 1: Basic IT TOOLS
	Assignment:	Given	B.Sc. Life sciences, III Year, Semester V (Batch-A) & (Batch-B)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
	Test:	Conducted	B.Sc. Life sciences, II-Year, Semester IV (Batch-A) & (Batch-B)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
November	Theory:	Spectroscopy:: Selection rules, IR Spectra of diatomic molecules, structural information derived from vibrational spectra, vibrations of polyatomic molecules, group frequencies, Effect of hydrogen bonding (Inter & Intra molecular) and substitution on vibrational frequencies Electronic spectroscopy: electronic excited states. Free electron model and its application to electronic spectra of polyenes. Colour and constitution, Chromophores, auxochromes, bathochromic and hypsochromic shifts Spectroscopy:: Selection rules, IR Spectra of diatomic molecules, structural information derived from vibrational spectra, vibrations of polyatomic molecules, group frequencies, Effect of hydrogen bonding (Inter & Intra molecular) and substitution on vibrational frequencies Electronic spectroscopy: electronic excited states. Free electron model and its application to electronic spectra of polyenes. Colour and constitution, Chromophores, auxochromes, bathochromic and hypsochromic shifts	B.Sc. Life sciences, III Year, Semester V (Batch-A) B.Sc. Life sciences, III Year, Semester V (Batch-B)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy



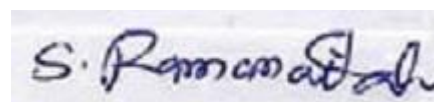
प्रधानाचार्य
Principal

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	Practicals:	Verify Lambert-Beer's law and determine the concentration of K ₂ Cr ₂ O ₇ /CoSO ₄ in a solution of unknown concentration Estimation of the amount of nickel present in a given solution as bis - (dimethylglyoximate) nickel(II) or aluminium as oxinate in a given solution gravimetrically.	B.Sc. (P) Life Sciences Semester V (Batch-B)	DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
	Practicals:	UNIT- IV Sports Physiology and Psychology • Depression, Anxiety and Stress Scale (DASS) • Rosenberg Self Esteem Scale Practical/Practice • Skills learning and Participation in sports • Group Games/ Relays/ Minor Games • Meditative Asanas and Pranayama • Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results • Data of at least 10 persons to be collected on DASS and self-esteem scale	B. Sc. (H) and B. Sc. (P)-I-Year, Semester-II	VALUE ADDITION COURSES (Vacs) UNDER UGCF-2022- Fit India
	Practicals:	SEC: Basic IT TOOLS Unit 3: Word Processing Introduction: Creating and saving your document, displaying different views, working with styles and character formatting, working with paragraph formatting techniques using indents, tabs, alignment, spacing, bullets and numbering and creating borders; Page setup and sections: Setting page margins, orientation, headers and footers, end notes and foot notes, creating section breaks and page borders; Working with tables: Creating tables, modifying table layout and design, sorting, inserting graphics in a table, table math, converting text to table and vice versa; Create newspaper columns, indexes and table of contents, Spell check your document using inbuilt and custom dictionaries, checking grammar and style, using thesaurus and finding and replacing text; Create bookmarks, captions and cross referencing, adding hyperlinks, adding sources and compiling and bibliography; Mail merge: Creating and editing your main document and data source, sorting and filtering merged documents and using merge instructions like ask, fill-in and if-then-else; Linking and embedding to keep things together. Unit 4: Databases Introduction to Database Development: Database Terminology, Objects, Creating Tables, working with fields, understanding Data types, Changing table design, Assigning Field Properties, Setting Primary Keys, using field validation and record validation rules, Indexing, working with multiple tables, Relationships & Integrity Rules, Join Properties, Record manipulation, Sorting & Filtering; Select data with queries: Creating Query by design & by wizard (Select, Make Table, Append, Delete, Cross Tab, Update, Parameterized Query, Find Duplicate and Find Unmatched).	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	SEC1: Basic IT TOOLS



December	Theory:	Photochemistry: Laws of photochemistry, Lambert-Beers law. Fluorescence and phosphorescence. Quantum efficiency and reasons for high and low quantum yields. Primary and secondary processes in photochemical reactions. Photochemical and thermal reactions. Photoelectric cells	B.Sc. Life sciences, III Year, Semester V (Batch-A)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
		Photochemistry: Laws of photochemistry, Lambert-Beers law. Fluorescence and phosphorescence. Quantum efficiency and reasons for high and low quantum yields. Primary and secondary processes in photochemical reactions. Photochemical and thermal reactions. Photoelectric cells	B.Sc. Life sciences, III Year, Semester V (Batch-B)	TLS DSC: Chemistry of d-block elements, Quantum Chemistry and Spectroscopy
	Practicals:	Creating multi table queries, creating & working with table joins. Using operators & expressions: Creating simple & advance criteria; Working with forms: Creating Basic forms, working with bound, unbound and calculated controls, understanding property sheet, Working with Data on Forms: Changing Layout, creating Sub Forms, creating list box, combo box and option groups; Working with Reports: Creating Basic Reports, Creating Header & Footer, Placing Controls on reports, sorting & grouping, Creating Sub reports.	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	SEC: Basic IT TOOLS



Signature of the teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Harshvardhan Meena

Department: Chemistry

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory (1)	Basic introduction to solid-state chemistry: Semiconductors, different types of semiconductors and their applications. Conventional heat and beat	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Theory (2)	Recapitulation of concept of atom in ancient India, Bohr's theory & its limitations, atomic spectrum of hydrogen atom. de Broglie equation, Heisenberg's Uncertainty Principle and its significance. Postulates of wave mechanics, Time independent Schrödinger's wave equation, well behaved wave function, significance of ψ and ψ^2 .	B.Sc. (Hons.) Chemistry IYear SEMESTER I	DSC-1 Atomic Structure and chemical bonding
	Practical (1)	1. Determination of pH of soil samples. 2. Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration.	B.Sc (H) Chemistry SEM III B.Sc.(H) SEM I	Basic Analytical Chemistry
	Practical (2)	1. Estimation of Ni(II) using dimethylglyoxime (DMG). 2. Estimation of copper as CuSCN. 3. Estimation of iron as Fe ₂ O ₃ by precipitating iron as Fe(OH) ₃ . (by homogeneous and heterogeneous method)		DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical (3)	1. Participation in Physical Activity		VAC-FIT INDIA
September	Theory(1)	Characterization techniques of inorganic solids: Powder X-ray Diffraction, UV-visible spectroscopy, Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM), Fourier-Transform Infrared (FTIR) spectroscopy, Brunauer–Emmett–Teller (BET) surface area analyser, Dynamic Light Scattering (DLS)	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Theory (2)	Quantum mechanical treatment of H- atom, Quantum numbers and their significance. Normalized and orthogonal wave functions. Sign of wave functions. Radial and angular wave functions for hydrogen atom. Radial function plots, radial probability distribution plots, angular distribution curves. Shapes of s, p, and d orbitals, Relative energies of orbitals. Pauli's Exclusion	B.Sc. (Hons.) Chemistry IYear SEMESTER I	DSC-1 Atomic Structure and chemical bonding प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-2

		Principle, Hund's rule of maximum spin multiplicity, Aufbau principle and its limitations.		
	Practical (1)	3. Determination of pH, acidity and alkalinity of a water sample 4. Determination of dissolved oxygen (DO) of a water sample. 5. Paper chromatographic separation of mixture of metal ion (Ni^{2+} and Co^{2+}).	BSc (P) Life Science III year	Basic Analytical Chemistry
	Practical (2)	4. Estimation of Al(III) by precipitating with oxime and weighing as $\text{Al}(\text{oxime})_3$ (aluminiumoximate). Inorganic Preparations 5. Potassium aluminium sulphate $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ (potash alum) or Potassium chromium sulphate $\text{KCr}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ (chrome alum). 6. Manganese phosphate 7.. Sodium peroxoborate	B.Sc (H) Chemistry SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical (3)	2. Health Related Fitness and their Components	B.Sc.(H) SEM I	VAC-FIT INDIA
October	Theory(1)	Sol-gel methods, Hydrothermal method, Ion-exchange and Intercalation methods. Solid electrolytes – Cationic, anionic, mixed Inorganic pigments – coloured solids, white and black pigments.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Theory (2)	General characteristics, types of ions, size effects, radius ratio rule and its limitations. Packing of ions in crystals. Lattice energy, Born-Landé equation with derivation, Madelung constant, importance	B.Sc. (Hons.) Chemistry I Year	DSC-1 Atomic Structure and chemical bonding
	Practical (1)	6. To study the use of phenolphthalein in trap cases. 7.To analyze arson accelerants. 8. To carry out analysis of gasoline.	BSc (P) Life Science III year	Basic Analytical Chemistry
	Practical (2)	Paper chromatographic separation 8. Ni(II) and Co(II) 90 9. Cu(II) and Cd(II)	B.Sc (H) Chemistry SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical (3)	3. Nutrition and Fitness	B.Sc.(H) SEM I	VAC-FIT INDIA
	Assignment	1. NOVEL INORGANIC SOLIDS 2.Atomic structure	. B.Sc. (Hons.) Chemistry SEMESTER V B.Sc. (Hons.) Chemistry	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS DSC-1 Atomic Structure and chemical bonding

	Mid-Term Test	1. NOVEL INORGANIC SOLIDS 2. Atomic structure	B.Sc. (Hons.) Chemistry SEMESTER V B.Sc. (Hons.) Chemistry	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS DSC-1 Atomic Structure and chemical bonding
November	Theory (1)	One-dimensional metals, molecular magnets, inorganic liquid crystals.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	
	Theory (2)	Covalent character in ionic compounds, polarizing power and polarizability. Fajan's rules and consequences of polarization.	B.Sc. (Hons.) Chemistry I Year	DSC-1 Atomic structure and Chemical bonding
	Practical (1)	9. Estimation of macro-nutrients: Potassium, calcium and magnesium in soil samples by flame photometry. Spectrophotometric determination of Iron in vitamin / dietary tablets. 11. Spectrophotometric identification and determination of caffeine and benzoic	BSc (P) Life Science III year	Basic Analytical Chemistry
	Practical (2)	10. Fe(III) and Al(III)	B.Sc (H) Chemistry SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical (3)	4. Sports Physiology and Psychology	B.Sc (H) SEM I	VAC-FIT INDIA

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Signature of the teacher



SEMESTER WISE TEACHING PLAN

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4 (Odd)**

Name of the Faculty: Dr. POOJA

Department: CHEMISTRY

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Introduction to oils and fats; common fatty acids present in oils and fats	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
		Electronic displacements and their applications: Inductive, electromeric, resonance and hyperconjugation. Dipole moment, acidity and basicity.	B.Sc. CHEMISTRY (Hons.) I Year, Semester I	DSC 101: Basic concepts of BIOMOLECULES
	Practicals	Estimation of glucose by Fehling's solution.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV BIOMOLECULES
		General introduction of Green Chemistry, 12 principles of Green Chemistry	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	DSE-8 GREEN CHEMISTRY
		Preparations: (Mechanism of various reactions involved to be discussed). (1) Acetanilide to p-Bromoacetanilide.	B.Sc. (P) Life Science, I Year, Semester I	DSC-1 Chemistry-I: Basic Concepts of Organic Chemistry

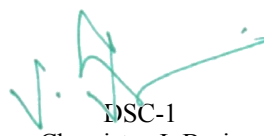
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SEPTEMBER	Theory	Hydrogenation of fats and oils, Saponification value, acid value, iodine number. Reversion and rancidity Occurrence, classification, and their biological importance. Monosaccharides: Constitution and absolute configuration of glucose and fructose	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
		Types, shape and relative stability of carbocations, carbanions and free radicals. Electrophiles and nucleophiles, Intramolecular and intermolecular molecular forces including hydrophobic, hydrophilic interactions and hydrogen bond (emphasis on effect of these forces on the stability of biomolecules), Stereochemistry and its importance to biological systems, Stereoisomerism: Optical activity and optical isomerism, asymmetry, chirality, enantiomers, diastereomers.	B.Sc. CHEMISTRY (Hons.) I Year, Semester I	DSC 101: Basic concepts of BIOMOLECULES
	Practicals	Estimation of proteins by Lowry's method.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV BIOMOLECULES
		Saponification value of the given oil.		
		Preparation of biodiesel from waste cooking oil and characterization (TLC, pH, Solubility, Combustion Test, Density, Viscosity, Gel Formation at Low Temperatures and IR can be provided).	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	DSE-8 GREEN CHEMISTRY
		Mechanochemical solvent-free, solid-solid synthesis of azomethine using p- toluidine and o-vanillin/p-vanillin (various other combinations of primary amine and aldehyde can also be tried).		
		Preparations: (Mechanism of various reactions involved to be discussed):	B.Sc. (P) Life Science, I Year, Semester I	DSC-1 Chemistry-I: Basic Concepts of Organic Chemistry
		(2) Bromination of phenol/aniline.		
		(3) 2,4-Dinitrophenylhydrazone of aldehydes and ketones		
		(4) Semicarbazone of aldehydes/ ketones		



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OCTOBER	Theory	epimers and anomers, mutarotation, determination of ring size of glucose and fructose, Haworth projection and conformational structures; Interconversion of aldoses and ketoses; Killiani-Fischer synthesis and Ruff degradation; Disaccharides – Structure elucidation of maltose, lactose and sucrose. Polysaccharides – Elementary treatment of starch, cellulose and glycogen.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
		Mesomers, specific rotation; Resolution of racemic modification, Configuration and projection formulae: Newmann, Sawhorse, Fischer projections and their interconversion. Chirality in molecules with one and two stereocentres; CIP rules: Erythro/Threo, D/L and R/S designations.; Relative and absolute configuration; thalidomide case and chiral drugs; Geometrical isomerism: cis- trans, syn-anti and E/Z nomenclature.; Cis-trans isomerism in vision. Classification of carbohydrates, reducing and non-reducing sugars, biological functions, linkage between monosaccharides, General properties and reactions of glucose and fructose, their open chain structure, epimers, mutarotation and anomers, reactions of monosaccharides, configuration, cyclic structure (exclude structure elucidation) and Haworth projection formulae of glucose and fructose:	B.Sc. CHEMISTRY (Hons.) I Year, Semester I	DSC 101: Basic concepts of BIOMOLECULES
	Practicals	Study of the action of salivary amylase on starch under optimum conditions.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV BIOMOLECULES
		Effect of temperature on the action of salivary amylase.		
		Preparation and characterization of nanoparticles of gold using tea leaves/silver nanoparticles using plant extracts.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	DSE-8 GREEN CHEMISTRY
		Benzoin condensation using Thiamine Hydrochloride as a catalyst instead of cyanide.		
		Detection of extra element	B.Sc. (P) Life Science, I Year, Semester I	DSC-1 Chemistry-I: Basic Concepts of Organic Chemistry


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	<u>Test</u>	Lipids, Carbohydrates, Nucleic acids	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV
		Basic organic chemistry, Stereochemistry	B.Sc. CHEMISTRY (Hons.) I Year, Semester I	DSC 101: Basic concepts of BIOMOLECULES



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NOVEMBER	Theory	Introduction to metabolism (catabolism, anabolism). ATP: The universal currency of cellular energy, ATP hydrolysis and free energy change. Agents for transfer of electrons in biological redox systems: NAD^+, FAD. Outline of catabolic pathways of carbohydrate-glycolysis, fermentation, Krebs cycle. structure of disaccharides (sucrose, maltose, lactose); polysaccharides- classification, structure of important members, storage polysaccharides (Glycogen, Starch) and structural polysaccharides (Cellulose, chitin, peptidoglycans and glycosaminoglycans) Introduction, classification, biological importance of triglycerides, phospholipids, glycolipids, eicosanoids and steroids (cholesterol). Oils, Fats and Waxes: Common fatty acids present in oils and fats, essential fatty acids,	B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc. CHEMISTRY (Hons.) I Year, Semester I	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV DSC 101: Basic concepts of BIOMOLECULES
	Practicals	Study of the titration curve of glycine. Isolation and estimation of DNA using cauliflower/onion. Extraction of D-limonene from orange peel using liquid CO_2 prepared from dry ice. Solvent free, microwave assisted one pot synthesis of phthalocyanine complex of copper (II). Detection of extra element Purification of an organic compound by crystallization (from water and alcohol) and distillation, Criteria of purity: Determination of M.P.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc. (P) Life Science, I Year, Semester I	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV BIOMOLECULES DSE-8 GREEN CHEMISTRY DSC-1 Chemistry-I: Basic Concepts of Organic Chemistry  प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi बाला कृष्ण, नई दिल्ली / Balakrishna, New Delhi-110021

	Assignment	Amino acids and Proteins, Enzymes, Carbohydrates	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV BIOMOLECULES
DECEMBER	Theory:	Caloric value of food, standard caloric content of food types. characteristics of fatty acids and fats (saponification, iodine, acid, acetyl and peroxide values). Rancidity and reversion of fats; waxes, trans-fats and their biological significance. Aldol condensation (Glucogenesis), Retro-aldol (Glycolysis), Benzoin condensation (umpolung decarboxylation of pyruvate in the presence of TPP), Claisen condensation (Synthesis of fatty acids), Michael addition (Dehydrases), Cannizzaro (Sugar metabolism), Baeyer Villiger reaction (FAD dependent ketone synthesis), Pinacole-pinacolone rearrangement (1,2-carbon carbon shift), Isomerisation (Glycolysis), Redox reaction (Lactate dehydrogenase	B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc. Biological Sciences, I Year, Semester I	CHEMISTRY - C XI: ORGANIC CHEMISTRY IV BIOMOLECULES BS-C1: CHEMISTRY ORGANIC CHEMISTRY 

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Teacher's Signature



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Rekha Yadav

Department: Chemistry

Semester: 2023-24 Odd Semester

Month		Topics	Course	Paper Code/Name
August	Theory	Ionic equilibrium Strong, moderate and weak electrolytes, Arrhenius theory of electrolytic dissociation, degree of ionization, factors affecting degree of ionization, ionization constant and ionic product of water. Ionization of weak acids and bases, pH scale, common ion effect; dissociation constants of mono and diprotic acids. Salt hydrolysis-calculation of hydrolysis constant, degree of hydrolysis and pH for different salts.	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state UPC 2172012303
	Theory	Introduction and Postulates of kinetic theory of gases	GE-III	GE: States of Matter UPC 2174001011
	Tutorial	-	-	-
	Practical	1. Verify Lambert-Beer's law and determine the concentration of KMnO_4 in aqueous solution of unknown concentration. 2. Verify Lambert-Beer's law and determine the concentration of KMnO_4 in acidic solution of unknown concentration.	B.Sc. (H) Chemistry V Sem	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V
	Practical	1. Study the effect of addition of HCl/NaOH on pH to the solutions of acetic acid, sodium acetate and their mixtures. 2. Preparation of buffer solutions of different pH values a: Sodium acetate-acetic acid b: Ammonium chloride-ammonium hydroxide	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state 

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	Practical	1.Determination of critical solution temperature and composition at CST of the phenol water system 2. To study the effect of impurities of sodium chloride on the CST of phenol-water system.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical	1.Determine the surface tension of a liquid by drop number method. 2. Determine the surface tension of a liquid by drop weight method.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
September	Theory	Buffer solutions; derivation of Henderson equation and its applications. Solubility and solubility product of sparingly soluble salts – applications of solubility product principle. Qualitative treatment of acid – base titration curves. Theory of acid–base indicators; selection of indicators and their limitations. Chemical Equilibrium Criteria of thermodynamic equilibrium, degree of advancement of reaction, Chemical equilibria in ideal gases, Thermodynamic derivation of relation between Gibbs free energy of a reaction and reaction quotient, Equilibrium constants and their dependence on temperature, pressure and concentration, Le Chatelier's Principle (Quantitative treatment), Free energy of mixing and spontaneity (qualitative discussion).	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state UPC 2172012303
	Theory	Derivation of the kinetic gas equation, deviation of real gases from ideal behaviour, compressibility factor, causes of deviation, van der Waals equation of state for real gases. Boyle temperature (derivation not required), critical phenomena, critical constants and their calculation from van der Waals equation.	GE-III	GE: States of Matter UPC 2174001011
	Tutorial	-	-	-
	Practical	3. Verify Lambert-Beer's law and determine the concentration of $K_2Cr_2O_7$ in acidic solution of unknown concentration. 4. Determine the concentrations of $KMnO_4$ and $K_2Cr_2O_7$ in a mixture. 5. Study the kinetics of iodination of propanone in acidic medium. 6. Determine the amount of iron present in a sample using 1, 10-phenanthroline.	B.Sc. (H) Chemistry V Sem	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V  प्रधानाचार्य Principal श्री. वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhauila Kuan, New Delhi-22

	Practical	3. pH metric titration of Strong acid with strong base 4. pH metric titration of Weak acid with strong base. Determination of dissociation constant of a weak acid. 5. Determination of cell constant 6. Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant of a weak acid.	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state
	Practical	3. To study the effect of impurities of succinic acid on the CST of phenol-water system. 4. To study the cooling curves for the following simple eutectic system.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical	3. Study the variation of surface tension with different concentration of detergent solutions. Determine CMC. 4. Study the effect of the addition of solutes on the surface tension of water at room temperature and explain the observations in terms of molecular interactions: (i) sugar (ii) ethanol (iii) sodium chloride 5. Study the variation of surface tension with different concentration of sodium chloride solutions.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
October	Theory	Conductance Quantitative aspects of Faraday's laws of electrolysis, Conductivity, equivalent and molar conductivity and their variation with dilution for weak and strong electrolytes. Molar conductivity at infinite dilution. Kohlrausch's law of independent migration of ions. Debye-Huckel-Onsager equation, Wien effect, Debye-Falkenhagen effect, Walden's rule. Ionic velocity, mobility and their determination, transference number and its relation to ionic mobility, determination of transference number using Moving Boundary methods. Applications of conductance measurement: (i) degree of dissociation of weak electrolytes, (ii) ionic product of water (iii) solubility and solubility product of sparingly soluble salts, (iv) conductometric titrations (v) hydrolysis constants of salts.	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state UPC 2172012303

	Theory	Andrews isotherms of CO ₂ , Maxwell Boltzmann distribution laws of molecular velocities and molecular energies (graphic representation – derivation not required) and their importance. Temperature dependence of these distributions, most probable, average and root mean square velocities (no derivation), collision cross section, collision number, collision frequency, collision diameter.	GE-III	GE: States of Matter UPC 2174001011
	Tutorial	-	-	-
	Practical	7. Determine the dissociation constant of an indicator (phenolphthalein). 8. Study the kinetics of interaction of crystal violet/ phenolphthalein with sodium hydroxide. 9. Study the 200-500 nm absorbance spectra of KMnO ₄ and K ₂ Cr ₂ O ₇ (in 0.1 M H ₂ SO ₄) and determine the $\lambda_{\max}$ values. Calculate the energies of the two transitions in different units (kJ molecule ⁻¹ , kJ mol ⁻¹ , cm ⁻¹ , eV). 10. Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of K ₂ Cr ₂ O ₇ .	B.Sc. (H) Chemistry V Sem	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V
	Practical	7. Perform the following conductometric titration: Strong acid vs. strong base 8. Conductometric titration: Weak acid vs. strong base 9. conductometric titration: Mixture of strong acid and weak acid vs. strong base 10. Conductometric titration: Strong acid vs. weak base	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state
	Practical	4. To study the cooling curves for the simple eutectic system (continued). 5. To study the cooling curves for the congruently melting systems.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical	6. Determination of co-efficient of viscosity of two unknown aqueous solutions. 7. Study the variation of viscosity with different concentration of sugar solutions. 8. Study the effect of the addition of solutes such as (i) polymer (ii) ethanol (iii) sodium chloride on the viscosity of water at room temperature and explain the observations in terms of molecular interactions	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State

	Assignment and Mid-Term Test	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state	
		B. Sc./ B. Sc. (H) Semester III	GE: States of Matter UPC 2174001011	
November	Theory	Solid State Nature of the solid state, law of constancy of interfacial angles, law of rational indices, Miller indices, elementary idea of symmetry, seven crystal systems and fourteen Bravais lattices; X-ray diffraction, Bragg's law, a simple account of rotating crystal method and powder pattern method. Analysis of powder diffraction patterns of NaCl, CsCl and KCl.	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state UPC 2172012303
	Theory	Mean free path of molecules, viscosity of gases and effect of temperature and pressure on coefficient of viscosity (qualitative treatment only).	GE-III	GE: States of Matter UPC 2174001011
	Tutorial	-	-	-
	Practical	11. Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water. Comment on the effect of structure on the UV spectra of organic compounds. 12. Analysis of the given vibration-rotation spectrum of HCl (g)	B.Sc. (H) Chemistry V Sem	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V
	Practical	11. Differentiate and classify the given set of the diffraction pattern as crystalline materials or amorphous (Glass) substance. 12. Carry out analysis of a given set of p-XRD and determine the type of the cubic crystal structure a. NaCl b. CsCl c. KCl 13. Determination of approximate crystal size from a given set of p-XRD	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state
	Practical	5. To study the cooling curves for the congruently melting systems (continued). 6. Verify the Freundlich and Langmuir isotherms for adsorption of acetic acid on activated charcoal.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption

	Practical	9. Study the variation of viscosity of water with the amounts of a solute and calculate the intrinsic viscosity at room temperature. 10. Determine the viscosity average molecular mass of the polymer (PVA) using viscosity measurements.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
December	Theory	Solid State Analysis of powder diffraction patterns of NaCl, CsCl and KCl.	B.Sc. (H) Chemistry III Sem	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state UPC 2172012303
	Practical	-	-	-

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Pragya Gahlot
Department: Chemistry
Semester: 2023-24 Odd Semester

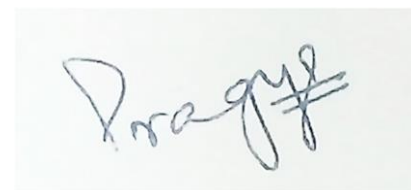
Month		Topics	Course	Paper Code/Name
August	Theory	UNIT-1: Solutions and Colligative Properties (12 Hours) Dilute solutions; lowering of vapour pressure, Raoult's law, Henry's law.	B.Sc. (H) CHEMISTRY Semester III	DSE: Solutions, Colligative Properties, Phase Equilibria and Adsorption UPC 2173012005
	Theory	Introduction	B. Sc./ B. Sc. (H) Semester III	GE: States of Matter UPC 2174001011
	Practical	pH metry: 1. Study the effect of addition of HCl/NaOH on pH to the solutions of acetic acid, sodium acetate and their mixtures. 2. Preparation of buffer solutions of different pH values a. Sodium acetate-acetic acid b. Ammonium chloride-ammonium hydroxide	B.Sc. (H) CHEMISTRY Semester III	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state
	Practical	1. Determination of heat capacity of calorimeter. 2. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.	B.Sc. (P) Life Sciences Semester III	DSC Chemistry -III Chemical Energetics and Equilibria
	Practical	Verify Lambert-Beer's law and determine the concentration of KMnO ₄	B.Sc. (P) Life Sciences Semester V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy
September	Theory	Thermodynamic basis of the colligative properties - lowering of vapour pressure, elevation of Boiling Point, Depression of Freezing point and Osmotic pressure and derivation of expressions for these using chemical potential. Application of colligative properties in calculating molar masses of normal, dissociated and associated solutes in solutions, van't Hoff factor and its applications. Concept of activity and activity coefficients. UNIT-2: Concept of phases, components and degrees of freedom, derivation of Gibbs Phase Rule for nonreactive and reactive systems; Clausius-Clapeyron equation and	B.Sc. (H) CHEMISTRY Semester III	DSE: Solutions, Colligative Properties, Phase Equilibria and Adsorption UPC 2173012005

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		its applications to solid-liquid, liquid-vapour and solid-vapour equilibria,. phase diagram for one component systems (H ₂ O and S), with applications. A comparison between the phase diagram of CO ₂ and H ₂ O		
	Theory	Unit 2: Liquids State: Surface tension and its determination using stalagmometer, Viscosity of a liquid and determination of coefficient of viscosity using Ostwald viscometer, effect of temperature on surface tension and coefficient of viscosity of a liquid (qualitative treatment only). Effect of addition of various solutes on surface tension and viscosity. Explanation of cleansing action of detergents.	B. Sc./ B. Sc. (H) Semester III	GE: States of Matter UPC 2174001011
	Practical	2. Preparation of buffer solutions of different pH values b. Ammonium chloride-ammonium hydroxide 3. pH metric titration of a. Strong acid with strong base b. Weak acid with strong base. Determination of dissociation constant of a weak acid.	B.Sc. (H) CHEMISTRY Semester III	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state
		3. Determination of the enthalpy of ionization of acetic acid. 4. Determination of enthalpy of neutralization of acetic acid and ammonium hydroxide using Hess's law. 5. Determination of integral enthalpy of solution (both endothermic and exothermic) of salts.	B.Sc. (P) Life Sciences Semester III	DSC Chemistry -III Chemical Energetics and Equilibria
	Practical	Verify Lambert-Beer's law and determine the concentration of K ₂ Cr ₂ O ₇ /CoSO ₄ in a solution of unknown concentration Estimation of the amount of nickel present in a given solution as bis - (dimethylglyoximate) nickel(II) or aluminium as oxinate in a given solution gravimetrically. Estimation of (i) Mg ²⁺ or (ii) Zn ²⁺ by complexometric titrations using EDTA. 3. Estimation of total hardness of a given sample of water by complexometric titration.	B.Sc. (P) Life Sciences Semester V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy
	Theory	. Phase diagrams for systems of solid-liquid equilibria involving eutectic, congruent and incongruent melting points, solid solutions (excluding partial miscibility). Binary solutions: Gibbs-Duhem-Margules equation, its derivation and applications to fractional distillation of binary miscible liquids (ideal and non ideal),	B.Sc. (H) CHEMISTRY Semester III	DSE:Solutions, Colligative Properties, Phase Equilibria and Adsorption UPC 2173012005
	Theory	Unit 3: Solid State (12 Hours) Forms of solids, symmetry elements, unit cells, crystal systems, Bravais lattice types and identification of lattice planes. Laws of crystallography - law of constancy of interfacial angles. Law of rational indices, Miller indices. X-ray diffraction by crystals	B. Sc./ B. Sc. (H) Semester III	GE: States of Matter UPC 2174001011

	Practical	Conductometry: 1. Determination of cell constant 2. Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant of a weak acid. 3. Perform the following conductometric titrations: a. Strong acid vs. strong base b. Weak acid vs. strong base	B.Sc. (H) CHEMISTRY Semester III	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state
		6. Determination of enthalpy of hydration of Copper sulphate. Ionic equilibria: 7. Preparation of buffer solutions: (i) Sodium acetate-acetic acid or (ii) Ammonium chloride ammonium acetate. Measurement of the pH of buffer solutions and comparison of the values with theoretical values.	B.Sc. (P) Life Sciences Semester III	DSC Chemistry -III Chemical Energetics and Equilibria
	Practical	4. Determination of the composition of the Fe^{3+} - salicylic acid complex / Fe^{2+} - phenanthroline complex in solution by Job's method. Study the 200-500 nm absorbance spectra of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ (in 0.1 M H_2SO_4) and determine the λ_{max} values. Calculate the energies of the two transitions in different units (J molecule ⁻¹ , kJ mol ⁻¹ , cm ⁻¹ , eV). 2. Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of $\text{K}_2\text{Cr}_2\text{O}_7$ 3. Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water	B.Sc. (P) Life Sciences Semester V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy
	Assignment and Mid-Term Test	B.Sc. (H) CHEMISTRY Semester III	DSE: Solutions, Colligative Properties, Phase	
		B. Sc./ B. Sc. (H) Semester III	GE: States of Matter UPC 2174001011	
November	Theory	Konovalov's laws, azeotropes, lever rule, partial miscibility of liquids, CST, miscible pairs, steam distillation. Nernst distribution law: its derivation and applications. Three component systems, water-chloroform-acetic acid system, triangular plots. UNIT-3: Surface chemistry Physical adsorption, chemisorption, adsorption isotherms (Langmuir and Freundlich).	B.Sc. (H) CHEMISTRY Semester III	DSE: Solutions, Colligative Properties, Phase Equilibria and Adsorption UPC 2173012005
	Theory	Bragg's law and powder XRD. Powder diffraction patterns of NaCl, CsCl and KCl (qualitative treatment only), defects in crystals. Glasses and liquid crystals.	B. Sc./ B. Sc. (H) Semester III	GE: States of Matter UPC 2174001011
	Practical	3. Perform the following conductometric titrations: c. Mixture of strong acid and weak acid vs. strong base d. Strong acid vs. weak base	B.Sc. (H) CHEMISTRY Semester III	DSC-9: Chemical equilibrium, Ionic equilibrium, conductance and solid state

		8. Study the effect of addition of HCl/NaOH on pH of the buffer solutions (acetic acid, and sodium acetate). 9. pH metric titration of strong acid with strong base, 10. pH metric titration of weak acid with strong base	B.Sc. (P) Life Sciences Semester III	DSC Chemistry -III Chemical Energetics and Equilibria
	Practical	2. Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of K ₂ Cr ₂ O ₇ 3. Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water. Comment on the effect of structure on the UV spectra of organic compounds.	B.Sc. (P) Life Sciences Semester V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy
December	Theory	Gibbs adsorption study, Derivation of BET equation	B.Sc. (H) CHEMISTRY Semester III	DSE: Solutions, Colligative Properties, Phase Equilibria and Adsorption



Signature of the teacher



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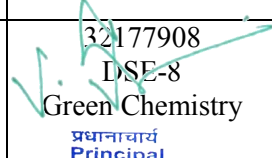
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Rangarajan T. M.

Department: Chemistry

Semester: I, III, and V

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 1: What is Green Chemistry? Some important environmental laws, pollution prevention Act of 1990 and Introduction. Unit 2: Twelve principles of Green Chemistry and their explanation with examples. Prevention of Waste/ by products; maximum incorporation of the materials used in the process into the final products, Environmental impact factor, waste or pollution prevention hierarchy • Green metrics to assess greenness of a reaction, e.g. Atom Economy, calculation of atom economy of the rearrangement, addition, substitution and elimination reactions. Use of catalytic reagents (wherever possible) in preference to stoichiometric reagents; catalysis and green chemistry, comparison of heterogeneous and homogeneous catalysis, biocatalysis, asymmetric catalysis and photocatalysis.	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry
	Theory	Stereoisomerism: Optical activity and optical isomerism, asymmetry, chirality, enantiomers, diastereomers. Specific rotation; Configuration and projection formulae: Newman,	B.Sc. (H) Chemistry I Sem.	UPC- 2172011102 DSC-2: Organic Chemistry-I: Basic Concepts and Aliphatic Hydrocarbons
	Tutorial			
	Practical	Preparation of biodiesel from waste cooking oil and characterization (TLC, pH, Solubility, Combustion Test, Density, Viscosity, Gel Formation at Low Temperature and IR can be provided). Photoreduction of benzophenone to benzopinacol in the presence of sunlight.	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry
	Practical	1. Estimation of glucose by Fehling's solution. 2. Estimation of proteins by Lowry's method.	B.Sc. (H) Chemistry V Sem.	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
	Practical	UNIT- I Participation in Physical Activity • Fit India Protocol Physical Activity, Health and Fitness • Indicators of Fitness Practical/Practice • Aerobic Work Out/ Physical Activity (Walking)	B.Sc. (H) Chemistry III Sem.	6967001009 VAC-III Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		• Yoga -Asanas (Lying, Sitting and Standing positions) and Pranayama • Cardiovascular Testing by 12min/9 min Cooper Run/Walk test		
September	Theory	Energy requirements for reactions – alternative sources of energy: use of microwaves , ultrasonic energy and photochemical energy. Avoidance of unnecessary derivatization – careful use of blocking/protecting groups. Selection of starting materials; should be renewable rather than depleting, Illustrate with few examples such as biodiesel and polymers from renewable resources (such as green plastic). Green solvents: super critical fluids with special reference to carbon dioxide, water as a solvent for organic reactions, ionic liquids, fluoruous biphasic solvent, PEG, solventless processes, solvents obtained from renewable resources and how to compare greenness of solvents.	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry
	Theory	projection formulae: Newman, Sawhorse, Fischer and their interconversion. Chirality in molecules with one and two stereocentres; meso configuration.	B.Sc. (H) Chemistry I Sem.	UPC- 2172011102 DSC-2: Organic Chemistry-I: Basic Concepts and Aliphatic Hydrocarbons
	Tutorial			
	Practical	Mechanochemical solvent free, solid–solid synthesis of azomethine using p- toluidine and o-vanillin/p-vanillin (various other combinations of primary amine and aldehyde can also be tried).	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry
	Practical	1. Study of the action of salivary amylase on starch under optimum conditions. 2. Effect of temperature on the action of salivary amylase.	B.Sc. (H) Chemistry V Sem.	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
	Practical	Muscular Strength and Endurance • Body Composition and Flexibility Practica I/Practice • Flexibility Training: Back Saver Sit and Reach test • Muscular Strength Training: Curl Ups / Standing Broad Jump/ Vertical Jump/ Plyometric • Endurance Training: 1 Mile RockPort Test or 12 /9 minute Cooper run/walk test. • Ideal Body Weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio (Data of at least 10 persons to be collected)	B.Sc. (H) Chemistry III Sem.	6967001009 VAC-III FIT INDIA
October	Theory	Design for degradation: A product should not persist after the commercial function is over e.g. soaps and detergents, pesticides and polymers • Strengthening/ development of analytical techniques to prevent and minimize the generation of hazardous substances in chemical processes. Prevention of chemical accidents designing greener	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		processes, inherent safer design, principle of ISD “What you don’t have cannot harm you”, greener alternative to Bhopal Gas Tragedy (safer route to carcarbaryl) and Flixiborough accident (safer route to cyclohexanol) subdivision of ISD, minimization, simplification, substitution, moderation and limitation. Prevention/ minimization of hazardous/ toxic products reducing toxicity • Risk = (function) hazard x exposure • Designing safer chemicals with minimum toxicity yet has the ability to perform the desired functions.		
	Theory	Racemic mixture and their resolution. Relative and absolute configuration: D/L and R/S designations (CIP rules). Geometrical isomerism: cis-trans, syn-anti and E/Z notations.	B.Sc. (H) Chemistry I Sem.	UPC- 2172011102 DSC-2: Organic Chemistry-I: Basic Concepts and Aliphatic Hydrocarbons
	Tutorial			
	Practical	Solvent free, microwave assisted one pot synthesis of phthalocyanine complex of copper(II). Benzoin condensation using Thiamine Hydrochloride as a catalyst instead of cyanide.	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry
	Practical	1. Isolation and estimation of DNA using cauliflower/onion. 2. Saponification value of the given oil.	B.Sc. (H) Chemistry V Sem.	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
	Practical	UNIT- III Nutrition and Fitness • Healthy Eating Plate • Balanced Diet • Caloric Content of Food, Practical/Practice • Preparing Daily Diet and Calorie Chart • Aerobic Work Out/ Physical Activity (Walking) • Assessment of Physical Activity with the Calorie intake. • Asanas for digestive system excretory system	B.Sc. (H) Chemistry III Sem.	6967001009 VAC-III FIT INDIA
	Assignment	Assignment was given and collected.		
	Mid-Term Test	Internal assessment test was conducted and evaluated.		
November	Theory	Unit 3: Examples of Green Synthesis/ Reactions • Green Synthesis of the following compounds: adipic acid, catechol, disodium iminodiacetate (alternative to Strecker synthesis). • Green Reagents: Non-phosgene Isocyanate Synthesis, Selective Methylation using dimethylcarbonate. • Microwave assisted solvent free synthesis of copper phthalocyanine • Microwave assisted reactions in water: Hofmann Elimination, methyl benzoate to benzoic acid and Decarboxylation reaction • Ultrasound assisted reactions: sonochemical	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		Simmons-Smith Reaction (Ultrasonic alternative to Iodine). Unit 5: mechanochemical and solvent free synthesis of inorganic complexes; co crystal controlled solid state synthesis (C2S3); Green chemistry in sustainable development.		
		Conformational Isomerism: Alkanes (Conformations, relative stability and energy diagrams of Ethane, Propane and butane). Relative stability of cycloalkanes (Baeyer strain theory), Cyclohexane conformations with energy diagram. Conformations of monosubstituted cyclohexanes.	B.Sc. (H) Chemistry I Sem.	UPC- 2172011102 DSC-2: Organic Chemistry-I: Basic Concepts and Aliphatic Hydrocarbons
	Tutorial			
	Practical	Preparation and characterization of nanoparticles of gold using tea leaves/silver nanoparticles using plant extracts. Extraction of D-limonene from orange peel using liquid CO2 prepared from dry ice.	B.Sc. (H) Chemistry V Sem.	32177908 DSE-8 Green Chemistry
	Practical	1. Study of the titration curve of glycine.	B.Sc. (H) Chemistry V Sem.	CHEMISTRY - CXI: ORGANIC CHEMISTRY – IV Biomolecules
	Practical	UNIT- IV Sports Physiology and Psychology • Depression, Anxiety and Stress Scale (DASS) • Rosenberg Self Esteem Scale, Practical/Practice • Skills learning and, Participation in sports • Group Games/ Relays/ Minor Games • Meditative Asanas and Pranayama • Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results • Data of at least 10 persons to be collected on DASS and self-esteem scale	B.Sc. (H) Chemistry III Sem.	6967001009 VAC-III FIT INDIA
December	Theory			
	Tutorial			
	Practical			

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr.T.VASANTHA

Department: CHEMISTRY

Semester: I / III / V

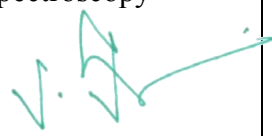
Month		Topics	Course	Paper Code/Name
August	Theory	Introduction to Nanomaterials, classification & preparation of Gold & Silver nano particles, methods of synthesis of nanoparticles, surface plasmon resonance, carbon nanotubes inorganic nanowires	B.Sc. (H), Chemistry III Year, SemV	32177901 DSE- Novel inorganic solids
	Theory	Introduction to analytical chemistry and its interdisciplinary nature, Concept of sampling. Importance of accuracy, precision and sources of error in analytical measurements. Significant figures. Presentation of experimental data and results.	B.Sc. Life Science, III Year, SemV	CHEMISTRY –SEC-2 Basic Analytical Chemistry
	Practical	Synthesis of silver nanoparticles by chemical methods and characterization using UV-visible spectrophotometer.	B.Sc. (H) Chemistry III Year SEM V	Chemistry Practical - DSE Lab: Novel Inorganic Solids
	Practical	1. Estimation of Ni(II) using dimethylglyoxime (DMG). 2. Estimation of copper as CuSCN. 3. Estimation of iron as Fe ₂ O ₃ by precipitating iron as Fe(OH) ₃ . (by homogeneous and heterogeneous method)	B.Sc (H) Chemistry SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical	Introduction of titrations	B.Sc. (H) Chemistry Sem I	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
	Practical	1. Estimation of (i) Mg ²⁺ or (ii) Zn ²⁺ by complexometric titrations using EDTA. 2. Estimation of total hardness of a given sample of water by complexometric titration.	B.Sc. (P) Life Sciences Sem V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy

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September	Theory	surface plasmon resonance, carbon nanotubes, inorganic nanowires, Bioinorganic nanomaterials, DNA and its nanomaterials, natural and artificial nanomaterials, self-assembled nanostructures, control of nanoarchitecture, one dimensional control.	B.Sc. (H) Chemistry III Year SEM V	32177901 DSE- Novel inorganic solids
	Theory	Analysis of soil Importance of soil, uses of soil, Composition of soil, complexometric titrations & their importance's, Introduction to chelation, chelating agents	B.Sc. Life Science, III Year, SemV	CHEMISTRY –SEC-2 Basic Analytical Chemistry
	Practical	Synthesis of silver nanoparticles by green approach methods and characterization using UV-visible spectrophotometer. Preparation of polyaniline and its characterization using UV-visible spectrophotometer.	B.Sc. (H) Chemistry III Year SEM V	Chemistry Practical - DSE Lab: Novel Inorganic Solids
	Practical	4. Estimation of Al(III) by precipitating with oxime and weighing as Al(oxime) ₃ (aluminiumoxinate). Inorganic Preparations 5.Potassium aluminium sulphate KAl(SO ₄) ₂ .12H ₂ O (potash alum) or Potassium chromium sulphate KCr(SO ₄) ₂ .12H ₂ O (chrome alum). 6.Manganese phosphate 7.. Sodium peroxoborate	B.Sc (H) Chemistry II Year SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical	Estimation of sodium carbonate using standardized HCl. 2. Estimation of carbonate and hydroxide present together in a mixture	B.Sc. (H) Chemistry Sem I	DSC:Atomic Structure & Chemical Bonding(Inorganic Chemistry -I)
	Practical	3.Determination of the composition of the Fe ³⁺ -salicylic acid complex / Fe ²⁺ -phenanthroline complex in solution by Job's method. 4.Study the 200-500 nm absorbance spectra of KMnO ₄ and K ₂ Cr ₂ O ₇ (in 0.1 M H ₂ SO ₄) and determine the λ_{max} values. Calculate the energies of the two transitions in different units (J molecule ⁻¹ , kJ mol ⁻¹ , cm ⁻¹ , eV). 5 Study the pH-dependence of the	B.Sc. (P) Life Sciences Sem V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy



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		UV-Vis spectrum (200-500 nm) of K ₂ Cr ₂ O ₇ . 6. Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water		
October	Theory	Introduction, classification of Ceramic, Properties, manufacturing and applications of ceramics, Introduction to Refractory, classification of Refractories and superalloys as examples, Introduction, conduction polymers, conduction mechanism, polyacetylene, polyparaphenylene, polyaniline and polypyrrole, applications of conducting polymers, Introduction to ion-exchange resins and their applications.	B.Sc. (H) Chemistry III Year SEM V	32177901 DSE- Novel inorganic solids
	Theory	Chromatography thin layer chromatography, Column chromatography and ion-exchange chromatography	B.Sc. Life Science, III Year, Sem V	CHEMISTRY –SEC-2 Basic Analytical Chemistry
	Practical	Intercalation of hydrogen in tungsten trioxide and its conductivity measurement using conductometer. Synthesis of metal sulphide nanoparticles (MnS, CdS, ZnS, CuS, NiO) and characterization	B.Sc. (H) Chemistry III Year SEM V	Chemistry Practical – DSE Lab: Novel Inorganic Solids
	Practical	Paper chromatographic separation 8. Ni(II) and Co(II) 90 9. Cu(II) and Cd(II)	B.Sc (H) Chemistry II Year SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical	Estimation of carbonate and bicarbonate present together in a mixture.	B.Sc. (H) Chemistry I Year Sem I	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
	Practical	Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of K ₂ Cr ₂ O ₇ Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water. Comment on the effect of structure on the UV spectra of organic compounds.	B.Sc. Life Science, III Year, Sem V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-2

	Assignment	Given		
	Mid-Term Test	Conducted		
November	Theory	Introduction of Composite materials, limitations of conventional engineering materials, Role of matrix in composites, classification, matrix materials, Reinforcements classifications, metal-matrix composites, polymer-matrix composites, Fibre-reinforced composites, bio nanocomposites, Environmental effects on composites, applications of composites	B.Sc. (H) Chemistry III Year SEM V	32177901 DSE- Novel inorganic solids
	Theory	Analysis of water: Definition of pure water, Sources of water, importance's of water, Introduction to contamination water, Sources responsible for contaminating water, Different methods of water sampling, Different methods of water purification	B.Sc. Life Science, III Year, SemV	CHEMISTRY –SEC-2 Basic Analytical Chemistry
	Practical	Synthesis of inorganic pigments (PbCrO ₄ , ZnCrO ₄ , Prussian Blue, Malachite). Synthesis of pure ZnO and Cu doped ZnO nanoparticles. Preparation of zeolite A and removal of Mg and Ca ions from water samples quantitatively	B.Sc. (H) Chemistry III Year SEM V	Chemistry Practical – DSE Lab: Novel Inorganic Solids
	Practical	Separation of following metal ions by using paper chromatography. Fe(III) and Al(III)	B.Sc (H) Chemistry II Year SEM III	DSC-7: Chemistry of d- and f block Elements & Quantitative Inorganic Analysis
	Practical	Estimation of oxalic acid by titrating it with KMnO ₄ Estimation of Mohr's salt by titrating it with KMnO ₄ Estimation of oxalic acid and sodium oxalate in a given mixture	B.Sc. (H) Chemistry Sem I	DSC:Atomic Structure & Chemical Bonding(Inorganic Chemistry -I)

	Practical	Verify Lambert-Beer's law and determine the concentration of $K_2Cr_2O_7/CoSO_4$ in a solution of unknown concentration Estimation of the amount of nickel present in a given solution as bis - (dimethylglyoximate) nickel(II) or aluminium as oxinate in a given solution gravimetrically.	B.Sc. (P) Life Sciences Sem V	DSE: Chemistry of d-Block Elements, Quantum Chemistry and Spectroscopy
December	Theory	-	-	-

T. Q. a

Signature of the teacher

V. B.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Ramavath Janraj Naik

Department: Chemistry

Semester: I, III, and V

Month		Topics	Course	Paper Code/Name
August	Theory	Atomic Structure: Recapitulation of concept of atom in ancient India, Bohr's theory & its limitations, atomic spectrum of hydrogen atom. de Broglie equation, Heisenberg's Uncertainty Principle and its significance. Postulates of wave mechanics, Time independent Schrödinger's wave equation, well behaved wave function, significance of ψ and ψ^2 . Quantum mechanical treatment of H- atom, Quantum numbers and their significance. Normalized and orthogonal wave functions. Sign of wave functions. Radial and angular wave functions for hydrogen atom. Radial function plots, radial probability distribution plots, angular distribution curves. Shapes of s, p, and d orbitals, Relative energies of orbitals. Pauli's Exclusion Principle, Hund's rule of	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Unit 1: Atomic Structure Review of: Bohr's theory and its limitations, Heisenberg uncertainty principle, Dual behaviour of matter and radiation, De-Broglie's relation, Hydrogen atom spectra, need of a new approach to atomic structure. Time independent Schrodinger equation and meaning of various terms in it. Significance of ψ and ψ^2 , Schrödinger equation for hydrogen atom, radial and angular parts of the hydrogen wave functions (atomic orbitals) and their variations for 1s, 2s, 2p, 3s, 3p and 3d orbitals (Only graphical representation), radial and angular nodes and their significance, radial distribution functions and the concept of the most probable distance with special reference to 1s and 2s atomic orbitals.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding

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		UNIT-1: Periodic Properties Electronic configurations of the atoms. Stability of half-filled and completely filled orbitals, the concept of exchange energy, inert pair effect.	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
	Practical	1. Determination of pH of soil samples. 2. Estimation of Calcium and Magnesium ions as Calcium carbonate by complexometric titration. 3. Determination of pH, acidity and alkalinity of a water sample.	B.Sc. (P) Life Sciences V Sem	SEC: Basic Analytical Chemistry
		-----	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools
		1. Estimation of sodium carbonate using standardized HCl. 2. Estimation of carbonate and hydroxide present together in a mixture.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
September	Theory	Periodic properties of Elements & Periodic Trends Brief discussion of the following properties of the elements, with reference to s- & p-block and their trends: (a) Effective nuclear charge, shielding or screening effect and Slater's rules (b) Atomic and ionic radii (c) Ionization enthalpy (Successive ionization enthalpies) (d) Electron gain enthalpy (e) Electronegativity, Pauling's scale of electronegativity. Variation of electronegativity with bond order and hybridization.	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Significance of quantum numbers, orbital angular momentum and quantum numbers ml and ms. Shapes of s, p and d atomic orbitals, nodal planes, discovery of spin, spin quantum number (s) and magnetic spin quantum number (ms). Rules for filling electrons in various orbitals, electronic configurations of the atoms, stability of half-filled and completely filled orbitals, concept of exchange energy, relative energies of atomic orbitals, anomalous electronic configurations	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		General group trends of main group elements with special reference to size (atomic and ionic), Ionization Enthalpy, Electron Gain Enthalpy, Electronegativity, oxidation states (including rare oxidation states of alkali metals, carbides and nitrides), melting and boiling points, flame colour, metallic character and complex formation tendency (crown ethers and cryptates), Alkali metal solutions in liquid ammonia	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements

		Distribution of major and minor biogenic elements in human beings		
	Practical	4. Determination of dissolved oxygen (DO) of a water sample. 5. Paper chromatographic separation of mixture of metal ion (Ni^{2+} and Co^{2+}). 6. To study the use of phenolphthalein in trap cases	B.Sc. (P) Life Sciences V Sem	SEC: Basic Analytical Chemistry
		Unit 1: Introduction to Spreadsheets Spreadsheets: Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets, working with multiple worksheets and multiple workbooks, controlling worksheet views, naming cells using name box, name create and name define; Exchanging data using clipboard, object linking and embedding; Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae; Implementing file level security and protecting data within the worksheet; Understanding absolute, relative and mixed referencing in formulas, referencing cells in other worksheets and workbooks, correcting common formula errors, working with inbuilt function categories like mathematical, statistical, text, lookup, information, logical, database, date and time and basic financial functions.	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools
		3. Estimation of carbonate and bicarbonate present together in a mixture. 4. Estimation of free alkali present in different soaps/detergents	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
October	Theory	Chemical Bonding Ionic bond: General characteristics, types of ions, size effects, radius ratio rule and its limitations. Packing of ions in crystals. Born-Landé equation with derivation and importance of Kapustinskii expression for lattice energy. Madelung constant, Born-Haber cycle and its application, Solvation energy. Covalent character in ionic compounds, polarizing power and polarizability. Fajan's rules and consequences of polarization. Valence shell electron pair repulsion (VSEPR) theory, shapes of the following simple molecules and ions containing lone pairs and bond pairs of electrons: H_2O, NH_3, PCl_3, PCl_5, SF_6, ClF_3, I_3, BrF_2^+, PCl_6^-, ICl_2^-, ICl_4^-, and SO_4^{2-}. Application of VSEPR theory in predicting trends in bond lengths and bond angles.	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)

		Unit 2: Chemical Bonding and Molecular Structure Ionic Bonding: General characteristics of ionic bonding, energy considerations in ionic bonding, lattice energy and solvation energy and their importance in the context of stability and solubility of ionic compounds, statement of Born-Landé equation for calculation of lattice energy (no derivation), Born Haber cycle and its applications. Covalent character in ionic compounds, polarizing power and polarizability, Fajan's rules. Ionic character in covalent compounds, bond moment, dipole moment and percentage ionic character. Covalent bonding: VB Approach: Shapes of some inorganic molecules and ions on the basis of VSEPR (H₂O, NH₃, PCl₅, SF₆, ClF₃, SF₄) and hybridization with suitable examples of linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		UNIT 2: Structure, Bonding and Properties (16 Hours) Structure, bonding and properties: Acidic/Basic nature, stability, ionic/covalent nature, oxidation/reduction, hydrolysis, thermal stability of the following: Hydrides: hydrides of Group 13 (only diborane), Group 14, Group 15 (EH₃ where E = N, P, As, Sb, Bi), Group 16 and Group 17. Oxides: Oxides of nitrogen, phosphorus and sulphur Oxoacids: oxoacids of phosphorus, sulphur and chlorine	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
	Practical	7. To analyze arson accelerants. 8. To carry out analysis of gasoline. 9. Estimation of macro-nutrients: Potassium, calcium and magnesium in soil samples by flame photometry.	B.Sc. (P) Life Sciences V Sem	SEC: Basic Analytical Chemistry
		Unit 2: Data Analysis in Spreadsheets Consolidating worksheets and workbooks using formulae and data consolidate command; Choosing a chart type, understanding data points and data series, editing and formatting chart elements, and creating sparkline graphics, Analysing data using pivot tables: Creating, formatting and modifying a pivot table, sorting, filtering and grouping items, creating calculated field and calculated item, creating pivot table charts, producing a report with pivot tables. Introduction to recording and execution of macros.	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools

		5. Estimation of oxalic acid by titrating it with KMnO_4 6. Estimation of Mohr's salt by titrating it with KMnO_4	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
	Assignment	Assignment is given	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Assignment is given	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Assignment is given	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
	Mid-Term Test			
November	Theory	Valence Bond theory (Heitler-London approach). Hybridization, equivalent and non-equivalent hybrid orbitals, Bent's rule. Ionic character in covalent compounds: Bond moment and dipole moment. Percentage ionic character from dipole moment and electronegativity difference	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Concept of resonance and resonating structures in various inorganic and organic compounds. MO Approach: Rules for the LCAO method, bonding and antibonding MOs and their characteristics for ss, s-p and p-p combinations of atomic orbitals, nonbonding combination of orbitals.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Halides of phosphorus Relevance of above compounds in industrial/environmental/biological systems wherever applicable. Preparation, properties, structure and uses of the following compounds: Borazine, Silicates.	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
	Practical	10. Spectrophotometric determination of Iron in vitamin / dietary tablets. 11. Spectrophotometric identification and determination of caffeine and benzoic acid in soft drink. 12. Determination of ion exchange capacity of anion / cation exchange resin (using batch	B.Sc. (P) Life Sciences V Sem	SEC: Basic Analytical Chemistry

		Unit 3: Word Processing Introduction: Creating and saving your document, displaying different views, working with styles and character formatting, working with paragraph formatting techniques using indents, tabs, alignment, spacing, bullets and numbering and creating borders; Page setup and sections: Setting page margins, orientation, headers and footers, end notes and foot notes, creating section breaks and page borders; Working with tables: Creating tables, modifying table layout and design, sorting, inserting graphics in a table, table math, converting text to table and vice versa; Create newspaper columns, indexes and table of contents, Spell check your document using inbuilt and custom dictionaries, checking grammar and style, using thesaurus and finding and replacing text; Create bookmarks, captions and cross referencing, adding hyperlinks, adding sources and compiling and bibliography; Mail merge: Creating and editing your main document and data source, sorting and filtering merged documents and using merge instructions like ask, fill-in and if-then-else; Linking and embedding to keep things together. Unit 4: Databases Introduction to Database Development: Database Terminology, Objects, Creating Tables, working with fields, understanding Data types, Changing table design, Assigning Field Properties, Setting Primary Keys, using field validation and record validation rules, Indexing, working with multiple tables, Relationships & Integrity Rules, Join Properties, Record manipulation, Sorting & Filtering; Select data with queries: Creating Query by design & by wizard (Select, Make Table, Append, Delete, Cross Tab, Update, Parameterized Query, Find Duplicate and Find Unmatched).	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools
		7. Estimation of oxalic acid and sodium oxalate in a given mixture	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
December	Theory	Molecular orbital diagrams of homo & hetero diatomic molecules [N_2 , O_2 , C_2 , B_2 , F_2 , CO , NO] and their ions; HCl (idea of s-p mixing and orbital interaction to be given).	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		MO treatment of homonuclear diatomic molecules of 1 st and 2 nd periods (including idea of s-p mixing) and heteronuclear diatomic molecules such as CO , NO and NO^+ .	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding

		Preparation, properties, structure and uses of the following compounds: silicones, Phosphonitrilic halides $\{(PNCl_2)_n$ where $n = 3$ and $4\}$	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
	Practical	-----	B.Sc. (P) Life Sciences V Sem	SEC: Basic Analytical Chemistry
		Creating multi table queries, creating & working with table joins. Using operators & expressions: Creating simple & advance criteria; Working with forms: Creating Basic forms, working with bound, unbound and calculated controls, understanding property sheet, Working with Data on Forms: Changing Layout, creating Sub Forms, creating list box, combo box and option groups; Working with Reports: Creating Basic Reports, Creating Header & Footer, Placing Controls on reports, sorting & grouping, Creating Sub reports.	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools
		8. Estimation of Fe (II) ions by titrating it with $K_2Cr_2O_7$ using internal indicator (diphenylamine/ N-phenylanthranilic acid)	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding

R Jaiswal

Signature of the teacher

V. B.

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SEMESTER WISE TEACHING PLAN

Name of the Faculty: Dr. Ravindra Kumar Upadhyay

Department: Chemistry

Semester: I / III/V

Month		Topics	Course	Paper
Aug	Theory	1. Nucleic Acids: structure of components of nucleic acids, bases, Nucleotide and Nucleosides. Nomenclature of Nucleosides and Nucleotides.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC 11. Organic Chemistry IV Biomolecules
		2. Principles of Green Chemistry and Designing a Chemical Synthesis: Prevention of waste, maximum incorporation of materials used in the process into final products, Environmental impact factor, waste, or pollution prevention hierarchy.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC-8. Green Chemistry
	Practicals	1. Calibration of a thermometer and determination of the melting points of the organic compounds using any one of the following methods-Kjeldahl method, electrically heated melting point apparatus and BODMEL).	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
		2. Purification of organic compounds by recrystallization using the solvent water and water alcohol.	B.Sc. (H) Biological Science	DSC-1 Basic concept of Biomolecules
		3. UNIT- I Participation in Physical Activity • Fit India Protocol Physical Activity, Health and Fitness • Indicators of Fitness Practical/Practice • Aerobic Work Out/ Physical Activity (Walking) • Yoga -Asanas (Lying, Sitting and Standing positions) and Pranayama • Cardiovascular Testing by 12min/9 min Cooper Run/Walk test.	Graduation IInd Year (3 rd Sem)	6967001009 VAC-III FIT INDIA
	Tutorials	NA	NA	NA
SEPTEMBER	Theory:	1. Structure of Polynucleotides (DNA and RNA), Concept of DNA duplex formation and its Characteristics, Biological Role of DNA and RNA.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC 11. Organic Chemistry IV Biomolecules
		2. Green metrics to assess greenness of a reaction, eg. Atom Economy, Calculation of atom economy, prevention minimization, designing safer chemicals, green solvents eg. Water, ionic liquids, PEG, Fluorous biphasic solvent.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC-8. Green Chemistry

	Practicals	1. Concept of melting point and mixed melting point. 2. Concept of recrystallisation using alcohol/water/alcohol-water systems (Any two).	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
		1. Purification of organic compounds by recrystallization using the solvent water and water alcohol. 2. Criteria of purity of organic compound melting point.	B.Sc. (H) Biological Science Sem 1	DSC-1 Basic concept of Biomolecules
		Muscular Strength and Endurance • Body Composition and Flexibility Practica I/Practice • Flexibility Training: Back Saver Sit and Reach test • Muscular Strength Training: Curl Ups / Standing Broad Jump/ Vertical Jump/ Plyometric • Endurance Training: 1 Mile RockPort Test or 12 /9-minute Cooper run/walk test. • Ideal Body Weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio (Data of at least 10 persons to be collected)	Graduation IInd Year (3 rd Sem)	6967001009 VAC-III FIT INDIA
	Tutorials:	NA	NA	NA
OCTOBER	Theory:	1. Concept of heredity: Genetic Code, Replication, Transcription and Translation. Amino Acids, Peptides and Proteins: Amino acids, peptides and their Classification, Synthesis, Ionic Properties and reactions, Zwitterions, Pka Values.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC 11. Organic Chemistry IV Biomolecules
		2. Solventless Processes, solvents obtained from renewable resources. Energy requirements for reactions – alternative sources of energy: use of microwaves, ultrasonic energy and photochemical energy. Selection of starting materials , bio diesel and polymers, avoidance of necessary derivatization, careful use of blocking /protecting groups.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC-8. Green Chemistry

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Practicals	1. Determination of boiling point of liquid compounds (boiling point lower than and more than 100°C by distillation, capillary method and BODMEL method) 2. Separation of a mixture of two amino acids/sugars by radial/ascending paper chromatography.	B.Sc. (Hons.) Chemistry 1st Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
	1. To separate a mixture of sugars by circular paper chromatography	B.Sc. (H) Biological Science	DSC-1 Basic concept of Biomolecules
	UNIT- III Nutrition and Fitness • Healthy Eating Plate • Balanced Diet • Caloric Content of Food, Practical/Practice • Preparing Daily Diet and Calorie Chart • Aerobic Work Out/ Physical Activity (Walking) • Assessment of Physical Activity with the Calorie intake. • Asanas for digestive system excretory system.	Graduation IIInd Year (3 rd Sem)	B.Sc. (H) Chemistry III Sem. 6967001009 VAC-III FIT INDIA
Assignment	Assignment was given and collected.		
Mid-Term Test Internal	Internal assessment test was conducted and evaluated.		



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NOVEMBER	Theory:	1. Isoelectric point and electrophoresis, study of peptides, determination of their primary structure end group analysis. Synthesis of peptide using N- protecting, C- Protecting and C activating groups, solid phase synthesis, structure of proteins. Enzyme: classification salient features of active site of enzymes, mechanism of enzyme action, factor affecting enzyme action, coenzyme, cofactors, enzyme inhibitors.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY- DSC 11. Organic Chemistry IV Biomolecules
		1. Use of catalytic reagents, catalysis and green chemistry, biocatalysis, photocatalysis. Design for degradation, development of analytical techniques to prevent and minimize the generation of hazardous substances in chemical process. Prevent of chemical accidents designing greener processes, inherent safer design, case study. Real world case: healthier fats, oils by green chemistry, enzymatic esterification for no production of trans fat. Development of fully recyclable carpet, Harpin technology to stimulate the plant growth.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	CHEMISTRY-DSC-8. Green Chemistry
	Practicals	Detection of extra elements	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
		Estimation of saponification value of fat/oil.	B.Sc. (Honours) Biological Science Ist Year (1st Sem)	DSC-1 Basic concept of Biomolecules

	UNIT- IV Sports Physiology and Psychology • Depression, Anxiety and Stress Scale (DASS) • Rosenberg Self Esteem Scale, Practical/Practice • Skills learning and, Participation in sports • Group Games/ Relays/ Minor Games • Meditative Asanas and Pranayama • Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results • Data of at least 10 persons to be collected on DASS and self-esteem scale	B.Sc. (H) Chemistry III Sem.	6967001009 VAC-III FIT INDIA
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Ravindra
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. VINITA KAPOOR

Department: Chemistry

Semester: I,III,V

Month		Topics	Course	Paper Code/Name
August	Theory	Molecular Spectroscopy: Interaction of electromagnetic radiation with molecules and various types of spectra; Born Oppenheimer approximation.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	-	GE-III	Chemistry GE-7 States of Matter
	Tutorial	-		-
	Practical	1. Verify Lambert-Beer's law and determine the concentration of KMnO_4 in aqueous solution of unknown concentration. 2. Verify Lambert-Beer's law and determine the concentration of KMnO_4 in acidic solution of unknown concentration.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	1. Determination of heat capacity of calorimeter. 2. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide	B.Sc. (P) Life Sci III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	1. Determination of critical solution temperature and composition at CST of the phenol water system 2. To study the effect of impurities of sodium chloride on the CST of phenol-water system.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical			

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September	Theory	Rotation spectroscopy: Selection rules, intensities of spectral lines, determination of bond lengths of diatomic and linear triatomic molecules, isotopic substitution. Vibrational spectroscopy: Classical equation of vibration, computation of force constant, amplitude of diatomic molecular vibrations, anharmonicity, Morse potential, dissociation energies, fundamental frequencies, overtones, hot bands, degrees of freedom for polyatomic molecules, modes of vibration, concept of group frequencies.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY–V Quantum Chemistry & Spectroscopy
	Practical	1. Surface tension measurement using drop weight method	GE-III	Chemistry GE-7 States of Matter
	Tutorial		-	
	Practical	3. Verify Lambert-Beer's law and determine the concentration of $K_2Cr_2O_7$ in acidic solution of unknown concentration. 4. Determine the concentrations of $KMnO_4$ and $K_2Cr_2O_7$ in a mixture. 5. Study the kinetics of iodination of propanone in acidic medium. 6. Determine the amount of iron present in a sample using 1, 10-phenanthroline.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY–V Quantum Chemistry & Spectroscopy
	Practical	3. Determination of the enthalpy of ionization of acetic acid. 4. Determination of enthalpy of neutralization of acetic acid and ammonium hydroxide using Hess's law	B.Sc. (P) Life Sci III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	3. To study the effect of impurities of succinic acid on the CST of phenol-water system. 4. To study the cooling curves for the following simple eutectic system.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical			

October	Theory	Vibration-rotation spectroscopy: diatomic vibrating rotator, P, Q, R branches. Raman spectroscopy: Qualitative treatment of Rotational Raman effect; Vibrational Raman spectra, Stokes and anti-Stokes lines; their intensity difference, rule of mutual exclusion.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	2. Surface tension measurement using drop number method 3. Absolute and relative viscosity of liquid	GE-III	Chemistry GE-7 States of Matter
	Tutorial		-	
	Practical	7. Determine the dissociation constant of an indicator (phenolphthalein). 8. Study the kinetics of interaction of crystal violet/ phenolphthalein with sodium hydroxide. 9. Study the 200-500 nm absorbance spectra of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ (in 0.1 M H_2SO_4) and determine the λ_{max} values. Calculate the energies of the two transitions in different units (kJ molecule^{-1} , kJ mol^{-1} , cm^{-1} , eV). 10. Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of $\text{K}_2\text{Cr}_2\text{O}_7$.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	5. Determination of integral enthalpy of solution of KNO_3 . 6. Determination of integral enthalpy of solution of NH_4Cl . 7. pH metric titration of strong acid with strong base,	B.Sc. (P) Life Sci III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	4. To study the cooling curves for the simple eutectic system (continued). 5. To study the cooling curves for the congruently melting systems.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical			
	Assignment	Given		
	Mid-Term Test	Conducted		


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November	Theory	Electronic spectroscopy: Franck-Condon principle, electronic transitions, singlet and triplet states, fluorescence and phosphorescence, dissociation and predissociation, calculation of electronic transitions of polyenes using free electron model. Nuclear Magnetic Resonance (NMR) spectroscopy: Principles of NMR spectroscopy, Larmor precession, chemical shift and low resolution spectra	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	4. Absolute and relative viscosity of liquid 5. Study of variation of viscosity with concentration 6. Surface tension using drop weight and drop number method	GE-III	Chemistry GE-7 States of Matter
	Tutorial		-	
	Practical	11. Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water. Comment on the effect of structure on the UV spectra of organic compounds. 12. Analysis of the given vibration-rotation spectrum of HCl (g)	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	8. pH metric titration of weak acid with strong base 9. Preparation of buffer solutions: (i) Sodium acetate-acetic acid Measurement of the pH of buffer solutions and comparison of the values with theoretical values 10. Preparation of buffer solutions Ammonium chloride-ammonium acetate. Measurement of the pH of buffer solutions and comparison of the values with theoretical values	B.Sc. (P) Life Sci III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	5. To study the cooling curves for the congruently melting systems (continued). 6. Verify the Freundlich and Langmuir isotherms for adsorption of acetic acid on activated charcoal.	B.Sc. (H) Chemistry III Sem	DSE-5: Solutions, Colligative properties, Phase Equilibria and adsorption
	Practical			
December	Theory	NMR SPECTRA: different scales (δ and T), spin-spin coupling and high resolution spectra, interpretation of PMR spectra of simple organic molecules like methanol, ethanol, acetaldehyde, acetic acid and aromatic proton.	B.Sc. (H) Chemistry V Sem	PHYSICAL CHEMISTRY-V Quantum Chemistry & Spectroscopy
	Practical	-	GE-III	Chemistry GE-7 States of Matter Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-2

	Tutorial	-	-	
	Practical	-	B.Sc. (H) Chemistry V Sem	
	Practical	-	B.Sc. (P) Life Sci III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	-		
	Practical			

Signature of the teacher

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. K. Murali Mohan Achari

Department: Chemistry

Semester: I, III, and V

Month		Topics	Course	Paper Code/Name
August	Theory	Atomic Structure: Recapitulation of concept of atom in ancient India, Bohr's theory & its limitations, atomic spectrum of hydrogen atom. de Broglie equation, Heisenberg's Uncertainty Principle and its significance. Postulates of wave mechanics, Time independent Schrödinger's wave equation, well behaved wave function, significance of ψ and ψ^2 . Quantum mechanical treatment of H-atom, Quantum numbers and their significance. Normalized and orthogonal wave functions. Sign of wave functions. Radial and angular wave functions for hydrogen atom. Radial function plots, radial probability distribution plots, angular distribution curves. Shapes of s, p, and d orbitals, Relative energies of orbitals.	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)

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		Unit 1: Atomic Structure Review of: Bohr's theory and its limitations, Heisenberg uncertainty principle, Dual behaviour of matter and radiation, De-Broglie's relation, Hydrogen atom spectra, need of a new approach to atomic structure. Time independent Schrodinger equation and meaning of various terms in it. Significance of ψ and ψ^2, Schrödinger equation for hydrogen atom, radial and angular parts of the hydrogen wave functions (atomic orbitals) and their variations for 1s, 2s, 2p, 3s, 3p and 3d orbitals (Only graphical representation), radial and angular nodes and their significance, radial distribution functions and the concept of the most probable distance with special reference to 1s and 2s atomic orbitals.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Transition Elements (3d series) General group trends with special reference to electronic configuration, variable valency, colour, magnetic and catalytic properties, ability to form complexes and stability of various oxidation states (Latimer diagrams) for Mn, Fe and Cu. Lanthanoids and actinoids: Electronic configurations, oxidation states, colour, magnetic properties, lanthanide contraction, separation of lanthanides (ion exchange method only).	B.Sc. (P) Life Sciences V Sem	DSE Chemistry of d-block elements, quantum chemistry and spectroscopy
	Practical	1. Calibration and use of apparatus 2. Preparation of solutions of different Molarity/Normality	B.Sc. (H) I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		1. Preparation of polyaniline and its characterization using UV-visible spectrophotometer. 2. Intercalation of hydrogen in tungsten trioxide and its conductivity measurement using conductometer.	B.Sc. (H) V Sem	DSE: Novel Inorganic Solids

		Qualitative semi-micro analysis of mixture- Introduction	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
		1. Estimation of sodium carbonate using standardized HCl. 2. Estimation of carbonate and hydroxide present together in a mixture.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
September	Theory	Periodic properties of Elements & Periodic Trends Brief discussion of the following properties of the elements, with reference to s- & p-block and their trends: (a) Effective nuclear charge, shielding or screening effect and Slater's rules (b) Atomic and ionic radii (c) Ionization enthalpy (Successive ionization enthalpies) (d) Electron gain enthalpy (e) Electronegativity, Pauling's scale of electronegativity. Variation of electronegativity with bond order and hybridization.	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Significance of quantum numbers, orbital angular momentum and quantum numbers ml and ms. Shapes of s, p and d atomic orbitals, nodal planes, discovery of spin, spin quantum number (s) and magnetic spin quantum number (ms). Rules for filling electrons in various orbitals, electronic configurations of the atoms, stability of half-filled and completely filled orbitals, concept of exchange energy, relative energies of atomic orbitals, anomalous electronic configurations	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Coordination Chemistry, Valence Bond Theory (VBT): Inner and outer orbital complexes of Cr, Fe, Co, Ni and Cu (coordination numbers 4 and 6). Structural and stereoisomerism in complexes with coordination numbers 4 and 6. Drawbacks of VBT. IUPAC system of nomenclature.	B.Sc. (P) Life Sciences V Sem	DSE Chemistry of d- block elements, quantum chemistry and spectroscopy
	Practical	(i) Estimation of oxalic acid using standardized NaOH solution (ii) Estimation of sodium carbonate using standardized HCl.	B.Sc. (H) I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Synthesis of the following inorganic pigments: (i) PbCrO ₄ / chrome yellow (ii) Barium white (iii) Prussian Blue (iv) Malachite	B.Sc. (H) V Sem	DSE: Novel Inorganic Solids
		Qualitative semi-micro analysis of mixture-I	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements

		3. Estimation of carbonate and bicarbonate present together in a mixture. 4. Estimation of free alkali present in different soaps/detergents	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
October	Theory	Chemical Bonding Ionic bond: General characteristics, types of ions, size effects, radius ratio rule and its limitations. Packing of ions in crystals. Born-Landé equation with derivation and importance of Kapustinskii expression for lattice energy. Madelung constant, Born-Haber cycle and its application, Solvation energy. Covalent character in ionic compounds, polarizing power and polarizability. Fajan's rules and consequences of polarization. Valence shell electron pair repulsion (VSEPR) theory, shapes of the following simple molecules and ions containing lone pairs and bond pairs of electrons: H_2O , NH_3 , PCl_3 , PCl_5 , SF_6 , ClF_3 , I_3 , BrF_2^+ , PCl_6^- , ICl_2^- , ICl_4^- , and SO_4^{2-} . Application of VSEPR theory in predicting trends in bond lengths and bond angles.	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Unit 2: Chemical Bonding and Molecular Structure Ionic Bonding: General characteristics of ionic bonding, energy considerations in ionic bonding, lattice energy and solvation energy and their importance in the context of stability and solubility of ionic compounds, statement of Born-Landé equation for calculation of lattice energy (no derivation), Born Haber cycle and its applications. Covalent character in ionic compounds, polarizing power and polarizability, Fajan's rules. Ionic character in covalent compounds, bond moment, dipole moment and percentage ionic character. Covalent bonding: VB Approach: Shapes of some inorganic molecules and ions on the basis of VSEPR (H_2O , NH_3 , PCl_5 , SF_6 , ClF_3 , SF_4) and hybridization with suitable examples of linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Crystal Field Theory Crystal field effect, octahedral symmetry. Crystal field stabilization energy (CFSE), Crystal field effects for weak and strong fields. Tetrahedral symmetry. Factors affecting the magnitude of D.	B.Sc. (P) Life Sciences V Sem	DSE Chemistry of d-block elements, quantum chemistry and spectroscopy

	Practical	(iii) Estimation of carbonate and hydroxide present together in a mixture. (iv) Estimation of carbonate and bicarbonate present together in a mixture	B.Sc. (H) I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Preparation of zeolite A and removal of Mg and Ca ions from water samples quantitatively using zeolite	B.Sc. (H) V Sem	DSE: Novel Inorganic Solids
		Qualitative semi-micro analysis of mixture-II	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
		5. Estimation of oxalic acid by titrating it with KMnO_4 6. Estimation of Mohr's salt by titrating it with KMnO_4	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
	Assignment	Assignment is given	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Assignment is given	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Assignment is given	B.Sc. (P) Life Sciences V Sem	DSE Chemistry of d-block elements, quantum chemistry and spectroscopy
	Mid-Term Test			
	Theory	Valence Bond theory (Heitler-London approach). Hybridization, equivalent and non-equivalent hybrid orbitals, Bent's rule. Ionic character in covalent compounds: Bond moment and dipole moment. Percentage ionic character from dipole moment and electronegativity difference	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)

		Concept of resonance and resonating structures in various inorganic and organic compounds. MO Approach: Rules for the LCAO method, bonding and antibonding MOs and their characteristics for ss, s-p and p-p combinations of atomic orbitals, nonbonding combination of orbitals.	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Spectrochemical series. Comparison of CFSE for Oh and Td complexes, Tetragonal distortion of octahedral geometry, Jahn-Teller distortion	B.Sc. (P) Life Sciences V Sem	DSE Chemistry of d-block elements, quantum chemistry and spectroscopy
	Practical	(i) Estimation of oxalic acid using standardized KMnO ₄ solution (ii) Estimation of water of crystallization in Mohr's salt by titrating with KMnO ₄ .	B.Sc. (H) I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Determination of exchange capacity of cation exchange resins and anion exchange resins.	B.Sc. (H) V Sem	DSE: Novel Inorganic Solids
		Qualitative semi-micro analysis of mixture-III	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
		7. Estimation of oxalic acid and sodium oxalate in a given mixture	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
December	Theory	Molecular orbital diagrams of homo & hetero diatomic molecules [N ₂ , O ₂ , C ₂ , B ₂ , F ₂ , CO, NO] and their ions; HCl (idea of s-p mixing and orbital interaction to be given).	B.Sc. (H) Chemistry I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		MO treatment of homonuclear diatomic molecules of 1 st and 2 nd periods (including idea of s-p mixing) and heteronuclear diatomic molecules such as CO, NO and NO ⁺ .	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding
		Square planar coordination	B.Sc. (P) Life Sciences V Sem	DSE Chemistry of d-block elements, quantum chemistry and spectroscopy

	Practical	Estimation of oxalic acid and sodium oxalate in a given mixture.	B.Sc. (H) I Sem	DSC: Atomic Structure & Chemical Bonding (Inorganic Chemistry -I)
		Determination of a mixture of cobalt and nickel (UV-visible spectroscopy). Preparation of a disc of a ceramic compound using ball milling, pressing and sintering, and study its XRD.	B.Sc. (H) V Sem	DSE: Novel Inorganic Solids
		Qualitative semi-micro analysis of mixture-IV	B.Sc. (P) Life Sciences III Sem	DSE-1 Chemistry of Major and Minor Biogenic Elements
		8. Estimation of Fe (II) ions by titrating it with $K_2Cr_2O_7$ using internal indicator (diphenylamine/ N-phenylanthranilic acid)	B.Sc. (H) I Sem	GE: Atomic Structure and Chemical Bonding



Signature of the teacher



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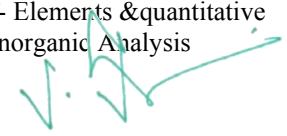
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Academic year 2023-2024 (odd semester)

Name of the Faculty: Dr. Shikha Gulati

Department: Chemistry

Semester: III/ V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Basic introduction to solid-state chemistry: Semiconductors, different types of semiconductors and their applications.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Practicals	Synthesis of silver nanoparticles by chemical methods and characterization using UV-visible spectrophotometer.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
	Practicals	Estimation of Ni(II) using dimethylglyoxime (DMG).	B.Sc. (Hons.) Chemistry II Year SEMESTER III	DSC-7: Chemistry of d- and f- Elements & quantitative Inorganic Analysis
	Tutorials	NA	NA	NA
SEPTEMBER	Theory:	Characterization techniques of inorganic solids: Powder X-ray Diffraction, UV-visible spectroscopy, Scanning Electron	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Practicals:	Synthesis of silver nanoparticles by green approach methods and characterization using UV-visible spectrophotometer.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
	Practicals	(i) Estimation of copper as CuSCN. (ii) Estimation of iron as Fe ₂ O ₃ by precipitating iron as Fe(OH) ₃ . (by homogeneous and heterogeneous method)	B.Sc. (Hons.) Chemistry II Year SEMESTER III	DSC-7: Chemistry of d- and f- Elements & quantitative Inorganic Analysis  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

	Tutorials:	NA	NA	NA
OCTOBER	Theory:	Nanomaterials: Overview of nanostructures and nanomaterials: classification. Preparation of gold and silver metallic nanoparticles, self-assembled nanostructures-control of nanoarchitecture-one dimensional control. Carbon nanotubes and inorganic nanowires. Bioinorganic nanomaterials, DNA and nanomaterials, natural and artificial nanomaterials, bionano composites.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS



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	Practicals:	Intercalation of hydrogen in tungsten trioxide and its conductivity measurement using conductometer. Synthesis of metal sulphide	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
	Practicals:	(i) Estimation of Al(III) by precipitating with oxime and weighing as Al(oxime) ₃ (aluminiumoxinate). (ii) Potassium aluminium sulphate KAl(SO ₄) ₂ .12H ₂ O (potash alum) or Potassium chromium sulphate KCr(SO ₄) ₂ .12H ₂ O (chrome alum).	B.Sc. (Hons.) Chemistry II Year SEMESTER III	DSC-7: Chemistry of d- and f- Elements & quantitative Inorganic Analysis
	Tutorials:	NA	NA	NA
	<u>Assignment:</u>	NOVEL INORGANIC SOLIDS	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
NOVEMBER	Theory:	Composite materials: Introduction, limitations of conventional engineering materials, role of matrix in composites, classification, matrix materials, reinforcements, metal-matrix composites, polymer-matrix composites, fibre-reinforced composites, environmental effects on composites, applications of composites. Speciality polymers: Conducting polymers - Introduction, conduction mechanism, polyacetylene, polyparaphenylene and polypyrrole,	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Practicals:	Synthesis of inorganic pigments (PbCrO ₄ , ZnCrO ₄ , Prussian Blue, Malachite). Synthesis of pure ZnO and	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय

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		Inorganic preparations (i) Sodium peroxoborate Paper chromatographic separation of following metal ions (minimum two)	B.Sc. (Hons.) Chemistry II Year SEMESTER III	DSC-7: Chemistry of d- and f- Elements & quantitative Inorganic Analysis
	Tutorials:	NA	NA	NA
	Test	NOVEL INORGANIC SOLIDS	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
DECEMBER	Theory:	Applications of conducting polymers, Ion-exchange resins and their applications. Ceramic & Refractory: Introduction, classification, properties, new materials	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY-DSE 1: NOVEL INORGANIC SOLIDS
	Practicals:	Preparation of zeolite A and removal of Mg and Ca ions from water samples quantitatively using zeolite.	B.Sc. (Hons.) Chemistry III Year SEMESTER V	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
		Paper chromatographic separation of following metal ions : Fe(II) & Al(II)	B.Sc. (Hons.) Chemistry II Year SEMESTER III	DSC-7: Chemistry of d- and f- Elements & quantitative Inorganic Analysis
	Tutorials:	NA	NA	NA

Signature of the Teacher

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**SEMESTER WISE TEACHING
PLAN 2023-2024 (Odd Sem)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Chandra Sekhar Tekuri

Department: Chemistry

Semester: I/III

Month		Topics	Course	Paper Code/Name
August	Theory	Fundamentals of Organic chemistry Electronic Displacements; Inductive effect, electrometric effect, resonance, hyper conjugation, Reaction intermediates and their stability; carbocations, carbanions and free radicals, benzyne, carbenes. Acidity and basicity in organic compounds (comparison of carboxylic acids, alcohols, phenols, primary, secondary and tertiary aliphatic amines, aniline and its derivatives)	B.Sc. Life Science, I Year, I Semester	Basic concepts of Organic chemistry
	Practicals	1. Purification of an organic compound by crystallization (from water and alcohol) and distillation, Criteria of purity: Determination of M.P. 2. Determination of boiling point of liquid compounds. (Boiling point lower than and more than 100 °C by distillation and capillary method)	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic
		Unit 1: Definition of Yoga and Types	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice
September	Theory	Types of projection formulae: Flying Wedge Formula, Newmann, Sawhorse and Fischer representations and their interconversion. Stereoisomerism: Concept of chirality (upto two carbon atoms). Configurational isomerism: geometrical and optical isomerism; enantiomerism, diastereomerism and meso compounds). Threo and erythro; D and L; Cis-trans nomenclature; CIP Rules: R/ S (for upto 2 chiral carbon atoms) and E/Z nomenclature (for upto two C=C systems). Conformational isomerism with respect to ethane, butane and cyclohexane.	B.Sc. Life Science, I Year, I Semester	Reactive intermediates and Rearrangement Reactions


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	Practicals	1. Detection of extra element 2. Preparations a) Bromination of phenol/aniline.	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic
		Unit 1: Introduction to Spreadsheets Spreadsheets: Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets, working with multiple worksheets and multiple workbooks, controlling worksheet views, naming cells using name box, name create and name define; Exchanging data using clipboard, object linking and embedding; Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae; Implementing file level security and protecting data within the worksheet; Understanding absolute, relative and mixed referencing in formulas, referencing cells in other worksheets and workbooks, correcting common formula errors, working with inbuilt function categories like mathematical, statistical, text, lookup, information, logical, database, date and time and basic financial functions.	B.com/B.A./B. Sc. I Sem	SEC-1 Basic IT Tools
		Karma yoga, Gyana yoga, Bhakti yoga, Laya yoga, Raja yoga, Hatha yoga, Mantra yoga, Kundalini yoga. (in) Ashtanga Yoga: Yam- Ahinsa, Satya, Asteya, Brahmacharya, Aparigraha. Niyam- Saucha, Santosha, Tapa, Swadhyaya, Ishwarpranidhana. Asana, Pranayama- (the types of Pranayama: Puraka, rechaka & Kumbhaka), Pratyahara, Dharana, Dhyana & Samadhi etc. Shat Chakra,s: Mooladhara, Swadhishtana, Manipura, Anahata, Vishudha, Ajanya, Sahasrara- (Sahasradhara chakra)	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice


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October	Theory	Types of Organic Reactions (Including reactions of alkenes, alkyl and aryl halides, alcohols, aldehydes, ketones) Electrophilic addition reactions Electrophilic addition reaction (with respect to propene, propyne, 3,3-dimethyl-1-butene): Hydration, Addition of HX in the absence and presence of peroxide, Hydroboration oxidation, Addition of bromine (with stereochemistry). Nucleophilic addition reactions Nucleophilic addition reaction of carbonyl compounds: Addition of HCN, ammonia derivatives (Hydroxylamine, Hydrazine, Semicarbazide and 2,4-DNP), the addition of carbanion (Aldol condensation, Claisen Schmidt, Benzoin condensation, Perkin reaction, reactions involving Grignard reagent).	B.Sc. Life Science, I Year, I Semester	Electrophilic substitution reactions
	Assignment	Assignment is given	B.Sc. Life Science, I Year, I Semester Graduation IInd Year (3 rd Sem) B.com/B.A./B. Sc. I Sem	Basic Concepts of Organic SEC III- Yoga and Practice SEC-1 Basic IT Tools
	Mid-Term Test		B.Sc. Life Science, I Year, I Semester	Basic Concepts of Organic
	Practicals	1. Detection of extra element 2. 2,4-Dinitrophenylhydrazone of aldehydes and ketones 3. Semicarbazone of aldehydes/ ketones 4. Aldol condensation reaction using green method	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		Data Analysis in Spreadsheets Consolidating worksheets and workbooks using formulae and data consolidate command; Choosing a chart type, understanding data points and data series, editing and formatting chart elements, and creating sparkline graphics, Analysing data using pivot tables: Creating, formatting and modifying a pivot table, sorting, filtering and grouping items, creating calculated field and calculated item, creating pivot table charts, producing a report with pivot tables. Introduction to recording and execution of macros.	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools
		(i) Asana in standing position: Surya Namaskara, Tadasana, Padahasthasana, Garudasana, Natarajasana, Cakrasana. (ii) Asana in sitting position: Padmasana, Vajrasana, Siddhasana, Bhadrasana, Gomukhasana, Shashankasana, Mandukasana, Kukkutasana	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice
November	Theory	Elimination and Nucleophilic substitution reactions Nucleophilic substitution reaction (SN1 and SN2) in alkyl halides (mechanisms with stereochemical aspect), alcohols (with nucleophiles like ammonia, halides, thiols, ambident nucleophiles (cyanide and nitrite ion)), ethers (Williamson ether synthesis), Elimination reaction (E1 & E2), elimination vs substitution (w.r.t. potassium t-butoxide and KOH); Nucleophilic aromatic substitution in aryl halides-elimination addition reaction w.r.t. chlorobenzene, including the effect of nitro group (on the ring) on the reaction. relative reactivity and strength of C-X bond in alkyl, allyl, benzyl, vinyl and aryl halides towards substitution reactions Electrophilic substitution reactions Electrophilic Aromatic substitution with mechanism (benzene)- sulphonation, nitration, halogenation, Friedel craft acylation :o-, m- and p- directive influence giving examples of toluene/nitrobenzene/ phenol/ aniline/ chlorobenzene. Reactive intermediates and Rearrangement Reactions	B.Sc. Life Science, I Year, I Semester	Elimination and Nucleophilic substitution reactions


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		Free radicals (Birch Reduction); Carbocations (Pinacol-Pinacolone, Wagner-Meerwein, Rearrangement, and Beckmann rearrangement); Carbanions (Michael Addition); Carbenes (Reimer Tiemann)		
	Practicals	1. Bromination of Stilbene. 2. Acetanilide to p-Bromoacetanilide	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic
	Practicals	Unit 3: Word Processing Introduction: Creating and saving your document, displaying different views, working with styles and character formatting, working with paragraph formatting techniques using indents, tabs, alignment, spacing, bullets and numbering and creating borders; Page setup and sections: Setting page margins, orientation, headers and footers, end notes and foot notes, creating section breaks and page borders; Working with tables: Creating tables, modifying table layout and design, sorting, inserting graphics in a table, table math, converting text to table and vice versa; Create newspaper columns, indexes and table of contents, Spell check your document using inbuilt and custom dictionaries, checking grammar and style, using thesaurus and finding and replacing text; Create bookmarks, captions and cross referencing, adding hyperlinks, adding sources and compiling and bibliography; Mail merge: Creating and editing your main document and data source, sorting and filtering merged documents and using merge instructions like ask, fill-in and if-then-else; Linking and embedding to keep things together. Unit 4: Databases Introduction to Database Development: Database Terminology, Objects, Creating Tables, working with fields, understanding Data types, Changing table design, Assigning Field Properties, Setting Primary Keys, using field validation and record validation rules, Indexing, working with multiple tables, Relationships & Integrity Rules, Join Properties, Record manipulation, Sorting & Filtering; Select data with queries: Creating Query by design & by wizard	B.com/B.A./B.Sc. I Sem	SEC-1 Basic IT Tools


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		(Select, Make Table, Append, Delete, Cross Tab, Update, Parameterized Query, Find Duplicate and Find Unmatched).		
		Asana in stomach side position: Dhanurasana, Bhujangasana, Mayurasana, Marjarasana, Makrasana. (iv) Asana in backbone side position: Uttanapadasana, Naukasana, Sarvangasana, Sheershasana, Savasana etc. (v) Practice of pranayama - Purak, Rechak and Kumbhaka	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice

T. chandra sekhar

SIGNATURE OF THE CANDIDATE

V. B.

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SEMESTER WISE TEACHING
PLAN

Academic year 2023-2024 (odd
semester)

SRI VENKATESWARA COLLEGE

Name of the Faculty: Ms. Laishram Saya Devi

Department: CHEMISTRY

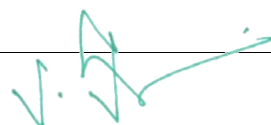
Semester: I/III/V

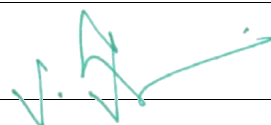
Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Quantum Chemistry: Postulates of quantum mechanics, quantum mechanical operators and commutation rules. Schrödinger equation and its application to free particle and particle in a box (rigorous treatment), quantization of energy levels	B.Sc.(H) CHEMISTRY Semester V (SECTION A)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy
		Quantum Chemistry: Postulates of quantum mechanics, quantum mechanical operators and commutation rules. Schrödinger equation and its application to free particle and particle in a box (rigorous treatment), quantization of energy levels	B.Sc.(H) CHEMISTRY Semester V (SECTION B)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy
	Practical	1. Verify Lambert-Beer's law and determine the concentration of CuSO ₄ /KMnO ₄ /K ₂ Cr ₂ O ₇ in a solution of unknown concentration	B.Sc. CHEMISTRY (Hons.) II Year, Semester V	CHEMISTRY -C XII: PHYSICAL CHEMISTRY V
		Introductory class 1. Determination of heat capacity of calorimeter. 2. Determination of enthalpy of neutralization of hydrochloric acid with sodiumhydroxide. Introductory class 1. Determination of heat capacity of calorimeter. 2. Determination of enthalpy of neutralization of hydrochloric acid with sodiumhydroxide.	B.Sc (P) Life Sciences Semester III (BATCH 1) B.Sc (P) Life Sciences Semester III (BATCH 2)	DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria

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SEPTEMBER	Theory:	Quantum Chemistry: Zero-point energy and Heisenberg Uncertainty principle; wave functions, probability distribution functions, nodal properties, Extension to two and three dimensional boxes, separation of variables, degeneracy. Qualitative treatment of simple harmonic oscillator model of vibrational motion: Setting up of Schrödinger equation and discussion of solution and wave functions. Vibrational energy of diatomic molecules and zero-point energy.	B.Sc.(H) CHEMISTRY Semester V (SECTION A)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy
		Quantum Chemistry: Zero-point energy and Heisenberg Uncertainty principle; wave functions, probability distribution functions, nodal properties, Extension to two and three dimensional boxes, separation of variables, degeneracy. Qualitative treatment of simple harmonic oscillator model of vibrational motion: Setting up of Schrödinger equation and discussion of solution and wave functions. Vibrational energy of diatomic	B.Sc.(H) CHEMISTRY Semester V (SECTION B)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy
	Practical:	2. Determine the concentrations of KMnO ₄ and K ₂ Cr ₂ O ₇ in a mixture. 3. Determine the amount of iron present in a sample using 1, 10-phenanthroline. 4. Determine the dissociation constant of an indicator (phenolphthalein). 5. Study the kinetics of interaction of crystal violet/ phenolphthalein	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY -C XII: PHYSICAL CHEMISTRY V
		3. Determination of the enthalpy of ionization of acetic acid. 4. Determination of enthalpy of neutralization of acetic acid and ammonium hydroxide using Hess's law. 5. Determination of integral enthalpy of solution (endothermic) of salts.	B.Sc (P) Life Sciences Semester III (BATCH 1)	DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria
		3. Determination of the enthalpy of ionization of acetic acid. 4. Determination of enthalpy of neutralization of acetic acid and ammonium hydroxide using Hess's law. 5. Determination of integral enthalpy of solution (endothermic) of salts.	B.Sc (P) Life Sciences Semester III (BATCH 2)	DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria



OCTOBER	Theory:	Angular momentum. Rigid rotator model of rotation of diatomic molecule. Schrödinger equation in Cartesian and spherical polar coordinates (derivation not required). Separation of variables. Spherical harmonics. Discussion of solution (Qualitative). Qualitative treatment of hydrogen atom and hydrogen-like ions: setting up of Schrödinger equation in spherical polar coordinates, radial part and quantization of energy (only final energy expression). Angular momentum. Rigid rotator model of rotation of diatomic molecule. Schrödinger equation in Cartesian and spherical polar coordinates (derivation not required). Separation of variables. Spherical harmonics. Discussion of solution (Qualitative). Qualitative treatment of hydrogen atom and hydrogen-like ions: setting up of Schrödinger equation in spherical polar coordinates, radial part and quantization of energy (only final energy expression).	B.Sc.(H) CHEMISTRY Semester V (SECTION A) B.Sc.(H) CHEMISTRY Semester V (SECTION B)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy
	Practicals:	6. Verify the Freundlich and Langmuir isotherms for adsorption of acetic acid on activated charcoal. 7. Analysis of the given vibration-rotation spectrum of HCl(g) 8. Study the kinetics of iodination of propanone in acidic medium. 6. Determination of integral enthalpy of solution for exothermic of salts. 7. Determination of enthalpy of hydration of Copper sulphate. 8. pH metric titration of strong acid with strong base, 6. Determination of integral enthalpy of solution for exothermic of salts. 7. Determination of enthalpy of hydration of Copper sulphate. 8. pH metric titration of strong acid with strong base.	B.Sc. CHEMISTRY (Hons.) II Year, Semester V B.Sc (P) Life Sciences Semester III (BATCH 1) B.Sc (P) Life Sciences Semester III (BATCH 2)	CHEMISTRY -C XII: PHYSICAL CHEMISTRY V DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria
	<u>Assignment</u>			

NOVEMBER	Theory:	Average and most probable distances of electron from nucleus. Setting up of Schrödinger equation for manyelectron atoms (He, Li). Need for approximation methods. Statement of variation theorem and application to simple systems (particle-in-a-box, harmonic oscillator, hydrogen atom). Average and most probable distances of electron from nucleus. Setting up of Schrödinger equation for manyelectron atoms (He, Li). Need for approximation methods. Statement of variation theorem and application to simple systems (particle-in-a-box, harmonic oscillator, hydrogen atom).	B.Sc.(H) CHEMISTRY Semester V (SECTION A) B.Sc.(H) CHEMISTRY Semester V (SECTION B)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy CHEMISTRY - CXII: PHYSICAL CHEMISTRY-V Course Title: Quantum Chemistry & Spectroscopy
	Practicals:	9. Study the 200-500 nm absorbance spectra of KMnO₄ and K₂Cr₂O₇ (in 0.1 M H₂SO₄) and determine the $\lambda_{\max}$ values. Calculate the energies of the two transitions in different units. 10. Study the pH-dependence of the UV-Vis spectrum (200-500 nm) of K₂Cr₂O₇. 11. Record the 200-350 nm UV spectra of the given compounds (acetone, acetaldehyde, 2-propanol, acetic acid) in water. 12. Comment on the effect of structure on the UV spectra of organic compounds. 9. pH metric titration of weak acid with strong base 10. Preparation of buffer solutions: (i) Sodium acetate-acetic acid or (ii) Ammonium chloride-ammonium acetate. Measurement of the pH of buffer solutions and comparison of the values with theoretical values. 9. pH metric titration of weak acid with strong base 10. Preparation of buffer solutions: (i) Sodium acetate-acetic acid or (ii) Ammonium chloride-ammonium acetate. Measurement of the pH of buffer solutions and comparison of the values with theoretical values.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V B.Sc (P) Life Sciences Semester III (BATCH 1) B.Sc (P) Life Sciences Semester III (BATCH 2)	CHEMISTRY -C XII: PHYSICAL CHEMISTRY V DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria DISCIPLINE SPECIFIC CORE COURSE -7: Chemistry -III Chemical Energetics and Equilibria
	Test			
				

DECEMBER	Theory:	NUMERICALS PRACTICE AND PREVIOUS YEARS QUATION PAPER DISCUSSION	B.Sc.(H) CHEMISTRY Semester V (SECTION A)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY–V Course Title: Quantum Chemistry & Spectroscopy
		NUMERICALS PRACTICE AND PREVIOUS YEARS QUATION PAPER DISCUSSION	B.Sc.(H) CHEMISTRY Semester V (SECTION B)	CHEMISTRY - CXII: PHYSICAL CHEMISTRY–V Course Title: Quantum Chemistry & Spectroscopy

Signature of teacher:




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**SEMESTER WISE TEACHING PLAN 2023-
2024 (Odd Sem)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Y.Veera Manohara Reddy

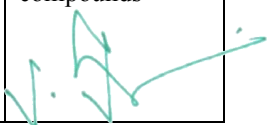
Department: Chemistry

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Fundamentals of Organic chemistry Electronic Displacements; Inductive effect, electrometric effect, resonance, hyper conjugation, Reaction intermediates and their stability; carbocations, carbanions and free radicals, benzyne, carbenes.	B. Sc. (H) Chemistry I Yr, Semester I DSC 2 (DSC-2):	2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
		What is Green Chemistry? Some important environmental laws, pollution prevention Act of 1990, emergence of green chemistry, Need for Green Chemistry.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
	Practicals	1. Purification of an organic compound by crystallization (from water and alcohol) and distillation, Criteria of purity: Determination of M.P. 2. Determination of boiling point of liquid compounds. (Boiling point lower than and more than 100 °C by distillation and capillary method)	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic
		Preparation of S-benzylisothiuronium salts for water soluble and water insoluble carboxylic acids.	B.Sc. (Hons.) Chemistry II Year (3rd Sem) CHEMISTRY-	DSC 8: Carbonyl compound and nitrogen containing compounds
		Purification of organic compounds by recrystallization using the following solvents: i. Water ii. Water-Alcohol ili. Alcohol	B.Sc. (Honours) Biological Science Ist Year (1st Sem)	DSC-1 Basic concept of Biomolecules
September	Theory	Electrophiles & nucleophiles, and introduction to types of organic reactions: addition, elimination and substitution reactions.	B. Sc. (H) Chemistry I Yr, Semester I DSC 2 (DSC-2):	2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
		Goals of Green Chemistry. Limitations/ Obstacles in the pursuit of the goals of Green Chemistry. Green Synthesis of the following compounds: adipic acid, catechol, disodium iminodiacetate (alternative to Strecker synthesis)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
	Practicals	1. Detection of extra element 2. Preparations a) Bromination of phenol/aniline.	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic


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		3. Hydrolysis of amides/esters. 4. Selective reduction of m-dinitrobenzene to m-nitroaniline.	B.Sc. (Hons.) Chemistry II Year (3rd Sem) CHEMISTRY-	DSC 8: Carbonyl compound and nitrogen containing compounds
		Criterion of purity of organic compound- melting point, mixed melting point and boiling point of organic compounds.	B.Sc. (Honours) Biological Science Ist Year (1st Sem)	DSC-1 Basic concept of Biomolecules

October	Theory	Alkanes: Preparation, Halogenation of alkanes, Concept of relative reactivity v/s selectivity. Alkenes and Alkynes: Methods of preparation of alkenes using Mechanisms of E1, E2, E1cb reactions	B. Sc. (H) Chemistry I Yr, Semester I DSC 2 (DSC-2):	2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
		Green Reagents: Non-phosgene Isocyanate Synthesis, Selective Methylation using dimethylcarbonate. • Microwave assisted solvent free synthesis of copper phthalocyanine Microwave assisted reactions in water: Hofmann Elimination, methyl benzoate to benzoic acid and Decarboxylation reaction • Ultrasound assisted reactions: sonochemical Simmons-Smith Reaction (Ultrasonic alternative to Iodine)	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
	Assignment	Assignment is given		
	Mid-Term Test			
	Practicals	1. Detection of extra element 2. 2,4-Dinitrophenylhydrazone of aldehydes and ketones 3. Semicarbazone of aldehydes/ ketones 4. Aldol condensation reaction using green method	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic
		. Preparation of semicarbazone derivatives for aldehydes/ketones (like benzaldehyde, ethyl methyl ketone, cyclohexanone etc.)	B.Sc. (Hons.) Chemistry II Year (3rd Sem) CHEMISTRY-	DSC 8: Carbonyl compound and nitrogen containing compounds 

		To separate a mixture of sugars by circular paper chromatography	B.Sc. (Honours) Biological Science Ist Year (1st Sem)	DSC-1 Basic concept of Biomolecules
November	Theory	Saytzeff and Hoffmann eliminations. Electrophilic additions, mechanism with suitable examples, (Markownikoff/Anti-markownikoff addition), syn and anti-addition; addition of H ₂ , X ₂ , oxymercuration demercuration, hydroboration-oxidation, ozonolysis, hydroxylation, reaction with NBS Reactions of alkynes; acidity, Alkylation of terminal alkynes, electrophilic addition: hydration to form carbonyl compounds, Relative reactivity of alkenes and alkynes, 1,2-and 1,4-addition reactions in conjugated dienes, Diels Alder reaction (excluding stereochemistry)	B. Sc. (H) Chemistry I Yr, Semester I DSC 2 (DSC-2):	2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
		Oxidation reagents and catalysts; Biomimicry and green chemistry, Biomimetic, Multifunctional Reagents; mechanochemical and solvent free synthesis of inorganic complexes; co crystal controlled solid state synthesis (C2S 3); Green chemistry in sustainable development.	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY
	Practicals	1. Bromination of Stilbene. 2. Acetanilide to p-Bromoacetanilide	B.Sc. Life Science, I Year, first Semester	Basic Concepts of Organic
		Systematic qualitative analysis of the given organic compounds containing monofunctional groups (aromatic hydrocarbons, alcohols, phenol) and preparation of one suitable derivative.	B.Sc. (Hons.) Chemistry II Year (3rd Sem) CHEMISTRY-	DSC 8: Carbonyl compound and nitrogen containing compounds
		Estimation of saponification value of fat/oil.	B.Sc. (Honours) Biological Science Ist Year (1st Sem)	DSC-1 Basic concept of Biomolecules
DECEMBER		• Engaging in doubt-solving class discussions focused on previous year question papers	B. Sc. (H) Chemistry I Yr, Semester I DSC 2 (DSC-2):	2: ORGANIC CHEMISTRY - I Basic Concepts, Aliphatic Hydrocarbons
		Surfactants for Carbon Dioxide – replacing smog producing and ozone depleting solvents with CO ₂ for precision cleaning and dry cleaning of garments. • A new generation of environmentally advanced wood preservatives: Getting the chromium and Arsenic out of pressure treated wood. • An efficient, green synthesis of a compostable and widely	B.Sc. CHEMISTRY (Hons.) III Year, Semester V	CHEMISTRY-DSE: GREEN CHEMISTRY प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		applicable plastic (polylactic acid) made from corn.		



Signature of the teacher



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SEMESTER WISE TEACHING PLAN

Name of the Faculty: Dr Neelam Kumari

Department: Chemistry

Semester: I / III/V

Month		Topics	Course	Paper Code/Name
Aug	Theory	Carbonyl Compounds: Reaction of carbonyl compounds with ammonia derivatives, Aldol and Benzoin condensation, Knoevenagel condensation, Claisen-Schmidt, Perkin, Cannizzaro and Wittig reaction	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds
	Practicals	1. Estimation of glucose by Fehling's solution. 2. Estimation of proteins by Lowry's method	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	Batch-II (Biochem)-DSC 11. Organic Chemistry IV Biomolecules
		1. Purification of an organic compound (Benzoic acid) by crystallization (from water) and distillation, Criteria of purity: Determination of M.P. 2. Purification of an organic compound (dinitrobenzene) by crystallization (alcohol) and distillation, Criteria of purity: Determination of M.P.	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry-DSC-1: Basic Concepts of Organic Chemistry
		1. Calibration of a thermometer and determination of the melting points of the organic compounds using any one of the following methods-Kjeldahl method, electrically heated melting point apparatus and BODMEL).	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
		Unit 1: Definition of Yoga and Types	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice
	Tutorials	NA	NA	NA
SEPTEMBER	Theory:	Beckmann and Benzil-Benzilic acid rearrangements, haloform reaction and Baeyer Villiger oxidation, α -substitution reactions, oxidations and reductions (Clemmensen, Wolff Kishner, LiAlH ₄ , NaBH ₄ , MPV, PDC), addition reactions of α,β -unsaturated carbonyl compounds: Michael addition.	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds
	Practicals :	3. Study of the action of salivary amylase on starch under optimum conditions. 4. Estimation of proteins by Lowry's method	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	Batch-II (Biochem)-DSC 11. Organic Chemistry IV Biomolecules

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Dr. Neelam Kumari

B.Sc. (Hons.) Chemistry

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		3. Determination of boiling point of liquid compounds. (Boiling point lower than and more than 100 °C by distillation and capillary method) 4. Preparations: (Mechanism of various reactions involved to be discussed) - a. Bromination of phenol/aniline. - b. 2,4-Dinitrophenylhydrazone of aldehydes and ketones - c. Semicarbazone of aldehydes/ ketones	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC-1: Basic Concepts of Organic Chemistry
		2. Concept of melting point and mixed melting point. 3. Concept of recrystallisation using alcohol/water/alcohol-water systems (Any two).	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
		Karma yoga, Gyana yoga, Bhakti yoga, Laya yoga, Raja yoga, Hatha yoga, Mantra yoga, Kundalini yoga. (in) Ashtanga Yoga: Yam- Ahinsa, Satya, Asteya, Brahmacharya, Aparigraha. Niyam- Saucha, Santosha, Tapa, Swadhyaya, Ishwarpranidhana. Asana, Pranayama- (the types of Pranayama: Puraka, rechaka & Kumbhaka), Pratyahara, Dharana, Dhyana & Samadhi etc. Shat Chakra,s: Mooladhara, Swadhishtana, Manipura, Anahata, Vishudha, Ajnya, Sahasrara-(Sahasradhara chakra)	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice
	Tutorials:	NA	NA	NA
OCTOBER	Theory:	Carboxylic acids and derivatives: Effect of substituents on acidic strength on carboxylic acids, HVZ reaction, typical reactions of dicarboxylic acids and hydroxy acids. Comparative study of nucleophilic acyl substitution for acid chlorides, anhydrides, esters and amides, Mechanism of acidic and alkaline hydrolysis of esters, Dieckmann and Reformatsky reactions, Hoffmann-bromamide degradation and Curtius rearrangement. Active methylene compounds: Keto enol tautomerism. Preparation and synthetic applications of diethyl malonate and ethyl acetoacetate	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds


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Practicals:	5. Isolation and estimation of DNA using cauliflower/onion 6. Effect of temperature on the action of salivary amylase. 7. Saponification value of the given oil.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	Batch-II (Biochem)-DSC 11. Organic Chemistry IV Biomolecules
	5. Preparations: (Mechanism of various reactions involved to be discussed). f. Acetanilide to p-Bromoacetanilide. 6. Detection of extra element (N containing compounds)	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC-1: Basic Concepts of Organic Chemistry
	4. Determination of boiling point of liquid compounds (boiling point lower than and more than 100°C by distillation, capillary method and BODMEL method) 5. Separation of a mixture of two amino acids/sugars by radial/ascending paper chromatography.	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons
	(i) Asana in standing position: Surya Namaskara, Tadasana, Padahasthasana, Garudasana, Natarajasana, Cakrasana. (ii) Asana in sitting position: Padmasana, Vajrasana, Siddhasana, Bhadrasana, Gomukhasana, Shashankasana, Mandukasana, Kukkutasana	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice
<u>Assignment :</u>	SEC: Yoga and Practice	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice



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NOVEMBER	Theory:	Nitro compounds: General methods of preparation: from alkyl halides, alkanes, oxidation of amines and oximes. Henry reaction, Nef reaction, Reduction-electrolytic reduction, reaction with nitrous acid, reduction in acidic, basic and neutral medium (for aromatic compounds) Amines: Preparation, chirality in amines (pyramidal inversion), Basicity of amines: Effect of substituents, solvent and steric effects, distinction between Primary, secondary and tertiary amines using Hinsberg's method and nitrous acid, Gabriel Phthalimide synthesis, Carbylamine reaction, Mannich reaction, Hoffmann's exhaustive methylation, Hofmann-elimination reaction and Cope elimination. Diazonium Salts: Synthetic applications of diazonium salts including preparation of arenes, haloarenes, phenols, cyano and nitro compounds; Coupling reactions of diazonium salts (preparation of azo dyes.	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds
	Practicals:	8. Study of the titration curve of glycine. 9. Estimation of glucose by Fehling's solution.	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	Batch-II (Biochem)-DSC 11. Organic Chemistry IV Biomolecules
		7. Detection of extra element (N and Halogen)	B.Sc. (P) Life Science Ist year (Batch III)	Organic Chemistry- DSC-1: Basic Concepts of Organic Chemistry
		7. Detection of extra elements	B.Sc. (Hons.) Chemistry Ist Year (1st Sem)	ORGANIC CHEMISTRY – I: DSC 2 Course Title: Basic Concepts and Aliphatic Hydrocarbons



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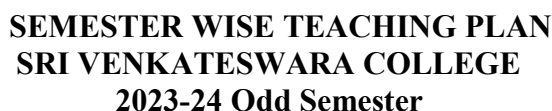
		Asana in stomach side position: Dhanurasana, Bhujangasana, Mayurasana, Marjarasana, Makrasana. (iv) Asana in backbone side position: Uttanapadasana, Naukasana, Sarvangasana, Sheershasana, Savasana etc. (v) Practice of pranayama - Purak, Rechak and Kumbhaka	Graduation IInd Year (3 rd Sem)	SEC III- Yoga and Practice
	<u>Test</u>	Unit 1: Carbonyl Compounds	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds
	<u>Assignment</u>	Carbonyl Compounds and Nitrogen containing Comp	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds
DECEMBER	Theory:	Nitriles: Preparation using following reactions: Dehydration of amides and aldoximes, substitution reaction in alkyl halides and tosylates, from Grignard reagents and from dehydrogenation of primary amines. Properties: Physical properties, discussion on the following reactions with mechanism: Reaction with Grignard reagent, hydrolysis, addition reaction with HX, NH., reaction with aqueous ROH, Reduction reactions-catalytic reduction and Stephen's reaction, Condensation reactions-Thorpe Nitrile Condensation. Isonitriles: Preparation from the following reactions: Carbylamine reaction, substitution in alkyl halides and dehydrogenation of N- substituted formamides. Properties: Physical properties, discussion on the following reactions with mechanism: Hydrolysis, reduction, addition of- HX, X, and sulphur, Grignard reaction, oxidation and rearrangement.	B.Sc. (Hons.) Chemistry II Year (3 rd Sem)	CHEMISTRY-DSC 8: Carbonyl compound and nitrogen containing compounds


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Practicals:	Estimation of proteins by Lowry's method	B.Sc. (Hons.) Chemistry III Year (5 th Sem)	Batch-II (Biochem)-DSC 11. Organic Chemistry IV Biomolecules
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Signature of Teacher: Dr Neelam Kumari

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Semester: I, III, and V

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 1: Gaseous state Kinetic theory of gases- postulates and derivation of kinetic gas equation, Maxwell distribution of molecular velocities and its use in evaluating average, root mean square and most probable velocities and average kinetic energy. Definition, expression, applications and temperature and pressure dependence of each one of the following properties of ideal gases: Collision frequency, Collision diameter, Mean free path.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
		Unit 1: Chemical Energetics Recapitulation of Intensive and extensive variables; state and path functions; isolated, closed and open systems, concept of heat, Q, work, W, internal energy, U, and enthalpy, H.	B.Sc. (P) Life Science III Sem (Sec-A, Sharing)	DSC-8 Chemistry-III: Chemical Energetics and Equilibria
		Unit 1: Chemical Energetics Recapitulation of Intensive and extensive variables; state and path functions; isolated, closed and open systems, concept of heat, Q, work, W, internal energy, U, and enthalpy, H. First law Concept of heat, Q, work, W, internal energy, U, and statement of first law; enthalpy, H, relation between heat capacities for ideal gas, Joule's experiment, calculations of Q, W, ΔU and ΔH for reversible expansion of ideal gases under isothermal conditions.	B.Sc. (P) Life Science III Sem (Sec-B, Full Syllabus)	DSC-8 Chemistry-III: Chemical Energetics and Equilibria
	Practicals	1. Determine the surface tension of a liquid by drop number method. 2. Determine the surface tension of a liquid by drop weight method.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State

		1. Determination of heat capacity of calorimeter. 2. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.	B.Sc. (P) Life Science III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
September	Theory	Unit 1: Gaseous state (Continue...) Coefficient of viscosity, definition, units and origin of viscosity of gases, relation between mean free path and coefficient of viscosity, temperature and pressure dependence of viscosity of a gas, calculation of molecular diameter from viscosity Barometric distribution law , its derivation and applications, alternative forms of barometric distribution law in terms of density and number of molecules per unit volume, effect of height, temperature and molecular mass of the gas on barometric distribution. Behaviour of real gases- Compressibility factor , Z, Variation of compressibility factor with pressure at constant temperature (plot of Z vs P) for different gases (H ₂ , CO ₂ , CH ₄ and NH ₃), Cause of deviations from ideal gas behaviour and explanation of the observed behaviour of real gases in the light of molecular interactions.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
		First law Concept of heat, Q, work, W, internal energy, U, and statement of first law; enthalpy, H, relation between heat capacities for ideal gas, Joule's experiment, calculations of Q, W, ΔU and ΔH for reversible expansion of ideal gases under isothermal conditions.	B.Sc. (P) Life Science III Sem (Sec-A)	DSC-8 Chemistry-III: Chemical Energetics and Equilibria
		Thermochemistry: Enthalpy of reactions: standard states; enthalpy of neutralization, enthalpy of ionization enthalpy of hydration, enthalpy of formation and enthalpy of combustion, Integral enthalpy of solution, bond dissociation energy and bond enthalpy; Hess's law, Born Haber's cycle (NaCl/KCl). Second Law: Concept of entropy; statements of the second law of thermodynamics (Kelvin and Clausius). Calculation of entropy change for reversible processes (for ideal gases). Free Energy Functions: Gibbs and Helmholtz energy (Non-PV work and the work function); Free energy change and concept of spontaneity (for ideal gases).	B.Sc. (P) Life Science III Sem (Sec-B)	DSC-8 Chemistry III Chemical Energetics and Equilibria


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	Practical	3. Study the variation of surface tension with different concentration of detergent solutions. Determine CMC. 4. Study the effect of the addition of solutes on the surface tension of water at room temperature and explain the observations in terms of molecular interactions: (i) sugar (ii) ethanol (iii) sodium chloride. 5. Study the variation of surface tension with different concentration of sodium chloride solutions.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
		3. Determination of the enthalpy of ionization of acetic acid. 4. Determination of enthalpy of neutralization of acetic acid and ammonium hydroxide using Hess's law.	B.Sc. (P) Life Science III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
October	Theory	Unit 1: Gaseous state (Continue...) van der Waals (vdW) equation of state, Limitations of ideal gas equation of state and its modifications in the form of derivation of van der Waal equation, Physical significance of van der Waals constants, application of van der Waal equation to explain the observed behaviour of real gases. Isotherms of real gases- Critical state, relation between critical constants and van der Waals constants, correlation of critical temperature of gases with intermolecular forces of attraction, Continuity of states, Limitations of van der Waals equation, Reduced equation of state and law of corresponding states (Statement only).	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
		Thermochemistry: Enthalpy of reactions: standard states; enthalpy of neutralization, enthalpy of ionization enthalpy of hydration, enthalpy of formation and enthalpy of combustion, Integral enthalpy of solution, bond dissociation energy and bond enthalpy; Hess's law, Born Haber's cycle (NaCl/ KCl).	B.Sc. (P) Life Science III Sem (Sec-A)	DSC-8 Chemistry-III: Chemical Energetics and Equilibria

		Third Law: Statement of third law, qualitative treatment of absolute entropy of molecules (examples of NO, CO), concept of residual entropy. Unit 2: Chemical Equilibrium Criteria of thermodynamic equilibrium. Free energy change in a chemical reaction and equilibrium constant, exergenic and endergenic reactions with examples such conversion of ATP to ADP or vice versa, Le Chatelier's principle, relationship between K_p, K_c and K_x for reactions involving ideal gases.	B.Sc. (P) Life Science III Sem (Sec-B)	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	6. Determination of co-efficient of viscosity of two unknown aqueous solutions. 7. Study the variation of viscosity with different concentration of sugar solutions. 8. Study the effect of the addition of solutes such as (i) polymer (ii) ethanol (iii) sodium chloride on the viscosity of water at room temperature and explain the observations in terms of molecular interactions	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
		5. Determination of integral enthalpy of solution of KNO_3. 6. Determination of integral enthalpy of solution of NH_4Cl. 7. pH metric titration of strong acid with strong base.	B.Sc. (P) Life Science III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Assignment	Given		
	Mid-Term Test	Conducted		
November	Theory	Unit 1: Gaseous state (Continue...) Virial equation of state-Physical significance of second and third virial coefficients, van der Waals equation expressed in virial form, Relations between virial coefficients and van der Waals constants. Unit 2: Liquid state Nature of liquid state, qualitative treatment of the structure of the liquid state Physical properties of liquids-vapour pressure, its	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State  प्रधानाचार्य Principal श्री वैकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुर्डी, नई दिल्ली / Dhoola Kuan, New Delhi-24

		origin and definition, Vapour pressure of liquids and intermolecular forces, and boiling point Surface tension, its origin and definition, Capillary action in relation to cohesive and adhesive forces, determination of surface tension by (i) using stalagmometer (drop number and drop mass method both) and (ii) capillary rise method, Effects of addition of sodium chloride, ethanol and detergent on the surface tension of water and its interpretation in terms of molecular interactions, Role of surface tension in the cleansing action of detergents.		
		Second Law: Concept of entropy; statements of the second law of thermodynamics (Kelvin and Clausius). Calculation of entropy change for reversible processes (for ideal gases). Free Energy Functions: Gibbs and Helmholtz energy (Non-PV work and the work function); Free energy change and concept of spontaneity (for ideal gases). Third Law: Statement of third law, qualitative treatment of absolute entropy of molecules (examples of NO, CO), concept of residual entropy.	B.Sc. (P) Life Science III Sem (Sec-A)	DSC-8 Chemistry-III: Chemical Energetics and Equilibria
		Unit 3: Ionic Equilibria Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, Ostwald's dilution law, ionization constant and ionic product of water, ionization of weak acids and bases, Degree of ionization, pH scale, common ion effect, Buffer solutions, Henderson-Hasselbach equation. Solubility and solubility product of sparingly soluble salts – applications of solubility product principle.	B.Sc. (P) Life Science III Sem (Sec-B)	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	9. Study the variation of viscosity of water with the amounts of a solute and calculate the intrinsic viscosity at room temperature. 10. Determine the viscosity average molecular mass of the polymer (PVA) using viscosity measurements.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State

		8. pH metric titration of weak acid with strong base. 9. Preparation of buffer solutions: (i) Sodium acetate-acetic acid Measurement of the pH of buffer solutions and comparison of the values with theoretical values. 10. Preparation of buffer solutions Ammonium chloride-ammonium acetate. Measurement of the pH of buffer solutions and comparison of the values with theoretical values.	B.Sc. (P) Life Science III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria
December	Theory	Coefficient of viscosity and its origin in liquids, Interpretation of viscosity data of pure liquids (water, ethanol, ether and glycerol) in the light of molecular interactions, Effects of addition of sodium chloride, ethanol and polymer on the viscosity of water, relative viscosity, specific viscosity and reduced viscosity of a solution, comparison of the origin of viscosity of liquids and gases, effect of temperature on the viscosity of a liquid and its comparison with that of a gas.	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I Gaseous and Liquid State
		-	B.Sc. (P) Life Science III Sem (Both sections)	DSC-8 Chemistry III Chemical Energetics and Equilibria
	Practical	-	B.Sc. (H) Chemistry I Sem	DSC-3: Physical Chemistry-I
		-	B.Sc. (P) Life Science III Sem	DSC-8 Chemistry III Chemical Energetics and Equilibria


Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Mrs. Sunita Chhabra

Department: Commerce

Semester: 5th

Month		Topics	Course	Paper Code/Name
August 2023	Theory	1. Introduction: Meaning, Nature and scope of marketing; Evolution of marketing concept and modern marketing concept; Marketing mix. 2. Marketing Environment- macro and micro environmental concepts; Consumer buying process; Factors influencing consumer buying decisions. 3. Market segmentation – meaning, benefits, and Bases of segmentation; Positioning – meaning and importance; Major bases of positioning a product	B.Com. (Hons.) 5 th Semester CBCS	Paper BCH 5.1 Principles of Marketing
	Tutorials	1. Nature of marketing. 2. Difference between marketing and selling. 3. Marketing mix and its components. 4. Marketing Environment – explain customer supplier, social cultural technological environment.		
September 2023	Theory	1. Product: Concept, Product classification; Major product decisions: Product attributes Branding, Packaging and labeling; After-sales service; Product life cycle, new product development. 2. Pricing: Significance, factors affecting price determination, major pricing methods; pricing policies and strategies. 3. Promotion: Nature and importance, promotion mix, Promotion tools, advertising personal selling, public relation, sales promotion and publicity.	B.Com. (Hons.) 5 th Semester CBCS	Paper BCH 5.1 Principles of Marketing
	Tutorials	1. Dimensions of product in 5 layers. 2. Branding. 3. Product life cycle. 4. Pricing		

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	Assignment	1. Consumer Behaviour. 2. Write note on marketing and selling, significance of marketing.		
October 2023	Theory	1. Factors affecting promotion mix, integrated marketing communication approach. 2. Distribution: Channels of distribution – Meaning, importance, and functions; Factors affecting choice of distribution channel; Distribution logistics: Meaning, importance and decisions. 3. Retailing: Store based, Non store based, specialty store, super market, retail vending machine, mail order house.	B.Com. (Hons.) 5 th Semester CBCS	Paper BCH 5.1 Principles of Marketing
	Tutorials	1. Pricing policies and factors affecting pricing. 2. Skimming and penetration pricing. 3. Distribution logistics. 4. Retailing – store based and non-store based.		
	Test	1. Introduction 2. Consumer Behavior 3. Market selection 4. Product		
November & December 2023	Theory	1. Management of Retailing; an overview in India changing scenario. 2. Development and Issues in Marketing: Rural, Social, Online, Direct, Services, Green and relationship marketing, marketing ethics.	B.Com. (Hons.) 5 th Semester CBCS	Paper BCH 5.1 Principles of Marketing
	Tutorials	1. Promotion mix 2. Relationship, green, online and direct marketing.		

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SRI VENKATESWARA COLLEGE

University of Delhi

Semester-Wise Teaching Plan (2023-24) (Odd-Semester)

Name of the Faculty: Dr. Mamta Arora

Designation: Associate Professor

Department: Commerce

Course: B. Com (H)

Semester: V

Session: 2023-24 (16th August 2023 to 12th December 2023)

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
August 2023	Theory	Financing Decisions: Sources of long-term financing, Estimation of components of cost of capital, methods of calculating cost of equity, cost of retained earnings, cost of debt and preference capital, weighted average cost of capital, capital structure: theories of capital structure (Net Income, Net Operating Income, MM Hypothesis, Traditional approach), Operating and Financing Leverage, Determinants of capital structure.	B.Com. (Hons) - V	BCH 5.2: Fundamental of Financial Management
September 2023	Theory	Dividend Decisions: Theories of relevance and irrelevance of dividend decisions for corporate valuation: Walter's Model, Gordon's model, MM Approach, Cash and stock dividends, Dividend policies in practice	B.Com. (Hons) - V	BCH 5.2: Fundamental of Financial Management
	Assignment	Topics were allotted for making the assignments.	B.Com. (Hons) - V	BCH 5.2: Fundamental of Financial Management
October 2023	Theory	Working capital decisions: concepts of working capital, operating & cash cycles, sources of short-term finance, working capital estimation, cash management, receivables management, inventory management	B.Com. (Hons) - V	BCH 5.2: Fundamental of Financial Management
November 2023	Theory	Long-term investment decisions: The capital budgeting process, cash flow estimation, pay-back period method, accounting rate of return, net present value, net terminal value, internal rate of return and Profitability Index	B.Com. (Hons) - V	BCH 5.2: Fundamental of Financial Management
	Test	Test would be conducted on the concerned subject.	B.Com. (Hons) - V	BCH 5.2: Fundamental of Financial Management
December 2023	Theory	Practice on previous year question papers		

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE 2023 odd sem

Name of the Faculty: Dr. Shruti Mathur

Department: Commerce

Semester: 1st

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 4 – Directing & Controlling - Motivation: Meaning , - Importance, - Factors affecting motivation	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
	Tutorials	Case studies/ presentations/ management games related to the topics done in theory	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
September	Theory	Unit 4 – Directing & Controlling - Leadership- meaning, - Importance , - factors affecting leadership, - leadership styles, - Followership - Control, - Principles of controlling,	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
	Tutorials	Case studies/ presentations/ management games related to the topics done in theory	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
	Assignment	Assignment on various topics from the course	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
October	Theory	Unit 4 -Directing & Controlling - Measures of controlling, - Accountability for performance Unit 5 Salient Developments and Contemporary Issues in Management - Management challenges of the 21st Century; - Factors reshaping and redesigning management purpose, - Performance and reward perceptions - Internationalization	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
	Tutorials	Case studies/ presentations/ discussions related to the topics done in theory	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications

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November	Theory	Unit 5 Salient Developments and Contemporary Issues in Management • Digitalization; • Entrepreneurship & innovation; • Values & ethics, Case studies on Indian corporates- Tata, Bhilwara Group, IOC, Godrej • holistic purpose and measures of firm performance; • Workplace diversity; • Democracy and Sociocracy; • Subaltern management ideas from India	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
	Tutorials	Case studies/ presentations/ quiz related to the topics done in theory	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
December	Theory	Revision of topics in Unit 4 and 5	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications
	Tutorial	Case studies/ presentations/ discussions related to the topics done in theory	B.Com. (Hons.)	Paper DSC 1: Management Principles and Applications



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SEMESTER WISE TEACHING PLAN 2023 odd **SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Shruti Mathur
Department: Commerce

Semester: 5th

Month		Topics	Course	Paper
August	Theory	Unit 1 – Introduction to Marketing : Meaning, Nature and scope and importance of marketing; Marketing Philosophies; Marketing mix. Marketing Environment- Need for studying Marketing Environment, Micro environmental factors - company, suppliers, intermediaries, customers, competitors, public	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
	Tutorials	Case studies/ presentations/ activities based on the theory chapters		
September	Theory	Unit 1 – Marketing Environment- Macro Environmental factors – demographic, economic, political, legal, natural, technological, socio-cultural Unit 2 – Consumer Behaviour- Need for studying, types, stages in Consumer buying process; Factors influencing consumer buying decisions. Market Selection Market segmentation – concept, importance, levels and Bases of segmentation; Positioning – meaning and importance; Market targeting – Concept and factors affecting the choice Product positioning- concept and bases Major bases of positioning Product Differentiation – concept and bases	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
	Tutorials	Case studies/ presentations/ activities based on the theory chapters		
	Assignment	Assignment on various topics in the syllabus		

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October	Theory	UNIT 3 Product Decisions: Concept, Product classification; Levels, product mix dimensions: Branding- concept, functions, types and qualities of good brand name, Packaging and labeling – concept and functions; Product-support service; New product development. Product life cycle -concept and market strategies, new product development process . Unit 4 Pricing Decisions: Objectives, factors affecting price determination, major pricing methods; pricing strategies. Distribution Decisions: Channels of distribution – Meaning, importance, Types of channels and functions; Factors affecting choice of distribution channel;	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
	Tutorials	Case studies/ presentations/ activities based on the theory chapters	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
	Test	Unit 1 to Unit 3 (Till New Product Development)		
November		Unit 4 Distribution Decisions: Distribution logistics: concept, importance and decisions. Wholesaling and retailing Unit 5 Promotion Decisions: Communication process, Nature and process of promotion, promotion mix, distinctive characteristics of advertising, personal selling, public relation, sales promotion, publicity and direct marketing. Factors affecting promotion mix Contemporary Issues in Marketing: Relationship marketing, Sustainable marketing, Rural marketing	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
	Tutorials	Case studies/ presentations/ activities based on the theory chapters	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
December	Theory	Unit 5 Contemporary Issues in Marketing: Social marketing, Digital marketing, Ethical issues in marketing. Revision of Units 1 to 5	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing
	Tutorials	Case studies/ presentations/ activities based on the theory chapters	B.Com. 5 th Semester LOCF	Paper BC 5.1 b Principles of Marketing



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Sindhu Mani Bag

Department: Commerce

Semester: I/III/V

Month	Type of Class	Topics	Course	Paper Code/Name
August -2023	Theory	1. The Indian contract Act: Meaning, Characteristics and Kinds; Essentials of a valid contracts- offers and acceptance, consideration, contractual capacity. 2. The Indian contract Act: Meaning, Characteristics and Kinds; Essentials of a valid contracts- offers and acceptance, consideration, contractual capacity. 3. The Indian contract Act: Meaning, Characteristics and Kinds; Essentials of a valid contracts- offers and acceptance, consideration, contractual capacity.	1. B.com (H)Ist sem-A 2. B.Com (P)-Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws 2.BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1.B.com (H)Ist sem-A 2.B.Com(P)-Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws 2.BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws
	Computer Lab	1. 1. Financial Management-Time Value of Money	1. B.Com. (H) – III- Financial Management	1. DSC 3.2- Financial Management

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

September - 2023	Theory	1. The Indian Contract Act 1872: Free consent, the Legality of Objects, Void agreements, Quasi Contracts. Discharge of Contracts and remedies for breach of contract: Modes of Discharge of contracts; Performance of contract, Mutual agreement, Supervening impossibility, Lapse of Time, operation of Law, Breach of contract, remedies for breach of contract, Rescission, suit for damages, Quantum meruit, suit for specific performance, suit for Injunction. 2. The Indian Contract Act 1872: Free consent, the Legality of Objects, Void agreements, Quasi Contracts. Discharge of Contracts and remedies for breach of contract: Modes of Discharge of contracts; Performance of contract, Mutual agreement, Supervening impossibility, Lapse of Time, operation of Law, Breach of contract, remedies for breach of contract, Rescission, suit for damages, Quantum meruit, suit for specific performance, suit for Injunction. 3. The Indian Contract Act 1872: Free consent, the Legality of Objects, Void agreements, Quasi Contracts. Discharge of Contracts and remedies for breach of contract: Modes of Discharge of contracts; Performance of contract, Mutual agreement, Supervening impossibility, Lapse of Time, operation of Law, Breach of contract, remedies for breach of contract, Rescission, suit for damages, Quantum meruit, suit for specific performance, suit for injection.	1. B.com (H) Ist sem-A 2. B.Com(P)- Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC- 1.2 : Business Laws 2. BC: DSC- 1.2- Business Laws 3. BC: DSC- 1.2- Business Laws.
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1. B.com (H) Ist sem-A 2. B.Com(P)- Ist sem-A 3. B.Com (P)-Ist sem-B	1. 1. BCH: DSC- 1.2 : Business Laws 2. BC: DSC- 1.2- Business Laws 3. BC: DSC- 1.2- Business Laws
	Computer Lab	1. Capital Budgeting Decision (12 hours) The Capital Budgeting Process, Cash Flow	B.Com. (H) – III	DSC 3, 2- Financial

		Estimation, Different techniques of Capital budgeting: Payback Period Method, Discounted Payback Period Method, Accounting Rate of Return, Net Present Value (NPV), Internal Rate of Return (IRR) and Profitability Index.	Financial Management	Management.
October-2023	Theory	1. Introduction to special Contracts: Contract of Indemnity and Guarantee; Contracts of Bailment and Pledge; Contract of Agency. 2. Introduction to special Contracts: Contract of Indemnity and Guarantee; Contracts of Bailment and Pledge; Contract of Agency 3. Introduction to special Contracts: Contract of Indemnity and Guarantee; Contracts of Bailment and Pledge; Contract of Agency	1. B.com (H) Ist sem-A 2. B.Com(P) -Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws 2. BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws.
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1. B.com (H) Ist sem-A 2. B.Com(P) -Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws 2. BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws.
	Computer Lab	1. Cost of Capital: Estimation of components of cost of capital: Method for calculating cost of equity, Cost of retained Earnings, Cost of Debt, Cost of Preference Capital, Weighted Average Cost of Capital (WACC) and Incremental (Marginal) Cost of Capital. Capital Structure: Theories of Capital Structure (Net Income, Net Operating Income, MM Hypothesis, Traditional Approach). Operating, Financial and Combined Leverage. EBIT-EPS Analysis. Determinants of Capital Structure.	B.Com. (H) – III- Financial Management	DSC 3.2- Financial Management
	Internal Test Exam	Conduct Internal examination	1. B.com (H) Ist sem-A 2. B.Com(P)- Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws. 2. BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws.

Novem ber- 2023	Theory	1. The Sales of Goods Act 1930: Contract of Sale; Meaning and difference between sales and agreement of sell; Conditions and Warranties; Transfer of ownership in goods including sale by non-owners; performance of the contract of sale; Unpaid seller-Meaning and rights of Unpaid seller against the goods. 2. The Sales of Goods Act 1930: Contract of Sale; Meaning and difference between sales and agreement of sell; Conditions and Warranties; Transfer of ownership in goods including sale by non-owners; performance of the contract of sale; Unpaid seller-Meaning and rights of Unpaid seller against the goods 3. The Sales of Goods Act 1930: Contract of Sale; Meaning and difference between sales and agreement of sell; Conditions and Warranties; Transfer of ownership in goods including sale by non-owners; performance of the contract of sale; Unpaid seller-Meaning and rights of Unpaid seller against the goods	1. B.com (H)Ist sem-A 2.B.Com(P)-Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws 2.BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws.
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1. B.com (H)Ist sem-A 2.B.Com(P)-Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws 2.BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws.
	Computer Lab	Dividend Decision: Theories for relevance and irrelevance of dividend decision for corporate valuation- MM Approach, Walter's Model, Gordon's Model. Determinants of Dividend policy.	B.Com. (H) – III- Financial Management	1. DSC 3.2- Financial Management
		Finalisation of Internal Assessment		
Decem ber- 2023	Theory	1. The Limited Liability Partnership Act,2008: Salient Features and nature of LLP; small LLP; Difference between LLP and Partnership, LLP and Company; LLP agreement; Incorporation Document; Incorporation by Registration; Registered office of LLP and Change there in; change and rectification of of the name of LLP, Partners and designated partners, Partners and their relations; Extent and limitation of liability of LLP and Partners; whistle	1. B.com (H)Ist sem-A	1. BCH: DSC-1.2 : Business Laws  प्रधानाचार्य Principal श्री वैकुण्ठेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		blowing, Conversion into LLP 2. The Limited Liability Partnership Act, 2008: Salient Features and nature of LLP; small LLP; Difference between LLP and Partnership, LLP and Company; LLP agreement; Incorporation Document; Incorporation by Registration; Registered office of LLP and Change there in; change and rectification of the name of LLP, Partners and designated partners, Partners and their relations; Extent and limitation of liability of LLP and Partners; whistle blowing, Conversion into LLP. 3. The Limited Liability Partnership Act, 2008: Salient Features and nature of LLP; small LLP; Difference between LLP and Partnership, LLP and Company; LLP agreement; Incorporation Document; Incorporation by Registration; Registered office of LLP and Change there in; change and rectification of the name of LLP, Partners and designated partners, Partners and their relations; Extent and limitation of liability of LLP and Partners; whistle blowing, Conversion into LLP	2. B.Com(P)-Ist sem-A 3. B.Com (P)-Ist sem-B	2.BC: DSC-1.2- Business Laws 3. BC: DSC-1.2- Business Laws
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1. B.com (H)Ist sem-A 2.B.Com(P)-Ist sem-A 3. B.Com (P)-Ist sem-B	1. BCH: DSC-1.2 : Business Laws. 2.BC: DSC-1.2- Business Laws. 3. BC: DSC-1.2- Business Laws
	Computer Lab	Working Capital Decision: Concepts of Working Capital, Operating & Cash Cycles, Risk-return Trade off, working capital estimation, Receivables Management.	B.Com. (H) – III- Financial Management	DSC 3.2- Financial Management
	Conducting lab test	Conducting practical Examination	B.Com. (H) – III- Financial Management	DSC 3.2- Financial Management



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SRI VENKATESWARA COLLEGE

University of Delhi

Semester-Wise Teaching Plan (2023-24) (Odd-Semester)

Name of the Faculty: Dr. Vinod Kumar

Designation: Assistant Professor

Department: Commerce

Course: B. Com (H)/B.Com

Semester: III/V

Session: 2023-24 (16th August 2023 to 12th December 2023)

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
August 2023	Theory	Nature, Scope and Objectives of financial management, Time value of money, Risk & Return	B.Com. – V B.Com. (Hons) – III B.Com (Hons.) V	BC 5.2 (a): Fundamental of Financial Management BCH 3.2 DSC Financial Management BCH 5.2 Financial Management
	Practical	Time value of money with MS-EXCEL Software	B.Com.(H) - V	BCH 5.2 DSE: Financial Management
September 2023	Theory	Dividend Decisions: Theories of relevance and irrelevance of dividend decisions for corporate valuation: Walter's Model, Gordon's model, MM Approach, Cash and stock dividends, Dividend policies in practice	B.Com. – V B.Com. (Hons) – III	BC 5.2 (a): Fundamental of Financial Management BCH 3.2 DSC Financial Management
	Assignment	Topics were allotted for making the assignments.	B.Com (Hons.) V	BCH 5.2 Financial Management
	Practical	Time value of money with MS-EXCEL Software	B.Com.(H) - V	BCH 5.2 DSE: Financial Management
October 2023	Theory	Working capital decisions: concepts of working capital, operating & cash cycles, sources of short-term finance, working capital estimation, cash management, receivables management, inventory management	B.Com. – V B.Com. (Hons) – III B.Com (Hons.) V	BC 5.2 (a): Fundamental of Financial Management BCH 3.2 DSC Financial Management

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				BCH 5.2 Financial Management
	Practical	Time value of money with MS-EXCEL Software	B.Com.(H) - V	BCH 5.2 DSE: Financial Management
November 2023	Theory	Long-term investment decisions: The capital budgeting process, cash flow estimation, pay-back period method, accounting rate of return, net present value, net terminal value, internal rate of return and Profitability Index	B.Com. – V B.Com. (Hons) – III B.Com (Hons.) V	BC 5.2 (a): Fundamental of Financial Management BCH 3.2 DSC Financial Management BCH 5.2 Financial Management
	Practical	Time value of money with MS-EXCEL Software	B.Com.(H) - V	BCH 5.2 DSE: Financial Management
	Test	Test would be conducted on the concerned subject.	B.Com. – V	BC 5.2 (a): Fundamental of Financial Management
December 2023	Theory	Practice on previous year question papers	B.Com. (Hons) – III B.Com (Hons.) V	BCH 3.2 DSC Financial Management BCH 5.2 Financial Management



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
University of Delhi
(2023-24)

Name of the Faculty: Dr. Pooja Jain

Designation: Assistant Professor

Department: Commerce

Semester: I/III/V

Session: 16th August 2023 to 12th December 2023

Month	Type of Class	Topics	Course	Paper Code/Name
August 2023 – September 2023	Theory	1. Unit I: Nature and Scope, Difference between cost accounting and management accounting, cost control, cost reduction, cost management, difference between cost control, cost reduction and cost management. Unit IV: Absorption versus variable costing: Distinctive features and income determination. 2. Unit 1 Measures of Central Tendency: Concept and properties of averages including Arithmetic mean, Median and Mode. Measures of Dispersion: An overview of Range, Quartile Deviation and Mean Deviation; Standard deviation; Variance and Coefficient of variation. Moments: Computation and significance; Skewness; Kurtosis Unit 5 Index Numbers: Meaning and uses of index numbers. Construction of Index numbers: Methods of Laspeyres, Paasche and Fisher's Ideal index. Construction and Utility of Consumer Price Indices; BSE SENSEX, and NSE NIFTY.	B.Com. (Hons) – V A+B B.Com. III A+B	• BCH 5.3: Management Accounting • DSC 3.1 Business Statistics
	Practical	Unit 1: Measures of Central Tendency: Concept and properties of averages including Arithmetic mean, Median and Mode. Measures of Dispersion: An overview of Range, Quartile Deviation and Mean Deviation; Standard deviation; Variance and Coefficient of variation. Moments: Computation and significance; Skewness; Kurtosis	B.Com. III A+B	• DSC 3.1 Business Statistics  प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय

		Unit 5 Index Numbers: Meaning and uses of index numbers. Construction of Index numbers: Methods of Laspeyres, Paasche and Fisher's Ideal index. Construction and Utility of Consumer Price Indices; BSE SENSEX, and NSE NIFTY.		
Month	Type of Class	Topics	Course	Paper Code/Name
October 2023	Theory	1. Unit IV: Cost-Volume-Profit Analysis: Break-even analysis-algebraic and graphic methods. Contribution / sales ratio, key factor. Margin of safety. Angle of incidence. Determination of cost indifference point. Unit II: Budgeting and budgetary control: Concept of budget and budgetary control, objectives, merits, and limitations, Budget administration, Functional budgets, Fixed and flexible budgets, Zero base budget, Programme and performance budgets. 2. UNIT 3: Simple Correlation and Regression Analysis Correlation Analysis: Meaning and types of Correlation; Correlation Vs Causation; Pearson's coefficient of correlation (computation and properties); Probable and standard errors; Rank correlation. Regression Analysis: Principle of least squares and regression lines; Regression equations and estimation; Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate.	B.Com. (Hons) – V A+B B.Com. III A+B	• BCH 5.3: Management Accounting • DSC 3.1 Business Statistics
	Practicals	UNIT 3: Simple Correlation and Regression Analysis Correlation Analysis: Meaning and types of Correlation; Correlation Vs Causation; Pearson's coefficient of correlation (computation and properties); Probable and standard errors; Rank correlation. Regression Analysis: Principle of least squares and regression lines;	B.Com. III A+B	• DSC 3.1 Business Statistics  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Regression equations and estimation; Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate.		
	Assignment	One home assignment will be given from the topic: Absorption and variable Costing and CVP analysis	B.Com. (Hons) – V A+B B.Com. III A+B	• BCH 5.3: Management Accounting • DSC 3.1 Business Statistics
Month	Type of Class	Topics	Course	Paper Code/Name
November 2023	Theory	Unit V: Decision making: Costs for decision making, variable costing and differential analysis as aids in making decisions – fixation of selling price, exploring new markets, make or buy, product mix, operate or shut down, sell or process further; Responsibility Accounting: Concept, Significance, Different Responsibility Centres, Divisional Performance Measurement – Financial Measures. 2. Unit IV: Time Series Data; Components of time series; Additive and Multiplicative models. Trend analysis; Fitting of trend using principle of least squares – linear and second degree parabola. Shifting of Origin and Conversion of annual linear trend equation to quarterly/monthly basis and vice-versa.	B.Com. (Hons) – V A+B B.Com. III A+B	• BCH 5.3: Management Accounting • DSC 3.1 Business Statistics
	Practicals	Unit IV: Time Series Data; Components of time series; Additive and Multiplicative models. Trend analysis; Fitting of trend using principle of least squares – linear and second degree parabola. Shifting of Origin and Conversion of annual linear trend equation to quarterly/monthly basis and vice-versa.	B.Com. III A+B	• DSC 3.1 Business Statistics
	Test	1. Class Test will be conducted in the middle of the month from these topics:	B.Com. (Hons) – V A+B B.Com. III A+B	• BCH 5.3: Management Accounting

		a. Nature and scope of management accounting b. Absorption and variable costing c. C-V-P Analysis d. Budgeting 2. Class Test will be conducted in the middle of the month from these topics: a. Measures of Central Tendency b. Time Series Analysis		• DSC 3.1 Business Statistics
Month	Type of Class	Topics	Course	Paper Code/Name
December 2023	Theory	1. Unit III: Standard costing and variance analysis: Meaning of standard cost and standard costing: advantages, limitations and applications, Variance analysis – material, labour, and sales variances, Disposition of variances, Control ratios. Standard Costing and Variance analysis: Overhead variance 2. Revision of all topics	B.Com. (Hons) – V A+B B.Com. III A+B	• BCH 5.3: Management Accounting • DSC 3.1 Business Statistics
	Practicals	Revision of all topics	B.Com. III A+B	• DSC 3.1 Business Statistics



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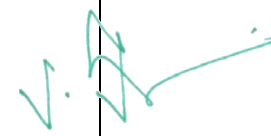
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Department of Commerce (Year 2023-24)
ODD SEMESTER TEACHING PLAN (AUGUST-DECEMBER 2023)

Name of the Faculty: Ms. Angel Josy Lakra

Department: Commerce

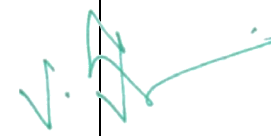
Semester: I/III/V

Month	Type of Class	Topics	Course	Paper Code/Name
August	Theory	1. Management Principles and Application ✓ Concept, nature and scope of management ✓ Characteristics of management ✓ Managerial functions and managerial levels ✓ Inter-relationships of Managerial functions ✓ Roles of manager ✓ Levels of management ✓ Skills of a manager ✓ Managerial Competencies	B.Com Hons I DSC	BCH 3.4(a)
	Practical	2. SEC: Innovation and Entrepreneurship ✓ Understanding the concept and process of creativity; students exploring within themselves the nature of the creative process; approaches to understanding creativity ✓ Differentiate between invention and innovation ✓ Understanding entrepreneurial mindset and skills(creativity, decision making, risktaking behaviour, networking) and entrepreneurship in different contexts (eg. Social, Cooperative, Commercial, Public, Not for Profit organisations) ✓ Case studies of some successful innovations/start-ups – Different group can be given a different Case Study and the groups can have a discussion on same	B.Com Hons III	
	Theory	3. Entrepreneurship Development (SEC) ✓ Basics of Entrepreneurship: Evolution of Entrepreneurship; meaning; definition; can entrepreneur be a manager also; types; functions; role in the economic development; entrepreneurial process; prerequisites/traits/characteristics; determinants of entrepreneurship; misconceptions and myths. ✓ Creativity and Innovation: creativity; innovation; importance, process of creativity; types of innovation, process of innovation; Innovation and business/role of managers in promoting innovations. ✓ Dimensions of Entrepreneurship: intrapreneurship, technopreneurship, netpreneurship, international entrepreneurship, ecopreneurship, culture entrepreneurship; social entrepreneurship; women entrepreneurship; Entrepreneurship and new challenges of globalization.	B.Com Hons V	BCH 5.3 (d)


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		Class Activity: One-two slide PPT class presentations by few students on types of entrepreneurship.		
Month	Type of Class	Topics	Course	Paper Code/Name
September	Theory	1. Management Principles and Application Unit 1 ✓ Meaning and definitions of coordination ✓ Nature and characteristics of coordination ✓ Coordination vs. cooperation ✓ Need for coordination ✓ Advantages of coordination ✓ Types and principles of coordination ✓ Techniques or mechanisms of coordination ✓ Coordination as the essence of management ✓ Evolution of management thought ✓ The classical approach, neo-classical approach or behavioral approach ✓ Systems Approach ✓ Contingency approach ✓ Indian ethos for management	B.Com Hons I DSC	BCH 3.4(a)
	Practical	2. SEC: Innovation and Entrepreneurship ✓ Identifying a specific problem through observation, contemplation, networking and research ✓ Generating ideas for problem solving using mind mapping, brainstorming, focus groups, idea generation tool kit (SCAMPER); other techniques ✓ Learning through failures of others – case studies of some ventures that could not sustain – Different group can be given a different Case Study and the groups can have a discussion on same	B.Com Hons III	
	Theory	3. Entrepreneurship Development (SEC) ✓ MSME: Definition; Benefits/role in India; Issues and challenges; Support to MSME by GOI; Support to MSME by E-Commerce World ✓ Business Groups and Family Business: Concept; Features; Role; Key challenges; Resolving conflicts among family members; Changing orientation of family business in India; What makes Indian family business special? ✓ Sources of Business Ideas: Introduction; Definition of business idea; Prerequisite of convincing business idea; identifying business opportunity. ✓ Feasibility of the study: Introduction; meaning, elements of feasibility analysis ✓ Business Plan: Introduction, meaning, need/significance pitfalls to be avoided while planning/writing a business plan, contents of business plan/project proposal; Sample Business Plan.	B.Com Hons V	BCH 5.3 (d)
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Class Activity 1: Students (leaving the students who have				

		already given presentation) were asked to give one-two slide presentation on profiles of noted Indian Entrepreneurs such as Kumar Manglam Birla, Sunil Mittal and many more. Class Activity 2: Students (leaving the students who have already given presentation) were asked to give one-two slide presentation on Promotional Schemes for MSME by GOI.		
Month	Type of Class	Topics	Course	Paper Code/Name
October	Theory	1. Management Principles and Application Unit 2 ✓ Planning: Nature, characteristics, and importance ✓ Principles, planning process, Limitations and criticism of planning ✓ Types of plans ✓ Nature, need, and importance of objectives ✓ Setting objectives ✓ Management by objectives ✓ Key areas for setting objectives ✓ Levels of strategy ✓ Concept, nature, and importance of strategy ✓ Limitations of strategy ✓ Business level strategic planning ✓ Concept and components of business environment ✓ Environmental analysis and diagnosis ✓ SWOT Analysis	B.Com Hons I DSC	BCH 3.4(a)
	Practical	2. SEC: Innovation and Entrepreneurship ✓ Building a business plan using the lean canvas model ✓ Understanding customers/stakeholders and evaluating the business plan through survey/questionnaire/interview/secondary research	B.Com Hons III	
	Theory	3. Entrepreneurship Development (SEC) ✓ Business processes: meaning, types, steps in business processes; Challenges related to business process; Technical solution to business process challenges. ✓ Forms of Business: Different forms of Business Corporation, Sole Proprietorship; Partnership Firm, LLP, Private Company, Public Limited Company. ✓ Entrepreneurial Sustainability: Public and Private System of Stimulation; Government support for Innovation and Entrepreneurship in India ✓ Support and Sustainability of Enterprise: meaning of business sustainability; Advantages; Steps for sustainable business/ futuristic outlook for sustainable business. Assignment for IA: Business Plan Presentation	B.Com Hons V	BCH 5.3 (d)
Month	Type of Class	Topics	Course	Paper Code/Name


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November	Theory	1. Management Principles and Application Unit 2 ✓ Concept, characteristics, and importance of decision-making ✓ Decision making environment ✓ Types of managerial decisions ✓ Process of rational decision making ✓ Individual and group decision making ✓ Techniques of decision making ✓ Rationality in decision making- Bounded rationality Unit 3 ✓ Concept, nature, and purpose of organizing ✓ Steps in the process of decision making ✓ Principles of organizing ✓ Organizing and division of labor ✓ Span of management ✓ Delegation and decentralization of authority ✓ Organization design	B.Com Hons I DSC	BCH 3.4(a)
	Practical	2. SEC: Innovation and Entrepreneurship ✓ Designing, prototyping and iteration ✓ Networking and growth strategies ✓ Presentations Building and managing organisations ✓ Role of leadership and team based culture ✓ Financing the innovation: pitching and communicating the idea ✓ Sources of finance: crowdfunding, venture capital, equity funds, angel investing, borrowing (including government initiatives, bank and public funded schemes) ✓ Various forms of IPR (patent, copyright, trademark, geographical indication, industrial design) ✓ Presentations	B.Com Hons III	
	Theory	3. Entrepreneurship Development (SEC) ✓ Requirement, Availability, and Access to Finance: Reasons for requirement of funds; Factors determining the requirement of capital; Funding Life Cycle; Problems in financing a New Venture ✓ Access to Marketing Assistance: Factors to be considered in market research; Marketing Assistance; Role of Technology; Digital Marketing. ✓ Business Incubators, Angel Investors, Venture Capital, and Private Equity Funds. ✓ Role of Industries/Entrepreneurs Associations: Institutions set up by Government; Industrial Association. ✓ Self Help Groups: Introduction, meaning, objectives, rationale, functions; Role in Women Empowerment; Role of Banks in Development of SHGs. ✓ Resource Mobilization: Attributes to Resource Mobilization, types, importance, and impediments/challenges. ✓ Utilities and Accommodation; Preliminary	B.Com V	BCH 5.3 (d)


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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		contracts; Contract management, Start-up Problems. Test: Test conducted on the concerned subject after mid-semester break		
Month	Type of Class	Topics	Course	Paper Code/Name
December	Theory	1. Management Principles and Application Unit 3 ✓ Departmentalization ✓ Line, functional, line and staff organization ✓ Project organization ✓ Matrix organization ✓ Network or boundaryless organization ✓ Team based structure ✓ Organograms ✓ Formal and informal organization ✓ Advantages and limitations of organization ✓ Structure and working of Informal Organization ✓ Functions or benefits of Informal organization ✓ How to handle informal groups	B.Com Hons I DSC	BCH 3.4(a)
	Practical	2. SEC: Innovation and Entrepreneurship ✓ Setting and scaling up ✓ Entrepreneurial resilience and ongoing creativity ✓ Presentations	B.Com Hons III	
	Theory	3. Entrepreneurship Development (SEC) ✓ Presentation ✓ Revision	B.Com V	BCH 5.3 (d)

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Antima Sharma

Department: Commerce

Semester: I, III & V (AY 23-24)

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 1: Financial Goals, Time Value of Money, Steps of financial Planning, Personal Finance/Loans	B.COM (P) – Sem V (A+B)	Personal Finance BC 5.3 (b)
		Unit 1: Accounting as an information system, An overview of Artificial Intelligence and Data Analytics in Accounting, Qualitative characteristics of accounting information, Function advantages and limitations of accounting, branches of accounting, Capital and revenue expenditure and receipts,	B.com (H) Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 3: Accounting for sole proprietorship	B.com (P) Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 1: Introduction, Nature, Scope, and Objectives of Financial Management	B.com (P) Sem III (A)	Financial Management (DSC 3.2)

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	Tutorials /Practical	Unit 5: Creation of Company in Tally Prime	B.COM (H) – Sem I(A+B)	Financial Accounting (DSC 1.3)
September	Theory	Unit 1: Introduction of savings, benefits of savings, management of spending & financial discipline, net banking	B.COM (P) – Sem V (A+B)	Personal Finance BC 5.3 (b)
		Unit 1: Accounting Policies, Fair Value Meaning, Recognition and Disclosure requirements of Provisions, Contingent Liability and Contingent Assets. Financial Accounting Principles: meaning and Need: GAAP, Entity, Money measurement, Going concern, cost Revenue concept.	B.com (H)-Sem I (B)	Financial Accounting DSC 1.3
		Unit 3. Accounting for Not-for-Profit Organization	B.com (P)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 1: An overview of time value of money and risk and return	B.com (P)-Sem III (A)	Financial Management (DSC 3.2)
	Tutorials /Practical	Unit 5: Creation of Ledgers, configure & Feature setting	B.COM (H) – Sem I(A+B)	Financial Accounting (DSC 1.3)



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	Assignment	Unit 1: Introduction to Financial Panning	B.COM P – Sem V (A+B)	Personal Finance BC 5.3 (b)
		Unit 3: Accounting for Sole Proprietorship	B.com (P)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 3: Accounting for PPE	B.com (H)-Sem I (B)	Financial Accounting (DSC 1.3)
October	Theory	Unit 2: Process and objectives of management, concept and measurement of risk and return Measurement of portfolio risk and return, Diversification and portfolio formation. Real estate, financial derivatives & commodity market in India. Mutual fund scheme including SIP.	B.COM P – Sem V (A+B)	Personal Finance BC 5.3 (b)
		Unit 2: Business Income, Accounting for Property plant and Equipment	B.com (H)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 4: Accounting for Inland Branches	B.com (P)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 5: Concept of Working Capital, Operating & Cash Cycles.	B.com (P)-Sem III (A)	Financial Management (DSC 3.2)
	Tutorials /Practical	Unit 5: Creation Stock Items and Groups	B.COM H – Sem I (A+B)	Financial Accounting (DSC 1.3)
	Test	Unit 1 & 3 Introduction to financial planning and Personal Tax Planning	B.COM P – Sem V (A+B)	Personal Finance BC 5.3 (b)
		Unit 2: Accounting for PPE, Measurement of Business Income	B.com (H)-Sem I (B)	Financial Accounting (DSC 1.3)


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November	Theory	Unit 3: Tax structure in India for personal taxation, steps of personal tax planning, exemptions and deductions for individuals, tax avoidance versus tax evasion.	B.COM (P) – Sem V (A+B)	Personal Finance 5.3 (b)
		Unit 4 Need for protection planning, Risk of mortality, health disability and property. Importance of insurance: life and nonlife insurance scheme.		
		Unit 3: Financial Statements of Sole Proprietorship and Not for profit organizations	B.com (H)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 4: Accounting for Departments	B.com (P)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 5: Risk-return trade off	B.com (P)-Sem III (A)	Financial Management (DSC 3.2)
	Tutorial/ Practical	Unit 5: Voucher entry including GST,	B.com (H)-Sem I (A+B)	Financial Accounting (DSC 1.3)
December	Theory	Unit V: Retirement Planning Goals, Process of Retirement planning, Pension Plans available in India, reverse mortgage, new pension scheme.	B.COM (P) – Sem V (A+B)	Personal Finance BC 5.3 (b)
		Unit IV: Accounting for Inland Branches, Department and Lease	B.com (H)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 4: Accounting for Leases	B.com (P)-Sem I (B)	Financial Accounting (DSC 1.3)
		Unit 5: Working capital estimation and receivable management	B.com (P)-Sem III (A)	Financial Management (DSC 3.2)
	Tutorial/Practical	Unit 5: Generation of Reports: P&L, Balance Sheet, Day Book, and GST Reports	B.com (H)-Sem I (A+B)	Financial Accounting (DSC 1.3)



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Department of Commerce (Year 2023-24)

TEACHING PLAN

Name of the Faculty: Mr. Aashish Jain

Department: Commerce

Semester I/III/V

Month	Type of Class	Topics	Course	Paper Code/Name
August	Theory	Business Statistics a) Mathematical averages including arithmetic mean, geometric mean & harmonic mean. Properties & applications. Goods & Service Tax & Custom Laws a) Constitutional framework of indirect tax before GST, Concept of VAT, Major defects before GST b) Rationale of GST, Structure of GST, GST Council, GST Network, State Compensation Scheme.	1. B. Com – (H) III Semester-V 2. B. Com – III Semester-V	1. BCH 5.4 (e): Business Statistics 2. BCH 6.2: Goods & Service Tax and Custom Laws
	Practical	INNOVATION & ENTREPRENEURSHIP (Sec) 1. Understanding the creativity 2. Differentiate between innovation & creativity 3. Understanding entrepreneurial mindset while preparing business plan.	1. B. Com H Semester – III	1. Innovation & Entrepreneurs hip (SEC)
Month	Type of Class	Topics	Course	Paper Code/Name
September	Theory	Business Statistics a) Positional averages: absolute & relative Range, quartile deviation, mean deviation, standard deviation & their co-efficient, properties of standard deviation/variance. Moments:- calculation & significance. Skewness, meaning, measurement using karl pearson & bowley's measures, concept of kurtosis. Goods & Service Tax and Custom Laws a) Taxable event – supply of Goods & Services, Place of Supply, Time of Supply, Valuation of	1. B. Com – (H) III Semester-V 2. B. Com – III Semester-V	1. BCH 5.4 (e): Business Statistics 2. BC 6.2: Goods & Service Tax and Custom Laws

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		Supply, Exemption of Goods & Services. b) Composition Scheme, Classification of Goods & Services, Composite & Mixed Supply		
	Practical	INNOVATION & ENTREPRENEURSHIP 1. Identifying specific problem through observation, Generating Ideas for problem solving using mind mapping, brainstorming etc. 2. Learning through achievements & failures – case studies of different companies.	1. B. Com – (H) Semester III	1. Innovation & Entrepreneurship
Month	Type of Class	Topics	Course	Paper Code/Name
October	Theory	Business Statistics 1) Theory of probability, approaches to calculate probability 2) Calculation of event probabilities. Addition & multiplication laws of probability. 3) Conditional probability & Bayes' theorem 4) Expectation & variance of a random variable Goods & Services Tax and Custom Laws a) Eligibility and non-eligibility of taking benefit of ITC, Apportionment of Credit, Blocked Credits, Recovery of excess tax, Transfer of input credits b) Payment of Taxes Refund process, TDS, TCS, Reverse charge Mechanism, Job Work	1. B. Com – (H) III Semester-V 2. B. Com – (H) III Semester-V	1. BCH 5.4 (e): Business Statistics 2. BC 6.2: Goods & Service Tax and Custom Laws
	Practical	INNOVATION & ENTREPRENEURSHIP 1) Building business plan using lean canvas, 2) Designing prototyping & iteration 3) Building & managing organization 4) Role of leadership	1. B. Com – (H) Semester-III	1. Innovation & Entrepreneurship
	Assignment	1. Topics allotment for making the assignments from probability & central value	1. B. Com – (H) III Semester-v	1. BCH 5.4 (e): Business Statistics
	Test	1. Test conducted on the concerned subject after mid-semester break.	1. B. Com – (H) III Semester-v 2. B. Com III Semester – V	1. BCH 5.4 (e): Business Statistics 2. BC 6.2: Goods & Service Tax and Custom Laws
Month	Type of Class	Topics	Course	Paper Code/Name

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November - December	Theory	Business Statistics a) Correlation analysis: meaning of correlation- simple, multiple & partial: linear & non-linear, scatter diagram, pearson's co-efficient of correlation: calculation & properties. Probable & standard errors, rank correlation. b) Regression analysis. Principle of least squares & regression lines, regression equations & estimation. Standard error of estimates. Goods & Service Tax and Custom Laws a) Registration under GST, Tax Invoice, Debit & Credit notes, E way Bill, Zero rated supply b) Basic concept of Custom Law, Types of Custom Duties c) Determining Assessable Value, Rate of Exchange & Rate of Duty d) Baggage Rules	1. B. Com – (H) III Semester- V 2. B. Com – III Semester- V	1. BCH 5.4 (e): Business Statistics 2. BC 6.2: Goods & Service Tax and Custom Laws
	Practical	External Exam conducted for Innovation & Entrepreneurship	1. B. Com H Semester – III	1. Innovation & Entrepreneurship



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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE (DU)

Name of the Faculty: Dr. M. Rama Naik
Department: Commerce
Semester: DSC1.3: SEM-I

MONTH		TOPICS	COURSE	PAPER CODE/NAME
August 2023	Theory	Unit-1 , Accounting as an Accounting Information system, Users of Accounting information system and needs. An overview of Artificial Intelligence and data Analytics in Accounting	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING
September 2023	Theory	Unit-1 Qualitative Characteristics of accounting information, Functions, Advantages and limitations of accounting, Branches of Accounting, Basis of Accounting, cash basis and accrual basis Capital and revenue expenditures and receipts	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING
September 2023	Theory	Unit-1 Event Occurring after the balance sheet date, extraordinary items, prior period Items, Accounting Estimate, Accounting Policies, Fair value,	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING
	Theory	Unit 2: Business income: Concept of Revenue and Business Income, Measurement of business income; relevance of accounting period, continuity doctrine and matching concept in the measurement of business income; Objectives of measurement of Business income.	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING
September 2023	Assignment	Revenue recognition with reference to AS 9.	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING

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October 2023	Theory	Unit-2: Accounting for Property, Plant, and Equipment with reference to AS 10. Impact of Depreciation on measurement of business income. Accounting for Intangible Assets with reference to AS 26. Valuation of Inventory with reference to AS 2. Impact of inventory valuation on measurement of business income by using FIFO, LIFO, and Weighted Average Method.	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING
October 2023	Theory	Unit-3: Unit 3: Financial Statements of Sole Proprietorship and Not-for-Profit Organizations: (9 hours) Preparation of Financial Statements of Sole Proprietorship and Not-for-Profit Organisations	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING
November 2023	Theory 2023	Unit 4: Accounting for Inland Branches, Departments and Leases: (12 hours) Accounting for Inland Branches: Concept of Dependent branches; Branch Accounting as per Debtors System, Stock and Debtors' System. Accounting for Departments (excluding Mark-up Account). Accounting for Leases with reference to AS 19	DSC3.2	DSC1.3 - FINANCIAL ACCOUNTING



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SEMESTER WISE TEACHING PLAN (2023-2024)

SRI VENKATESWARA COLLEGE (DU)

Name of the Faculty: Dr. M. Rama Naik

Department: Commerce

Semester: DSC3.2: SEM-III

Month	Type of Class	Topics	Course	Paper Code/Name
August 2023	Theory	Unit-1 , Meaning Nature and objectives of Finance Management (Wealth and Profit Maximizations) Time Value of Money Overview of Time Value of Money (Compounding & Discounting) Risk & Return. And Numerical on Time Value of Money.	DSC3.2	DSC3.2-FINANCIAL MANAGEMENT
September 2023	Theory	Unit-2 Meaning of Capital Budgeting, Process of Capital Budgeting Cash Flow Estimation	DSC3.2	DSC3.2-FINANCIAL MANAGEMENT
September 2023	Theory	Unit-2 Different Techniques of Capital Budgeting Non-Discounting Technique (Payback period method Accounting Rate of return.	DSC3.2	DSC3.2-FINANCIAL MANAGEMENT
	Theory	Unit-2 Discounting Techniques (Net Present Value Method (NPV), Internal rate of return (IRR) and Profitability Index	DSC3.2	DSC3.2-FINANCIAL MANAGEMENT
September 2023	Assignment	Numerical on Capital budgeting Techniques	DSC3.2	DSC3.2-FINANCIAL MANAGEMENT
October 2023	Theory	Unit-3: Concept of cost of Cost of Capital, Estimation and component of Cost of capital, Methods of Calculating Cost of Capital (cost of retained earnings, cost of Debt, cost of preference share, cost of Weighted Average cost of Capital (WACC) and	DSC3.2	DSC3.2-FINANCIAL MANAGEMENT

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		Incremental Cost of Capital.		
October 2023	Theory	Unit-3: Capital Structure: Theories of Capital structure (Net Income, Net Operating Income, MM Hypothesis, Traditional Approach) Leverages its Types	DSC3.2	DSC3.2- FINANCIAL MANAGEMENT
November 2023	Theory	Unit-4: Dividend Decision: Meaning of Dividend Factors affecting dividend policies Theories of Dividend (Relevance (Walters model and Gordon model) and Irrelevance (Residual Theories and M.M Approach)	DSC3.2	DSC3.2- FINANCIAL MANAGEMENT
November 2023	Theory	Unit-5: Working Capital Decision: Concept of Working Capital. Need of Working Capital. Types of Working Capital Need for Adequate working Capital.	DSC3.2	DSC3.2- FINANCIAL MANAGEMENT
December 2023	Theory	Unit-5 Risk return Trade off, Working capital estimation Receivable management.	DSC3.2	DSC3.2- FINANCIAL MANAGEMENT

Name of the Faculty: Dr. M. Rama Naik

Department: Commerce

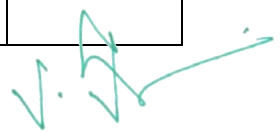
Semester: G.E3.3: SEM-III

Month	Type of Class	Topics	Course	Paper Code/ Name
August 2023	Theory	Unit-1, Basics of Investing: Meaning and Basics of investment, Investment Environment, Concept of Risk and return Trade-off, Types of Investment and Investors	DSC3.3	G.E3.3- INVESTI NG IN STOCK MARKET
September 2023	Theory	Unit-1 Avenues of Investments Equity Shares, Preferences shares, Bonds & Debentures, Insurance Schemes, Mutual Funds, EFT. Introduction of Primary and Secondary market, Derivative Market	DSC3.3	G.E3.3- INVESTI NG IN STOCK MARKET
September 2023	Theory	Unit-2 Fundamental Analysis: Introduction of Fundamental Analysis Top down and bottom-up Approach, Analysis of International & domestic economic scenario, Industry and	DSC3.3	G.E3.3- INVESTI NG IN STOCK MARKET

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		company Analysis. (Quality of management financial Analysis)		
	Theory	Unit-2 Income statement Analysis, position statement Analysis Including Financial Ratios Capital Gearing Ratio return on Equity, EPS and DPS Analysis Operating Ratio, (Net operating and net profit Ratio) PE,PEG Ratio Dividend yield ratio Debt Equity ratio. Share holding pattern of the Company.	DSC3.3	G.E3.3- Investing In Stock Market
September 2023	Assignment	Assignment	DSC3.3	G.E3.3- Investing In Stock Market
October 2023	Theory	Unit-3: Technical Analysis: Introductions of Technical Analysis, Trading rules. (Credit balance theory, confidence index filter rules, market breadth. Advances Vs Declines)	DSC3.3	G.E3.3- Investing In Stock Market
October 2023	Theory	Unit-3: MACD, Basic and advanced interactive chart ,Do, s Don'ts of investing in markets.	DSC3.3	G.E3.3- Investing In Stock Market
November 2023	Theory	Unit-4: Indian Stock Market: Introduction of Primary Market (IPO,FPO, Private Placement OFS) Secondary market(Cash Derivative Market Future and options Market participants(Stock Broker, Investor, Depositors, Clearing House, Stock Exchange, Role of Stock Exchange	DSC3.3	G.E3.3- Investing In Stock Market
November 2023	Theory	Unit-4: BSE, NSE and MCX. Security market indices: Nifty, Sensex and sectoral indices, Sources of financial information. Trading in securities: Demat trading, types of orders, using brokerage and analyst recommendations.	DSC3.3	G.E3.3- Investing In Stock Market
December 2023	Theory	Unit-5: Investing in Mutual Funds: Concept and background of mutual funds: advantages, disadvantages of investing in mutual funds, types of mutual funds- open-ended, close-ended, equity, debt, hybrid, index funds, exchange traded funds and money market funds. Factors affecting the choice of mutual funds. CRISIL mutual fund ranking and its usage. Calculation and use of Net Asset Value.	DSC3.3	G.E3.3- Investing In Stock Market





SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

(2023-24) (odd-Semester)

Name of the Faculty: Dr. Devendra Malapati

Department: Commerce

Courses: B.Com (H)/B.Com

Semester: I,III & V

16th August-2023 to 12th December-2023 (Semester-I,III&V)

Month	Type of Class	Course Contents	Course	Paper Code/Name
August 2023	Theory	Unit-I Introduction - An Introduction to Financial System, Components, - Financial System and - Economic Development, - Financial Inter-mediation, Unit-1: An introduction to financial system - An introduction to financial system – - components, - inter-linkages between financial system and economic development UNIT-V-Indian Ethos and Contemporary Issues in Management - Indian Ethos for management - Value oriented holistic management VAC-Financial Literacy Unit-1: Financial Planning and Financial Products - Meaning of financial Planning and Financial products - Concept of investments, objectives and Elements of investment - Introduction to savings - Concept of time value of money	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course-3.2 3. Discipline Specific Elective Course-5.4(b) 4. Value Addition Course
	Assign ment	Continuous assessment on Unit I,II & III	1. B.COM-I 2. B.Com.(H) – III&V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course-3.2

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				Course-3.2 3. Discipline Specific Elective Course-5.4(b) 4. Value addition course
September 2023	Theory	Unit-III: Financial Institutions I - Financial Institutions: Commercial banking – introduction, - classification, - Its role in financing – - commercial and consumer, Unit-I Introduction - An overview of Indian Financial System since 1951, - Financial Sector Reforms since liberalization 1990-91. Unit-II Financial Markets- I Money Market - Financial markets – - integration of Indian financial markets with global financial markets; - money market – - functions, organizations and participants; UNIT-V-Indian Ethos and Contemporary Issues in Management - Learning lessons from Bhagavat Gita - Learning lessons from Ramayana Unit-1: Financial Planning and Financial Products - Techniques of time value of money - Discounting - Compounding - Management spending and financial plan	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course-3.2 3. Discipline Specific Elective Course-5.4(b) 4. Value addition course

September 2023	Assignment	Continuous assessment on Unit I,II & III	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific 2. Core Course -2.2 3. Skill Enhancement Course.
September 2023	Theory	Unit-III: Financial Institutions I - Recent developments like MUDRA financing, - Problem of NPAs, - Bankruptcy and insolvency	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course-3.2 3. Discipline Specific

		Act, - Financial Inclusion. Unit-II Financial Markets- I Money Market - Money market instruments; - Role of central bank in money market; - Role of Reserve Bank of India in Indian money market; Fixed Income Money Market and Derivative Association of India (FIMMDA). UNIT-V-Indian Ethos and Contemporary Issues in Management - Business Processing Engineering (BPR) - Six sigma Methodologies Unit-II: Banking and Digital Payments - Banking products and services - Concept of digitization - Digitization of financial transactions		Elective Course- 5.4(b) 4. Value addition course
	Assign ment	Continuous assessment on Unit II & IV	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -2.2 2. Discipline Specific Core Course -2.2 3. Skill Enhancement Course.
Septem ber 2023	Theory	Unit-IV: Financial Institutions II - Concept of insurance and meaning - Life and non-life insurance companies in India: - Public and private. - Mutual Funds – Introduction and, - Their role in capital market development. Unit 3: Financial Markets II: Capital Mark ets - Capital Markets -	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course- 3.2 3. Discipline Specific Elective Course- 5.4(b) 4. Value addition course



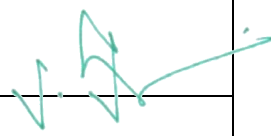
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		introduction, components, role and functions; - equity market-methods of issue; debt market-concept, - significance and classification; capital market instruments; raising funds from global financial markets; - primary and secondary markets- concept, similarities, differences UNIT-V-Indian Ethos and Contemporary Issues in Management - Subaltern management Ideas from India: - Diversity and Inclusion - Work- life balance Unit-II: Banking and Digital Payments - Debit cards - Credit cards - Security and precautions against Ponzi schemes and online frauds		
	Assignment	Continuous assessment on Unit IV,III &IV	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 3. Discipline Specific Elective Course- 3.2 4. Discipline Specific Elective Course- 5.4(b) 5. Value addition course
October 2023	Theory	Unit-IV: Financial Institutions II - Types of mutual fund schemes - Open ended vs close ended, - Equity and Debt, - Hybrid schemes and ETFs. - Non-banking financial companies (NBFCs). Unit 3: Financial Markets II: Capital Markets - MUDRA financing; Insurance - life and non-	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course- 3.2 3. Discipline Specific Elective Course- 5.4(b) 4. Value addition course

		life insurance companies in India: public and private; • Mutual Funds – introduction and • their role in capital market development, types of mutual fund schemes (open ended vs close ended, equity, debt, hybrid schemes and UNIT-V-Indian Ethos and Contemporary Issues in Management • Freelancing Unit-II: Banking and Digital Payments • Digitization of financial transactions • Net banking and UPI Payments • Digital wallets •		
	Assignment	Continuous assessment on Unit IV& V	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 5. Discipline Specific Elective Course-3.2 6. Discipline Specific Elective Course-5.4(b) 7. Value addition course
OCTOBER 2023		Unit-V: Financial Services Industry • Overview of financial services industry. Concept of Merchant Banking • Pre and post issue management, underwriting. Unit 3: Financial Markets II: Capital Markets • Exchange Traded Funds (ETFs); • Non-banking Financial Companies (NBFCs) – role and • Types; private equity, • Venture capital and hedge funds.	1. B.COM-I 2. B.Com.(H) – III, V	1. Discipline Specific Core Course -1.1 2. Discipline Specific Elective Course-3.2 3. Discipline Specific Elective Course-5.4(b) 4. Value addition course



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		Unit 4: Financial Institutions - Commercial banking – - Introduction, classification, - Role, asset liability - Management, non-performing assets; - Role of technology in banking sector; financial inclusion, UNIT-III: Investment Planning and Management - Investment opportunity and Financial products - Concept of insurance		
	Home Examination	1. Test will be conducted on the concerned subject		
NOVEMBER 2023		Unit-V: Financial Services Industry - Regulatory framework relating to Merchant Banking in India. - Leasing and, - Hire Purchase, - Consumer and , - Housing Finance, Unit 4: Financial Institutions - Recent developments in banking including - Restructuring, - Privatisation, - MUDRA financing; - Insurance - life and non-life insurance companies in India: public and private; UNIT-V-Indian Ethos and Contemporary Issues in Management - work from home UNIT-III: Investment Planning and Management - Life and non-life medical insurance schemes	1. B.COM-I 2. B.Com.(H) – III, V	8. Discipline Specific Core Course -1.1 9. Discipline Specific Elective Course-3.2 10. Discipline Specific Elective Course-5.4(b) 11. Value addition course
	Assignment	Continuous assessment on Unit IV& V	1. B.COM-I 2. B.Com.(H) – III, V	 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

NOVEMBER 2023		Unit-V: Financial Services Industry - Venture Capital Finance, - Concept of Factoring Services, - Credit Rating, Unit 4: Financial Institutions - Mutual Funds – introduction and their role in capital market development, - Types of mutual fund schemes (open ended vs close ended, equity, debt, hybrid schemes and Exchange Traded Funds (ETFs); - Non-banking Financial Companies (NBFCs) – role and types; - Private equity, - Venture capital and hedge funds UNIT-V-Indian Ethos and Contemporary Issues in Management - Flexi time - Co sharing/ co working UNIT-IV: Personal taxation - Introduction to basic tax structure in India for personal taxation - Aspects of personal tax planning - Exemptions and deductions	1. B.COM-I 2. B.Com.(H) – III, V	5. Discipline Specific Core Course -1.1 6. Discipline Specific Elective Course-3.2 7. Discipline Specific Elective Course-5.4(b) 8. Value addition course
	Assignment	Continuous assignment	1. B.Com.(H) – III, V	
December, 2023		Unit-V: Financial Services Industry - Financial Advisory and Portfolio Management Services Unit 5: Financial Stability - Financial stability-	1. B.Com.(H) – III, V 2. VAC	1. Discipline Specific Elective Course-5.4(b)  प्रधानाचार्य Principal श्री वैकुण्ठेश्वर महाविद्यालय Shri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		• importance and, • indicators (World Bank, IMF, RBI); • understanding financial crisis - causes and policy response; • global financial crisis (2008); emerging challenges to financial stability. UNIT-IV: Personal taxation • e-Filling		
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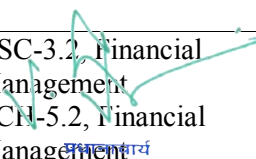


**SRI VENKATESWARA COLLEGE
DEPARTMENT OF COMMERCE**

Dr. Neha Singhal

Semester: July- December (III/V)

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	Internal Control System, Evidence in Auditing, Vouching, Verification of Assets, Verification of Liabilities, Appointment and Removal of Auditor, Rights and Duties of a Company Auditor, Auditor's Report, Liabilities of Auditor. Role of Auditor, PCAOB, NFRA Introduction to Marketing	B.Com- V B.com (H) - III	1. BC- 5.1 (b) Auditing and CG DSC-3.3, Principles of Marketing
	Practical:	Time Value of Money Time Value of Money	B.Com (H)- III B.Com (H)-V	DSC-3.2, Financial Management BCH-5.2, Financial Management
	Tutorial:	Assignment on Case Study: Role Of IT Sector In Developing Rural Markets	B.com (H) - III	DSC-3.3, Principles of Marketing
SEPTEMBER	Theory	Corporate Governance Theories and Models Committee, Regulatory Framework Assignment on CG Theories and Models Presentations on CG Scams Marketing Environment Consumer Behavior and Market Selection	B.com- V B.com (H) - III	1. BC- 5.1 (b) Auditing and CG 2. DSC-3.3, Principles of Marketing
	Practical	Capital Budgeting Decisions Capital Budgeting Decisions	B.Com (H)- III B.Com (H)-V	DSC-3.2, Financial Management BCH-5.2, Financial Management
	Tutorial	Assignment on take any product of your choice and suggest Segmentation, Targeting and Positioning strategy for the same.	B.com (H) - III	DSC-3.3, Principles of Marketing
OCTOBER	Theory	Major Corporate Failures Presentations on CG Scams Product Decisions and New Product Development	B.Com - V B.com (H) - III	1. BC- 5.1 (b) Auditing and CG 2. DSC-3.3, Principles of Marketing
	Practical	Capital Budgeting Decisions and Financing Decisions Capital Budgeting Decisions and Financing Decisions	B.Com (H)- III B.Com (H)-V	DSC-3.2, Financial Management BCH-5.2, Financial Management


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	Tutorial:	1. Assignment on take any product of your choice and suggest a marketing mix for the same.	B.com (H) - III	DSC-3.3, Principles of Marketing
	TEST:	Auditing, Types and CG failures. Marketing Concepts, Segmentation, Targeting and Positioning and Consumer Behavior	. B.Com -V	1. BC- 5.1 (b) Auditing and CG
NOVEMBER	THEORY:	Business Ethics and Corporate Social Responsibility Presentations on CG Scams Pricing and Distribution Decisions Promotion Decisions	1. B.Com -V 2. B.com (H) -III 3. B.Com (H)-III	1. BC- 5.1 (b) Auditing and CG 2. DSC-3.3, Principles of Marketing
	PRACTICAL:	Financing Decisions Financing Decisions	B.Com (H)-III B.Com (H)-V	DSC-3.2, Financial Management BCH-5.2, Financial Management
	Tutorial:	Assignment on Compare and Contrast all the concepts of marketing along with the examples.	B.com (H) - III	DSC-3.3, Principles of Marketing
DECEMBER	THEORY:	1. Corporate Social Responsibility and TBL 2. Developments in Marketing	1. B.Com -V 2. B.com (H) -III	1. BC- 5.1 (b) Auditing and CG 2. DSC-3.3, Principles of Marketing
	PRACTICAL	Practical Exam Practical Exam	B.Com (H)-III B.Com (H)-V	DSC-3.2, Financial Management BCH-5.2, Financial Management
	Tutorial:	VIVA from the syllabus	B.com (H) - III	DSC-3.3, Principles of Marketing



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Ajit Singh

Department: Commerce

Semester: I & V

Month	Type of Class	Topics	Course	Paper Code/Name
AUGUST-2023	Theory/ Practical	1. Unit 1: Marketing in the Digital World Digital marketing: Concept, Features, Difference between traditional and digital marketing, Moving from traditional to digital Marketing; Digital Marketing Channels: Intent Based-SEO, Search Advertising; Brand Based-Display Advertising; Community Based-Social Media Marketing; Others Affiliate, Email, Content, Mobile. Customer Value Journey: 5As Framework; The Ozone O3 Concept Key; Traits of online consumer	1. SEC (SEM I)	1. 2926000002 (Digital Marketing)
		2. Unit I: Introduction Entrepreneurship- concept, functions, need and its relevance in Indian society; Pros and cons of entrepreneurship; Entrepreneurship as a creative response to society's problem; Dimensions of entrepreneurship- intrapreneurship, social entrepreneurship; Entrepreneurship and new challenges of globalization.	2. B.Com(P)-V	2. BC 5.3 (a) ED
		3. Unit I: Introduction to Advertising- Communication Process; Information Response Hierarchy Models- AIDA Model & Hierarchy of Effects Model; Advertising: Importance, types and objectives; DAGMAR Approach; Target audience selection- basis; Methods of setting of Advertising Budget	3. B.Com(H)-V	3. BCH 5.4 (c): ADVERTISING AND PERSONAL SELLING
	Tutorials /Practical:	1. Digital marketing application tools presented by the teacher and practiced by the Students.	1. SEC (SEM I)	1. 2926000002 (Digital Marketing)
		2. Case Studies and business plan discussed and presented by the Students.	2. B.Com(P)	2. BC 5.3 (a) ED
		3. Case Studies and companies advertising strategies discussed and presented by the Students.	3. B.Com(H)-V	3. BCH 5.4 (c): ADVERTISING AND PERSONAL SELLING

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SEPTEMBER 2023	Theory/ Practical	1. Unit 2: Content and Email Marketing Content Marketing: Step-by-step Content Marketing Developing a content marketing strategy Email Marketing: Types of Emails in email marketing, Email Marketing best practices 2. Unit 2: Individual and Entrepreneurship Entrepreneurial competencies; Individual risk behavior and propensity for entrepreneurship; Family and social support for entrepreneurship; Entrepreneurial values; Attitudes and motivation; Family business in India- role and contribution towards growth of entrepreneurship; Entrepreneurial rewards system Unit 3: Entrepreneurial Process Generation of business ideas; Opportunity sensing and identification; Test of feasibility of business ideas; Developing a business proposal, contents of a business plan/project report; Project appraisal by external agencies. (Students should be taught to prepare a business plan of their choice based on the framework of opportunity sensing and identification techniques) 3. Unit II: Advertising: Message and Media Decisions Advertising Message-Advertising appeals; Elements of print and broadcast advertising copy; Types of Advertising Media- strengths and limitations; Factors influencing selection of advertising media; Media Scheduling. 3. Unit III: Advertising Effectiveness and Institutional Framework Rationale of measuring advertising effectiveness; Communication and Sales Effect; Pre and Post-testing Techniques; Advertising	1. SEC (SEM I) 2. B.Com (P)- V 3. B.Com(H)-V	1. 2926000002 (Digital Marketing) 2. BC 5.3 (a) ED 3. BCH 5.4 (c): ADVERTISING AND PERSONAL SELLING
	Tutorials/ Practical:	1. Digital marketing application tools presented by the teacher and practiced by the Students. 2. Case Studies and business plan discussed and presented by the Students. 3. Case Studies and companies advertising strategies discussed and presented by the Students.	1. SEC (SEM I) 2. B.Com(P) 3. B.Com(H)-V	1. 2926000002 (Digital Marketing) 2. BC 5.3 (a) ED 3. BCH 5.4 (c): ADVERTISING

	<u>Assignment</u>	Assignment and Presentation Given to the students.	1. SEC (SEM I) 2. B.Com(P) 3. B.Com(H)-V	1. 2926000002 (Digital Marketing) 2. BC 5.3 (a) ED 3. BCH 5.4 (c): ADVERTISING AND PERSONAL SELLING
OCTOBER 2023	Theory/ Practical	1. Unit 3: Social Media Marketing and Display Marketing Social Media Marketing: Building Successful Social Media strategy; Social Media Marketing Channels; Facebook, LinkedIn, YouTube (Concepts and strategies) Display Advertising: Working of Display Advertising; Benefits and challenges; Overview of Display ad Process.; Define-Customer, Publisher, Objectives; Format-Budget, Media, Ad Formats, Ad Copy. 2. Unit 4: Entrepreneurial Eco-System Socio-economic support system for entrepreneurial orientation; Public and private support system; Institutional support system-financial, marketing, technological and managerial; Social organisations - trade and industry associations, self-help groups; Business incubators, angel investors, venture capital, prototype centres, private equity funds; Start-ups and success stories; Startup Action Plan; Make in India initiative	1. SEC (SEM I) 2. B.Com (P)- V 3. B.Com(H)-V	1. 2926000002 (Digital Marketing) 2. BC 5.3 (a) ED 3. BCH 5.4 (c):
	Tutorials /Practical :	1. Digital marketing application tools presented by the teacher and practiced by the Students. 2. Case Studies and business plan discussed and presented by the Students. 3. Case Studies and companies advertising strategies discussed and presented by the Students.	1. SEC (SEM I) 2. B.Com(P) 3. B.Com(H)-V	1. 2926000002 (Digital Marketing) 2. BC 5.3 (a) ED 3. BCH 5.4 (c): ADVERTISING AND PERSONAL SELLING



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	Tutorials /Practical :	1. Digital marketing application tools presented by the teacher and practiced by the Students. 2. Case Studies and business plan discussed and presented by the Students. 3. Case Studies and companies advertising strategies discussed and presented by the Students.	1. SEC (SEM I) 2. B.Com(P) 3. B.Com(H)-V	1. 2926000002 (Digital Marketing) 2. BC 5.3 (a) ED 3. BCH 5.4 (c): ADVERTISING AND PERSONAL SELLING
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SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Arpita Kaul

Department: Commerce

Semester: III, V

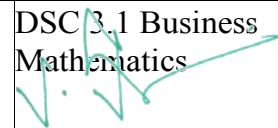
Month		Topics	Course	Paper Code/Name
AUGUST	Theory	INTRODUCTION: Nature, Scope and importance of marketing, Evolution of marketing concepts, Marketing Mix https://www.youtube.com/watch?v=F9OzaQPIQvs, Marketing environment. Micro and Macro environmental factors - https://www.youtube.com/watch?v=4vcZWJ-AhLw <i>Buland bharat ki buland tasweer</i> https://theprint.in/features/brandma/liril-and-lalitaji-a-tale-of-two-ads-and-how-they-captured-indias-attention/177169/ <i>Liril</i> https://www.youtube.com/watch?v=IRkXL9rRbmK&feature=emb_rel_end Promotion: Nature and importance of promotion; Promotion Tools: advertising, personal selling, public relations; sales promotion and publicity – concept and their distinctive characteristics; Promotion mix; Factors affecting promotion mix decisions; and Integrated Marketing Communication https://youtu.be/-qxHnfhDPF8 https://www.adsoftheworld.com/media/film/mumbai_traffic_police_guiltShame https://youtu.be/IC5EhJl1wFE Unit 1: Introduction: Organisational Behaviour: Concepts and Determinants; Relationship between Management and OB; Emergence of OB; Hawthorne Study; Contributing disciplines of OB; OB models. Unit 2: Individual Behaviour (9 hours) 10 Foundations of Individual Behaviour; Personality - Type A/B, Big five personality types Factors influencing personality; Attitude – concept, components, job related attitudes; Learning- concept, theories and reinforcement; Perception and emotions-concept, perceptual process, factors influencing perception, perceptual errors and distortions; Group dynamics- concepts, types- group norms, group roles, and group cohesiveness; Leadership- concept and theories; Power, Influence, followership & Leadership; Styles of	B.COM H V B.Com III B.Com H III B.Com H	BCH 5.1 Principles of Marketing DSC 3.3 Principles of Marketing DSE 3.1 Organisational Behaviour BCH 5.3(b) Organisational

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	leadership; Leadership continuum; Trait, Behavioral and Situational approach; Leadership effectiveness.	V	behaviour
Practicals	Mathematics of finance: Simple interest, compound interest, equation of value	B.Com H III	DSC 3.1 Business Mathematics
Tutorials	Continuous assessment 1: students will be divided in groups of 4 and will be given time to make a television advertisement on any product/ service of their choice keeping in mind the objective of promotion, target market etc. and perform the same in the tutorial in front of all. Continuous assessment 1: Students will fill the MBTI questionnaire and know their personality type, they will paste the duly filled questionnaire in their fill and analyse their personality type.	B.Com III B.Com H III	DSC 3.3 Principles of Marketing DSE 3.1 Organisational Behaviour



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SEPTEMBER	Theory:	Market Selection: Market Segmentation-concept, importance and bases https://www.youtube.com/watch?v=15zHUfSjLG4. Target market selection, Positioning concept, importance and bases, Product differentiation v market segmentation Rural marketing: Growing Importance; Distinguishing characteristics of rural markets; Understanding rural consumers and rural markets; Marketing mix planning for rural markets. https://www.youtube.com/watch?v=to5HxvrZMs https://www.youtube.com/watch?v=bC26MSKjA1s Formation of Groups; Group Behaviour - concepts, types- group norms, group roles, and group cohesiveness; Groups Vs Teams; Group decision making – process and types; Organisational conflict – nature, sources, and resolution strategies Leadership - Concept and theories; Styles of leadership; Leadership continuum; Trait, Behavioural and Situational approach; Leadership grid; Contemporary leadership issue. Meaning and importance of motivation; Need theories- Maslow, McClelland and Alderfer; Two factor theory of Herzberg; Theory X and Theory Y of McGregor; Intrinsic motivation by Ken Thomas; Behavior modification; Communication and feedback; JOHARI window; Motivation practices of 5 prominent organisations.	B.Com V B. Com III B.Com H III B.Com H V	BCH 5.1 Principles of Marketing DSC 3.3 Principles of Marketing DSE 3.1 Organisational Behaviour BCH 5.3 (b) Organisational behaviour
	Practicals:	Mathematics of finance: Present value, future value, pmt function, leasing, sinking fund, depreciation, ordinary annuity, annuity due	B.Com H III	DSC 3.1 Business Mathematics  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi घौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

	Tutorials:	Continuous assessment 2: Group presentations by students. Continuous assessment 2: Group presentations	B.Com III B.Com H III	DSC 3.3 Principles of Marketing DSE 3.1 Organisational Behaviour
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OCTOBER	Theory	Distribution: Channels of distribution - meaning and importance; Types of distribution channels; Wholesaling and retailing; Factors affecting choice of distribution channel; Distribution Logistics; Meaning, importance and decisions. Retailing: Types of retailing – store based and non-store-based retailing, chain stores, specialty stores, supermarkets, retail vending machines, mail order houses, retail cooperatives; Management of retailing operations: an overview; Retailing in India: changing scenario. Relationship Marketing- concept and dimensions. Sustainable Marketing- concept and issues. Beliefs and values - concept and types: terminal values and instrumental values. Motivation – Why people work; Need theories (Maslow’s need hierarchy, ERG Theory, McClelland’s Theory); Theory X and Theory Y, Two Factors Theory; Contemporary Theories of motivation (Self-Determination Theory, Goal-setting Theory, Reinforcement Theory, Self efficacy Theory). Foundations of Individual Behavior; Personality- factors influencing personality, Traits, Type A and B; Big five personality types;	B.Com H V B.Com III B.Com H III B.Com H V	BCH 5.1 Principles of Marketing DSC 3.3 Principles of Marketing DSE 3.1 Organisational Behaviour BCH 5.3 (b) Organisational behaviour
	Practicals	Matrices: Multiplication, inverse, transpose, determinant, matrix method	B.Com H III	DSC 3.1 Business Mathematics  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय श्री Venkateswara College दिल्ली विश्वविद्यालय दिल्ली, नई दिल्ली / Dhaula Kuan, New Delhi-21

Tutorial	Continuous assessment 2: Students will fill the Rokeach Value survey and analyse their values in their practical file.	B.Com H III	DSE 3.1 Organisational Behaviour
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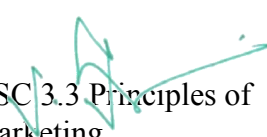


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	Assignment	Students will make group presentations on approved topics and present in the class/ tutorial	B.Com V	BC 5.1(b)Principles of Marketing
NOVEMBER	Theory:	Promotion: Nature and importance of promotion; Promotion Tools: advertising, personal selling, public relations; sales promotion and publicity – concept and their distinctive characteristics; Promotion mix; Factors affecting promotion mix decisions; and Integrated Marketing Communication https://youtu.be/-qxHnfhDPF8 https://www.adsoftheworld.com/media/film/mumbai_traffic_police_guiltShame https://youtu.be/lC5EhJl1wFE	B Com H V	BCH 5.1 Principles of Marketing
		Distribution: Channels of distribution - meaning and importance; Types of distribution channels; Wholesaling and retailing; Factors affecting choice of distribution channel	B. Com III	DSC 3.3 Principles of Marketing
		Communication – Understanding Communication; Persuasive communication; Communication styles; Transactional Analysis (TA), Johari Window	B.Com H III	DSE 3.1 Organisational Behaviour
		Values - concept and types: terminal values and instrumental values; Attitude - components, job related attitudes; Learning- concept, theories and reinforcement; Perception and emotions- concept, perceptual process, importance, factors influencing perception, perceptual errors and distortions;	B.Com H V	BCH 5.3 (b)Organisational behaviour
	PRACTICAL	Linear programming using solver	B.Com H III	DSC 3.1 Business Mathematics


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	Tutorials:	Internal assessment 3: Students will fill the Johari window questionnaire and analyse their own Johari window	B.Com V	BC 5.1(b) Principle of Marketing
	TEST	Internal tests will be conducted according to the college schedule		
DECEMBER	Theory	Pricing: Objectives; Factors affecting price of a product; Pricing methods; Pricing strategies; Ethical issues in pricing decisions.	B.Com H V	BCH 5.1 Principle of Marketing
		Organisational culture- concept and determinants; Organisational change-importance, types of change, resistance to change, managing change; Stress-individual and organisational factors, prevention and management of stress.	B.Com H III	DSE 3.1 Organisational Behaviour
		Emotional intelligence.	B.Com H v	BCH 5.3(b) Organisational behaviour
	Tutorial	Continuous assessment III: Multiple choice question quiz online face to face in class	B.Com III	DSC 3.3 Principles of Marketing


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INTERNAL ASSESSMENT	Group presentations	B.Com H v	BCH 5.3(b) Organisational behaviour
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**SRI VENKATESWARA COLLEGE
UNIVERSITY OF DELHI**

**DEPARTMENT OF COMMERCE
SEMESTER-WISE TEACHING PLAN**

Name of the Faculty: Dr. Deepika

Semester: III

Course: B.Com. (P)

Section: A

Month	Type of Class	Topics	Course	Paper Code/Name
August 2023	Theory	Unit 1: Introduction to Marketing and Marketing Environment - Introduction to Marketing: Meaning; Scope and Importance; Core Concepts; Marketing Philosophies; Services Marketing; Marketing Mix - Marketing Environment: Need to study marketing environment; Micro Environmental Factors and Macro Environmental Factors	B.Com. (P)	Principles of Marketing (DSC 3.3)
September 2023	Theory & Tutorial	Unit 2: Consumer Behaviour and Market Selection - Consumer Behaviour: Need to study Consumer Behaviour, Buying Behaviour and Factors Influencing Buying Decisions - Market Selection: Segmentation; Targeting and Positioning TUTORIAL: Presentations and Doubts CONTINUOUS ASSESSMENT	B.Com. (P)	Principles of Marketing (DSC 3.3)
October 2023	Theory & Tutorial	Unit 3: Product Decisions and New Product Development - Product Decisions: Concept; Levels of Product; Product Mix; Branding and Packaging - New Product Development: Process; PLC TUTORIAL: Presentations and Doubts CONTINUOUS ASSESSMENT	B.Com. (P)	Principles of Marketing (DSC 3.3)
November 2023	Theory & Tutorial	Unit 4: Pricing Decisions - Pricing and Distribution Decisions Unit 5: Promotion Decisions and Developments in Marketing - Promotion Decisions: Introduction; Need; Promotion Mix - Developments in Marketing: Sustainable marketing; Rural Marketing; Relationship Marketing; Digital Marketing TUTORIAL: Presentations; Viva and Doubts CONTINUOUS ASSESSMENT	B.Com. (P)	Principles of Marketing (DSC 3.3)
December 2023	Theory & Tutorial	RESERVED FOR DOUBTS	B.Com. (P)	Principles of Marketing (DSC 3.3)


 प्रधानाचार्य
 श्री. वेणकटेश्वर कॉलेज
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Name of the Faculty: Dr. Deepika
Semester: III
Course: B.Com. (P) & B.Com. (Hons)
Section: B

Month	Type of Class	Topics	Course	Paper Code/Name
August 2023	Theory	Unit 1: Introduction to Marketing and Marketing Environment • Introduction to Marketing: Meaning; Scope and Importance; Core Concepts; Marketing Philosophies; Services Marketing; Marketing Mix	B.Com. (P) & <u>B.Com.</u> (Hons)	Principles of Marketing (DSC 3.3)
September 2023	Theory	Unit 1: Introduction to Marketing and Marketing Environment • Marketing Environment: Need to study marketing environment; Micro Environmental Factors and Macro Environmental Factors Unit 2: Consumer Behaviour and Market Selection • Consumer Behaviour: Need to study Consumer Behaviour, Buying Behaviour and Factors Influencing Buying Decisions	B.Com. (P) & <u>B.Com.</u> (Hons)	Principles of Marketing (DSC 3.3)
October 2023	Theory	Unit 2: Consumer Behaviour and Market Selection • Market Selection: Segmentation; Targeting and Positioning Unit 3: Product Decisions and New Product Development • Product Decisions: Concept; Levels of Product; Product Mix; Branding and Packaging	B.Com. (P) & <u>B.Com.</u> (Hons)	Principles of Marketing (DSC 3.3)
November 2023	Theory	Unit 3: Product Decisions and New Product Development • New Product Development: Process; PLC Unit 4: Pricing Decisions • Pricing and Distribution Decisions	B.Com. (P) & <u>B.Com.</u> (Hons)	Principles of Marketing (DSC 3.3)
December 2023	Theory	RESERVED FOR DOUBTS	B.Com. (P) & <u>B.Com.</u> (Hons)	Principles of Marketing (DSC 3.3)

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Name of the Faculty: Dr. Deepika
Semester: I
Course: B.Com. (Hons)
Section: A

Month	Type of Class	Topics	Course	Paper Code/Name
August 2023	Theory	Unit 1: Conceptual Framework and Accounting Process (Theory & Numericals)	B.Com. (Hons)	Financial Accounting (DSC 1.3)
September 2023	Theory	Unit 2: Business Income, Accounting for PPE and Inventory Valuation • Business income (Revenue; Business Income; Measurement; Objective; Revenue Recognition AS 9) • Accounting for PPE (AS 10) • Inventory Valuation as per AS 2	B.Com. (Hons)	Financial Accounting (DSC 1.3)
October 2023	Theory	Unit 4: Inland Branches; Departmental and Lease Accounting • Branch Accounting (Stock and Debtors System and Debtors System) • Departmental Accounting • Lease accounting AS 19	B.Com. (Hons)	Financial Accounting (DSC 1.3)
November 2023	Theory	Unit 3: Financial Statements • Preparation of Financial Statements of Sole Proprietorship • Preparation of Financial Statements of NPO	B.Com. (Hons)	Financial Accounting (DSC 1.3)
December 2023	Theory	Unit 3: Financial Statements • Preparation of Financial Statements of Sole Proprietorship (Continued) RESERVED FOR DOUBTS	B.Com. (Hons)	Financial Accounting (DSC 1.3)

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Name of the Faculty: Dr. Deepika
Semester: I
Course: All Course (SEC Paper)
Section: C

Month	Type of Class	Topics	Course	Paper Code/Name
September 2023	Theory	UNIT 1 Introduction to Marketing & Digital Marketing	SEC	Digital Marketing
October 2023	Theory	UNIT 2: Email Marketing and Content Marketing Email Marketing (Via Mailchimp) Creation of Website using Google Docs	SEC	Digital Marketing
November 2023	Theory	UNIT 3: Social Media Marketing Creation of Facebook Ads; Instagram Ads; LinkedIn Ads	SEC	Digital Marketing
December 2023	Theory	UNIT 4: Search Engine Marketing Creation of Google Ads; Use of Google Analytics	SEC	Digital Marketing

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SEMESTER WISE TEACHING PLAN

Name of the Faculty: Mohini Yadav

Department: Commerce

Semester: III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 1: Matrices & Determinants	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 2: Probability and Probability Distribution: Theory & Approaches	B.Com (P) – Sem III	DSC-3.1: Business Statistics
		Unit 2: Financial Markets & Capital Markets – Money market & Capital market	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Tutorials	Unit 2: Financial Markets & Capital Markets – Money market & Capital market	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Practical	Unit 1: Matrices & Determinants using excel	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 1: Descriptive Statistics using excel	B.Com (P) – Sem III	DSC-3.1: Business Statistics
September	Theory	Unit 2: Calculus-I: Application of Differentiation	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 2: Probability and Probability Distribution: Conditional Probability & Bays theorem	B.Com (P) – Sem III	DSC-3.1: Business Statistics
		Unit 2: Financial Markets & Capital Markets – Cash Markets (Equity & Debt)	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Tutorials	Unit 2: Financial Markets & Capital Markets – Cash Markets (Equity & Debt)	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Practical	Unit 4: Mathematics of Finance using excel	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 3: Regression &	B.Com (P) – Sem III	DSC-3.1: Business Statistics

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		correlation using excel		
October	Theory	Unit 5: Linear Programming	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 2: Probability and Probability Distribution: Discrete probability distribution - Binomial	B.Com (P) – Sem III	DSC-3.1: Business Statistics
		Unit 2: Financial Markets & Capital Markets – Depositories & Primary and Secondary markets	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Tutorials	Unit 2: Financial Markets & Capital Markets – Depositories & Primary and Secondary markets	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Practical	Unit 4: Mathematics of Finance using excel	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 3 & 2: Spearman's Rank Correlation & Binomial distribution using excel	B.Com (P) – Sem III	DSC-3.1: Business Statistics
November	Assignment	Unit 1, 2 and 5	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 2: Financial Markets & Capital Markets	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Test	Unit 1, 2 and 5	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Units – Time Series, Descriptive Statistics (Mean, Median & Mode), Probability till bays theorem	B.Com (P) – Sem III	DSC-3.1: Business Statistics
	Theory	Unit 3: Calculus-II Application of partial differentiation and Integration	B.Com (H) – Sem III	DSC-3.1: Business Mathematics
		Unit 2: Probability and Probability Distribution: Discrete probability distribution – Poisson & Normal Distribution	B.Com (P) – Sem III	DSC-3.1: Business Statistics
		Unit 2: Financial Markets & Capital Markets – Role of Stock exchanges in India	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services
	Tutorials	Unit 2: Financial Markets & Capital Markets – Role of Stock exchanges in India	B.Com (H) – Sem V	BCH 5.4(b): Financial Markets, Institutions & Services


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	Practical	Unit 5: LPP – Solver Unit 3: Poisson & Normal distribution using excel	B.Com (H) – Sem III B.Com (P) – Sem III	DSC-3.1: Business Mathematics DSC-3.1: Business Statistics
December	Theory	Unit 4: Mathematics of Finance Unit 2: Probability and Probability Distribution: Normal Distribution Unit 2: Financial Markets & Capital Markets – SEBI & Investor Protection	B.Com (H) – Sem III B.Com (P) – Sem III B.Com (H) – Sem V	DSC-3.1: Business Mathematics DSC-3.1: Business Statistics BCH 5.4(b): Financial Markets, Institutions & Services
		Tutorials	Unit 2: Financial Markets & Capital Markets – SEBI & Investor Protection	BCH 5.4(b): Financial Markets, Institutions & Services
	Practical	Revision	B.Com (H) – Sem III B.Com (P) – Sem III	DSC-3.1: Business Mathematics DSC-3.1: Business Statistics



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SRI VENKATESWARA COLLEGE
University of Delhi
Semester-Wise Teaching Plan
(2023-24) (Odd-Semester)

Name of the Faculty: Dr. P.CHENGALRAYULU

Designation: Assistant Professor

Department: Commerce

Course: B. Com (H)/B.Com

Semester: I

Session: 2023-24 (16th August 2023 to 12th December 2023)

MONTH	Type of Class	TOPICS	COURSE	PAPER CODE/NAME
August 2023	Theory	Unit-1: Origin of Tax System in India; Taxation – Voluntary practice to the involuntary system, Kautilya's philosophy of Taxation.	GE 1.7	GE 1.7:- Basic Personal Taxation
September 2023	Theory	Unit-1: Basic concepts: Income, agricultural income, person, assessee, assessment year, previous year, gross total income, total income, the maximum marginal rate of tax; Permanent Account Number (PAN). Residential status (only individual); Scope of total income on basis of residential status. Unit 2: Computation of Income – 1 Income from Salaries: Meaning, the basis of charge, different forms, allowances, perquisites. Unit 2: Income from house property: Basis of charge, computing income from letting out, self-occupied and partly let out and partly self-occupied, provisions related to unrealised rent, taxation of arrears of rent. Deductions from Annual Value (Sec 24).	GE 1.7	GE 1.7:- Basic Personal Taxation
			GE 1.7	GE 1.7:- Basic Personal Taxation
			GE 1.7	GE 1.7:- Basic Personal Taxation
	Assignment	Illustrations on Computation of Income-I	GE 1.7	GE 1.7:- Basic Personal Taxation
October 2023	Theory	Unit 3: Computation of Income – 2 Profits and gains of business or profession: Basis of charge, computing business or profession income, the relevance of method of accounting, scheme of deductions and allowances, specific deductions under the act, specific disallowances under the act.	GE 1.7	GE 1.7:- Basic Personal Taxation

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November 2023	Theory	Unit 4: Computation of Income -3 Capital gains: Basis of charge, capital asset, transfer of a capital asset, consideration, cost of acquisition, cost of improvement, indexation, and computation of capital gains.	GE 1.7	GE 1.7:- Basic Personal Taxation
December 2023	Theory	Income from other sources: Basis of charge, the relevance of method of accounting, dividend, interest on securities, winnings from lotteries, crossword puzzle, horse race, and card games and their taxation.	GE 1.7	GE 1.7:- Basic Personal Taxation

Name of the Faculty: Dr. P.CHENGALRAYULU

Designation: Assistant Professor

Department: Commerce

Course: B.Com (P)

Semester: III

Session: 2023-24 (16th August 2023 to 12th December 2023)

MONTH	Type of Class	TOPICS	COURSE	PAPER CODE/NAME
August 2023	Theory	Unit-1 , Meaning, Nature and objectives of Finance Management (Wealth and Profit Maximizations) Time Value of Money, Overview of Time Value of Money (Compounding & Discounting) and Risk & Return.	DSC3.2	DSC3.2- Financial Management
September 2023	Theory	Unit-2 Meaning of Capital Budgeting, Process of Capital Budgeting & Cash Flow Estimation Unit-2 Different Techniques of Capital Budgeting Traditional Techniques (Payback period method Accounting Rate of return). Unit-2 Discounting Techniques (Net Present Value Method (NPV), Internal Rate of Return (IRR) and Profitability Index	DSC3.2	DSC3.2- Financial Management
	Assignment	Illustrations on Capital budgeting Techniques	DSC3.2	DSC3.2- Financial Management
October, 2023	Theory	Unit-3: Concept of Cost of Capital, Estimation and component of Cost of capital, Methods of Calculating Cost of Capital (cost of retained earnings,	DSC3.2	DSC3.2- Financial Management

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		cost of Debt, cost of preference share, cost of Weighted Average cost of Capital (WACC) and Incremental Cost of Capital (ICC).		
October 2023	Theory	Unit-3: Capital Structure: Theories of Capital structure (Net Income, Net Operating Income, MM Hypothesis, Traditional Approach), Types of Leverages	DSC3.2	DSC3.2- Financial Management
November 2023	Theory	Unit-4: Dividend Decision: Meaning of Dividend, Factors affecting dividend policies Theories of Dividend	DSC3.2	DSC3.2- Financial Management
December 2023	Theory	Walters model and Gordon model and M.M Approach	DSC3.2	DSC3.2- Financial Management

Name of the Faculty: Dr. P.CHENGALRAYULU

Designation: Assistant Professor

Department: Commerce

Course: B.Com (H)

Semester: III

Session: 2023-24 (16th August 2023 to 12th December 2023)

MONTH	Type of Class	TOPICS	COURSE	PAPER CODE/NAME
August, 2023	Theory	Unit-1, Meaning, Nature and objectives of Finance Management (Wealth and Profit Maximizations) Time Value of Money, Overview of Time Value of Money (Compounding & Discounting) and Risk & Return.	DSC3.2	DSC3.2- Financial Management
September, 2023	Theory	Unit-2 Meaning of Capital Budgeting, Process of Capital Budgeting & Cash Flow Estimation Unit-2 Different Techniques of Capital Budgeting Traditional Techniques (Payback period method Accounting Rate of return). Unit-2 Discounting Techniques (Net Present Value Method (NPV), Internal Rate of Return (IRR) and Profitability Index	DSC3.2	DSC3.2- Financial Management

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	Assignment	Illustrations on Capital budgeting Techniques	DSC3.2	DSC3.2- Financial Management
October 2023	Theory	Unit-3: Concept of Cost of Capital, Estimation and component of Cost of capital, Methods of Calculating Cost of Capital (cost of retained earnings, cost of Debt, cost of preference share, cost of Weighted Average cost of Capital (WACC) and Incremental Cost of Capital (ICC). Unit-3: Capital Structure: Theories of Capital structure (Net Income, Net Operating Income, MM Hypothesis, Traditional Approach), Types of Leverages	DSC3.2	DSC3.2- Financial Management
November 2023	Theory	Unit-4: Dividend Decision: Meaning of Dividend, Factors affecting dividend policies Theories of Dividend viz., Walters model and Gordon model and M.M Approach Unit-5: Working Capital Decision: Concept of Working Capital. Need of Working Capital. Types of Working Capital Need for Adequate working Capital.	DSC3.2	DSC3.2- Financial Management
December 2023	Theory	Unit-5 Risk return Trade off, Working capital estimation Receivable management.	DSC3.2	DSC3.2- Financial Management

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SRI VENKATESWARA COLLEGE
University of Delhi
Semester-Wise Teaching Plan
(2023-24) (Odd-Semester)

Name of the Faculty: Dr. Neetu Kushwaha

Designation: Assistant Professor

Department: Commerce

Course: B. Com (H)/B.Com

Semester: V

Session: 2023-24 (16th August 2023 to 12th December 2023)

Month	Type of Class	Topics	Course	Paper Code/Name
August 2023	Theory	The Indian Contract Act, 1872 Contract – meaning, characteristics and kinds; Essentials of a valid contract - offer and acceptance, consideration, contractual capacity, free consent, the legality of objects; Void agreements; Quasi-contracts Introduction Role of organisations and management in our lives; Nature and Functions of Management (An overview); Managerial Competencies, Ownership forms; Business formats- Brick & Mortar; Click; Brick & Click; E-commerce; Franchising; Outsourcing.	B.Com (H) I Sem	DSC 2.2 Business Law
			B.Com (P) I sem	DSC 2.1 Business Organization & Management
	Practical	Descriptive Analysis	B.Com (H) V Sem	DSE 5.4. (d) Business Statistics
September 2023	Theory	Discharge of Contract and Remedies for Breach Modes of discharge of contract: performance of a contract, mutual agreement, supervening impossibility, lapse of time, operation of law, breach of contract; Remedies for breach of contract: rescission, suit for damages, quantum meruit, suit for specific performance; suit for injunction. Meaning and layers of Business Environment (micro/immediate, meso/intermediate, macro and international); Business ethics and social responsibility, Entrepreneurship and its relevance, Business and social entrepreneurship as a process of opportunity/problem; Micro, small and medium Enterprises; Government Policy regarding MSMEs	B.Com (H) I Sem	DSC 2.2 Business Law
			B.Com (P) I sem	DSC 2.1 Business Organization & Management

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	Practical	Regression	B.Com (H) V Sem	DSE 5.4. (d) Business Statistics
October 2023	Theory	Introduction to Special Contracts Contracts of Indemnity and Guarantee; Contracts of Bailment and Pledge; Contract of Agency. Contract of sale; Meaning and the difference between a sale and agreement to sell; Conditions and Warranties; Transfer of ownership in goods including sale by non-owners	B.Com (H) I Sem	DSC 2.2 Business Law
		Strategic Planning – Business and Corporate Level Strategies; Decision-making process and techniques; Organizing, Formal and Informal Organisations, Centralization and Decentralisation, Organizational structures – Divisional, Product, Matrix, Project and Virtual Organization	B.Com (P) I sem	DSC 2.1 Business Organization & Management
	Practical	Correlation	B.Com (H) V Sem	DSE 5.4. (d) Business Statistics
November 2023	Theory	Performance of the Contract of Sale; Unpaid seller – meaning and rights of an unpaid seller against the goods. The Limited Liability Partnership Act, 2008 Salient Features and Nature of LLP; Small LLP; Difference between LLP and Partnership, LLP and Company; LLP Agreement	B.Com (H) I Sem	DSC 2.2 Business Law
		Motivation- needs (including Maslow's theory), incentives, Equity and two-factor theory (Herzberg); McGregor Theory X and Theory Y; Leadership – Leadership Styles, Transactional Vs. Transformational Leadership; Followership – meaning, importance and Kelley's Followership Model; Communication – New trends and directions (Role of IT and social media); Controlling –Techniques of Controlling Relationship between planning and controlling	B.Com (P) I sem	DSC 2.1 Business Organization & Management
	Practical	Time Series Analysis	B.Com (H) V Sem	DSE 5.4. (d) Business Statistics



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December 2023	Theory	Incorporation Document; Incorporation by Registration; Registered office of LLP and change therein; Change and Rectification of the name of LLP; Partners and Designated Partners: Partners and their Relations; Extent and limitation of liability of LLP and partners; Whistleblowing; Conversion into LLP.	B.Com (H) I Sem	DSC 2.2 Business Law
		Indian Ethos for Management: Value-Oriented Holistic Management; Learning Lessons from Bhagavat Gita and Ramayana. Business Process Reengineering (BPR), Learning Organisation, Six Sigma, Supply Chain Management, Subaltern Management Ideas from India; Diversity & inclusion; Work-life Balance; Freelancing; Flexi-time and work from home; Co-sharing/co-working.	B.Com (P) I sem	DSC 2.1 Business Organization & Management
	Practical	Index Number	B.Com (H) V Sem	DSE 5.4. (d) Business Statistics



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Aruna Rao

Department: ECONOMICS

Semester: 1ST / BA (H)/ Introduction to Microeconomics

Month	Topic	Course	Paper Code	Name of paper
	Unit 1: Introduction to microeconomics Mankiw: Ch 1,2,3	Economics	Econ 001	Introductory microeconomics
August		7 lectures		
Sept.	Unit 2: How Markets Work Mankiw: Ch 4,5,6,	10 L + 12T		
Oct.	Unit 2: Mankiw: Ch7,9 Unit 3: Mankiw: Ch8,10,	12 L + 6 T		
Nov.- Dec.	Unit 3: Mankiw: Ch 11, Dixit & Skeath: Ch 1,2	12 L + 6 T		
Sem 1 GE B.COM(H)				
Month	Topic	B.Com(H)	Econ 025	Principles of Microeconomics-1
August & Sept	Unit 1 Mankiw: Ch 1,2,4,5,6,7	16 L + 6 T		
Oct.	Unit 2 Mankiw: 21	12 L + 9 T		
Nov- Dec	Units 3&4 Mankiw: Ch 13,14	13 L + 6 T		

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: KRISHNAKUMAR S (2023-24)

Department: ECONOMICS

Semester : I/III/V

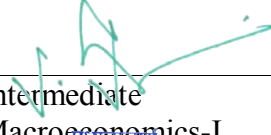
Intermediate Macroeconomics-I

BA(Hons)Semester III

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	The labour market Wage determination; wages, prices and employment; natural rate of unemployment; from employment to output	BA(Hons) Sem III	Intermediate Macroeconomics-I
	Practicals			
	Tutorials			
SEPTEMBER	Theory:	Aggregate demand and aggregate supply curves Derivation of aggregate demand and aggregate and supply curves; interaction of aggregate demand and supply to determine equilibrium output, price level and employment	BA(Hons) Sem III	Intermediate Macroeconomics-I
	Practicals:			Intermediate Macroeconomics-I
	Tutorials:	Numericals on the basis of the AD and As approach	BA(Hons) Sem III	Intermediate Macroeconomics-I
OCTOBER	Theory:	Keynesian consumption function; Fisher's theory of optimal intertemporal choice; lifecycle and permanent income hypotheses; rational expectations and random-walk of consumption	BA(Hons) Sem III	Intermediate Macroeconomics-I

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	Practicals:			
	Tutorials:	Assignments on the basis of two period model as well as multi-period optimization model	BA(Hons) Sem III	Intermediate Macroeconomics-I
	<u>Assignment :</u>		BA(Hons) Sem III	Intermediate Macroeconomics-I
NOVEMBER	Theory:	Investment: determinants of business fixed investment; residential investment and inventory investment. Arbitrage equation, neoclassical theory of	BA(Hons) Sem III	Intermediate Macroeconomics-I
	Practicals:			
	Tutorials:	Assignments based on the workbooks of Mankiw	BA(Hons) Sem III	Intermediate Macroeconomics-I
	<u>Test</u>	Class Test on the part of consumption and investment		
DECEMBER	Theory:	Phillips curve; adaptive and rational expectations; policy ineffectiveness debate	BA(Hons) Sem III	Intermediate Macroeconomics-I
	Practicals:			
	Tutorials:	Revision and discussion of the previous year papers	BA(Hons) Sem III	Intermediate Macroeconomics-I


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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: KRISHNAKUMAR S
Semester : V / International Trade HE-52

Department: ECONOMICS

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Ricardian model of comparative advantage. H-O-S factor endowments model, specific factors model. Standard trade model	BA(Hons) Economics Sem V	International Trade
	Practicals			
	Tutorials	Problems on Ricardian model and modeling with specific factor model		
SEPTEMBER	Theory:	New trade theories. intra-industry trade. Imperfect competition and trade. Dumping and reciprocal dumping. Externalities and decreasing cost curve. Industrial district. Instruments of trade policy. Static welfare analysis of tariffs, subsidies and quotas. Political economy of trade policy. Offshoring in the global economy	BA(Hons) Economics Sem V	International trade
	Practicals:			
	Tutorials:	Problem set on welfare calculation of tariffs and subsidies.		
OCTOBER	Theory:	Brander Spencer strategic trade policy. Optimum tariff. Trade creation and trade diversion. WTO, RTAs, FTAs.	BA(Hons) Economics Sem V	International Trade  Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Four Core Theorems from H-O model and Introduction to HOV model as well as offer curves in trade theory.		
	Practicals:			
	Tutorials:	Trade creation, trade diversion. Problems of instruments of trade policy		
	Assignment :	Articles assigned to students from WTO disputes, US Chips Act		
NOVEMBER	Theory:	.Export Policies in Resource and High Technology Industries Imperfect Competition and Trade Policy	BA(Hons) Economics Sem V	International Trade
	Practicals:			
	Tutorials:	Chinese rare earths case, export controls on nickel ore from Indonesia, Rana Plaza, LDCs, IFEE		
	Test	Test on the basis of four chapters : two from each section . introduction to		
DECEMBER	Theory:	Issues relating to international trade and labour as well as environment and trade	BA(Hons) Economics Sem V	International trade
	Practicals:			
	Tutorials:	Revision of the trade theory numerical from back of text.		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: D. BRAHMA REDDY

Department: ECONOMICS

Semester: III/2023-24/ Money and Banking

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August	Theory	Topic 1: MONEY: Concept, Functions, Measurement, Theories of Money Supply Determination	GE Economics (Hons.)-III	Money and Banking 2274002005
	Tutorials	Problem Solving		
September	Theory:	Topic 2: Financial Markets An Introduction	GE Economics	
	Tutorials:	Problem Solving		
October	Theory:	INTEREST RATES: Determination, Sources of interest rates differentials, Theories of term structure of interest rates ; interest rates in India	GE Economics (Hons.)-III	
	Tutorials:	Problem Solving		
November & December	Theory:	Central Banking And Monetary Policy	GE Economics (Hons.)-III	
	Tutorials:	Problem Solving		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: D. BRAHMA REDDY

Department: ECONOMICS

Semester: V /2023-24/ Indian Economy-I

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August	Theory	Unit 1: Economic development since independence	B.A (Hons.) Economics	12271501
	Tutorials:	Discussion of additional readings		
September	Theory:	Unit 2: Human Capital: Demography, health and education	B.A (Hons.) Economics	
	Tutorials:	Discussion of additional readings		
October	Theory:	Unit 3: Growth and Distribution: Poverty, inequality, unemployment and policy interventions	B.A (Hons.) Economics	
	Tutorials:	Discussion of additional readings		
November & December	Theory:	Unit 3: Growth and Distribution: Poverty, inequality, unemployment and policy interventions Unit 4: International comparisons	B.A (Hons.) Economics	
	Tutorials:	Discussion of additional readings		

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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Sonakshi Jain
Department: ECONOMICS
Semester :III/2023/ Optimization methods for economic analysis

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August- September	Theory	Comparative-Static Analysis	BA Programme	Optimization methods for economic analysis ECON023
	Tutorials	Discussion of back exercise		
October	Theory:	Differentials and its role in Comparative static analysis		
	Tutorials:	Discussion of back exercise		
November- December	Theory:	Optimisation Problems		
	Tutorials:	End chapter exercises		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Sonakshi Jain

Department: ECONOMICS

Semester : I/2022-23/ Introductory Mathematical Methods for Economics

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August-September	Theory	Preliminaries Graphs; elementary types of functions: quadratic, polynomial, power, exponential,	B.A.Hons Economics	ECON002
	Tutorials	End chapter exercises		
October	Theory:	logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterisation, properties with respect to various operations and applications;		
	Tutorials:	End chapter exercises		
November-December	Theory:	differentiable functions: characterisation, properties with respect to various operations and applications; second and higher order derivatives: properties and applications. Single-variable optimization		
	Tutorials:	End chapter exercises		

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SEMESTER WISE TEACHING PLAN
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Name of the Faculty: Sonakshi Jain

Department: ECONOMICS

Semester : 3/2023/ Advanced Mathematical Methods for Economics

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August- September	Theory	Multivariate Optimization with constraints	B.A.Hons Economics	ECON009
	Tutorials	End chapter exercises		
October	Theory:	Linear programming		
	Tutorials:	Problem Sets		
November- December	Theory:	Integration, differential equations, and difference equations		
	Tutorials:	End chapter exercises		

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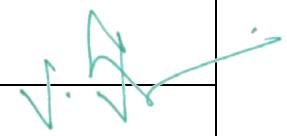


SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24
Odd Semester

Name of the Faculty: Abhishek Malhotra
Department: Economics
Semester: 5/ Development Economics -1

Month		Topics	Course	Paper Code/Name
August	Theory	1. Discussed about the basics of this course and its importance. 2. First two readings	B.A. (Hons) Economics	12271502/Development Economics-1
	Tutorial	1. Doubts in the chapters completed in the week. 2. Discussions about important questions from the topic.	B.A. (Hons) Economics	12271502/Development Economics-1
	Practical	NA	B.A. (Hons) Economics	
September	Theory	1. Completed Unit 1. 2. Covered the first chapter from Unit 2	B.A. (Hons) Economics	12271502/Development Economics-1
	Tutorial	1. Doubts in the chapters completed in the week. 2. Discussions about important questions from the topic.	B.A. (Hons) Economics	12271502/Development Economics-1
	Mid-Term Assessment	Internal exam from Unit 1	B.A. (Hons) Economics	12271502/Development Economics-1

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October	Theory	1. Completed Unit 2 2. Covered the first two readings of Unit 3	B.A. (Hons) Economics	12271502/Development Economics-1
	Tutorial	1. Doubts in the chapters completed in the week.	B.A. (Hons) Economics	12271502/Development Economics-1
	Practical	NA	B.A. (Hons) Economics	
	Assignment	NA	B.A. (Hons) Economics	
	Mid-Term Test	Internal exam from Unit 2 and parts of Unit 3	B.A. (Hons) Economics	12271502/Development Economics-1
November	Theory	1. Completed Unit 3 2. Covered the first two readings of Unit 4	B.A. (Hons) Economics	12271502/Development Economics-1
	Tutorial	1. Doubts in the chapters completed in the week. 2. Discussions about important questions from the topic.	B.A. (Hons) Economics	12271502/Development Economics-1
	Mid-Term Assessment	Presentations on important topics related to the course	B.A. (Hons) Economics	12271502/Development Economics-1
December	Theory	1. Completed Unit 4	B.A. (Hons) Economics	12271502/Development Economics-1
	Tutorial	1. Doubts in the chapters completed in the week. 2. Discussions about important questions	B.A. (Hons) Economics	12271502/Development Economics-1
	Practical	NA	B.A. (Hons) Economics	 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester**

Name of the Faculty: Abhishek Malhotra
Department: Economics
Semester: 1/ Principles of Microeconomics- 1

Month		Topics	Course	Paper Code/Name
August	Theory	1. Discussed about the course and its importance. 2. Discussed general topics related to economics	GE- 1	2274001003/Principles of Microeconomics
	Tutorial	NA	GE- 1	2274001003/Principles of Microeconomics
	Practical	NA	GE- 1	
September	Theory	1. Completed all the chapters in Unit 1.	GE- 1	2274001003/Principles of Microeconomics
	Tutorial	1. Doubts in the chapters completed in the week. 2. Continuous Assessment	GE- 1	2274001003/Principles of Microeconomics
	Mid-Term Assessment	Internal exam from Unit 1	GE- 1	2274001003/Principles of Microeconomics


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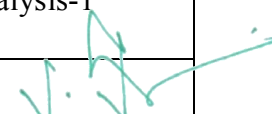
October	Theory	1. Completed Unit 2 2. Covered the first two readings of Unit 3	GE- 1	2274001003/Principles of Microeconomics
	Tutorial	1. Doubts in the chapters completed in the week.	GE- 1	2274001003/Principles of Microeconomics
	Practical	NA	GE- 1	
	Assignment	NA	GE- 1	
	Mid-Term Test	Internal exam from Unit 2 and parts of Unit 3	GE- 1	2274001003/Principles of Microeconomics
November	Theory	1. Completed Unit 3 2. Covered the only chapter in Unit 4.	GE- 1	2274001003/Principles of Microeconomics
	Tutorial	1. Doubts in the chapters completed in the week. 2. Continuous Assessment	GE- 1	2274001003/Principles of Microeconomics
	Mid-Term Assessment	Internal exam from Unit 3	GE- 1	2274001003/Principles of Microeconomics
December	Theory	Revision and Doubt classes	GE- 1	2274001003/Principles of Microeconomics
	Tutorial	Continuous Assessment	GE- 1	2274001003/Principles of Microeconomics
	Practical	NA	GE- 1	 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Abhishek Malhotra
Department: Economics
Semester: 3/ IT Skills and Data Analysis -1

Month		Topics	Course	Paper Code/Name
August	Theory	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
	Tutorial	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
	Practical	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
September	Theory	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
	Tutorial	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
	Practical	1. Discussed about the course structure, importance of the course and the applicability. 2. Discussed the theoretical part in Unit 1.	SEC- III	3126000001/IT Skills and Data Analysis-1
October	Theory	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
	Tutorial	NA	SEC- III	
	Practical	1. Completed Unit 1. 2. Discussed the theory part of Unit	SEC- III	3126000001/IT Skills and Data Analysis-1
	Assignment	NA	SEC- III	
	Mid-Term Test	NA	SEC- III	
November	Theory	NA	SEC- III	3126000001/IT Skills and Data Analysis-1
	Tutorial	NA	SEC- III	


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	Practical	1. Completed Unit 2 2. Continuous	SEC- III	3126000001/IT Skills and Data Analysis-1
December	Theory	NA	SEC- III	
	Tutorial	NA	SEC- III	
	Practical	Revision and Doubt Classes	SEC- III	3126000001/IT Skills and Data Analysis-1



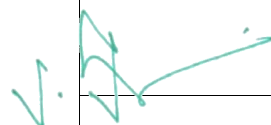
SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mausumi Mohanty

Department: ECONOMICS

Semester: 1ST /VAC_ FINANCIAL LITERACY

MONTH		TOPICS	COURSE	PAPER CODE /NAME
September	Theory	• Introduction to Financial literacy • Benefits of Financial literacy • Key concepts of the subject	VAC	6967000008
	Practical	Review questions and doubt sessions		
October	Theory	• Introduction to income, expenses and budgeting • Banking and digital payments • Time value of money • Financial goals and planning		6967000008
	Practical	Review questions and doubt sessions		
November	Theory	• Key concepts of investment planning • Investment risks and management • Types of Investment • Insurance and mutual funds		6967000008
	Practical	Review questions and doubt sessions		
December	Theory	• Basics of personal tax • Basic tax structure • Tax planning • Allowances and tax returns		6967000008


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	Practical	Practice questions, division of groups for Viva, Important question discussion for exam		
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SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

Name of the Faculty: Mausumi Mohanty

Department: ECONOMICS

Semester: GE III /Money & Banking

MONTH		TOPICS	COURSE	PAPER CODE /NAME
September	Theory	- Understanding concept and functions of money, - Measurement of money supply - Analytics and Methodology of computation of money supply, - Money supply determination	Generic Elective	2274002005
	Tutorials	Review questions from book		
October	Theory:	- Role of financial markets and institutions - Problems of Asymmetric information - Financial Crises - Financial markets and Institutions in India: Organization, Structure - Financial markets Reforms in	Generic Elective	2274002005
	Tutorials:	Doubt sessions and discussion about project report		
November	Theory:	- Determination of interest rates - Sources of interest rates differentials and risk - Theories of term structure of interest rates - Interest rates in India	Generic Elective	2274002005
	Tutorials:	Doubt clearing sessions and RBI report discussion		
December	Theory:	- Monetary Policy: Targets and instruments - Monetary management in an open economy Monetary Policy Framework in India: Evolution and current scenario - Critical evaluation Digital currency: implications and emerging issues in Indian economy	Generic Elective	2274002005


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	Tutorials:	Important questions and past paper discussions, doubt sessions	Generic Elective	
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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mausumi Mohanty
Department: ECONOMICS
Semester: GE V/Principles of Microeconomics

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August	Theory	Problem of scarcity and choice: scarcity, choice and opportunity cost Production possibility frontier Law of demand, Determinants of demand and supply, shifts of supply versus movements along a supply curve, market supply, market equilibrium. Applications of demand and supply Consumer surplus, producer surplus. Elasticity: price elasticity of demand Other elasticities	B.Com prog.	62275504
	Tutorials	Review questions from book		
September	Theory:	Budget constraint, Concept of utility, diminishing marginal utility Diamond-water paradox Income and substitution effects Consumer choice Indifference curves, derivation of demand curve from indifference curve and budget constraint.	B.Com prog	62275504
	Tutorials:	Review questions from book and doubt session, discussion on assignment question		
October	Theory:	• Production: behaviour of profit maximising firms • Law of variable proportions • Isoquant and isocost lines, cost minimizing equilibrium condition. • Costs: costs in the short run, costs in the long run • Revenue and profit maximizations, minimizing losses, short run industry supply curve • Economies and diseconomies of scale, long run adjustments	B.Com prog	62275504

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	Tutorials:	Doubt sessions		
November	Theory:	• Perfect Competition Assumptions, demand and revenue • Equilibrium of the firm in the short run and long run • Long run industry supply curve: increasing, decreasing and constant cost industries • Allocative efficiency under perfect competition.	B.Com prog	62275504
	Tutorials:	Important questions and past paper discussions, doubt sessions		



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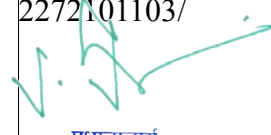
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SRI VENKATESWARA COLLEGE

Name of the Faculty: SHEEBANI GOSWAMI

Department: ECONOMICS

Semester: I /2023-24/ Introductory Statistics For Economics

MONTH		TOPICS	COURSE	PAPER CODE /NAME
AUGUST- SEPTEMBER	Theory	UNIT – I: introduction and overview References: Devore Chapter 1	DSC	2272101103/ INTRODUCTORY STATISTICS FOR ECONOMICS ECON003
	Tutorials	Doubts session.	DSC	2272101103/
OCTOBER	Theory:	UNIT – II: Elementary probability theory References: Devore Chapter 2 Hogg, Tanis and Zimmerman Chapter 1 Internal Assessment-1 Class Test- 12 marks Syllabus: Unit-I Data: 30-10-2023 Internal Assessment-II Assignment. Syllabus: Unit-2	DSC	INTRODUCTORY STATISTICS FOR ECONOMICS ECON003  प्रधानाचार्य Principal

	Tutorials:	Doubts session. Assignment of topics for groups. QUIZ	DSC	2272101103/
NOVEMBER	Theory:	UNIT – III: Random variables and probability distribution Unit IV : special probability distributions References Devore Chapter 3, chapter 4 Hogg Tanis and Zimmerman Chapter 2	DSC	INTRODUCTORY STATISTICS FOR ECONOMICS ECON003
	Tutorials:	Doubts sessions Continues assessments- Quiz, Group Questions		
	THEORY	UNIT IV: Special Probability Distribution Reference: Chapter 3 Devore Chapter 2 HTZ		
	Tutorials:	Doubt, questions and problem solving		
DECEMBER	Theory:	UNIT – V : Random sampling and jointly, distributed random variables References: Chapter 3 HTZ : Chapter 4	DSC	2272101103/
				INTRODUCTORY STATISTICS FOR ECONOMICS ECON003
	Tutorials:	Doubts Session Internal Assessments and continuous assessments.		2272101103/  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: SHEEBANI GOSWAMI
Department: ECONOMICS
Semester: I /2023-24/ Principles of Microeconomics I

MONTH	TOPICS		COURSE	PAPER CODE /NAME
AUGUST- SEPTEMBER	Theory	UNIT I: introduction References: Mankiw, N.G Chapter 1 Chapter 2, 4,5,6,7	General elective	2274001003 /Principles of Microeconomics I – ECON 025
	Tutorials	Doubts Sessions Numericals	GENERAL ELECTIVE	
OCTOBER	Theory:	Unit II Consumer Theory Internal Assessment-1 Class Test Reference: chapter 21: Theory of Consumer Choice	General elective	2274001003 /Principles of Microeconomics I – ECON 025
	Tutorials:	Doubts Sessions Answer Writing Assignment of topics for groups. Instructions for project	General elective	2274001003 /Principles of Microeconomics I – ECON 025

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NOVEMBER	Theory:	UNIT III: production and costs Reference: Mankiw chapter 13 Bernheim and Whinston Chapter 7,8,9 Internal Assessment-II Assignment.	General elective	2274001003 /Principles of Microeconomics I – ECON 025
	Tutorials:	Doubts sessions Continues assessments- Projects, Presentation.		
DECEMBER	Theory:	UNIT IV: perfect competition Chapter 14: firms in competitive market References: Mankiw Chalter 14	General elective	2274001003 /Principles of Microeconomics I – ECON 025
	Tutorials:	Doubts sessions		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: VARADAPUREDDY SUSHMITHA NAIDU

Department: ECONOMICS

Semester: I /2023-24/ Basic Development Economics

MONTH		TOPICS	COURSE	PAPER CODE /NAME
SEPTEMBER	Theory	UNIT – I: Development and underdevelopment. References: Debraj Ray, Development Economics, Princeton University Press, 1998. (Chapter 2) Amartya Sen, Development as Freedom, OUP, 2000. (Introduction and Chapter 2) Gustav Ranis et.al, Economic Growth and Human Development, World Development Vol. 28, No. 2, Elsevier Science Ltd., 2000 Recent Human Development Reports	GENERAL ELECTIVE	2274001001/ Basic Development Economics, Econ029
	Tutorials	Doubts session.	GENERAL ELECTIVE	2274001001/ Basic Development Economics, Econ029

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OCTOBER	Theory:	UNIT – II: Development goals and indicators, measures of underdevelopment Various concepts and measures of poverty and inequality, poverty lines using various national and international criteria. References: Debraj Ray, Development Economics, Princeton University Press, 1998. (Chapter 6) Debraj Ray, Development Economics, Princeton University Press, 1998. (Chapter 7) Abhijit Banerjee, Roland Benabou and Dilip Mookerjee (eds), Understanding Poverty, Oxford University Press, 2006. (Chapter 2) Robinson, J. A., & Acemoglu, D. (2012). Why nations fail: The origins of power, prosperity and poverty (pp. 45-47). London: Profile. Internal Assessment-1 Class Test- 12 marks Syllabus: Unit-I Data: 30-10-2023 Internal Assessment-II Assignment. Syllabus: Unit-2	GENERAL ELECTIVE	2274001001/ Basic Development Economics, Econ029
	Tutorials:	Doubts session. Assignment of topics for groups. Instructions for project Answer Writing	GENERAL ELECTIVE	2274001001/ Basic Development Economics, Econ029
NOVEMBER	Theory:	UNIT – III: Capabilities, human development and sustainable development References: Amartya Sen, Development as Freedom, OUP, 2000. (Chapter 4) Amartya Sen, <i>Development as Freedom</i>, OUP, 2000. (Chapter 6) Amartya Sen, Development as Freedom, OUP, 2000. (Chapter 9)	GENERAL ELECTIVE	2274001001/ Basic Development Economics, Econ029


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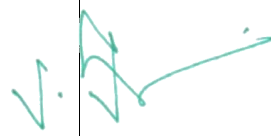
Name of the Faculty: VARADAPUREDDY SUSHMITHA NAIDU

Department: ECONOMICS

Semester: II /2023-24/ Fiscal Policy and Public Finance in India

MONTH		TOPICS	COURSE	PAPER CODE /NAME
SEPTEMBER	Theory	UNIT I: Income, Social Insurance and Redistribution- Redistribution and welfare policy, Universal Basic Income, Social Security, Health Insurance, Education, Pension Reforms References: Jonathan Gruber, (2011), Public Finance and Public Policy, 3rd edition, Worth Publishers. (Chapter-1) Jonathan Gruber, (2011), Public Finance and Public Policy, 3rd edition, Worth Publishers. (Chapter 15) Jonathan Gruber, (2011), <i>Public Finance and Public Policy</i> , 3rd edition, Worth Publishers. (Chapter 17)	BA(P) Major for Economics	2273102002/ Fiscal Policy and Public Finance in India (ECON034)
	Tutorials	Doubts Sessions Numericals	BA(P) Major for Economics	2273102002/ Fiscal Policy and Public Finance in India

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OCTOBER	Theory:	UNIT I: Income, Social Insurance and Redistribution References: Hillman A. L., (2009), Public Finance and Public Policy: Responsibilities and Limitations of Government, 2nd edition, Cambridge University Press. (Chapter 1) UNIT II: Public Expenditure and Fiscal Policy- Budget (Gender and Environment), Theories of Public Expenditure, Income and Employment Generation Policies, Public Debt; Sustainability and Debt Financing References: Jonathan Gruber, (2011), Public Finance and Public Policy, 3rd edition, Worth Publishers. (Chapter-4) Rosen, H. & Gayer, T. (2014). Public Finance (10th ed.). New York: McGraw-Hill. (Chapter 4) Rosen, H. & Gayer, T. (2014). Public Finance (10th ed.). New York: McGraw-Hill. (Chapter 5) Internal Assessment-1 Class Test	BA(P) Major for Economics	2273102002/ Fiscal Policy and Public Finance in India (ECON034)
	Tutorials:	Doubts Sessions Answer Writing Assignment of topics for groups. Instructions for project	BA(P) Major for Economics	2273102002/ Fiscal Policy and Public Finance in India (ECON034)
NOVEMBER	Theory:	UNIT II: Public Expenditure and Fiscal Policy References: Rosen, H. & Gayer, T. (2014). Public Finance (10th ed.). New York: McGraw-Hill. (Chapter 12) Key Budget Document, 2023. Internal Assessment-II Assignment.	BA(P) Major for Economics	2273102002/ Fiscal Policy and Public Finance in India (ECON034)  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

	Tutorials:	Doubts sessions Continues assessments- Projects, Presentation. Topics: Rao, M. Govinda. “Central transfers to states in India: rewarding performance while ensuring equity.” Final report submitted to NITI Aayog (2017). Report Summary, 15th Finance Commission, PRS India.		
DECEMBER	Theory:	UNIT III: Fiscal Federalism and Local Finance- Theory of Fiscal Federalism, Fiscal Federalism in India References: Jonathan Gruber, (2011), Public Finance and Public Policy, 3rd edition, Worth Publishers. (Chapter-10) Rosen, H. & Gayer, T. (2014). Public Finance (10th ed.). New York: McGraw-Hill. (Chapter 22)	BA(P) Major for Economics	2273102002/ Fiscal Policy and Public Finance in India (ECON034)
	Tutorials:	Doubts sessions		



SEMESTER WISE TEACHING PLAN
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Name of the Faculty: VARADAPUREDDY SUSHMITHA NAIDU

Department: ECONOMICS

Semester: III /2023-24/ Public Economics,(DSE)

MONTH		TOPICS	COURSE	PAPER CODE /NAME
SEPTEMBER	Theory	1.PUBLIC ECONOMIC THEORY- 1a. Fiscal functions: an overview References: Hindriks & Myles, Chapter 5. 1b. Public Goods: definition, models of efficient allocation, pure and impure public goods, free riding References: Cullis & Jones, Chapter 3 (Sections: 3.1 to 3.5.4). Cullis & Jones, Chapter 12 (Sections: 12.1 to 12.4.2) 2. INDIAN PUBLIC FINANCE 2c. Fiscal federalism in India References: Rao, M. Govinda. "Central transfers to states in India: rewarding performance while ensuring equity." Final report submitted to NITI Aayog (2017) (pages 1 to 18). Fifteenth Finance Commission Report 2021-26, Chapter 6 Report Summary, 15th Finance Commission, PRS India	B.A. (H) Economics	12277507/ Public Economics, (DSE)
	Tutorials	Doubts Sessions Numericals	B.A. (H) Economics	12277507/ Public Economics, (DSE)

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OCTOBER	Theory:	1c. Externalities: the problem and its solutions, taxes versus regulation, property rights, the Coase theorem References: Hindriks & Myles, Chapter 8 (Sections: 8.1 to 8.5, 8.7 to 8.10) Internal Assessment-1 Class Test Syllabus: 1b, 1c 1d. Taxation: its economic effects; dead weight loss and distortion. References: Stiglitz, Chapter 18 (pp. 482 to 497) 2. INDIAN PUBLIC FINANCE 2b. Budget, deficits and public debt (3 - 4 Lectures) Bajaj & Dutt (2020), "Financing of fiscal response to COVID-19: a pragmatic Alternative", Indian Economic Review, Vol. 55. (Suppl 1): S149 – S160 Budget at Glance 2021-22 Chakraborty, Lekha Union Budget 2021–22: The Macroeconomic Framework, Vol. 56, Issue No. 9, 27 Feb, 2021, EPW	B.A. (H) Economics	12277507/ Public Economics, (DSE)
	Tutorials:	Doubts Sessions Numericals	B.A. (H) Economics	12277507/ Public Economics, (DSE)
NOVEMBER	Theory:	1d. Taxation: efficiency and equity considerations, tax incidence, optimal taxation, Commodity tax, Ramsey rule References: Stiglitz, Chapter 19, Chapter 20 (pp. 550 to 562). Hindriks & Myles, Chapter 15 (Sections 15.1 to 15.3, 15.5 - 15.5.1, 15.5.2), Chapter 16 (Sections: 16.1 to 16.3), Chapter 17 (Sections: 17.1 to 17.4 and 17.7) Internal Assessment-II	B.A. (H) Economics	12277507/ Public Economics, (DSE)  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		Class Test Syllabus: 1a, 1d		
	Tutorials:	Doubts Sessions Numericals		
DECEMBER	Theory:	INDIAN PUBLIC FINANCE References: Rao, M. Govinda and Sudhanshu Kumar(2017). "Envisioning Tax Policy for Accelerated Development in India," Working PaperNo. 190, National Institute of Public Finance and Policy (NIPFP). Rao, M. Govinda. "Goods and Services Tax in India: Progress, Performance andProspects." Indian Economic Summit (2019), Schoolof International and Public Affairs, Columbia University Srivastava, D K et al., Taxing PetroleumProducts: Sharing Revenue Space between Centre and States, Vol. 56, Issue No. 9, 27 Feb, 2021, EPW	B.A. (H) Economics	12277507/ Public Economics, (DSE)
	Tutorials:	Doubts Sessions Numericals		



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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mr. Yogesh Malhotra

Department: ECONOMICS

Semester : V/2023-24/Money and Banking

MONTH		TOPICS	COURSE	PAPER CODE /NAME
AUGUST	Theory	Unit 1- Money, Measurement and Determination of Money Supply and Money Multiplier with factors affecting the money supply	B.A Prog. Money and Banking	62277502/CBCS-DSE
	Tutorials	Discussed the students doubts on money supply determination and solutions of some numerical on money multiplier		
SEPTEMBER	Theory:	Unit-2 Financial Institutions, markets and problems of asymmetric information: moral hazard and adverse selection		
	Tutorials:	Solved the students doubts on structure and reforms in Indian financial markets		
OCTOBER	Theory:	Unit-3 Interest rates determination and theories of term structure of interest rates		
	Tutorials:	Had doubt sessions on the numerical questions on expectation market hypothesis and preferred habitat hypothesis		
NOVEMBER-DECEMBER	Theory:	Unit-4 Banking system, balance sheet and portfolio management, glossary of banking terms Unit-5 Functions and targets of the monetary policy of India along with monetary management in open economy		
	Tutorials:	Previous Year's question papers and doubt-clearing sessions on the NPA and role of monetary policy in achieving objectives of RBI		

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mr. Yogesh Malhotra

Department: ECONOMICS

Semester: I /2023-24/Basic Mathematics for Economics Analysis

MONTH		TOPICS	COURSE	PAPER CODE /NAME
AUGUST	Theory	Unit-1 Introduction to number systems, sets, functions and relations	DSC-2 Basic Mathematics for Economic	22772201102/DSC-2
	Tutorials	Doubt sessions related to the number system and some revision on 12 th standard mathematics concepts		
SEPTEMBER	Theory:	Unit-1 Limits, Continuity, Series, Sequences and Present Discounted values		
	Tutorials:	Doubt sessions on limits and asymptotes and the concept of derivatives		
OCTOBER	Theory:	Unit-2 Equilibrium Analysis in Economics for linear and non linear models		
	Tutorials:	Doubt clearing sessions on the concept of marginal Revenue and Average Revenue and Average Cost		
NOVEMBER-DECEMBER	Theory:	Unit-3 Linear Models and Matrix Algebra, Determinants and Cramer's Rule		
	Tutorials:	Doubt session on previous year's question papers and assignment questions covered		



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Name of the Faculty: Mr. Yogesh Malhotra

Department: ECONOMICS

Semester: V /2023-24/ Issues in Economic Development

MONTH		TOPICS	COURSE	PAPER CODE /NAME
AUGUST	Theory	Unit-1 Development goals and Indicators, development and underdevelopment	GE Issues in Economic Development	62275505 /PGE52
	Tutorials	Doubts on the role of development in the growth of the economy		
SEPTEMBER	Theory:	Unit-2 Convergence and divergence causes, Pathways to economic development		
	Tutorials:	Discussed the role of Government and Institutions in the process of development and sessions on different types of institutions		
OCTOBER NOVEMBER- DECEMBER	Theory:	Unit-3 Capabilities, Human Development and Sustainable Development		
	Tutorials:	Discussion and doubts on calculation of Human development Index and its different measures		
	Theory:	Unit-4 Globalization and Development, globalization paradox and globalization of production		
	Tutorials:	Doubt session on previous year's question papers and assignment questions covered		

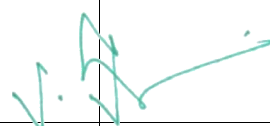

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Aruna Rao
Department: ECONOMICS

Semester: Sem 1, B.A (H)

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August	Theory	Principles of Economics, Law of demand, Determinants of demand and supply, shifts of supply versus movements along a supply curve, market supply, market equilibrium. Applications of demand and supply	B.A (H).	Econ 001
	Tutorials	Review questions from book		
September	Theory:	Elasticity and Its Application Supply, Demand, and Government Policies Consumers, Producers, and the Efficiency of Markets Application OF International Trade	B.A (H).	Econ 001
	Tutorials:	Review questions from book and doubt session, discussion on assignment question		
October	Theory:	• The Costs of Taxation ; Externalities • Public Goods and Common Resources • Isoquant and isocost lines, cost minimizing equilibrium condition. • Costs: costs in the short run, costs in the long run • Revenue and profit maximizations, minimizing losses, short run industry supply curve • Economies and diseconomies of scale, long run adjustments	B.A (H).	Econ 001
	Tutorials:	Doubt sessions		
November	Theory:	• Individual decision and interaction • . Equilibrium of the firm in the short run and long run	 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College भारतीय विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-110021 B.A(H) Econ 001	

		Long run industry supply curve: increasing, decreasing and constant cost industries		
	Tutorials:	Important questions and past paper discussions, doubt sessions		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Aruna Rao

Department: ECONOMICS

Semester: Sem 1, B.Com (H)

MONTH		TOPICS	COURSE	PAPER CODE /NAME
August	Theory	Problem of scarcity and choice: scarcity, choice and opportunity cost Production possibility frontier Law of demand, Determinants of demand and supply, shifts of supply versus movements along a supply curve, market supply, market equilibrium. Applications of demand and supply Consumer surplus, producer surplus. Elasticity: price elasticity of demand Other elasticities	B.Com (H).	Econ 025
	Tutorials	Review questions from book		
September	Theory:	Budget constraint, Concept of utility, diminishing marginal utility Diamond-water paradox Income and substitution effects Consumer choice Indifference curves, derivation of demand curve from indifference curve and budget constraint.	B.Com (H).	Econ 025
	Tutorials:	Review questions from book and doubt session, discussion on assignment question		
October	Theory:	- Production: behaviour of profit maximising firms - Law of variable proportions - Isoquant and isocost lines, cost minimizing equilibrium condition. - Costs: costs in the short run, costs in the long run - Revenue and profit maximizations, minimizing losses, short run industry supply curve - Economies and diseconomies of scale, long run adjustments	B.Com (H).	Econ 025
	Tutorials:	Doubt sessions		


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November	Theory:	• Perfect Competition Assumptions, demand and revenue • Equilibrium of the firm in the short run and long run • Long run industry supply curve: increasing, decreasing and constant cost industries • Allocative efficiency under perfect competition.	B.Com (H).	Econ 025
	Tutorials:	Important questions and past paper discussions, doubt sessions		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
August-December, 2021

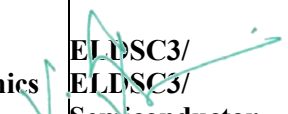
Name of the Faculty: Dr. Neeru Kumar

Department: Electronics

Semester: First and Third

Month		Topics	Course	Paper Code/Name
August	Theory:	Sem I Introduction to Semiconductor Materials. Energy Band in Solids, Concept of Effective Mass, Density of States.	B.Sc. Electronics	ELDSC3/ Semiconductor Devices
	Practicals:	Sem III Needs and challenges of Digital Inclusion.	B.A. History Sociology, Political Science, Hindi	Value Addition Course Digital Empowerment
		Sem I: Study of the I-V Characteristics of Diode – Ordinary and Zener Diode. SemI 1. Write a python program to print the Pascal triangle. 2. Write a python program to find HCF (GCD) of two numbers. 3. Write a python program to find LCM of two numbers.	B.Sc. Electronics B.Sc. Electronics	ELDSC3/ Semiconductor Devices ELDSC1/ Programming Fundamentals using Python
September	Theory:	Sem I: Carrier Concentration at Normal Equilibrium in Intrinsic Semiconductors, Derivation of Fermi Level for Intrinsic & Extrinsic Semiconductors, Donors, Acceptors, Dependence of Fermi Level on Temperature and Doping Concentration, Temperature Dependence of Carrier Concentrations. Carrier Transport Phenomena: Carrier Drift, Mobility, Resistivity, Hall Effect, Diffusion Process, Einstein Relation, Current Density Equation, Carrier Injection, Generation And Recombination Processes, Continuity Equation.	B.Sc. Electronics	ELDSC3/ Semiconductor Devices


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	Practicals:	Sem III 1. Vision of Digital India: Digi Locker. 2. Electronic Communication: electronic mail, blogs, social media Sem I 1. Study of Characteristics of Solar Cell. 2. Study of Characteristics of Photodiode. SemI 1. Write a python menu driven program to calculate area of circle, rectangle, square using if-else-if-else. 2. Write a python program to print Fibonacci series up to a certain limit (use 'while'). 3. Write a Python program to count number of vowels using sets in given string. 4. Write a Python program to Remove all duplicates from a given string in Python 5. Write a Python program to count positive and negative numbers in a list 6. Write a Python program to find sum of elements in list 7. Write a python program to read a list of 'n' integers (positive and negative) and create two new lists one having all positive numbers and the other having all negative numbers from the given list. Print all three lists.	B.A. History Sociology, Political Science, Hindi B.Sc. Electronics B.Sc. Electronics	Value Addition Course Digital Empowerment ELDSC3/ Semiconductor Devices ELDSC1/ Programming Fundamentals using Python
October	Theory:	Sem I: P-N Junction Diode: Formation of Depletion Layer, Space Charge at a Junction, Derivation of Electrostatic Potential Difference at Thermal Equilibrium, Depletion Width and Depletion Capacitance of an Abrupt Junction. Concept of Linearly Graded Junction, Derivation of Diode Equation and I-V Characteristics. Zener and Avalanche Junction Breakdown Mechanism. Tunnel diode, varactor diode, solar cell: circuit symbol, characteristics, applications. Metal Semiconductor Junctions: Ohmic and Rectifying Contacts. SCR: Construction, Working and Characteristics, Triac, Diac, IGBT, MESFET, Circuit symbols, Basic constructional features, Operation and Applications.	B.Sc. Electronics	ELDSC3/ Semiconductor Devices
	Practicals:	Sem III: 1.E-Hospitals, e-Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns. 2. Income Tax filing. Sem I 1. Study of the I-V Characteristics of the CE configuration of BJT 2. Study of the I-V Characteristics of the Common Base Configuration of BJT. 3. Study of the I-V Characteristics of the Common Collector Configuration of BJT.	B.A. History Sociology, Political Science, Hindi B.Sc. Electronics B.Sc. Electronics	Value Addition Course Digital Empowerment ELDSC3/ ELDSC3/ Semiconductor Devices Principal  Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Sem I: 1. Write a python program to create a list of tuples from given list having number and its cube in each tuple 2. Create a Python program to create a dictionary which has record of a student information: Admission number, Roll Number, Name and Marks. Display information on the basis of Admission number.	B.Sc. Electronics	ELDSC1/ Programming Fundamentals using Python
	Assignment	Given from the syllabus covered		
November	Theory	Sem I: Bipolar Junction Transistors (BJT): PNP and NPN Transistors, Basic Transistor Action, Emitter Efficiency, Base Transport Factor, Current Gain, Energy Band Diagram of Transistor in Thermal Equilibrium, Quantitative Analysis of Static Characteristics (Minority Carrier Distribution and Terminal Currents), Base-Width Modulation, Modes of operation, Input and Output Characteristics of CB, CE and CC Configurations	B.Sc. Electronics	ELDSC3/ Semiconductor Devices
	Practicals:	Sem III: 1. Online security and privacy 2. Threats in the digital world: Data breach and Cyber Attacks 3. Blockchain Technology 4. Security Initiatives by the Govt Sem I: 1. Study of the I-V Characteristics of the UJT. 2. Study of the I-V Characteristics of the SCR. 3. Study of the I-V Characteristics of JFET. 4. Study of the I-V Characteristics of MOSFET. Sem I: 1. Write a python program which contains user defined functions as a 'module' to calculate area, perimeter or surface area, volume for various shapes like square, cube, circle, cylinder. The user defined functions should accept the values for calculation as parameters and calculated values should be returned. Import the module and use appropriate functions. 2. Create a menu driven Python program using user defined functions to implement a calculator to perform : Basic arithmetic operations $\log_{10}(x)$, $\sin(x)$, $\cos(x)$ 3. Write Python programs to illustrate the various functions of the "Math" module, "Statistics" module in Python.	B.A. History Sociology, Political Science, Hindi B.Sc. Electronics B.Sc. Electronics	Value Addition Course Digital Empowerment ELDSC3/ Semiconductor Devices ELDSC1/ Programming Fundamentals using Python
December	Theory:	Sem 1 type MOSFET (both N channel and P channel). Complimentary MOS (CMOS). Power Devices: UJT: Basic construction and working, Equivalent circuit, intrinsic Standoff Ratio, Characteristics	B.Sc. Electronics	ELDSC3/Semiconductor Devices


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		and relaxation oscillator- I: Field Effect Transistors: JFET, Construction, Idea of Channel Formation, Pinch-Off and Saturation Voltage, Current-Voltage Output Characteristics. MOSFET, types of MOSFETs, Circuit symbols, Working and Characteristic curves of Depletion type MOSFET (both N channel and P Channel) and Enhancement expression.		
	Practicals:	Sem III: 1. Netiquettes 2. Ethics in digital communication 3. Ethics in Cyberspace Sem I 1. Study of Hall Effect. 2. Study of the I-V Characteristics of Diac and Triac.	B.A. History Sociology, Political Science, Hindi B.Sc. Electronics	Value Addition Course Digital Empowerment ELDSC3/ Semiconductor Devices



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Teaching Plan for the Semester

August - December (2023)

Dr Lalita Josyula / Department of Electronics

Paper : DSC (I semester) / Programming Fundamentals using Python ---> (3T + 1P) / Week

IA=30 Marks (12(Assignment)+12(Written_Test)+06(Attendance)) / End of Term Theory Exam = 90 Marks / Practicals=40 Marks(10(Continous Assessment)+20(Practicals)+10(Viva-Voce))

Subject Month	Theory	Practicals
August, 2023	Unit I Introduction to Python: Python Interpreter-IDLE (script and interactive mode), Python shell, using Python as calculator, concept of data types; variables, Identifiers and keywords, Literals, Strings, Operators (Arithmetic operator, Relational operator, Logical operator, Boolean operator, Assignment operators, Membership operators(in and not in), Identity operators, Bit wise operator, Increment or Decrement operator), comments in the program, understanding error messages.	1. Write a python program to print the Pascal triangle. 2. Write a python program to find HCF (GCD) of two numbers. 3. Write a python program to find LCM of two numbers.
September, 2023	Creation of a Python Program: Input and Output Statements, Control statements -Branching (if-else, if-elif-else), indentation in python, iteration (using for, while), Conditional Statement, exit function, Difference between break, continue and pass, Nested conditionals Unit II Data objects in Python: Mutable and immutable	1. Write a python menu driven program to calculate area of circle, rectangle, square using if-elif-else. 2. Write a python program to print Fibonacci series up to a certain limit (use 'while'). 3. Write a Python program to count number of vowels using sets in given string

	Strings- Creating and Storing Strings, Accessing Characters in String by Indexing (positive and negative), String Operations: concatenation, replication (*), membership, comparison, Slicing, string built-in functions, String method Lists- Creating Lists, Accessing list elements, traversing a list, Aliasing a list, comparing list, list Operations:- concatenation, replication(*), membership, slicing, Indexing, nested list, list built-in functions List methods, del statement. Sets: Creating sets, Sets built-in functions, Set Methods Assignment for 12 Marks -IA!!	4. Write a Python program to Remove all duplicates from a given string in Python 5. Write a Python program to count positive and negative numbers in a list 6. Write a Python program to find sum of elements in list 7. Write a python program to read a list of 'n' integers (positive and negative) and create two new lists one having all positive numbers and the other having all negative numbers from the given list. Print all three lists.
October, 2023	Unit III Tuples: Creating Tuples, Tuple operations: slicing, concatenation, replication, membership, comparing and deletion, tuple built-in functions Dictionaries: Dictionary in python (key : value pairs), creating a dictionary, element accessing and traversing a dictionary, appending values, updating values, removing items from dictionary, membership, dictionary built-in functions, dictionary methods, clear statement Written Test for 12 Marks -IA	1. Write a python program to create a list of tuples from given list having number and its cube in each tuple 2. Create a Python program to create a dictionary which has record of a student information: Admission number, Roll Number, Name and Marks. Display information on the basis of Admission number

November, 2023	Object Oriented Programming: Introduction to Classes, Objects and Methods, Encapsulation, Inheritance, Polymorphism, Abstraction Unit IV Functions: Built in functions (math, statistics), User defined functions: Defining Functions, arguments: positional, default, keyword, variable length arguments, scope of variables, parameter passing (string list, dictionary, tuples, sets), return statement, recursion, importing (using import) user defined function (path). Modules in python: use of keyword from, namespacing, module aliasing, introduction to python packages (matplotlib, pandas, numpy, scikitlearn, nltk, openCV) and libraries and their applications	1. Write a python program which contains user defined functions as a 'module' to calculate area, perimeter or surface area , volume for various shapes like square, cube, circle, cylinder. The user defined functions should accept the values for calculation as parameters and calculated values should be returned. Import the module and use appropriate functions. 2. Create a menu driven Python program using user defined functions to implement a calculator to perform : Basic arithmetic operations $\log_{10}(x)$, $\sin(x)$, $\cos(x)$ 3. Write Python programs to illustrate the various functions of the "Math" module, "Statistics" module in Python.
December, 2023	Final Exams (Theory & Practicals)	Project Work if Any ! Final Exams


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Learning Objectives

- This course introduces the student to the fundamental understanding of the Python programming language.
- The main objective is to help students learn to use the Python programming language to solve problems of interest to them.
- It introduces the core programming basics including data types, operators, input/output, control structures, iterative and recursive constructs, compound data types, and program design with functions.
- The course also discusses the fundamental principles of Object-Oriented Programming (OOP), as well as comprehensive data and information processing techniques.

Learning Outcomes

After completion of the course, students will be able to :

-  Read, Write and debug Python programs to solve computational problems.
-  Select and use a suitable programming construct and data objects *like Lists, Sets, Tuples and Dictionaries* for solving a given problem.
-  Be proficient in the handling of *Strings and Functions*
-  Use some important Python Libraries like *Pandas / Numpy / Scikitlearn* etc...
-  Articulate Object Oriented Programming (OOP) concepts such as *encapsulation, inheritance and polymorphism* and use them in applications.



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Teaching Plan for the Semester

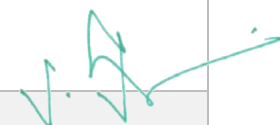
August - December (2023)

Dr Lalita Josyula / Department of Electronics

Paper : Skill Enhancement Course (II semester) / Analytics/Computing with Python ----> (4P Practicals) / Week

Continuous Assessment=20 Marks / End of Term Practicals Exam = 40 Marks / Viva Voce = 20 Marks

Subject Month	PRACTICALS
August, 2023	Unit I Python: General overview, Python vs. Excel , Anaconda and Jupyter notebook: Interface overview, Data types in Python, Python basic syntax: Assignment statements, creating variables, indentation, conditionals, and loops, writing user defined functions. Introduction to Python Libraries: Pandas, NumPy, Matplotlib, and Seaborn.
September, 2023	Unit II Pandas: Working with Data Frame, Importing from Excel or .csv files, Powerful filters and indexes. Selecting data with loc and iloc, Numpy: Using NumPy for speed, Trade-offs between arrays and lists, Array functions. Data cleansing and normalization: Libraries for data visualization, Types of charts/graphs and how to build them
October, 2023	Unit III Machine learning: Introduction, Definitions, Supervised, unsupervised, python libraries for machine learning: Sci-kit learn, Regression: Linear regression, logistic regression, overfitting and regularization. Internal Assessment : Mid Term
November, 2023	Python-SQL Database Access: Introduction, Installation, DB Connection, Creating DB Table.
December, 2023	Final Assessment



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Learning Objectives

- ✚ The Learning Objectives of this course are as follows:
- ✚ To introduce machine learning techniques to students using Python programming
- ✚ To enable students to use various tools and packages for advanced data analysis

Learning outcomes

- ✚ The Learning Outcomes of this course are as follows:
- ✚ After studying this course, students will be able to learn about Python's main features and how they make Python a great tool for financial analysts.
- ✚ After studying this course, students will be able to get familiarized with Anaconda and Jupyter Notebook.
- ✚ After studying this course, students will be able to learn basics of Machine learning.
- ✚ After studying this course, students will be able to apply these techniques on data



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ODD SEMESTER WISE TEACHING PLAN 2023-24
SRI VENKATESWARA COLLEGE

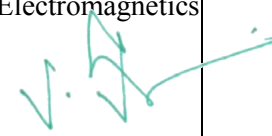
Name of the Faculty: Dr. Nutan Kala Joshi

Department: Electronics

Semester: Theory : B.Sc(H) Electronics, Sem V Electromagnetics(DSC)
B.Sc(H) Electronics Sem III Analog Electronics II (DSC)

Practical : B.Sc(H) Electronics Sem V Electromagnetics(DSC)
B.Sc(H) Electronics Sem III Analog Electronics II (DSC)

Month		Topics	Course	Paper Code/Name
August -2023	Theory	Unit-1 Vector Analysis: Scalars and Vectors, Vector Algebra, Rectangular (Cartesian) Coordinate System, Vector Components and Unit Vector, Vector Field, Products, Cylindrical Coordinates, Spherical Coordinates, Differential Length, Area and Volume, Line Surface and Volume integrals, Del Operator, Gradient of a Scalar, Divergence and Curl of a Vector, the Laplacian. Electrostatic Fields: Coulomb's Law and Electric Field, Field due to Discrete and Continuous Charge Distributions, Electric Flux Density, Gauss's Law and Applications, Divergence Theorem and Maxwell's First Equation. Electric Potential, Potential due to a Charge and Charge distribution, Electric dipole, Electric Fields in Conductors, Current and Current Density, Continuity of Current, Metallic Conductor Properties. Dielectric materials, Polarization, Dielectric Constant, Isotropic and Anisotropic dielectrics, Boundary conditions, Capacitance and Capacitors. Electrostatic Energy and Forces	B.Sc(H) Electronics Sem-V	Core-Course- XII/ Electromagnetics
	Practical	Introduction to MATLAB functions 1. Understanding and Plotting Vectors 2. Transformation of vectors into various coordinate systems.	B.Sc(H) Electronics Sem-V	Core-Course- XII/ Electromagnetics


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	Theory Practicals	Sem III: Unit 1 : Op AMP (DIBO, DIUO), Block diagram of an op amp, characteristics of an ideal op amp. Open and closed loop configurations: inverting, non-inverting and differential amplifier, op amp parameters (IC741) 1.Op amp characteristics study : cmrr and slew rate 2.Designing of inverting and non-inverting amplifiers of given gain 3. Design of adder and subtractor circuits	B. Sc. (H) Electronics Sem III	DSC Analog Electronics II
SEPTEMBER	Theory Practicals	UNIT-2 Poisson's Equation and Laplace's Equation: Derivation of Poisson's and Laplace's equation, Uniqueness Theorem, Examples of Solution of Laplace's Equation: Cartesian, Cylindrical and Spherical Coordinates. Method of Images. Magnetostatics: Biot Savart's law and Applications, Magnetic dipole, Ampere's Circuital Law, Curl and Stoke's Theorem, Maxwell's Equation, Magnetic Flux and Magnetic Flux Density, Scalar and Vector Magnetic Potentials, Magnetization in Materials and Permeability, Anisotropic materials, Magnetic Boundary Conditions, Inductors and Inductances, Magnetic Energy, Magnetic Circuits. Inductances and Inductors, Magnetic Energy, Forces and Torques. 3. 2D and 3D Graphical plotting with change of view and rotation. 4. Representation of the Gradient of a scalar field, Divergence and Curl of Vector Fields. 5 Plots of Electric field and Electric Potential due to charge distributions. 6. Plots of Magnetic Flux Density due to current carrying wire.	B.Sc(H) Electronics Sem-V	Core-Course- XII/ Electromagnetics Core-Course- XII/ Electromagnetics



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	Theory	Sem III: Unit II : Frequency response of an op amp: High frequency op amp equivalent circuit, open loop voltage gain as a function of frequency, closed loop frequency response, effects of slew rate in applications. Linear Applications of an op amp	B.Sc.(Hons) Electronics, Sem III	AE II
	Practicals	3. Design of an Integrator of given specifications 4.Design of a Differentiator of given specifications 5. Design of Adder and subtractor circuits		
	<u>Assignment</u> <u>Sem V, III</u>			
OCTOBER	Theory	Unit-3 Time-Varying Fields and Maxwell's Equations: Faraday's Law of Electromagnetic Induction, Stationary Circuit in Time Varying Magnetic Field, Transformer and Motional EMF, Displacement Current, Maxwell's Equations in differential and integral form and Constitutive Relations. Potential Functions, Lorentz gauge and the Wave Equation for Potentials, Concept of Retarded Potentials. Electromagnetic Boundary Conditions. Time-Harmonic Electromagnetic Fields and use of Phasors Unit-4 Electromagnetic Wave Propagation: Time-Harmonic Electromagnetic Fields and use of Phasors, the Electromagnetic Spectrum, Wave Equation in a source free isotropic homogeneous media.	B.Sc(H) Electronics Sem-V	Core-Course-XII/ Electromagnetics
	Practicals:	6. Plots of Magnetic Flux Density due to current carrying wire 7. Programs and Contour Plots to illustrate Method of Images 8. Solutions of Poisson and Laplace Equations –contour plots of charge and potential distributions	B. Sc.(H) Electronics Sem-V	Core-Course-XII/ Electromagnetics



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	Theory	Sem III: Unit III : Active Filters : First order low pass and high pass Butterworth filters, concept of higher order filters, band pass filter, band reject filter, all pass filters. Non-linear applications of an op amp : Basic comparator, level detectors, Schmitt trigger, characteristics of comparator, voltage limiters, sample and hold circuits	B. Sc.(H) Electronics, Sem III	DSC AE II
	Practicals	6. Design of first order low pass/ high pass filter and study of its frequency response 7. Design of a Phase Shift Oscillator		
	Mid Term Test Sem V, III			
NOVEMBER	Theory:	Sem V Unit 4 Uniform Plane Waves in Lossless and Lossy unbounded homogeneous media, Wave Polarization, Phase and Group velocity, Flow of Electromagnetic Power and Poynting Vector. Uniform Plane wave incident on a Plane conductor boundary, concept of reflection and standing wave. Guided Electromagnetic Wave Propagation: Waves along Uniform Guiding Structures, TEM, TE and TM waves, Electromagnetic Wave Propagation in Parallel Plate and Rectangular Metallic Waveguides	B. Sc.(H) Electronics Sem-V	Core-Course- XII/ Electromagnetics
	Practicals	8. Solutions of Poisson and Laplace Equations –contour plots of charge and potential distributions 9. Introduction to Computational Electromagnetics: Simple Boundary Value Problems by Finite Difference/Finite Element Methods	B. Sc.(H) Electronics Sem-V	Core-Course- XII/ Electromagnetics
	Theory	Sem III Unit IV : Signal Generators : Phase shift Oscillator, wien bridge oscillator, square wave generator, triangular wave generator, saw tooth wave generator IC 555 Timer : Block Diagram, Astable and monostable multivibrator circuit and their applications	B.Sc.(Hons) Electronics, Sem III	DSC Sem III AE II
	Practicals	7. Design of phase shift oscillator 8. Study of IC 555 as an Astable Multivibrator		 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



SEMESTER-WISE TEACHING PLAN 2023-24
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sunita Jain

Department: Electronics

Semester: V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Introduction to microprocessor, Different types, Difference between microprocessor and microcontroller, Introduction to 8085 microprocessors	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers
	Practical	Sem V: Introduction to Instruction Set of 8085. Sem V: Program to implement Bisection Method	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers DSE : Numerical Analysis
SEPTEMBER	Theory	Basic architecture of 8085 microprocessors, Block diagram, Instruction set, Addressing modes, Memory mapping and I/O mapping	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers
	Practical	Sem V: Program for addition and subtraction. Program for multibyte addition and subtraction. Program for block movement of data. Program for ascending and descending order Sem V : Program to implement: Secant Method Regular Falsi Method Newton Raphson Method	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers DSE : Numerical Analysis
OCTOBER	Theory	Interrupt structure of 8085 microprocessors, Various interrupts, Latency and response time, Concept of interfacing of various devices with 8085 microprocessors using interrupt Introduction to microcontrollers, Different types of microcontrollers, CISC & RISC architecture, Introduction to PIC16F887 microcontroller	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

	Practical	Sem V: Program for GCD. Program for truth table of logic gates, Fibonacci series. Program to find minimum and maximum among N numbers. Division of 16-bit number by 8-bit no. Sem V: Program to implement : Trapezoidal Rule Simpson Rule Runge Kutta Method	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers DSE : Numerical Analysis
	<u>Assignment</u>	Question based on 8085 microprocessors architecture and interfacing.	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers
NOVEMBER	Theory	Instruction set of PIC microcontrollers. Addressing modes. I/O ports.	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers
	Practical	Sem V: Interfacing LED with microprocessor using 8255 peripheral. Sem V: Program to implement Euler Cauchy Method Gauss Jordan Method Gauss Seidel Method	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers DSE : Numerical Analysis
	<u>Mid Term Test</u>	Complete 8085 microprocessors.	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers
DECEMBER	Theory	Interfacing of various I/O devices with PIC microcontroller	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers
	Practical	Sem V: Interfacing LED with PIC. Sem V: Program to implement Newton's Forward Interpolation. Program to obtain second degree polynomial.	B.Sc. (H)	Core Course-XI Microprocessor and microcontrollers DSE : Numerical Analysis





SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2023-2024 (Odd Semester)

Name of the Faculty : Dr Hari Singh
Department : Electronics

Semester: Theory : B.Sc. (H) Electronics, Semester I

Practical : B.Sc. (H) Electronics, Semester I
 B.A./B.Com/B.Sc. (Hons/Prog), Semester I
 B.Sc. (H) Electronics, Semester V

Month		Topics	Course	Paper Code/ Name
Aug	Theory	Unit I: Introduction to Circuits and DC Analysis Basic Circuit Concepts: Voltage and Current Sources, V- I characteristics of ideal voltage and ideal current sources, various types of controlled sources, passive circuit components, V-I characteristics, and ratings of different types of R, L, C elements.	B.Sc.(Hons) Electronics, Semester I	Discipline Specific Core Course II/Circuit Theory and Network Analysis
	Practical	Familiarization with Multimeter: Resistance, Capacitor and Inductor in series, parallel and series-parallel. Verification of Kirchhoff's Current Law. Unit I Python: General overview, Python vs. Excel , Anaconda and Jupyter notebook: Interface overview, Data types in Python, Python basic syntax: Assignment statements, creating variables, indentation, conditionals, and loops, writing user defined functions. Introduction to Python Libraries: Pandas, NumPy, Matplotlib, and Seaborn. MATLAB simulation software installation to implement Bisection Method using the function $f(x) = \lfloor 2x \rfloor^3 - x^2 + 7x + 7$	B.Sc.(Hons) Electronics, Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.Sc.(Hons) Electronics, Semester V	Discipline Specific Core Course II/Circuit Theory and Network Analysis Lab Skill Enhancement Course I/Analytics/Comp uting With Python Discipline Specific Elective II/Numerical Analysis
	Theory	Unit I: Introduction to Circuits and DC Analysis DC Circuit Analysis: Kirchhoff's Current Law (KCL), Kirchhoff's Voltage Law (KVL), Node Analysis, Mesh Analysis, Super node & Super mesh Analysis, Star-Delta Conversion. Unit II: AC Analysis Steady State Analysis: Sinusoidal Voltage and Current, Definition of Instantaneous, Peak, Peak to Peak, Root Mean Square and Average Values. Phasor, Complex Impedance, Sinusoidal Circuit Analysis for RL, RC and RLC Circuits.	B.Sc.(Hons) Electronics, Semester I	Discipline Specific Core Course II/Circuit Theory and Network Analysis
Sep	Practical	Verification of Kirchhoff's Voltage Law Verification of Norton's theorem. Verification of Thevenin's Theorem. Unit I: Digital inclusion and Digital Empowerment Needs and challenges Vision of Digital India: DigiLocker, E-Hospitals, e-Pathshala, BHIM, e-Kranti	B.Sc.(Hons) Electronics, Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I	Discipline Specific Core Course II/Circuit Theory and Network Analysis Lab Skill Enhancement Course I/Digital Empowerment Lab

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 नई दिल्ली / Dhaura Kuan, New Delhi-110021

		(Electronic Delivery of Services}, e-Health Campaigns Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education Unit II Pandas: Working with Data Frame, Importing from Excel or .csv files, Powerful filters and indexes. Selecting data with loc and iloc, Numpy: Using NumPy for speed, Trade-offs between arrays and lists, Array functions. Data cleansing and normalization: Libraries for data visualization, Types of charts/graphs and how to build them To implement Secant Method using the function $f(x) = x^3 + 2x^2 + x + 1$ To implement Regula Falsi method using the function $f(x) = x^3 - x - 1$ To implement Newton Raphson Method $f(x) = 2x^3 - 6x - 7$	B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.Sc.(Hons) Electronics, Semester V	Skill Enhancement Course I/Analytics/Computing With Python Discipline Specific Elective II/Numerical Analysis
Oct	Theory	Unit II: AC Analysis Node and Mesh Analysis for AC circuits. Star-Delta Conversion for complex impedances. Power in AC Circuits: Instantaneous Power, Average Power, Reactive Power, Power Factor. Unit III: Network Theorems Network Theorems: Principal of Duality, Superposition Theorem, Thevenin's Theorem, Norton's Theorem,	B.Sc.(Hons) Electronics, Semester I	Discipline Specific Core Course II/Circuit Theory and Network Analysis
	Practical	Verification of Superposition Theorem. Verification of the Maximum Power Transfer Theorem. Familiarization with Oscilloscope: Measurement of Amplitude and Frequency of a sinusoidal signal Unit II: Communication and Collaboration in the Cyberspace Electronic Communication: electronic mail, blogs, social media Collaborative Digital platforms Tools/platforms for online learning Collaboration using file sharing, messaging, video conferencing Unit III Machine learning: Introduction, Definitions, Supervised, unsupervised, python libraries for machine learning: Sci-kit learn, Regression: Linear regression, logistic regression, overfitting and regularization. To implement Trapezoidal rule To implement Simpson's rule Evaluate	B.Sc.(Hons) Electronics, Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.Sc.(Hons) Electronics, Semester V	Discipline Specific Core Course II/Circuit Theory and Network Analysis Lab Value Addition Course I/Digital Empowerment Lab Skill Enhancement Course I/Analytics/Computing With Python Discipline Specific Elective II/Numerical Analysis
	Mid Term Test and Assignment		As per the syllabus covered	
Nov	Theory	Unit III: Network Theorems Reciprocity Theorem, Millman's Theorem, Maximum Power Transfer Theorem. (Independent Sources) AC circuit analysis using Network Theorems. Unit IV: Filters Filters and Resonance: Introduction to Passive Filters-High Pass, Low Pass, Band Pass & Band Stop Filters, Frequency response of RC Circuits-High pass and Low pass filters,	B.Sc.(Hons) Electronics, Semester I	Discipline Specific Core Course II/Circuit Theory and Network Analysis प्रधानाचार्य श्री. वेणकटेश्वर, महाविद्यालय Sri Venkateswara College University of Delhi दिल्ली डी.ए. कुआँ

		Frequency response of Series and Parallel RLC Circuits. Resonance in Series and Parallel RLC Circuits, Quality (Q) Factor and Bandwidth, Band Pass and Band Stop RLC Filters.		
	Practical	- Design of Low Pass RC Filter and study of its Frequency Response. - Design of High Pass RC Filter and study of its Frequency Response. Unit III: Towards Safe and Secure Cyberspace (4 Weeks) - Online security and privacy - Threats in the digital world: Data breach and Cyber Attacks - Blockchain Technology - Security Initiatives by the Govt of India Unit I Python-SQL Database Access: Introduction, Installation, DB Connection, Creating DB Table. - To implement Runge Kutta Method Consider an ordinary differential equation $dy/dx = x^2 + y^2$, $y(1) = 1.2$. Find $y(1.05)$ - Solve: $x^2 y'' - 6xy' - 18y = 0$ using euler cauchy mehtod - Solve the following system of equations: $x + y + z = 2$; $x + 2y + 3z = 5$; $2x + 3y + 4z = 11$ - Solve the system of equations using the sedial Method $26x_1 + 2x_2 + 2x_3 = 12.6$ $3x_1 + 27x_2 + x_3 = -14.3$ $2x_1 + 3x_2 + 17x_3 = 6.0$ Obtain the result correct to three decimal places.	B.Sc.(Hons) Electronics, Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.Sc.(Hons) Electronics, Semester V	Discipline Specific Core Course II/Circuit Theory and Network Analysis Lab Value Addition Course I/Digital Empowerment Lab Skill Enhancement Course I/Analytics/Comp uting With Python Discipline Specific Elective II/Numerical Analysis
Dec	Theory	Unit IV: Filters Filters and Resonance: Frequency response of Series and Parallel RLC Circuits. Resonance in Series and Parallel RLC Circuits, Quality (Q) Factor and Bandwidth, Band Pass and Band Stop RLC Filters.	B.Sc.(Hons) Electronics, Semester I	Discipline Specific Core Course II/Circuit Theory and Network Analysis
	Practical	- Study of Frequency Response of a Series LCR Circuit and determination of its (a) Resonant Frequency (b) Impedance at Resonance (c) Quality Factor Q (d) Band Width. Unit IV: Ethical Issues in Digital World (2 Weeks) - Netiquettes - Ethics in digital communication - Ethics in Cyberspace Final Assessment - To implement Newton's Forward Interpolation	B.Sc.(Hons) Electronics, Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.A./B.Com /B.Sc. (Hons/Prog) , Semester I B.Sc.(Hons)	Discipline Specific Core Course II/Circuit Theory and Network Analysis Lab Value Addition Course I/Digital Empowerment Lab Skill Enhancement Course I/Analytics/Comp uting With Python Discipline

			Electronics, Semester V	Specific Elective II/Numerical Analysis
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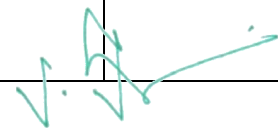


IQAC, SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
August-December 2023-2024

Name of the Faculty: Dr. Rakhi Narang
Department: Electronics

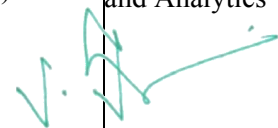
Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory:	Sem III: Continuous and discrete time signals, time domain operations (shifting, scaling, reflection, etc.) with precedence rules. Exponential and sinusoidal signals, impulse and unit step functions, continuous-time and discrete-time systems and their basic properties. Sem I: Linear Algebra: Vectors, Matrices; Statistics: Describing a Single Set of Data, Correlation, Simpson's Paradox. Sem III: Types of Machine Learning: Supervised Learning, Unsupervised Learning and Reinforcement Learning. Supervised Learning Vs. Unsupervised	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF) B. Sc. (Hons.) Electronics Sem III (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics ELDSE-1A: Artificial Intelligence and Machine Learning
	Practicals:	Sem IV: 1. Plotting/generation of signals: continuous time 2. Plotting/generation of signals: discrete time. Sem I: Python programs on basic data types and built in functions, operators.	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics


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September	Theory:	Sem IV: Discrete time LTI systems, the Convolution Sum, Continuous time LTI systems, the Convolution integral. Properties of LTI systems, Commutative, Distributive, Associative. LTI systems with and without memory, invariability, causality, stability, unit step response. Sem I: Correlation and Causation; Probability: Dependence and Independence, Conditional Probability, Bayes's Theorem. Random Variables, Continuous Distributions The Normal Distribution, The Central Limit Theorem ; Hypothesis and Inference: Statistical Hypothesis Testing, Confidence Intervals, P-hacking, Bayesian Inference. Sem III: Regression Analysis, Linear Regression, Classification Algorithm, Logistic Regression	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF) B. Sc. (Hons.) Electronics Sem III (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics ELDSE-1A: Artificial Intelligence and Machine Learning
	Practicals:	Sem III: 1. Make a function to add and multiply two signals: $x_1(n) + x_2(n)$ 2. Signal Transformation: Time Shift, Time Scaling and Time reversal 3. Even and odd decomposition of Real sequences Sem II: Python programs on Strings, Lists, Tuples and dictionaries.	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics
	Assignment	Sem III: Assignment based on Unit I and II Sem I: Assignment based on Simpson's Paradox and Python programming basics.	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics

October	Theory:	Sem III: Differential and Difference equation formulation. Block diagram representation of first-order systems. Laplace Transforms: Unilateral Laplace transform, inverse Laplace transform, properties of the Laplace transform, Laplace transform pairs, Laplace transform for signals. Sem I: Introduction to data engineering and data science, types of data, data File formats, data repositories; data marts and data lakes, ETL, ELT, data pipelines, introduction to cloud computing in data science. Understanding Pandas and Data Wrangling Sem III: K-NN Algorithm, Classification Vs. Regression, Linear Regression Vs. Logistic Regression	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF) B. Sc. (Hons.) Electronics Sem III (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics ELDSE-1A: Artificial Intelligence and Machine Learning
	Practicals:	Sem III: 1. Convolution of signals 2. Solution of Difference equation 3. Laplace Transform and Inverse Laplace transform Sem I: Programs on Python Libraries- NumPy, Pandas, matplotlib	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics
	<u>Mid Term Test</u>	Sem III: Based on Unit 1 and 2 Sem I: Based on Unit 1 and 2		
November	Theory	Sem III: Solutions of first and second-order differential equations with initial conditions. Fourier series Representation of Periodic Signals: Fourier series representation of periodic continuous and discrete signals. Convergence of the Fourier series (Dirichlet conditions). Sem I: Implement various data analysis tools in the Pandas library. Implement various basic data analysis techniques, clean and filter and manipulate data, Data Aggregation and Analysis	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics


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		Sem III: Decision Tree Classification Algorithm, Random Forest Algorithm, Clustering in Machine Learning, K-Means Clustering Algorithm	B. Sc. (Hons.) Electronics Sem III (UGCF)	ELDSE-1A: Artificial Intelligence and Machine Learning
	Practicals:	Sem IV: 1. Find Fourier Transform and Inverse Fourier transform 2. Determine the Fourier series components of a given CT signal 3. Fourier Series representation using Simulink Sem I: 1. Implementing Data cleaning, wrangling, filtering, and Plotting methods on the Pima Indians Diabetes dataset and Boston housing price	B. Sc. (Hons.) Electronics Sem III (UGCF) B. Sc. (Hons.) Electronics Sem I (UGCF)	ELDSC-9 Signals and Systems ELGE-1B: data Engineering and Analytics
December		Sem IV: Fourier Transform: Aperiodic signals, Periodic signals, Properties of Continuous-time Fourier transform, Convolution and multiplication Properties, Properties of Fourier transform and basic Fourier transform Pairs.	B. Sc. (Hons.) Electronics Sem III (UGCF)	ELDSC-9 Signals and Systems
		Sem I: Time series data Analysis	B. Sc. (Hons.) Electronics Sem I (UGCF)	ELGE-1B: data Engineering and Analytics
	Practicals:	Time series data Analysis on air passenger data	B. Sc. (Hons.) Electronics Sem I (UGCF)	ELGE-1B: data Engineering and Analytics


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
August-December 2023-24

Name of the Faculty: Dr. Hina Yadav

Department: Electronics

Semester: I/ III/V

Semester: Theory : B.Sc(H) Electronics, Sem III

Practical : B.Sc(H) Electronics, Sem III

Month		Topics	Course	Paper Code/Name
August	Theory	Sem III: Ordinary Differential Equations: First Order Ordinary Differential Equations, Basic Concepts, Separable Ordinary Differential Equations, Exact Ordinary Differential Equations, Linear Ordinary Differential Equations.	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Concept of AI, history, current status, scope, Modeling Techniques: Turing Test Approach, Cognitive Modeling Approach, Rational Agent Approach and Laws of Thought Approach, AI System Architecture: Concept of Agent & Environment, Types of Agents: Reactive Agent, Model based Reflex Agent, Omniscient Agent, Goal Based Agent, Utility based Agent and Learning Agent, Knowledge based Agents and Knowledge Representation Techniques. Types of Environment, PEAS representation of Intelligent Agents, Problem Solving Agents, AI Problem Formulation, State space representation	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Concept of AI, history, current status, scope, Modeling Techniques: Turing Test Approach, Cognitive Modeling Approach, Rational Agent Approach and Laws of Thought Approach, AI System Architecture: Concept of Agent & Environment, Types of Agents: Reactive Agent, Model based Reflex Agent, Omniscient Agent, Goal Based Agent, Utility based Agent and Learning Agent, Knowledge based Agents and Knowledge Representation Techniques.	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Practicals	Sem III: Familiarization with MATLAB software	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Revision of Python programming tools	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Revision of Python programming tools		DSE III: Artificial Intelligence and Machine Learning

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September	Theory	Sem III: Series solution of differential equations and special functions: Power series method, Legendre Polynomials, Bessel's equations and Frobenius method. Beta and gamma functions, error functions	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Breadth first search, Depth First Search, Depth Limited Search, Uniform Cost Search and Bidirectional Search, Heuristic Search Algorithms: concept of Heuristic Function, Greedy Best First Search, A* search algorithm	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Types of Environment, PEAS representation of Intelligent Agents, Problem Solving Agents, AI Problem Formulation, State space representation Breadth first search, Depth First Search, Depth Limited Search, Uniform Cost Search and Bidirectional Search, Heuristic Search Algorithms: concept of Heuristic Function, Greedy Best First Search, A* search algorithm	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Practicals	Sem III: Solution of First Order Differential Equations	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Write a program to solve the given search tree using Breadth First Search Write a program to solve the given search tree using Depth First Search and Depth Limited Search Write a program to solve the given search tree using Uniform Cost Search	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Write a program to solve the given search tree using Breadth First Search Write a program to solve the given search tree using Depth First Search and Depth Limited Search Write a program to solve the given search tree using Uniform Cost Search	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
October	Theory	Sem III: Matrices: Introduction to Matrices, System of Linear Algebraic Equations, Gauss Elimination Method, Gauss-Seidel Method, LU decomposition, Solution of Linear system by LU decomposition, Eigen values and Eigen vectors, Linear transformation, Properties of Eigen values and Eigen vectors. Real and Complex Matrices, Symmetric, Skew Symmetric, Hermitian, Skew Hermitian. Sequences, Limits of a sequence, convergence, Divergence and oscillation of a sequence	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Game Search Algorithms: Minimax Search Algorithm and Alpha Beta Pruning. Simple AI problems (such as Water Jug Problem, Maze Problem, 8-Tile Puzzle problem, Traveling Salesman Problem). Probability, conditional probability, Bayes Rule, Bayesian Networks- representation, construction and	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning

		inference		
		Sem III: Game Search Algorithms: Minimax Search Algorithm and Alpha Beta Pruning. Simple AI problems (such as Water Jug Problem, Maze Problem, 8-Tile Puzzle problem, Traveling Salesman Problem). Probability, conditional probability, Bayes Rule, Bayesian Networks- representation, construction and inference	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Practicals	Sem III: Solution of linear system of equations using Gauss Elimination method. Solution of linear system of equations using Gauss – Seidel method. Solution of linear system of equations using L-U decomposition method.	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Write a program to solve the given search tree using Greedy Best First Search Write a program to solve the given game search tree using Minimax Search Program for construction and inference of a Bayesian network	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Write a program to solve the given search tree using Greedy Best First Search Write a program to solve the given game search tree using Minimax Search Program for construction and inference of a Bayesian network	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Mid-Term Test	As per syllabus covered		
November	Theory	Sem III: Infinite series, Necessary condition for convergence, Cauchy's Integral Test, D'Alembert's Ratio Test, Cauchy's nth Root Test, Alternating Series. Complex Variables, Complex functions, Continuity, Differentiability, Analyticity, Cauchy-Riemann (C-R) Equations, Harmonic and Conjugate Harmonic Functions, Exponential Functions, Trigonometric Functions, Hyperbolic Functions	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Temporal model: concept of Transition probability, Markov Model and Hidden Markov model. Markov Decision Process Model: MDP formulation, Elements of MDP Model, concept of Sequential Decision Processing, Example of MDP Problem: Agent in a grid world. Machine Learning: Types of Machine Learning: Supervised Learning, Unsupervised Learning and Reinforcement Learning. Supervised Learning Vs. Unsupervised Learning Supervised Learning Techniques: Regression Analysis, Linear Regression,	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning


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		Sem III: Temporal model: concept of Transition probability, Markov Model and Hidden Markov model. Markov Decision Process Model: MDP formulation, Elements of MDP Model, concept of Sequential Decision Processing	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Practicals	Sem III: To test convergence of a given series. To test divergence of a given series.	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Write a Program to perform Regression on given data sets Write a Program to demonstrate Classification Write a Program to demonstrate Clustering	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Write a Program to perform Regression on given data sets Write a Program to demonstrate Classification Write a Program to demonstrate Clustering	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Assignment	As per syllabus covered		
December	Theory	Sem III: Line integral in Complex Plane, Cauchy's Integral Theorem, Cauchy's Integral Formula. Taylor series-exponential, logarithmic, and trigonometric functions.	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Classification Algorithm, Logistic Regression, K-NN Algorithm, Classification Vs. Regression, Linear Regression Vs. Logistic Regression, Decision Tree Classification Algorithm, Random Forest Algorithm, Clustering in Machine Learning, Hierarchical Clustering in Machine Learning, K-Means Clustering Algorithm	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Example of MDP Problem: Agent in a grid world	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning
	Practicals	Sem III: Plots of the exponential, logarithmic and trigonometric functions and comparison with the plots of their Taylor series expansion till first 10 terms	B.Sc(H) Electronics II	DSC: Engineering Mathematics
		Sem III: Mini Project Evaluation and Submission	B.Sc(H) Electronics II	GE III: Artificial Intelligence and Machine Learning
		Sem III: Mini Project Evaluation and Submission	B.Sc(H) Electronics II	DSE III: Artificial Intelligence and Machine Learning

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SRI VENKATESWARA COLLEGE

(University of Delhi)

DEPARTMENT OF ELECTRONICS

SEMESTER WISE TEACHING PLAN

August-December 2023-24

Name of the Faculty: Dr.Tarakeswara Rao Kaviti

Department: Electronics

Semester: I/III/V

Semester: Theory : B.Sc. (H) Electronics, Semester V

Practical : B.Sc. (H) Electronics, Semester V
B.Sc. (H) Electronics, Semester III
B.Sc. (H) Electronics, Semester I

Month		Topics	Course/year	Paper Code/Name
August	Theory	Sem V: Numerical Methods: Floating point, Round-off error, Error propagation, Stability, Programming errors. Solution of Transcendental and Polynomial Equations $f(x)=0$: Bisection method, Secant and Regula Falsi Methods, Newton Raphson method.	B.Sc. (H) Electronics III	DSE II : Numerical Analysis
	Practicals	Semester V: MATLAB simulation software installation to implement Bisection Method using the function $f(x) = 2x^3 - x^2 + 7x + 7$	B.Sc. (H) Electronics III	DSE II : Numerical Analysis

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September	Theory	Sem V: Solution of Transcendental and Polynomial Equations $f(x)=0$: Rate of convergence, General Iteration Methods, Newton's Method for Systems, Method for Complex Roots, Roots of Polynomial Equations. Interpolation and Polynomial Approximations: Taylor Series and Calculation of Functions, Lagrange Interpolation, Newton Divided Difference Interpolation (forward and backward difference formulae), Truncation errors.	B.Sc. (H) Electronics III	DSE II : Numerical Analysis
	Practicals	Sem V: To implement Secant Method using the function $f(x) = x^3 + 2x^2 + x + 1$ to implement Regula falsi method using the function $f(x) = x^3 - x - 1$ to implement Newton Raphson Method $f(x) = 2x^3 - 6x - 7$ Sem V: Understanding and Plotting Vectors. Transformation of vectors into various coordinate systems. 2D and 3D Graphical plotting with change of view and rotation. SEM III Installation of VB IDE editor. Create an HTML document with following formatting -Bold , Italics , underline, colors, Headings , Title, Font, and Font width, Background, paragraph, Line brakes, horizontal line, blinking text as well as marquee text. Create an HTML document with ordered and unordered lists, Inserting images, internal	B.Sc. (H) Electronics III B.Sc. (H) Electronics III B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)-----II	DSE II : Numerical Analysis DSC: Electromag netics SEC III: Front end Web Design and Developme nt

		and external linking. Create an HTML document for displaying the current semester timetable. SEM I Installation of Jupyter Notebook using anaconda on windows, Download anaconda installer, Launch Jupyter Notebook. Create a data frame and perform matrix-like operations on a data Frame. Implement basic array statistical methods (sum, mean, std var, min, max, argmin, argmax, cumsum and cumprod)	B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)___I	GE I: Data Engineering analytics
October	Theory	Semester V: Interpolation and Polynomial Approximations: Curve Fitting: Least square fitting, Curve fitting, Interpolation by Spline functions. Numerical Integration: Trapezoidal Rule, Error bounds and estimate for the Trapezoidal rule, Simpson's Rule, Error of Simpson's rule. Numerical Differentiation: Finite difference method and applications to electrostatic boundary value problems.	B.Sc. (H) Electronics III	DSE II : Numerical Analysis
	Practicals	Sem V: To implement Trapezoidal rule $\int_0^1 x dx$ To implement Simpson's rule Evaluate $\int_0^1 \tan^{-1} x dx$ Sem V: Representation of the Gradient of a scalar field, Divergence and Curl of Vector Fields. Plots of Electric field and Electric Potential due to charge distributions. Plots of Magnetic Flux Density due to current carrying wire.	B.Sc. (H) Electronics III B.Sc. (H) Electronics III	DSE II : Numerical Analysis DSC: Electromag netics

		SEM III Create a website with horizontal and vertical frames. Top horizontal frame needs to show your college's name and logo. Bottom horizontal frame is to be split into two vertical frames. The left frame has hyperlinks to pages related to faculty, courses, student activities, etc. The right frame shows the corresponding webpage based on the link clicked on the left frame. Create a student registration form using HTML which has the following controls and make an interactive content presentation using CSS: 1. Text Box buttons 2. Dropdown box 3. Option/radio buttons. 4. Check boxes 5. Reset and Submit buttons SEM I Create a data frame with a following structure using pandas. <table><tr><th>EMP ID</th><th>EMP NAME</th><th>SALARY</th><th>START</th></tr><tr><td>1</td><td>SATISH</td><td>50000</td><td>01-11-2</td></tr><tr><td>2</td><td>REEYA</td><td>75000</td><td>12-05-2</td></tr><tr><td>3</td><td>ROY</td><td>100000</td><td>22-09-2</td></tr><tr><td>4</td><td>JAY</td><td>45000</td><td>08-01-2</td></tr><tr><td>5</td><td>SERAH</td><td>55000</td><td>06-02-2</td></tr></table> Load pima Indians Diabetes dataset. i. Data cleaning and filtering methods. ii. Implement descriptive and summary statistics. iii. Plot histogram, bar plot, distplot for features of the dataset.	EMP ID	EMP NAME	SALARY	START	1	SATISH	50000	01-11-2	2	REEYA	75000	12-05-2	3	ROY	100000	22-09-2	4	JAY	45000	08-01-2	5	SERAH	55000	06-02-2	B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---II B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---I	SEC III: Front end Web Design and Development GE I: Data Engineering analytics
EMP ID	EMP NAME	SALARY	START																									
1	SATISH	50000	01-11-2																									
2	REEYA	75000	12-05-2																									
3	ROY	100000	22-09-2																									
4	JAY	45000	08-01-2																									
5	SERAH	55000	06-02-2																									
	Mid Term Test	Sem V: Based on Unit I, II Sem V: Based on Unit I, II																										
	Assignment	Presentations based on topics of the curriculum as well as its applications																										
November	Theory	Semester V: Numerical methods for first order differential equations: Euler-Cauchy Method, Heun's Method, Classical Runge Kutta method of fourth	B.Sc. (H) Electronics III	DSE II : Numerical Analysis 																								

		order. Methods for system and higher order equations. Numerical Methods in Linear Algebra: Linear systems $Ax=B$, Gauss Elimination, Partial Pivoting, LU factorization, Doolittle's, Crout's and Cholesky's method. Matrix Inversion, Gauss-Jordon,		
	Practicals	Sem V: To implement Runge Kutta Method Consider an ordinary differential equation $dy/dx = x^2 + y^2$, $y(1) = 1.2$. Find $y(1.05)$ Solve: $x^2 y'' - 6xy' - 18y = 0$ using euler cauchy mehtod Solve the following system of equations:$x + y + z = 2$; $x + 2y + 3z = 5$; $2x + 3y + 4z = 11$ Solve the system of equations using the sedial Method $26x_1 + 2x_2 + 2x_3 = 12.6$ $3x_1 + 27x_2 + x_3 = -14.3$ $2x_1 + 3x_2 + 17x_3 = 6.0$ Obtain the result correct to three decimal places. Sem V: Programs and Contour Plots to illustrate Method of Images Solutions of Poisson and Laplace Equations – contour plots of charge and potential distributions Introduction to Computational Electromagnetics: Simple Boundary Value Problems by Finite Difference/Finite Element Methods. SEM III Crate a webpage for your department with a drop-down navigation menu for faculty, courses, activities etc..Implement the webpage using styles, rules selectors etc, learned in CSS.	B.Sc. (H) Electronics III B.Sc. (H) Electronics III	DSE II : Numerical Analysis DSC: Electromag netics



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		Write event-driven programs in Java Script for the following - Enter a number and on click of a button prints its multiplication table. - print the largest of three numbers entered by the user. - find the factorial of a number entered by the user. - enter a list of positive numbers using the prompt terminated by a zero. find the sum and average of these number. SEM I Load boston housing price dataset and perform. - data cleaning and filtering method on the dataset - implement descriptive and summary statistics - plot displot for target variable and heatmap for the correlation in dataset. For Superstore sales data, perform time series Data Analysis.	B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P) II B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)	SEC III: Front end Web Design and Developme nt GE I: Data Engineering analytics
December	Theory	Semester V: Iterative Methods: Gauss-Seidel Iteration, Jacobian Iteration. Matrix Eigenvalue: Power Method.	B.Sc. (H) Electronics III	DSE II : Numerical Analysis
	Practicals	SEM V: To implement Newton's Forward Interpolation SEM III Create a student registration form using text radio button, check box, dropdown box, text field and all other required HTML elements. Customize the CSS and JavaScript to input and validate all date. Create function to perform validation of each element, example: - Roll number is a 7- digit numeric value. - Name should be an alphabetical value(String) - Non-empty and valid fields like DOB	B.Sc. (H) Electronics III B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P) II	DSE II : Numerical Analysis SEC III: Front end Web Design and Developme nt



**SEMESTER WISE
TEACHING PLAN
SRI VENKATESWARA COLLEGE
August-December, 2023**

Name of the Faculty: Dr Rahul

Department: Electronics

Semester: Theory: B.Sc(H) Electronics, Sem V

Practical: B.Sc(H) Electronics, Sem V

SEC: Front End Web Design and Development, Sem III, B.Sc/B.com/BA

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	Unit-1 Discrete Time systems: Discrete sequences, linear coefficient difference equation, Representation of DTS	B.Sc(H)	DSE-1/Digital Signal Processing
	Practicals:	SEM-V Generation of unit sample sequence, unit step, ramp function, discrete time sequence, real sinusoidal sequence. SEM-III (SEC) Create an HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line	B.Sc(H)	DSE-1/Digital Signal Processing
			B.Sc/B.com/BA	SEC
SEPTEMBER	Theory:	Stability and causality, frequency domain representations and Fourier transform of DT sequences. Unit-2 Z-Transform: Definition and properties, Inverse Z Transform and stability. Parsevals Theorem and applications.	B.Sc(H)	DSE-1/Digital Signal Processing
	Practicals:	SEM-V Generate and plot sequences over an interval. Given $x[n]$, write program to find $X[z]$. SEM-III Create an HTML document with Ordered and Unordered lists, Inserting Images, Internal and External linking • Create an HTML document for displaying the current semester's timetable. • Create a website with horizontal and vertical frames. Top horizontal frame needs to show your college's name and logo. Bottom horizontal frame is to be split into two vertical frames. The left frame has	B.Sc(H)	DSE-1/Digital Signal Processing
			B.Sc/B.com/BA	SEC


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		hyperlinks to pages related to faculty, courses, student activities, etc. The right frame shows the corresponding webpage based on the link clicked on the left frame.		
OCTOBER	Theory:	System Function: signal flow graph, its use in representation and analysis of Discrete Time Systems. Techniques of representations. Matrix generation and solution for DTS evaluations. Unit-3 Discrete Fourier Transform: DFT assumptions and Inverse DFT. Matrix relations, relationship with FT and its inverse, circular convolution	B.Sc(H)	DSE-1/Digital Signal Processing
	Practicals:	SEM-V Fourier Transform, Discrete Fourier Transform and Fast Fourier Transform Design of a Butterworth analog filter for low pass and high pass. SEM-III • Create a student registration form using HTML which has the following controls and make an interactive content presentation using CSS.: I. Text Box II. Dropdown box III. Option/radio buttons IV. Check boxes V. Reset and Submit button • Create a webpage for your department with a drop-down navigation menu for faculty, courses, activities, etc.. Implement the webpage using styles, rules, selectors etc. learned in CSS	B.Sc(H)	DSE-1/Digital Signal Processing
			B.Sc/B.com/BA	SEC
	Assignment	As per the syllabus covered		
NOVEMBER	Theory	DFT theorems, DCT. Computation of DFT. FFT Algorithms and processing gain, Discrimination, interpolation and extrapolation. Gibbs phenomena. FFT of real functions interleaving and resolution improvement. Word length effects. Unit-4 Digital Filters: Analog filter review. System function for IIR and FIR filters, network representation. Canonical and decomposition networks.	B.Sc(H)	DSE-1/Digital Signal Processing
	Practicals:	SEM-V Design of a Butterworth analog filter for low pass and high pass. Design of digital filters. SEM-III Write event-driven programs in JavaScript for the following: • Enter a number and on click of a button print its multiplication table. • Print the largest of three numbers entered by the user.	B.Sc(H)	DSE-1/Digital Signal Processing
			B.Sc/B.com/BA	SEC


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	- Find the factorial of a number entered by the user. - Enter a list of positive numbers using the prompt terminated by a zero. Find the sum and average of these numbers.		
Mid Term Test:		As per the syllabus covered	

DECEMBER	Theory:	IIR filter realization methods and their limitations. FIR filter realization techniques. Discrete correlation and convolution; Properties and limitations	B.Sc(H)	DSE-1/Digital Signal Processing
	Practicals:	SEM-V Design of digital filters. SEM-III Create a student registration form using text, radio button, check box, drop down box, text field and all other required HTML elements. Customize the CSS and javascript to input and validate all data. Create functions to perform validation of each element, example: a. Roll number is a 7-digit numeric value b. Name should be an alphabetical value (String) c. Non-empty and valid fields like DOB	B.Sc(H)	DSE-1/Digital Signal Processing
			B.Sc/B.com/BA	SEC

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Name of the Faculty: PROF MEENAKSHI BHARAT

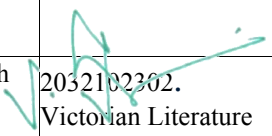
Department: ENGLISH

Semester: I/III/V ODD 2023-24

Month		Topics	Course	Paper Code/Name
JULY	Theory	Introduction to Modernism, the Novel form, the Modern novel Background of Colonialism Postcolonial Theory	B.A.(H) English III Semester V	12031502 British literature: The Early 20 th Century Paper 12
		Introduction to Feminism and Women's Writing	B.A.(H) English III Semester V	12031501 Women's Writing Paper 11
		Introduction to Victorian Literature	B.A.(H) English III Semester III	2032102302. Victorian Literature
		Introduction to the fiction genre and its aspects. Understanding it.	BA Programme III	2035001004 GE Language Course
		Introduction to the Novel and the Victorian Age and its literature	BA Programme Semester I	2032201101 Minor
AUGUST	Theory	Short Story form The Yellow Wallpaper	BA (H) English III Semester V	12031501 Women's Writing Paper 11
		Introduction to Joseph Conrad Part I of Joseph Conrad <i>Heart of Darkness</i>	B.A.(H) English III Semester V	12031502 British literature: The Early 20 th Century (Paper 12)
		Introduction to Jane Austen	B.A.(H) English III Semester III	2032102302. Victorian Literature
		Kumar E Santhosh	BA Programme III	GE Language through 2035001004.


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		Jane Austen and her writing	BA Programme I	2032201101 English Minor
SEPTEMBER	Theory	Rokkeya Rukshana's Dream	BA (H) English III Semester V	12031501 Women's Writing Paper 11
		Part II of <i>Heart of Darkness</i>	B.A.(H) English III Semester V	12031502 British literature: The Early 20 th Century (Paper 12)
		Pride and Prejudice Chaps Text Analysis	B.A.(H) English III Semester III	2032102302. Victorian Literature
		Rohinton Mistry	BA Programme III	2035001004 GE Language through Literature
		Start Pride and Prejudice Textual analysis and reading	BA Programme Semester I	2032201101 English Minor
	<u>Assignment</u>	Colonialism and Heart of Darkness	B.A.(H) English III Semester V	12031502 Paper 12 British Literature Early 20 th Century
OCTOBER	Theory	Part 3 of <i>Heart of Darkness</i>	B.A.(H) English III	12031502 British literature: The Early 20 th Century (Paper 12)
		Fefu and her Friends Irene Fornes	B.A.(H) English Semester V	12031501 Women's Writing Paper 11
		Pride and Prejudice Reading Analysis of themes, style and technique	BA (H) English Semester III	2032102302. Victorian Literature


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	Umashankar Joshi	BA Programme III	2035001004 GE Language through Literature
	JA and the developing tradition Chapters 16-35	BA programme I Semester I	2032201101 English as Minor
<u>Mid Term Test</u>			
NOVEMBER	Reading <i>Heart of Darkness</i> from different critical perspectives and placing it in context.	B.A.(H) English III Semester V	12031502 British literature: The Early 20 th Century (Paper 12)
	Fefu and her Friends contd. Concluding remarks	B.A.(H) English III Semester V	12031501 Women's Writing Paper 11
	Concluding remarks on Victorian literature	BA (H) English III Semester III	2032102302. Victorian Literature
	Concluding remarks on understanding fiction and parallel readings	BA Programme III	2035001004 GE Language through Literature
	Concluding remarks on Pride and Prejudice	B A Programme I Semester I	2032201101 English Minor




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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023

Name of the Faculty: professor Ratna Raman

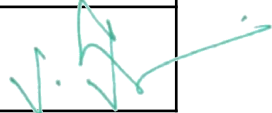
Department:

English

Semester: I/III/V

July– December 2023

		Topics	Course	Paper
July	Theory	Introduction to Literary Studies Critical essays by AN Kaul and Prince	BA (H) English Sem I	DSC 1
		Indian Classical Literature ‘Texts in Ancient India	BA (H) English Sem I	DSC 3
		Introduction to Literary Criticism	BA (H) English Sem III	DSC9
		Introduction to the English Novel	BA (H) English Sem III	DSC 8
		Introduction to the history of women’s poetry writing in the 19 th and 20 th century: Simin Behbahani	BA (H) English Sem V	D 11:
		Exploring links between language, literature, culture, and society ; The role of poetry Started with a poem by Parul K akkar : Shav Vahini Ganga	BA program Semester I	GE Language: English Language Through Literature I
		Literature and Human Rights How do writers engage with the larger world?	Combined sections Sem III	GE English 4: Human Rights


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		Topics	Course	Paper
	Tutorials	1. Critical essays on women poets 2. Short piece on Harper Lee	Eng (H)Sem V GE 4: Human Rights Semester III	D GE 4:Literature and Human Rights
		-	-	-

		Topics	Course	Paper
Aug	Theory	Introduction to the English Novel	BA (H) English Sem I	DSC 1
		Classical Indian Literature The Epics and kavyas	BA (H) English Sem I	DSC 3
		Why do we need literary Criticism?	BA (H) English Sem III	DSC9
		The great novels of the 19 th century	BA (H) English Sem III	DSC 8
		Contemporary poetry in India by women poets Sukirti Rani	BA (H) English Sem V Women's Writing	D 11:
		How does poetry mediate between language, literature, culture, and society The poems of Nissim Ezekiel	BA Program Semester I	GE Language: English Language Through Literature I



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		Topics	Course	Paper
		Literature and Human Rights The take-over of North America by the first world and slavery in Uncle Tom's cabin	Combined sections Semester III	GE 4: literature and Human Rights 2034001011
	Tutorials	1. Women's Writing in the 19 th and 20 th century Emily Dickinson and 19 th century evangelicalism 2. GE 4: Human Rights : discussion of Uncle Tom's cabin	Eng(H) Sem V Semester III	- Eng D11: GE Semester III
		-	-	-

		Topics	Course	Paper
Sep	Theory	Introduction to Literature Why did women begin writing in the 19 th century? Women of leisure? Elizabeth Barrett Browning and the case for poetry	BA (H) English Sem I	DSC 1
		The Mahabharata: text and context: Close reading of the Sabha parva	BA (H) English Sem I	DSC 3
		Schools of Literary Criticism and how they evolved	BA (H) English Sem III	DSC9
		George Eliot and the English Novel Part I of The Mill on the Floss	BA (H) English Sem III	DSC 8

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		Topics	Course	Paper
		Emily Dickinson and Civil war in America	BA (Hons) Women's Writing Sem V	D 11:
		The poetry of D. H Lawrence and poetry in England	BA program Semester I	GE Language: English Language Through Literature I
		Literature and Human Rights in America: Discussion of To Kill a Mockingbird and close textual reading	Combined sections : Semester III	GE 4: Literature and Human Rights 2034001011
	Tutorials IA and CA	Women's Writing in the 20 th century GE 4: Film viewing advice: To kill a Mockingbird	Eng(H) Sem V Semester III	- Eng D11 GE Semester III
		-	-	-

		Topics	Course	Paper
Oct	Theory	Close reading of Pride and Prejudice : Chapters I -XX. Idea of plot, character and theme.	BA (H) English Sem I	DSC 1
		Introduction to Indian Classical Literature: Sabha Parva close readings of the text	BA (H) English Sem I	DSC 3

		Topics	Course	Paper
		Introduction to Literary Criticism through novelist and essayist Virginia Woolf's essay	BA (H) English Sem III	DSC9
		Mill on the Floss Book I and II	BA (H) English Sem III	DSC 8
		20 th century women's poetry Sylvia Plath	BA (H) English Sem V	D 11:
		Maya Angelou Poem and context Detailed discussions, along with other poets speaking of race and gender	BA program Semester I	GE Language: English Language Through Literature I
		Literature and Human Rights Part I of To Kill a Mockingbird	Combined sections Semester III	GE 4: Literature and Human Rights 2034001011
	Tutorials	1) Eunice de Souza	Eng(H) Sem V	- Eng D11:
	IA and CA	2. GE 4: Human Rights Discussion on Racism	Semester III	GE Semester III
		-	-	-

		Topics	Course	Paper
Nov	Theory	Introduction to Literature Discussion of the remaining sections of Pride and Prejudice, and	BA (H) English Sem I	DSC 1


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		Topics	Course	Paper
		the idea of the epistolary novel and the domestic novel		
		Discussion of sections from Karna parva and Bhishma Parva and rounding up.	BA (H) English Sem I	DSC 3
		T.S. Eliot, poet and critic and his role in the tradition of Literary Criticism	BA (H) English Sem III	DSC9
		The remaining sections Of The Mill on The Floss and summing up	BA (H) English Sem III	DSC 8
		20 th century women poets in India: Eunice D'Souza	BA (H) English Sem V	D 11:
		Exploring links between language, literature, culture, and society in the poetry of Gabriel Okara	BA program Sem I	GE Language: English Language Through Literature I
		Literature and Human Rights	Combined sections Semester III	GE 4: Literature and Human Rights 2034001011
	Tutorials	1) Women's Writing in the 19 th and 20 th century	Eng(H) Sem V	- Eng D11:
	IA and CA	GE 4: Human Rights: Review of Book or Film	Semester III	GE 4 Human Rights Semester III
		-	-	-

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: PROF RINA RAMDEV

Department:

Semester : I/III/V

JULY – DECEMBER 2023

		Topics	Course	Paper
JULY	Theory	- Introduction to the social/historical / religious category of Caste	Eng H 3rd Yr	Graphic Narratives
		- _____		
		- Introduction Feminist Theory	Eng H 2nd Yr	Lit Theory
		- _____		
		- Introduction Greek Drama	Eng H 1st Yr	European Classical Literature
		- _____		
		- Introduction to Human Rights and the role played by Literature, Stories, Poems	GE 1st Yr All Hons Sec A	GE Literature & Human Rights
		- _____		
		- Understanding	VAC 1st Yr	
		- IQ vs Emotional Intelligence	All Hons	VAC Emotional Intelligence

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	Tutorials	- Readings on Everyday Caste Violence Newspapers, Reports - _____ - Literature and the Social	- Eng H 3rd Yr - - - - - - GE 1st Yr All Hons Sec A	Eng H 3rd Yr - - - - - - GE 1st Yr All Hons Sec A Literature & Human Rights
	Assignment	- Writing a Thesis Statement	-	-

		Topics	Course	Paper
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AUGUST	Theory	- Introducing the Graphic Novel - _____ Judith Butler Questions on Gender _____ Introducing Antigone _____ Orwell <i>1984</i> Discussion and Chapter Sections _____ Reading The Little Prince	-Eng H 3rd Yr Eng H 2nd Yr Eng H 1st Yr GE 1st Yr All Hons Sec A VAC 1st Yr All Hons	Graphic Narratives Lit Theory European Classical Literature GE Literature & Human Rights VAC Emotional Intelligence
	Tutorials	- Writing a Thesis Statement	- Eng H 3rd Yr	- Lit & Caste
	Assignment	- Writing a Thesis Statement	- Eng H 3rd Yr	- Lit & Caste

		Topics	Course	Paper
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	Theory	- Gardener in the Wasteland: Reading Graphics Visual Grammar, Theory, Scott Mc Cloud - _____ Judith Butler, Simone de Beauvoir _____ Antigone Critical Readings _____ 1984 - Totalitarianism, Political Activism _____ Discussing The Handbook Of Emotional Intelligence	- Eng H 3rd Yr Eng H 2nd Yr Eng H 2nd Yr GE 1st Yr All Hons Sec A 1st Yr All Hons	Graphic Narratives Lit Theory European Classical Literature GE Literature & Human Rights VAC Emotional Intelligence
	Tutorials	- Discussion Dalit Autobiographical Writing	- Eng H 3rd Yr	-Lit & Caste
	Assignment	- Winston, Julia	- GE 1st Yr All Hons Sec A	- GE Literature & Human Rights

		Topics	Course	Paper
OCTOBER	Theory	- Phule, Savitribai Caste Violence, Satyashodhak - _____ Irigaray This Sex which is not one - _____ Greek Comedy and background to Lysistrata _____ Discussing Human Rights in light of 1984 and its prescience _____ Emotional Intelligence and Mental health	- Eng H 3rd Yr Eng H 2nd Yr Eng H 1st Yr- GE 1st Yr All Hons Sec A 1st Yr All Hons	Graphic Narratives Lit Theory European Classical Literature GE Literature & Human Rights VAC Emotional Intelligence
	Tutorials	- Discussion Dalit Aesthetics, Dalit Poetry	Eng H 3rd Yr	Lit & Caste
	Assignment	- The Trial of Chicago 7	- GE 1st Yr All Hons Sec A	GE Literature & Human Rights

		Topics	Course	Paper
NOVEMBER	Theory	- Phule, Thomas Paine, Civil Rights - Summing up - _____ Irigaray and Butler _____ Lysistrata Sexual Politics, Acropolis _____ Summing up 1984 _____ Summing up EQ	Eng H 3rd Yr Eng H 2nd Yr Eng H 1st Yr GE 1st Yr All Hons Sec A VAC 1st Yr All Hons	Graphic Narratives Lit Theory European Classical Literature GE Literature & Human Rights VAC Emotional Intelligence
	Tutorials	- Caste - _____ Newspeak	- Eng H 3rd Yr - - GE 1st Yr All Hons Sec A	Lit & Caste -GE Literature & Human Rights
	Assignment	- Caste - Newspeak	- Eng H 3rd Yr - - GE 1st Yr All Hons Sec A	-Lit & Caste -GE Literature & Human Rights



**SEMESTER WISE
TEACHING PLAN (2023-24)
SRI VENKATESWARA
COLLEGE**

Name of the Faculty: Dr. Nikhil Yadav

Department: English

Semester : I/III/V

Month		Topics	Course	Paper Code/Name
JULY	Theory	Introduction to Empiricism. Empiricism vs Rationalism	BA Hons Eng II	Literary Criticism and Theory- I
		Introduction to Empiricism. Empiricism vs Rationalism	BA Hons Eng III	Literary Criticism and Theory- I
		Introduction to Gender Studies. Concepts in Constructio of gender categories	BA Prog V	SEC - Applied Gender Studies: Media Literacies
	Practicals			
	Tutorials	Readings & Discussion of Background of European Philosophical Traditions	BA Hons Eng III	Literary Criticism and Theory- I
AUGUST	Theory:	Introduction to Hume	BA Eng Hons. II	Literary Criticism and Theory- I
		Introduction to Hume and Burke. Empricism, Aesthetics and the Sublime	BA Eng Hons III	Literary Criticism and Theory- I
		Behaviourism and Constructivism	BA Pgm V	SEC- Applied Gender Studies: Media Literacies
	Practicals:			
	Tutorials:	Discussing Academic Writing, Discussing	BA Hons Eng III	Literary Criticism and Theory-I


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		background context to the concept of Sublime		
SEPTEMBER	Theory:	Reading and Analysis of the prescribed passage for David Hume's Standard of Taste	BA Eng Hons III	Literary Criticism and Theory- I
		Reading and Analysis of the prescribed passage for David Hume's Standard of Taste. Readings from Burke's Beautiful and the Sublime	BA Hons Eng III	Literary Criticism and Theory- I
		Interrogating Masculinities- A historical overview	BA Prog V	SEC - Applied Gender Studies: Media Literacies



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	Practicals:			
	Tutorials:	Discussing topics and context. Discussion of methodical writing when attempting Literary Theory	BA Eng Hons II	Literary Theory and Criticism - I SEC-
	<u>Assignment :</u>	Assignment on Hume/ Burke. Assignment on Masculinities. A historical- cultural approach	BA Eng Hons III BA Prog V	Literary Theory and Criticism - I SEC- Applied gender: Media Literacies
OCTOBER	Theory:	Concluding readings from Hume and Burke	BA Eng Hons II BA Prog I	Literary Theory and Criticism- I
		Background context to reading Immanuel Kant's and Schiller's German Idealism. Reading the prescribed passages.	BA Eng Hons III	Literary Theory and Criticism - I
		Readings from Hegel's account of Beauty and Genius		
	Practicals:			
	Tutorials:	Background topics and contexts of Literary Theory and Criticism	BA Hons Eng III	Literary Theory and Criticism - I
	<u>Test</u>	Test on Kant/ Schiller and Hume/Burke	BA Hons Eng III	Literary Theory and Criticism- I
NOVEMBER	Theory:	Introduction and reading on IA Richards and Cleanth Brooks.	BA Hons Eng II	Literary Theory and Criticism - I
		Reading and Analysis Nietzsche, Bakhtin and Brooks	BA Hons Eng III	Literary Theory and Criticism - I
		Concluding the prescribed Readings	BA Prog V	SEC- Applied gender: Media Literacies

	Practicals:			
	Tutorials:	Discussing Previous Years Questions	BA Hons. Eng III	Literary Theory and Criticism - I



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: Dr. Rupleena Bose

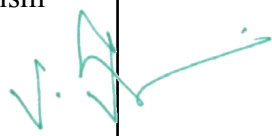
Department: English

Semester : II/V

AUG-DEC 2024

		Topics	Course	Paper
AUG-SEP T	Theory	Mrs dalloway and Woolf's city. The city after World War 1	ENG SEM 5	Modernism
	Tutorials	NA	-	-
	Assignment	Na	-	-

		Topics	Course	Paper
SEPT-DE C	Theory	Mrs Dalloway and Modernism in wriitng. Septimus	ENG sem 5	Modernism


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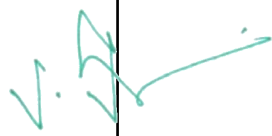
		Warren Smith and war trauma. Stream of Consciousness		
	Tutorials	-	-	-
	Assignment	-	-	-

		Topics	Course	Paper
OCT-DEC	Theory	Waiting for Godot, Absurdism, Existentialism Reading the Text in class Post War stasis in Theatre Beckett's play and its resposnes	ENG sem 5	Modernism
	Tutorials		-	-
	Assignment		-	-

		Topics	Course	Paper
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		Topics	Course	Paper
AUG-SEPT	Theory	James Baldwin and first generation of writers on sexuality	ENG SEM 5	DSC INTERROGATING QUEERNESS-
	Tutorials	Intersections-race, gender, in Giovanni's room	-	-
	Assignment	Queerness and Black arts	-	-

		Topics	Course	Paper
SEPT-OCT	Theory	Giovanni's room- Shame, humiliation Room as metaphor	ENG sem 5	Interrogating Queerness
	Tutorials	Watching James Baldwin documentary	-	-
	Assignment	Sappho and Queerness in ancient texts	-	-


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		Topics	Course	Paper
NOV -DEC	Theory	Prosecution, sexuality and memory in Giovanni's room	ENG sem 5	Interrogating Queerness
	Tutorials	Discussing James Baldwin documentary	-	-
	Assignment	Sappho and Queerness in ancient texts	-	-

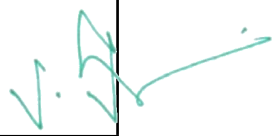
		Topics	Course	Paper
AUG- SEPT	Theory	Introduction to Cinema Adaptations. Shakespeare in Film. City and Cinema. History of Film in India	ENGLISH HONS SEM 4	LIT And Cinema
	Tutorials	Early Adaptations. Discussions on Film Theory. Shakespeare on Screen. History of Film in India.	-do-	-do-


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	Assignment	The Tragic Hero in Macbeth Adaptations		
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		Topics	Course	Paper
OCT -NOV	Theory	City, Genres and Maqbool as Shakespearan Text. Ranjani Mazumdar's Bombay Cinema	ENG SEM 4	LIT and Cinema
	Tutorials	Watching Maqbool. Discussions Scene by Scene of Film Adaptations. Madhav Prasad and Hindi Film	-do-	-do-
	Assignment	Reading first drafts of Assignment given	- do	-do-

		Topics	Course	Paper
NOV-DEC	Theory	KUROSAWA AND Shakesperan Tragic Heros. Set, Scene, Design	ENG Sem 4	Lit and Cinema


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		in Throne of Blood Language of Black and White Japanese War film and Kurosawa		
	Tutorials	City and cinema versus Shakespearan adapions set in medieval times	Eng Sem 4	-do-
	Assignment		- do	-do

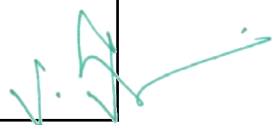
		Topics	Course	Paper
AUG-SEP T	Theory	Critical Reading of DICKENS	ENG SEM 4	VICTORIAN LIT
	Tutorials	DICKENS AND INDUSTRIAL REV.	-	-
	Assignment		-	-

		Topics	Course	Paper
SEPT-OC T	Theory	GREAT EXPECTATIONS	ENG SEM 4	VICTORIAN LIT

		CHPTERS 1-20		
	Tutorials	VICT PERIOD AND WOMEN	-	-
	Assignment	VICTORIAN ENGLAND AND DISEASE	-	-

		Topics	Course	Paper
OCT-NO V	Theory	GREAT EXPECTATIONS-2 0 onwards . ENDING AND BILDUNGSROMA N	ENG Sem 4	VICT. LIT
	Tutorials	DOMESTICITY and VICTORIAN LIT	-	-
	Assignment	Domesticity, Jane Eyre and Heroines of the period	-	-

		Topics	Course	Paper
AUG-SEP T	Theory	ELTL – Intro to Writing Writing Book Reviews	BCOM Sem 2	ELTL


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	Tutorials	Critical Reading of Texts. Analysis.	-	-
	Assignment	DISCUSS one film reviewed through your eyes	-	-

		Topics	Course	Paper
SEPT-OC T	Theory	THEORY- Reading Drama. Retelling in Lit Texts	BCOM Sem 2	ELTL
	Tutorials	Understanding Drama	-	-
	Assignment	Writing a note on drama and film adaptations	-	-

		Topics	Course	Paper
NOV - DEC	Theory	Reading Newspaper Articles. Non fiction pieces and style of writing	BCOM sem 2	ELTL
	Tutorials	Book review writing skills	-	-

	Assignment	Film Review and Book Review. Adapations of books	-	-
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		Topics	Course	Paper
AUG-Sep t	Theory	Individual and Society- WAR and Violence. Poetry of the War . Sasson, glory war poets	GE sem 2	ELTL
	Tutorials		-	-
	Assignment		-	-

		Topics	Course	Paper
SEPT-OC T	Theory	Individual and Society- Gordimer Diaspora and Food Memory and Diaspora	GE sem 2	Individual and Society


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	Tutorials		-	-
	Assignment		-	-

		Topics	Course	Paper
NOV-DE C	Theory	Individual and Society- Barthes symbolism Globalisation Satire	GE sem 2	Indovidual and Society
	Tutorials		-	-
	Assignment		-	-



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**SEMESTER WISE
TEACHING PLAN
ODD SEMESTER 2023-24
SRI VENKATESWARA
COLLEGE**

Name of the Faculty: DEBARATI SEN

Department: ENGLISH

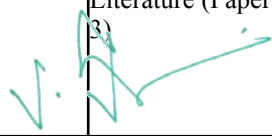
Semester: I/III/V

Month		Topics	Course	Paper Code/Name
JULY	Theory	Introduction to Sanskrit <i>Kavya</i> and <i>Natyashastra</i> . Introduction to Vyasa's Mahabharata Introduction to Kalidasa's Abhijnanasakuntalam.	B.A.(H) English I yr.	Indian Classical Literature (Paper DSE 3)
		Introduction to Homer, the genre of the epic and epic conventions. Introduction to the larger idea of European Classical Literature	B.A.(H) English I yr.	European Classical Literature (Paper DSE 2)
		Introduction to 19th Century European Realism Introduction to Balzac	B.A.(H) English II yr	DSE 3: 19th Century European Realism
		Introduction to Modernism Introduction to W.B.Yeats	B.A.(H) English III yr	British literature: The Early 20 th Century (Paper 12)
		Introduction Reading 1	BA P GE Lang Sem III Sec A	GE Language: English Language Through Literature-II (Section A)
		Introduction to conventions of Detective Literature and Bengali Detective Literature	BA P ENG DSC Sem V	ENG DSC
		Introduction to Romantic Literature	BA P Eng Minor Sem III	English Minor: DSC 3-Romantic Literature
		Introduction to Indian Classical Literature	BA P Eng Major Sem I BA P Eng Major Sem I	English Major: DSC-Indian Classical Literature
AUGUST	Theory	Analysis of Vyasa's Mahabharata Sec (a)+Sec (b). Analysis of Kalidasa's Abhijnanasakuntalam acts 1-2 with criticism.	B.A.(H) English I yr	Indian Classical Literature (Paper DSE 3)

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		Books 1-5 of Odyssey	B.A.(H) English I yr.	European Classical Literature (Paper DSE 2)
		Part 1 of Madame Bovary	B.A.(H) English II yr	DSE 3: 19th Century European Realism
		Leda and the Swan, No Second Troy.	B.A.(H) English III yr	British literature: The Early 20 th Century (Paper 12)
		Reading 2	BA P GE Lang Sem III Sec A	GE Language: English Language Through Literature-II (Section A)
		Introduction William Wordsworth and poems	BA P Eng Minor Sem III	English Minor: DSC 3-Romantic Literature
		Part 1 of The Menagerie	BA P ENG DSC Sem V	ENG DSC
		Act 1 of Shakuntala	BA P Eng Major Sem I BA P Eng Major Sem I	English Major: DSC-Indian Classical Literature
SEPTEMBER	Theory	Analysis of Vyasa's Mahabharata Sec (c) Analysis of Kalidasa's Abhijnanasakuntalam acts 3-4 with criticism.	B.A.(H) English I yr	Indian Classical Literature (Paper DSE 3)


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		Part 2 of Madame Bovary	B.A.(H) English II yr	DSE 3: 19th Century European Realism
		The Second Coming and Sailing to Byzantium. Critical reading of the Yeats's poems.	B.A.(H) English III yr	British literature: The Early 20 th Century (Paper 12)
		Books 6-10 of Odyssey	B.A.(H) English I yr.	European Classical Literature (Paper DSE 2)
		Reading 3	BA P GE Lang Sem III Sec A	GE Language: English Language Through Literature-II (Section A)
		Poems of William Wordsworth Introduction to Coleridge	BA P Eng Minor Sem III	English Minor: DSC 3-Romantic Literature
		Part 2 of The Menagerie	BA P ENG DSC Sem V	ENG DSC
		Act 2 of Shakuntala	BA P Eng Major Sem I BA P Eng Major Sem I	English Major: DSC-Indian Classical Literature
	<u>Assignment</u> <u>October</u>	On selected prose pieces	BA P ENG DSC Sem V	ENG DSC
		Selected sections from prescribed units	B.A.(H) English I yr.	Indian Classical Literature (Paper DSE 3)
OCTOBER	Theory	Critical analysis of Vyasa's Mahabharata Analysis of Kalidasa's Abhijnanasakuntalam act 5 with criticism.	B.A.(H) English I yr.  Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21	Indian Classical Literature (Paper DSE 3)

		Introduction to T.S.Eliot. The Love Song of Alfred J. Prufrock, Sweeney Among the Nightingales	B.A.(H) English IIIyr	British literature: The Early 20 th Century (Paper 12)
		Books 11-15 of Odyssey	B.A.(H) English I yr.	European Classical Literature (Paper DSE 2)
		Part 3 of Madame Bovary	B.A.(H) English II yr	DSE 3: 19th Century European Realism
		Reading 4	BA P GE Lang Sem III Sec A	GE Language: English Language Through Literature-II (Section A)
		Poems of Coleridge	BA P Eng Minor Sem III	English Minor: DSC 3-Romantic Literature
		Part 3 of The Menagerie	BA P ENG DSC Sem V	ENG DSC
		Act 3 of Shakuntala	BA P Eng Major Sem I BA P Eng Major Sem I	English Major: DSC-Indian Classical Literature
	<u>Mid Term Test</u> <u>November</u>	On selected prose pieces	BA P ENG DSC Sem V	ENG DSC
		Selected sections from prescribed units	B.A.(H) English I yr.	Indian Classical Literature (Paper DSE 3)
	Theory:	Analysis of Vyasa with a critical perspective Critical analysis of Kalidasa's Abhijnanasakuntalam	B.A.(H) English I yr	Indian Classical Literature (Paper DSE 3)
NOVEMBER		Hollow Men . Analysing the poems critically.	B.A.(H) English IIIyr	British literature: The Early 20 th Century (Paper 12)
		Critical Perspective on Odyssey	B.A.(H) English I yr	European Classical Literature (Paper DSE 2)

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DECEMBER		Critical Perspective on Madame Bovary	B.A.(H) English II yr	DSE 3: 19th Century European Realism
		Reading 5	BA P GE Lang Sem III Sec A	GE Language: English Language Through Literature-II (Section A)
		Introduction and poems of Blake	BA P Eng Minor Sem III	English Minor: DSC 3-Romantic Literature
		Part 4 of The Menagerie	BA P ENG DSC Sem V	ENG DSC
		Act 4 & 5 of Shakuntala	BA P Eng Major Sem I BA P Eng Major Sem I	English Major: DSC-Indian Classical Literature
		Concluding remarks on Kalidasa's Abhijnanasakuntalam	B.A.(H) English I yr	Indian Classical Literature (Paper DSE 3)
		Concluding remarks on the modernist poets	B.A.(H) English III yr	British literature: The Early 20 th Century (Paper 12)
		Concluding remarks on Odyssey	B.A.(H) English I yr.	European Classical Literature (Paper DSE 2)
		Concluding remarks on Madame Bovary	B.A.(H) English II yr	DSE 3: 19th Century European Realism
		Concluding remarks	BA P GE Lang Sem III Sec A	GE Language: English Language Through Literature-II (Section A)
		Concluding remarks on the romantic poets	BA P Eng Minor Sem III	English Minor: DSC 3-Romantic Literature
		Concluding remarks on The Menagerie	BA P ENG DSC Sem V	ENG DSC

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	Concluding remarks on Shakuntala	BA P Eng Major Sem I BA P Eng Major Sem I	English Major: DSC- Indian Classical Literature
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: Dr POOJA SHARMA

Department: English

Semester : I/III/V

Aug – Dec 2023

		Topics	Course	Paper
Aug	Theory 1.	Introduction to Ilango, key elements to consider in the text	BA Hons Eng 1 st Year	DSC 3: Indian Classical Literature
	2.	Introduction to poetry, discussion on why poetry is important, the difficulty and beauty of reading poetry. Discussing Ted Talk on poetry in this context.	BA HONS ENG 1 st YEAR	DSC 1: Introduction to Literary Studies
	3.	Introduction to the queer theory. Discussion on some of the key terms to be used in the paper.	BA Hons Eng 3 rd Year	Paper D7: Interrogating Queerness
	4.	Introduction to Detective Literature, discussion on key aspects, hard-boiled and traditional versions	BA P Sem V ENG	DSC B4: Detective Literature
	5.	Introduction to the paper, what skills the students are expected to develop, how the CA will be conducted, importance of LSRW	BA Com Prog 1 st Year	GE: Language Through Literature
	6.	Discussion about Human Rights, types of human rights and why this is important in literature	Sem III	GE: Literature and Human Rights


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	7.	Understanding Victorian England, Socio-economic developments of the time and their impact on literature	BA P, Sem III	Eng Major: Victorian Literature
	8.	Introduction to the paper and Units 3 & 8 – Hindi & Urdu, Sindhi & Gujarati	BA P Sem V	GE: Readings on Indian Diversities and Literary Movements
	Tutorial	Making students understand about CA and the modalities to be followed. Explaining the pattern of activities to be conducted over the semester. Assignment question given.	Sem III	GE: Literature and Human Rights

		Topics	Course	Paper
Sept	Theory			
	1.	Beginning close reading of the text, discussing key elements, themes etc	BA Hons Eng 1 st Year	DSC 3: Indian Classical Literature
	2.	Beginning close reading of the text. First poem John Milton's On His Blindness. Discussing key themes, literary devices etc.	BA HONS ENG 1 st YEAR	DSC 1: Introduction to Literary Studies
	3.	Discussion Mahabharata, Udyoga Parva, character of Shikhandin and their journey. Beginning close reading of Suniti Namjoshi, The Mothers of Maya Diip.	BA Hons Eng 3 rd Year	Paper D7: Interrogating Queerness
	4.	Close reading of The Murders in the Rue Morgue, discussing key stylistic techniques	BA P Sem V ENG	DSC B4: Detective Literature
	5.	Understanding poetry, discussion on how to read poetry	BA Com Prog 1 st Year	GE: Language Through Literature

	6.	Introduction to 1984 and George Orwell, discussing key themes relevant to Human Rights	Sem III	GE: Literature and Human Rights
	7.	Introduction to Charles Dickens as Victorian writer, his works and the themes he addresses	BA P, Sem III	Eng Major: Victorian Literature
	8.	Key points of Amrit Rai's essay, close reading of Amir Khusrau	BA P Sem V	GE: Readings on Indian Diversities and Literary Movements
	Tutorial	Activity 1 in class for CA: Importance of Human Rights	Sem III	GE: Literature and Human Rights

		Topics	Course	Paper
Oct	Theory			
	1.	Close reading of the text, discussion on Akam and Puram forma of poetry, indentifying these in the text	BA Hons Eng 1 st Year	DSC 3: Indian Classical Literature
	2.	Close reading of poem William Wordsworth: 'Composed Upon Westminster Bridge' and Rabindranath Tagore: 'Where the Mind is Without Fear'.	BA HONS ENG 1 st YEAR	DSC 1: Introduction to Literary Studies

		Discussing key themes, literary devices etc.		
	3.	Discussing kafis of Madho Lal Hussein, their life and intersections with queerness. Close reading of Suniti Namjoshi, The Mothers of Maya Diip.	BA Hons Eng 3rd ^d Year	Paper D7: Interrogating Queerness
	4.	Discussing the characters in the story and their impact on reader. Characterisation of the detective.	BA P Sem V ENG	DSC B4: Detective Literature
	5.	Practicing prose comprehension	BA Com Prog 1 nd Year	GE: Language Through Literature
	6.	Close reading of the important parts of 1984	Sem III	GE: Literature and Human Rights
	7.	Close reading of Great Expectations, discussion on key characters and important moments in the novel	BA P, Sem III	Eng Major: Victorian Literature
	8.	Close reading of Lajwanti by RS Bedi and Hindi by Raghuvir Sahay	BA P Sem V	GE: Readings on Indian Diversities and Literary Movements
	Tutorial	Activity 2: Presentation on the favourite text in the paper	Sem III	GE: Literature and Human Rights

		Topics	Course	Paper
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Nov	Theory			
	1.	Close reading of the text, discussing the idolisation of Kannagi, her journey from a woman to deity	BA Hons Eng 1 st Year	DSC 3: Indian Classical Literature
	2.	Close Reading of Emily Dickinson: '341 After Great Pain' and the essay 'Versification and Poetic Syntax',	BA HONS ENG 1 st YEAR	DSC 1: Introduction to Literary Studies
	3.	Works of Rangeen, Insha and Jan. Intersections with queerness. Discussing various models presents in MoM, the symbolic relevance and how the author defies norms and genres.	BA Hons Eng 3 rd Year	Paper D7: Interrogating Queerness
	4.	Discussion about Edgar Allan Poe, his style of writing and contribution to detective fiction	BA P Sem V ENG	DSC B4: Detective Literature
	5.	Practicing drama comprehension	BA Com Prog 1 st Year	GE: Language Through Literature
	6.	Close reading of 1984, discussion of key characters and dystopian literature	Sem III	GE: Literature and Human Rights
	7.	Discussing Great Expectations as a mirror of Victorian society	BA P, Sem III	Eng Major: Victorian Literature
	8.	Key points of essays by Sitanshu Yashchandra & Asani	BA P Sem V	GE: Readings on Indian Diversities and Literary Movements



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	Tutorial	Activity 3: Reimagining text	Sem III	GE: Literature and Human Rights
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		Topics	Course	Paper
Dec	Theory			
	1.	Discussion on themes of war, kingship etc. Discussing possible questions and resolving doubts.	BA Hons Eng 1 st Year	DSC 3: Indian Classical Literature
	2.	Discussing possible questions, addressing doubts etc	BA HONS ENG 1 st YEAR	DSC 1: Introduction to Literary Studies
	3.	Discussions on possible questions and addressing any doubts	BA Hons Eng 3 rd Year	Paper D7: Interrogating Queerness
	4.	Discussions on possible questions and addressing any doubts	BA P Sem V ENG	DSC B4: Detective Literature
	5.	Practicing previous year question papers	BA Com Prog 1 st Year	GE: Language Through Literature
	6.	Discussion on possible questions, resolution of doubts	Sem III	GE: Literature and Human Rights
	7.	Discussion on possible questions, resolution of doubts	BA P, Sem III	Eng Major: Victorian Literature

	8.	Discussion on possible questions, resolution of doubts	BA P Sem V	GE: Readings on Indian Diversities and Literary Movements
	Tutorial	Collection of assignments, pending activities etc	Sem III	GE: Literature and Human Rights



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: Aman Nawaz

Department: English

Semester : I/III/V

July-November 2023

		Topics	Course	Paper
July	Theory	Introduction to Sigmund Freud “The Structure of the Unconscious, the Id, the Ego and the Superego”	B.A English Honours Sem: V	Semester 5 Paper 12: British Literature: The Early 20th Century Readings

		Topics	Course	Paper
August	Theory	Albert Camus, (i) Absurdity and Suicide (ii) The Myth of Sisyphus	B.A English Honours Sem: V	British Literature: The Early 20th Century

		Topics	Course	Paper
September	Theory	Virginia Woolf , —On Being Ill in Virginia Woolf	B.A English Honours Sem: V	British Literature: The Early 20th Century Readings


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		Topics	Course	Paper
October	Theory	D.H. Lawrence Morality and the Novel		British Literature: The Early 20th Century Readings

		Topics	Course	Paper
November	Theory	Raymond Williams, Metropolit an Perceptions and the Emergence of Modernism	-	British Literature: The Early 20th Century Readings



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2023

Name of the Faculty: Aman Nawaz

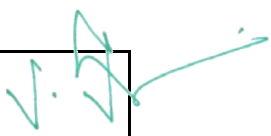
Department: English

Semester : I/III/V

July- November

		Topics	Course	Paper
July	Theory	Introduction to Dalit Literature	B.A English Honours Sem: V	DSE Dalit Literature

		Topics	Course	Paper
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August	Theory	Dalit Writings as Testimonios	B.A English Honours Sem: V	DSE Dalit Literature
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		Topics	Course	Paper
September	Theory	Introduction to Joothan	B.A English Honours Sem: V	DSE Dalit Literature

		Topics	Course	Paper
October	Theory	Ajay Navaria's Yes Sir and other short stories	B.A English Honours Sem: V	DSE Dalit Literature

		Topics	Course	Paper
November	Theory	Dalit literature and its aesthetics	B.A English Honours Sem: V	DSE Dalit Literature



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: Aman Nawaz

Department: English

Semester : I/III/V

July- November


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		Topics	Course	Paper
July	Theory	Reading language and culture	ELTL	Bcom Language II

		Topics	Course	Paper
August	Theory	Reading gaps and barriers in communication	ELTL	

		Topics	Course	Paper
September	Theory	Dialogue writing Understanding speech and writing speech	ELTL	

		Topics	Course	Paper
October	Theory	Previous semester question papers and doubt clearing sessions	ELTL	



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Name of the Faculty:

Department: English

Semester : I/III/V

July-November

		Topics	Course	Paper
July	Theory	Understanding Ethics	VAC	Ethics and Culture

		Topics	Course	Paper
August	Theory	Understanding Culture	VAC	Ethics and Culture

		Topics	Course	Paper
September	Theory	Everyday Ethical dilemmas	VAC	

		Topics	Course	Paper
October	Theory	Working with groups and ethics	VAC	Ethics and culture


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		Topics	Course	Paper
November	Theory	Questions and answers PYQ	VAC	Ethics and culture



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SRI VENKATESWARA COLLEGE**

2023

Name of the Faculty:

Department: English

Semester : I/III/V

July-November 2023

		Topics	Course	Paper
July	Theory	Introduction to 18 th century and romantic literature	Minor Romantic Literature	BA prog English Minor

		Topics	Course	Paper
August	Theory	Wordsworth's Poems	Minor Romantic Literature	BA prog English Minor

		Topics	Course	Paper
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September	Theory	Keats poems	Minor Romantic Literature	BA prog English Minor
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		Topics	Course	Paper
October	Theory	Shelley's Poems	Minor Romantic Literature	BA prog English Minor

		Topics	Course	Paper
November	Theory	Previous years questions and doubt clearing	Minor Romantic Literature	BA prog English Minor

Aman Nawaz
Assistant Professor

Aman Nawaz

V. B.

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SEMESTER WISE TEACHING PLAN
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2023

Name of the Faculty: N.Tejaswini

Department: English

Semester: I/III/V

August – Dec 2024

		Topics	Course	Paper
August	Theory	• Introduction to Romantic Period • Life and works of Shelly	BA (H) English Sem V	DSC 7: Romantic Literature
		• Introduction to Graphic Narratives • Understanding Comics by Scott McCloud	BA (H) English Sem V	D1: Graphic Narratives
		• Namdeo Dhasal “Hunger”	BA (H) English Sem V	D2: Literature and Caste
		• Introduction to Euro Realism	BA (H) English Sem V	DSE 3: 19 th Century European Realism
		• Understanding Drama	BA	GE Language: English Language Through Literature I
		• Theory of Communication	B.A Prog Sem II	Communicatio n in Everyday Life


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		Topics	Course	Paper
		• Introduction to detective lit • Life and works of Agata Christie	B.A. Prog DSC Sem V	Eng DSC: Detective Literature
		-	B.A.Prog Sem I	English Major: Indian Classical Literature
		• Introduction to Gender Studies in Indian Media	SEC Sem V	SEC: Applied Gender Studies: Media Literacies
	Tutorials	DSC 7: Romantic Literature	-	Eng (H) Sem III
	Assignment	-	-	-

		Topics	Course	Paper
September	Theory	• Shelly “Ode to the west wind”	BA (H) English Sem V	DSC 7: Romantic Literature
		• Art Spiegelman Life and works • Socio Historical and Political context • Germany and Russia clash over territories in Poland during World War II	BA (H) English Sem V	D1: Graphic Narratives
		• Namdeo Dhasal “Mandakini Patil”	BA (H) English Sem V	D2: Literature and Case

		Topics	Course	Paper
		• Novel as a historical documentation • Balzac's works • France after Revolution	BA (H) English Sem V	DSE 3: 19 th Century European Realism
		• Understanding Drama • Reading "Sita"	BA	GE Language: English Language Through Literature I
		• Listening Skills	B.A Prog Sem II	Communicatio n in Everyday Life
		• Agatha Christie "A murder is announced" • Understanding the setting and context of the story	B.A. Prog DSC Sem V	Eng DSC: Detective Literature
		-	B.A.Prog Sem I	English Major: Indian Classical Literature
		• Understanding Gendered roles in Indian media	SEC Sem V	SEC: Applied Gender Studies: Media Literacies
	Tutorials	DSC 7: Romantic Literature	-	Eng (H) Sem III
	Assignment	-	-	-

		Topics	Course	Paper
October	Theory	- John Keats Life and Work - Ode to Nightingale	BA (H) English Sem V	DSC 7: Romantic Literature
		- Reading and discussing the text Part 1 - Motifs and Symbols	BA (H) English Sem V	D1: Graphic Narratives
		- N D Rajkumar “My son wants me to buy him a toy car” - You my demon who delights in dancing	BA (H) English Sem V	D2: Literature and Caste
		- Old man Griot - Chapter wise Discussion and Analysis - Theme, motifs and symbols	BA (H) English Sem V	DSE 3: 19 th Century European Realism
		- Understanding Drama - Reading “Sita”	BA	GE Language: English Language Through Literature I
		Listening Skills	B.A Prog Sem II	Communicatio n in Everyday Life
		- Chapter wise discussion and analyses - Symbols and Motifs - Lasting effects of WWII	B.A. Prog DSC Sem V	Eng DSC: Detective Literature

		Topics	Course	Paper
		-	B.A.Prog Sem I	English Major: Indian Classical Literature
		Maitreyee Chaudhary “Gender and Advertisement ”	SEC Sem V	SEC: Applied Gender Studies: Media Literacies
	Tutorials	DSC 7: Romantic Literature	-	Eng (H) Sem III
	Assignment	-	-	-

		Topics	Course	Paper
November	Theory	John Keats “Grecian Urn” “Ode to Autumn”	BA (H) English Sem V	DSC 7: Romantic Literature
		- Reading and discussing the text Part 2 - Motifs and Symbols - Post memory and Generational Trauma	BA (H) English Sem V	D1: Graphic Narratives
		Manohar Mauli Biswas “I Shall go to war” “Valmiki”	BA (H) English Sem V	D2: Literature and Caste
		Paternity, women, sex and society, money and power	BA (H) English Sem V	DSE 3: 19 th Century European Realism

		Topics	Course	Paper
		- Understanding Drama - Reading “Sita” Continuation - Momo act (Moder Drama)	BA	GE Language: English Language Through Literature I
		Reading and writing Skills	B.A Prog Sem II	Communication in Everyday Life
		- Chapter wise discussion and analyses - Symbols and Motifs - Lasting effects of WWII - Small town communities, Xenophobia, Identity	B.A. Prog DSC Sem V	Eng DSC: Detective Literature
		-	B.A.Prog Sem I	English Major: Indian Classical Literature
		Maitreyee Chaudhary “Gender and Advertisement”	SEC Sem V	SEC: Applied Gender Studies: Media Literacies
	Tutorials	DSC 7: Romantic Literature	-	Eng (H) Sem III
	Assignment	Home assignment	-	-


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		Topics	Course	Paper
December	Theory	Previous Year question paper discussion	BA (H) English Sem V	DSC 7: Romantic Literature
		- Reading and discussing the text Part 2 - Motifs and Symbols - Post memory and Generational Trauma	BA (H) English Sem V	D1: Graphic Narratives
		Jayant Parmar "The last will of a Dalit poet"	BA (H) English Sem V	D2: Literature and Caste
		Previous Year question paper discussion	BA (H) English Sem V	DSE 3: 19 th Century European Realism
		Previous Year question paper discussion	BA	GE Language: English Language Through Literature I
		Previous Year question paper discussion	B.A Prog Sem II	Communication in Everyday Life
		Previous Year question paper discussion	B.A. Prog DSC Sem V	Eng DSC: Detective Literature
		-	B.A.Prog Sem I	English Major: Indian Classical Literature

		Topics	Course	Paper
		Previous Year question paper discussion”	SEC Sem V	SEC: Applied Gender Studies: Media Literacies
	Tutorials	DSC 7: Romantic Literature	-	Eng (H) Sem III
	Assignment	- home assignments	-	-

N. Tejaswini

V. B.

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SEMESTER WISE TEACHING PLAN
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2023

Name of the Faculty: Dr. Manvi Singh

Department: Dept. of English

Semester : I/III/V

August 2023 – December 2023

		Topics	Course	Paper
AUGUST	Theory	- Introduction to social reforms and women's right	- B.A. (H) English Sem V	Paper: WOMEN'S WRITING
		Introduction to caste and gender	-B.A. (H) English Sem V	Paper: LITERATURE AND CASTE
		William Wordsworth, 'Preface to Lyrical Ballads'	B.A. (H) English Sem III	Paper: ROMANTIC LITERATURE

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		Aspects of canonical literary theory	B.A. (hons) English Sem III	Paper: LITERARY THEORY
		Introduction to short stories	B.A. (H) GE	Paper: GE LITERATURE AND HUMAN RIGHTS
		Vyasa. Selections from The Mahabharata	B.A. (P) English Major Sem IV	Paper: English Major INDIAN CLASSICAL LITERATURE
		-Introduction to the theory of communication, modes of communication, types and levels of communication	SEC Sem III Section A	Paper: PUBLIC SPEAKING IN ENGLISH LANGUAGE AND LEADERSHIP

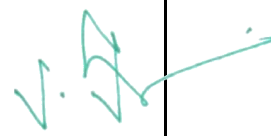
	Tutorials	- Discussion on article writing	- B.A. (P) SEM I SECTION A	Paper: ELTL I
		Discussion on drama	-BA (P) SEM III	Paper: INDIAN CLASSICAL LITERATURE
		-		
		Group Discussion round	-SEC Sem III Section A	Paper: Public Speaking in English Language and Leadership



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SEPTEMBER	Theory	- Mary Wollstonecraft's essay	- B.A. (H) English Sem V	Paper: WOMEN'S WRITING
		Unit 5	B.A. (H) English Sem V	Paper: LITERATURE AND CASTE
		William Blake	B.A. (H) English Sem III	Paper: ROMANTIC LITERATURE
		Antonio gramsci	B.A. (hons) English Sem III	Paper: LITERARY THEORY
		Unit 3	B.A. (H) GE	Paper: GE LITERATURE AND HUMAN RIGHTS
		Unit 1 reading 2	B.A. (P) English	Paper: English Major INDIAN CLASSICAL

			Major Sem IV	LITERATURE
		Leadership skills	SEC Sem III Section A	Paper: PUBLIC SPEAKING IN ENGLISH LANGUAGE AND LEADERSHIP


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	Tutorials	- Discussion on Literary devices	- B.A. (P) SEM I SECTION A	Paper: ELTL I
		Discussion on IKS.	-BA (P) SEM III	Paper: INDIAN CLASSICAL LITERATURE
		Speech round	SEC Sem III Section A	Paper: Public Speaking in English Language and Leadership

		Topics	Course	Paper
OCTOBER	Theory	- Pandita Ramabai's essay	- B.A. (H) English Sem V	Paper: WOMEN'S WRITING
		Unit 5 readings	B.A. (H) English Sem V	Paper: LITERATURE AND CASTE

		William Wordsworth	B.A. (H) English Sem III	Paper: ROMANTIC LITERATURE
		Antonio gramsci	B.A. (hons) English Sem III	Paper: LITERARY THEORY
		Unit 3 stories	B.A. (H) GE	Paper: GE LITERATURE AND HUMAN RIGHTS
		Unit 1 reading 3	B.A. (P) English Major Sem IV	Paper: English Major INDIAN CLASSICAL LITERATURE
		Leadership skills	SEC Sem III Section A	Paper: PUBLIC SPEAKING IN ENGLISH LANGUAGE AND LEADERSHIP

	Tutorials	- Discussion on Fiction writing Discussion on Krishna's Peace Proposal Speech round	- B.A. (P) SEM I SECTION A BA (P) SEM III SEC Sem III Section A	Paper: ELTL I Paper: INDIAN CLASSICAL LITERATURE Paper: Public Speaking in English Language and Leadership


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		Topics	Course	Paper
November	Theory	- Rashsundari Debi's essay	- B.A. (H) English Sem V	Paper: WOMEN'S WRITING
		Sivakami's the grip of change	B.A. (H) English Sem V	Paper: LITERATURE AND CASTE
		Samuel Taylor Coleridge: (i) 'Kubla Khan' (ii) 'Dejection: An Ode'	B.A. (H) English Sem III	Paper: ROMANTIC LITERATURE
		Antonio Gramsci	B.A. (hons) English Sem III	Paper: LITERARY THEORY
		Unit 3 short stories	B.A. (H) GE	Paper: GE LITERATURE AND HUMAN RIGHTS

		Unit 1 reading 3	B.A. (P) English Major Sem IV	Paper: English Major INDIAN CLASSICAL LITERATURE
		Leadership skills	SEC Sem III Section A	Paper: PUBLIC SPEAKING IN ENGLISH LANGUAGE AND LEADERSHIP
	Tutorials	- Discussion on Movie review and film review Discussion on developments in Indian philosophical and social change.	- B.A. (P) SEM I SECTION A BA (P) SEM III	Paper: ELTL I Paper: INDIAN CLASSICAL LITERATURE

		Speech round	SEC Sem III Section A	E Paper: Public Speaking in English Language and Leadership

		Topics	Course	Paper
December	Theory	- Revision	- B.A. (H) English Sem V	Paper: WOMEN'S WRITING
		Sivakami's the grip of change	B.A. (H) English Sem V	Paper: LITERATURE AND CASTE
		Revision	B.A. (H) English Sem III	Paper: ROMANTIC LITERATURE E


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		Revision	B.A. (hons) English Sem III	Paper: LITERARY THEORY
		Unit 3	B.A. (H) GE	Paper: GE LITERATUR E AND HUMAN RIGHTS
		Unit 1 reading 4	B.A. (P) English Major Sem IV	Paper: English Major INDIAN CLASSICAL LITERTAUR E
		Negotiation skills	SEC Sem III Section A	Paper: PUBLIC SPEAKING IN ENGLISH LANGUAGE AND LEADERSHI P

	Tutorials	- Discussion on Comprehension passages Discussion on Indian Poetics Speech round	- B.A. (P) SEM I SECTION A BA (P) SEM III SEC Sem III Section A	Paper: ELTL I Paper: INDIAN CLASSICAL LITERATURE Paper: Public Speaking in English Language and Leadership

Manvi Singh



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: Dr. Ritika Singh

Department: English

Semester: I/III/V

July – November 2023

		Topics	Course	Paper
July	Theory	Introduction to Queer Studies	BA (H) English Sem V	Paper D7: Interrogating Queerness
		Introduction to literary criticism	BA (H) English Sem V	DSE Lit Crit and Theory Sem V
		Defining 'Women's Writing' – self and text	BA (H) English Sem VI	Women's Writing
		Introduction to Sufi and Bhakti poetry	BA (P) Sem V	GE: Readings on Indian Diversities and Literary Movements
		Importance of emotional intelligence	BA (H) English Sem VI	VAC – Emotional Intelligence
		Understanding poetry	BA (P) Sem I	GE Language: English Language

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		Topics	Course	Paper
				Through Literature-I
		Language and meaning	BA (P) Sem III	GE Language: English Language Through Literature-II
		Introduction Understanding Poetry	BA (P) Sem I	BA P Eng Minor
	Tutorials	-	-	-
	Assignment	-	-	-

		Topics	Course	Paper
August	Theory	Reading Judith Halberstam	BA (H) English Sem V	Paper D7: Interrogating Queerness
		Plato and Phaedrus – Philosophy and literature	BA (H) English Sem V	DSE Lit Crit and Theory Sem V
		The Colour Purple – Gender and Race	BA (H) English Sem VI	Women's Writing

		Reading Sufi poem #1 and #2	BA (P) Sem V	GE: Readings on Indian Diversities and Literary Movements
		Fundamentals of Emotional Intelligence	BA (H) English Sem VI	VAC – Emotional Intelligence
		Goodbye Party for Miss Pushpa, and Ezekiel's Night of the Scorpion	BA (P) Sem I	GE Language: English Language Through Literature-I
		Reading Manto's Toba Tek Singh	BA (P) Sem III	GE Language: English Language Through Literature-II
		1. John Milton: 'On His Blindness' 2. William Wordsworth: 'Composed Upon Westminster Bridge'	BA (P) Sem I	BA P Eng Minor
	Tutorials	-	-	-
	Assignment	-	-	-

		Topics	Course	Paper
September	Theory	Audre Lorde, 'The Uses of the Erotic: The Erotic as Power', in <i>Sister/Outsider</i> (CA: Crossing Press, 1984) pp. 53-59. a) Gloria Anzaldua, 'Gestures of the Body', <i>Light in the Dark/Luz en lo Oscuro</i> :	BA (H) English Sem V	Paper D7: Interrogating Queerness
		Plato and Phaedrus – Rhetorics and art	BA (H) English Sem V	DSE Lit Crit and Theory Sem V
		The Colour Purple – Womanism, feminism, and Walker	BA (H) English Sem VI	Women's Writing
		Reading Bhakti poem #1 and #2	BA (P) Sem V	GE: Readings on Indian Diversities and Literary Movements
		Practicing of Emotional Intelligence – mindfulness, meditation, and reading emotions	BA (H) English Sem VI	VAC – Emotional Intelligence

		Writing an article	BA (P) Sem I	GE Language: English Language Through Literature-I
		Reading an article on Selfies	BA (P) Sem III	GE Language: English Language Through Literature-II
		3. Emily Dickinson: '341 After Great Pain' 4. Rabindranath Tagore: 'Where the Mind is Without Fear'	BA (P) Sem I	BA P Eng Minor
	Tutorials	How to structure an answer, make a bibliography	BA (H) English Sem I	(DSC-1): Introduction to Literary Studies
	Assignment	Write a critical analysis of any two poems in the course	BA (H) English Sem I	(DSC-1): Introduction to Literary Studies

		Topics	Course	Paper
October	Theory	Normative masculinities and femininities	BA (H) English Sem V	Paper D7: Interrogating Queerness
		The Speech of Phaedrus;	BA (H) English Sem V	DSE Lit Crit and Theory

				Sem V
		Reading The Colour Purple	BA (H) English Sem VI	Women's Writing
		Sufi and Bhakti as poetry of reform and resistance	BA (P) Sem V	GE: Readings on Indian Diversities and Literary Movements
		Boundary setting, and social awareness	BA (H) English Sem VI	VAC – Emotional Intelligence
		Reading poetry	BA (P) Sem I	GE Language: English Language Through Literature-I
		Reading an article on Selfies	BA (P) Sem III	GE Language: English Language Through Literature-II
			BA (P) Sem I	BA P Eng Minor
	Tutorials	How to close read an article	BA (P) Sem I	GE Language: English Language Through

				Literature-I
	Assignment	Write a movie review of any recent movie you have seen.	BA (P) Sem I	GE Language: English Language Through Literature-I

		Topics	Course	Paper
November	Theory	Desire and Sexuality	BA (H) English Sem V	Paper D7: Interrogating Queerness
		b) Longinus, From, 'On the Sublime', in <i>The Norton Anthology of Theory and Criticism</i> , ed. Vincent B. Leitch (New York: W. W. Norton & Co., 2001) pp. 138-54.	BA (H) English Sem V	DSE Lit Crit and Theory Sem V
		Critical readings on The Colour Purple	BA (H) English Sem VI	Women's Writing
		Close reading a poem	BA (P) Sem V	GE: Readings on Indian Diversities and Literary Movements

		Practicing emotional intelligence at the workplace	BA (H) English Sem VI	VAC – Emotional Intelligence
		Reading a newspaper article	BA (P) Sem I	GE Language: English Language Through Literature-I
		Reading an article on sustainability	BA (P) Sem III	GE Language: English Language Through Literature-II
		Poetic devices and rhyme in poetry	BA (P) Sem I	BA P Eng Minor
	Tutorials	Feedback and discussion of answers	BA (H) English Sem I	(DSC-1): Introduction to Literary Studies
	Assignment	Feedback and discussion of answers	BA (P) Sem I	GE Language: English Language Through Literature-I



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

2023

Name of the Faculty: Dr. Amrita Sharma

Department: English

Semester : I/III/V

August – December 2023

		Topics	Course	Paper
August	Theory	Introduction to Queer Theory	BA (H) English Semester V	DSE D7: Interrogating Queerness
		Introduction to Mary Shelley	BA (H) English Semester III	DSC 7: Romantic Literature
		Introduction to Harper Lee	BA (H) English Semester III	GE: Literature and Human Rights
		Introduction to American novel and Harper Lee	BA (H) English Semester I	GE: Literature and Human Rights
		Introduction to Indian Epics	BA (P) Semester I	English Major: Indian Classical Literature


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	Readings from Literary Texts	BA (P) Semester I	GE Language: English Language Through Literature
	Introduction to Detective Fiction	BA (P) Semester V	ENG DSC: Detective Literature
	Introduction to Media Techniques	BA (P) Semester V	SEC: Applied Gender Studies: Media Literacies
Practical	Discussion and Writing Exercises on Ethics	BA (H) English Semester III	VAC : Ethics and Culture
Tutorials	Introduction to European Classical Drama	BA (H) English Semester I	DSC 2: European Classical Literature
	Discussion on Prescribed Texts	BA (P) Semester I	English Minor: Introduction to Literary Studies
	Discussion on Language Skills	BA (P) Semester I	GE Language: English Language through Literature

		Discussion on English novels	BA (P) Semester III	GE Language: English Language through Literature
	Assignment	Analysis of European Classical Drama	BA (H) English Semester I	DSC 2: European Classical Literature
		Analysis of prescribed poetry	BA (P) Semester I	English Minor: Introduction to Literary Studies

		Topics	Course	Paper
September	Theory	Discussion on Sappho and her prescribed texts	BA (H) English Semester V	DSE D7: Interrogating Queerness
		Reading <i>Frankenstein</i>	BA (H) English Semester III	DSC 7: Romantic Literature
		Reading <i>To Kill a Mockingbird</i>	BA (H) English Semester III	GE: Literature and Human Rights


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		Reading <i>To Kill a Mockingbird</i>	BA (H) English Semester I	GE: Literature and Human Rights
		Reading Excerpts from <i>Mahabharata</i>	BA (P) Semester I	English Major: Indian Classical Literature
		Reading Literary Texts and their analysis	BA (P) Semester I	GE Language: English Language Through Literature
		A.C. Doyle and his narrative techniques	BA (P) Semester V	ENG DSC : Detective Literature
		Discussions on representation of Gender in Media	BA (P) Semester V	SEC: Applied Gender Studies: Media Literacies
	Practical	Writing Experiences and relating them to Ethics	BA (H) English Semester III	VAC : Ethics and Culture
	Tutorials	Discussion on Aristotle and his ideas	BA (H) English Semester I	DSC 2: European Classical Literature

		Discussion on Indian Literature	BA (P) Semester I	English Minor: Introduction to Literary Studies
		Understanding reviews	BA (P) Semester I	GE Language: English Language through Literature
		Media and Language	BA (P) Semester III	GE Language: English Language through Literature
	Assignment	Analysis of works by Aristotle	BA (H) English Semester I	DSC 2: European Classical Literature
		Analysis of Short Stories	BA (P) Semester I	English Minor: Introduction to Literary Studies

		Topics	Course	Paper
October	Theory	Discussion on Plato and his prescribed texts	BA (H) English Semester V	DSE D7: Interrogating Queerness


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		Themes and Narrative Techniques in <i>Frankenstein</i>	BA (H) English Semester III	DSC 7: Romantic Literature
		Major Themes in <i>To Kill a Mockingbird</i>	BA (H) English Semester III	GE: Literature and Human Rights
		Major Themes in <i>To Kill a Mockingbird</i>	BA (H) English Semester I	GE: Literature and Human Rights
		Narrative Techniques	BA (P) Semester I	English Major: Indian Classical Literature
		Language in Poetry and Drama	BA (P) Semester I	GE Language: English Language Through Literature
		Character Sketch of Sherlock Holmes	BA (P) Semester V	ENG DSC : Detective Literature
		Examples of Gender Representations from Media	BA (P) Semester V	SEC: Applied Gender Studies: Media Literacies

	Practical	Writing on Culture and its Impact	BA (H) English Semester III	VAC : Ethics and Culture
	Tutorials	Discussions on Homer	BA (H) English Semester I	DSC 2: European Classical Literature
		Discussion on novel	BA (P) Semester I	English Minor: Introduction to Literary Studies
		Movie Review	BA (P) Semester I	GE Language: English Language through Literature
		Blog Writing	BA (P) Semester III	GE Language: English Language through Literature
	Assignment	Analysis of Homer's Style	BA (H) English Semester I	DSC 2: European Classical Literature
		Analysis of prescribed texts	BA (P) Semester I	English Minor: Introduction to Literary Studies

		Topics	Course	Paper
November	Theory	Biblical Excerpts and William Shakespeare	BA (H) English Semester V	DSE D7: Interrogating Queerness
		Characters in the novel	BA (H) English Semester III	DSC 7: Romantic Literature
		Racism and Human Rights	BA (H) English Semester III	GE: Literature and Human Rights
		Racism and Human Rights	BA (H) English Semester I	GE: Literature and Human Rights
		Characters in the text	BA (P) Semester I	English Major: Indian Classical Literature
		Reading Popular Fiction	BA (P) Semester I	GE Language: English Language Through Literature
		Plot and Themes	BA (P) Semester V	ENG DSC : Detective Literature

		Theories on Gender	BA (P) Semester V	SEC: Applied Gender Studies: Media Literacies
	Practical	Multiculturalism	BA (H) English Semester III	VAC : Ethics and Culture
	Tutorials	Discussions on prescribed texts	BA (H) English Semester I	DSC 2: European Classical Literature
		Discussions on prescribed texts	BA (P) Semester I	English Minor: Introduction to Literary Studies
		Reading Across Cultures	BA (P) Semester I	GE Language: English Language through Literature
		Reading Gender Narratives	BA (P) Semester III	GE Language: English Language through Literature
	Assignment	Comparative Analysis of texts	BA (H) English Semester I	DSC 2: European Classical Literature

		Comparative Analysis of texts	BA (P) Semester I	English Minor: Introduction to Literary Studies
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		Topics	Course	Paper
December	Theory	Shakespeare and Queerness	BA (H) English Semester V	DSE D7: Interrogating Queerness
		Revision of the novel	BA (H) English Semester III	DSC 7: Romantic Literature
		Human Rights in Contemporary Times	BA (H) English Semester III	GE: Literature and Human Rights
		Human Rights and the Society	BA (H) English Semester I	GE: Literature and Human Rights
		Indian Epics and their relevance	BA (P) Semester I	English Major: Indian Classical Literature
		Writing Memoirs	BA (P) Semester I	GE Language: English Language Through Literature

		Comparative Analysis of Sherlock Homes with other characters	BA (P) Semester V	ENG DSC : Detective Literature
		Understanding the power of Media	BA (P) Semester V	SEC: Applied Gender Studies: Media Literacies
	Practical	Ethics and Culture in Contemporary Times	BA (H) English Semester III	VAC : Ethics and Culture
	Tutorials	Discussion on prescribed texts	BA (H) English Semester I	DSC 2: European Classical Literature
		Discussion on prescribed texts	BA (P) Semester I	English Minor: Introduction to Literary Studies
		Discussion on Diction and Narrative	BA (P) Semester I	GE Language: English Language through Literature
		Discussion on improving functional skills in language	BA (P) Semester III	GE Language: English Language through Literature

	Assignment	Writing course overview	BA (H) English Semester I	DSC 2: European Classical Literature
		Writing course overview	BA (P) Semester I	English Minor: Introduction to Literary Studies



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SRI VENKATESWARA COLLEGE
SEMESTER-WISE TEACHING PLAN (2023-2024)

Teacher Name: Dr. Pankaj Kumar
Semester: I

Department: Environmental Sciences

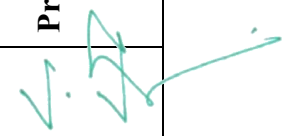
Semester I

Month	Topics	Course	Paper Code/Name
August	Theory	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
	Practical	--	--
	Tutorials	--	--
September	Theory	- Functions of Ecosystem: Physical (energy flow), Biological (food chains, food web, ecological succession), and Biogeochemical (nutrient cycling) processes. Concepts of productivity, ecological pyramids and homeostasis - Types of Ecosystems: Tundra, Forest, Grassland, Desert, Aquatic (ponds, streams, lakes, rivers, oceans, estuaries); importance and threats with relevant examples from India	AEC-I: Environmental Science: Theory into Practice – I

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October	Practical	- Schematic collection of data for depicting ecological pyramids in the College campus - Differentiation of natural and managed ecosystems using Google Earth/Google Map - Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc.	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--
	Theory	- Ecosystem services (Provisioning, Regulating, Cultural, and Supporting); Ecosystem preservation and conservation strategies; Basics of Ecosystem restoration - Land resources: Minerals, soil, agricultural crops, natural forest products, medicinal plants, and forest-based industries and livelihoods; Land cover, land use change, land degradation, soil erosion, and desertification; Causes of deforestation; Impacts of mining and dam building on environment, forests, biodiversity, and tribal communities	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I
	Practical	- Develop a working model of any ecosystem - Use of worksheets to identify structure and function of different ecosystems	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I
November	Tutorials	--	--	--
	Theory	Water resources: Natural and man-made sources; Uses of water; Over exploitation of surface and ground water resources; Floods, droughts, and international & inter-state conflicts over water	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.)	AEC-1: Environmental Science: Theory into Practice – I

		Energy resources: Renewable and non-renewable energy sources; Use of alternate energy sources; Growing energy needs; Energy contents of coal, petroleum, natural gas and bio gas; Agro-residues as a biomass energy source	- B.Com. Prog. - B.A. Prog.	
	Practical	Field visit to Sultanpur National Park - Visit to a solar plant in the College campus - Time-series analysis of natural resource consumption of a given country using publicly available data	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--
	Assignment/Test	Test on the basis of covered syllabus	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
	Theory	Case studies: Contemporary Indian issues related to mining, dams, forests, energy, etc (e.g., National Solar Mission, Cauvery River water conflict, Sardar Sarovar dam, Chipko movement, Appiko movement, Tarun Bharat Sangh, etc)	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
December	Practical	Visit to a rainwater harvesting plant in the College campus	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog.	AEC-I: Environmental Science: Theory into Practice – I


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SRI VENKATESWARA COLLEGE
SEMESTER-WISE TEACHING PLAN (2023-2024)

Teacher Name: Dr. Robin Suyesh
Semester: III/I

Department: Environmental Sciences

Semester III/I

Month		Topics	Course	Paper Code/Name
August	Theory	Definition of Biodiversity; Levels of biological diversity: genetic, species and ecosystem diversity (Sem III)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II
		Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere (Sem I)		AEC-I: Environmental Science: Theory into Practice – I
	Practical	Formulate questionnaire/online surveys for assessment of the impact of climate change on people (Sem III)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II
		- Analysis of achievement of Sustainable Development Goals of any country. - Gain insights of sustainability framework for an industrial activity using activity worksheets (Sem I)		AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--

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September	Theory	- India as a mega-biodiversity nation; Biogeographic zones of India; Biodiversity hotspots; Endemic and endangered species of India; IUCN Red list criteria and categories - Value of biodiversity: Ecological, economic, social, ethical, aesthetic, and informational values of biodiversity with examples; sacred groves and their importance with examples (Sem III)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
		Scope and importance; Concept of sustainability and sustainable development; Brief history of environmentalism (Sem I)		
	Practical	- Sampling of plant and animal biodiversity of the College campus - Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. (Sem III)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
		- Assess air quality index (AQI) of any location using real-time air quality parameters - Develop and maintain compost/vermicompost using biodegradable waste in the College (Sem I)		
	Tutorials	--	--	--


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October	Theory	- Threats to biodiversity: Habitat loss, degradation, and fragmentation; Poaching of wildlife; Man-wildlife conflicts; Biological invasion with emphasis on Indian biodiversity; Current mass extinction crisis (Sem III) - Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards - Nuclear hazards and human health risks (Sem I)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
	Practical	- Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. - Identification of the floral diversity of Delhi and other states. - Determine species location in a given study area . (Sem III) - Repurpose waste for economic and environmental benefits in your college/near by area/colony (submit a small video). (Sem I)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--
November	Theory	Biodiversity conservation strategies: in-situ and ex-situ methods of conservation; National Parks, Wildlife Sanctuaries, and Biosphere reserves; Keystone, Flagship, Umbrella, and Indicator species; Species reintroduction and translocation (Sem III)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry	AEC- II: Environmental Science: Theory into Practice – II

November

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		• Solid waste management: Control measures for various types of urban, industrial waste, Hazardous waste, E-waste, etc; Waste segregation and disposal (Sem I)	Sem I: Biochemistry	AEC-I: Environmental Science: Theory into Practice – I
Practical		• Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. • Acquaintance with open-source databases of biodiversity (Sem III)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
		• Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. • Repurpose waste for economic and environmental benefits in your college/near by area/colony (submit a small video). (Sem I)		--
Tutorials		--	--	--
Assignment/Test		Test on the basis of covered syllabus (Sem III/I)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
		• Case studies: Contemporary Indian wildlife and biodiversity issues, movements, and projects (e.g., Project Tiger, Project Elephant, Vulture breeding program, Project Great Indian Bustard, Crocodile conservation project, Silent	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry	AEC- II: Environmental Science: Theory into Practice – II
Theory				

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		Valley movement, Save Western Ghats movement, etc) (Sem III)	Sem I: Biochemistry	AEC-I: Environmental Science: Theory into Practice – I
		Pollution case studies: Ganga Action plan (GAP), Delhi air pollution and public health issues, Plastic waste management rules, Bhopal gas tragedy, etc (Sem I)		
Practical		Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. (Sem III/I)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
Tutorials		--	--	--
Revision/Doubt Classes		Revision/Doubt Classes on different topics related with curriculum. (Sem III/I)	Sem III: Bioscience, Physics, Botany, Zoology, Biochemistry, History, Sociology, Life sciences, Chemistry Sem I: Biochemistry	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Ram Kishore Yadav

Department: Hindi Department

Semester: I,III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Dhruvshwamini Natak dhrishya 1 Unit 1 Jansanchar aur Rachnatamak lekhan	B.A. (H) Hindi III Sem B.A(H) Economics III Sem B.Sc(H) Mathematics III Sem	DSC- 8 Hindi Natak avam Ekanki AEC Hindi B
	Theory	Hindi sahitya ka itihās unit-1 Unit 1 Hindi aupcharik lekhan B Unit 1 Rachnatmak lekhan	B.A (H) Hindi I Sem B. A(H) Eng sem 1 , B.Sc (H) Botany Sem 1 , B.Sc (H) Zoology sem 1 , B.Sc (H) Chemistry Sem 1 All Hons & Prog	DSC-2 Hindi Sahitya ka Itihās AEC Hindi B SEC
	Theory	Unit -1 Dalit vimarsh	B.A (H) Hindi V Sem	DSE- Ashmitamulak vimarsh aur Hindi Sahitya
September	Theory	Dhruvshwamini Natak dhrishya 1 Unit 1 Jansanchar aur Rachnatamak lekhan	B.A. (H) Hindi III Sem B.A(H) Economics III Sem B.Sc(H) Mathematics III Sem	DSC- 8 Hindi Natak avam Ekanki AEC Hindi B
	Theory Practical	Hindi sahitya ka itihās unit-1 Unit 1 Hindi aupcharik lekhan B Unit 1 Rachnatmak lekhan	B.A (H) Hindi I Sem B. A(H) Eng sem 1 , B.Sc (H) Botany Sem 1 , B.Sc (H) Zoology sem 1 , B.Sc (H) Chemistry Sem 1 All Hons & prog	DSC-2 Hindi Sahitya ka Itihās AEC Hindi B SEC
	Theory	Unit -1 Aadvasi vimarsh	B.A (H) Hindi V Sem	DSE- Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21


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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

				Ashmitamulak vimarsh aur Hindi Sahitya
October	Theory	Dhruvshwamini Natak dhrishya 2 Unit 1 Jansanchar aur Rachnatamak lekhan	B.A. (H) Hindi III Sem B.A(H) Economics III Sem B.Sc(H) Mathematics III Sem	DSC- 8 Hindi Natak avam Ekanki AEC Hindi B
	Theory	Hindi sahitya ka itihās unit-1 Unit 2 Hindi aupcharik lekhan B Unit 2 Rachnatmak lekhan	B.A (H) Hindi I Sem B. A(H) Eng sem 1 , B.Sc (H) Botany Sem 1 , B.Sc (H) Zoology sem 1 , B.Sc (H) Chemistry Sem 1 ALL Hons & Prog	DSC-2 Hindi Sahitya ka Itihās AEC Hindi B SEC
	Theory	Unit -1 Stree vimarsh	B.A (H) Hindi V Sem	DSE- Ashmitamulak vimarsh aur Hindi Sahitya
	Assignment	Murdahiya ka partipadhya Tippān , Praruppan & resume Sakshaktar , Yatra vritant , Vigyapan	B.A (H) Hindi V Sem SEM 1 All Hons & prog B.Sc (H) Math Sem III , B.A (H) Eco & Skt Sem III	DSE- Ashmitamulak vimarsh aur Hindi Sahitya AEC Hindi B AEC Hindi B
	Mid-Term Test	Murdahiya ka partipadhya Tippān , Praruppan & resume Sakshaktar , Yatra vritant , Vigyapan	B.A (H) Hindi V Sem SEM 1 All Hons & prog B.Sc (H) Math Sem III , B.A (H) Eco & Skt Sem III	DSE- Ashmitamulak vimarsh aur Hindi Sahitya AEC Hindi B AEC Hindi B
November	Theory	Dhruvshwamini Natak dhrishya 2 Unit 1 Jansanchar aur Rachnatamak lekhan	B.A. (H) Hindi III Sem B.A(H) Economics III Sem B.Sc(H) Mathematics III Sem	DSC- 8 Hindi Natak avam Ekanki AEC Hindi B
	Theory	Hindi sahitya ka itihās unit-1 Unit 1 Hindi aupcharik lekhan B	B.A (H) Hindi I Sem B. A(H) Eng sem 1 , B.Sc (H) Botany Sem 1 , B.Sc (H) Zoology sem 1 , B.Sc (H) Chemistry Sem 1	DSC-2 Hindi Sahitya ka Itihās AEC Hindi B
	Practical	Unit 2 Rachnatmak lekhan	Chemistry Sem 1 All Hons & Prog	SEC प्रधानाचार्य Principal श्री. वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	Theory	Unit -4 Murdhiya	B.A (H) Hindi V Sem	DSE- Ashmitamulak vimarsh aur Hindi Sahitya
December	Theory	Dhruvshwamini Natak dhrishya 3 Unit 1 Jansanchar aur Rachnatamak lekhan	B.A. (H) Hindi III Sem B.A(H) Economics III Sem B.Sc(H) Mathematics III Sem	DSC- 8 Hindi Natak avam Ekanki AEC Hindi B
	Theory	Hindi sahitya ka itihas unit-1 Unit 1 Hindi aupcharik lekhan B	B.A (H) Hindi I Sem B. A(H) Eng sem 1 , B.Sc (H) Botany Sem 1 , B.Sc (H) Zoology sem 1 , B.Sc (H) Chemistry Sem 1	DSC-2 Hindi Sahitya ka Itihas AEC Hindi B
	Theory	Unit – 3 Sonva ka pijadiya	B.A (H) Hindi V Sem	DSE- Ashmitamulak vimarsh aur Hindi Sahitya

Dr Ram kishore Yadav

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Avinash Kumar

Department: Hindi Department

Semester: I,III, V

Month		Topics	Course	Paper Name
August	Theory	इकाई 3. वाक्य विज्ञान वाक्य: स्वरूप एवं आवश्यकताएँ	B.A. (H) Hindi III Sem	DSC- 9 सामान्य भाषा विज्ञान
		इकाई 2. विविध माध्यमों के लिए रचनात्मक लेखन प्रिंट माध्यमों के लिए लेखन (साक्षात्कार)	B.A(H)English, B.Sc(H)Statisti, Mathematics, B.Com. (H) III Sem	जनसंचार और रचनात्मक लेखन AEC (Hindi B)
		इकाई 1. हिंदी गद्य रूपों का सामान्य परिचय- कहानी, संस्मरण.	B.com. (P) III Sem	हिंदी गद्य विकास के विविध चरण GE (Hindi B)
		इकाई 1. हिंदी गद्य रूपों का सामान्य परिचय-कहानी, रेखाचित्र, संस्मरण.	B.com. (P) III Sem	हिंदी गद्य विकास के विविध चरण GE (Hindi C)
		इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप सार्वजनिक स्थानों पर हिंदी का प्रयोग (अस्पताल, बाजार, मॉल, मंडी.)	B.Com. (P+H) III Sem	व्यवहारिक हिंदी AEC (Hindi A)
		इकाई 1. व्यावहारिक हिंदी व्यावहारिक हिंदी के विविध रूप (सामान्य परिचय)	B.A. (P) III Sem	व्यावहारिक हिंदी AEC (Hindi A)
		इकाई 3. शरणदाता-अज्ञेय	B.A. (P) III Sem	हिंदी कथा साहित्य DSC
	Theory	इकाई 4. हिंदी साहित्य का इतिहास: आधुनिक काल मध्यकालीन बोध तथा आधुनिक बोध (संक्रमण की परिस्थितियाँ)	B.A.(P) I Sem	हिंदी भाषा और साहित्य का इतिहास DSC
	Theory	इकाई 4. वाक्य परिचय वाक्य के अंग उद्देश्य और विधेय	B.A (P) V Sem	हिंदी भाषा का व्यावहारिक व्याकरण DSC

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September	Theory	इकाई 4. हिंदी साहित्य का इतिहास: आधुनिक काल आधुनिक हिंदी कविता की प्रमुख प्रवृत्तियां (भारतेंदु युग, द्विवेदी युग)	B.A.(P) I Sem	हिंदी भाषा और साहित्य का इतिहास DSC
	Theory	इकाई 3. वाक्य विज्ञान वाक्य रचना के आधार और भेद, वाक्य के प्रकार, वाक्य के निकटस्थ अवयव इकाई 2. विविध माध्यमों के लिए रचनात्मक लेखन प्रिंट माध्यमों के लिए लेखन (यात्रा अनुभव लेखन) इकाई 1. हिंदी गद्य रूपों का सामान्य परिचय-निबंध, एकांकी. इकाई 1. हिंदी गद्य रूपों का सामान्य परिचय-निबंध, एकांकी, व्यंग्य. इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप बैंकों में प्रचलित पारिभाषिक शब्दावली इकाई 1. व्यावहारिक हिंदी बैंकों में प्रयोग होने वाली हिंदी संपर्क भाषा के रूप में हिंदी का महत्व इकाई 3. शरणदाता-अज्ञेय	B.A. (H) Hindi III Sem B.A(H)English, B.Sc(H)Statisti, Mathematics, B.Com. (H) III Sem B.com. (P) III Sem B.com. (P) III Sem B.Com. (P+H) III Sem B.A. (P) III Sem B.A. (P) III Sem	DSC- 9 सामान्य भाषा विज्ञान जनसंचार और रचनात्मक लेखन AEC (Hindi B) हिंदी गद्य विकास के विविध चरण GE (Hindi B) हिंदी गद्य विकास के विविध चरण GE (Hindi C) व्यवहारिक हिंदी AEC (Hindi A) व्यावहारिक हिंदी AEC (Hindi A) हिंदी कथा साहित्य DSC
	Theory	इकाई 4. वाक्य परिचय वाक्य के भेद रचना के आधार पर	B.A (P) V Sem	हिंदी भाषा का व्यावहारिक व्याकरण DSC
October	Theory	इकाई 4. हिंदी साहित्य का इतिहास: आधुनिक काल आधुनिक हिंदी कविता की प्रमुख प्रवृत्तियां (छायावाद, प्रगतिवाद, प्रयोगवाद, नई कविता)	B.A.(P) I Sem	हिंदी भाषा और साहित्य का इतिहास DSC
	Theory	इकाई 4. अर्थ विज्ञान अर्थ:परिभाषा, शब्द और अर्थ का संबंध इकाई 2. विविध माध्यमों के लिए रचनात्मक लेखन इलेक्ट्रॉनिक माध्यमों के लिए लेखन, संवाद लेखन और गीत इकाई 3. निबंध एक दुराशा बालमुकुंद गुप्त	B.A. (H) Hindi III Sem B.A(H)English, B.Sc(H)Statisti, Mathematics, B.Com. (H) III Sem B.com. (P) III Sem	DSC- 9 सामान्य भाषा विज्ञान जनसंचार और रचनात्मक लेखन AEC (Hindi B) हिंदी गद्य विकास के विविध चरण GE (Hindi B)

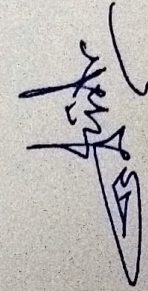

 प्रचारक, सचिव
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		इकाई 2. कहानी दो बैलों की कथा-प्रेमचंद	B.com. (P) III Sem	हिंदी गद्य विकास के विविध चरण GE (Hindi C)
		इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप कार्यालयों में प्रचलित हिंदी की पारिभाषिक शब्दावली	B.Com. (P+H) III Sem	व्यवहारिक हिंदी AEC (Hindi A)
		इकाई 1. व्यावहारिक हिंदी बंबइया हिंदी, कलकतिया हिंदी, हैदराबादी हिंदी	B.A. (P) III Sem	व्यावहारिक हिंदी AEC (Hindi A)
		इकाई 3. वापसी उषा प्रियंवदा	B.A. (P) III Sem	हिंदी कथा साहित्य DSC
	Theory	इकाई 4. वाक्य परिचय वाक्यगत अशुद्धियाँ	B.A (P) V Sem	हिंदी भाषा का व्यावहारिक व्याकरण DSC
November	Theory	इकाई 4. हिंदी साहित्य का इतिहास: आधुनिक काल गद्य विधाओं का उद्भव एवं विकास: उपन्यास कहानी नाटक निबंध	B.A.(P) I Sem	हिंदी भाषा और साहित्य का इतिहास DSC
	Theory	इकाई 4. अर्थ विज्ञान अर्थ-प्रतीति के साधन अर्थ-निर्णय के साधन इकाई 2. विविध माध्यमों के लिए रचनात्मक लेखन इलेक्ट्रॉनिक माध्यमों के लिए लेखन, संवाद लेखन और गीत इकाई 3. निबंध मजदूरी और प्रेम सरदार पूर्ण सिंह इकाई 2. कहानी बहादुर-- अमरकांत इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप बाजार, दर्शनीय स्थल का अनुभव लेखन इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप सार्वजनिक स्थानों पर हिंदी का प्रयोग अस्पताल, बाजार, मॉल, मंडी. बैंकों में प्रचलित पारिभाषिक शब्दावली. कार्यालय में प्रचलित हिंदी की पारिभाषिक शब्दावली.	B.A. (H) Hindi III Sem B.A(H)English, B.Sc(H)Statisti, Mathematics, B.Com. (H) III Sem B.com. (P) III Sem B.com. (P) III Sem B.Com. (P+H) III Sem B.A. (P) III Sem	DSC- 9 सामान्य भाषा विज्ञान जनसंचार और रचनात्मक लेखन AEC (Hindi B) हिंदी गद्य विकास के विविध चरण GE (Hindi B) हिंदी गद्य विकास के विविध चरण GE (Hindi C) व्यवहारिक हिंदी AEC (Hindi A) व्यावहारिक हिंदी AEC (Hindi A)

		इकाई 3. वापसी उषा प्रियंवदा	B.A. (P) III Sem	हिंदी कथा साहित्य DSC
	Theory	इकाई 4. वाक्य परिचय वाक्यगत अशुद्धियाँ	B.A (P) V Sem	हिंदी भाषा का व्यावहारिक व्याकरण DSC
December	Theory	इकाई 4. हिंदी साहित्य का इतिहास: आधुनिक काल गद्य विधाओं का उद्भव एवं विकास: उपन्यास कहानी नाटक निबंध	B.A.(P) I Sem	हिंदी भाषा और साहित्य का इतिहास DSC
	Theory	इकाई 4. अर्थ विज्ञान अर्थ परिवर्तन: कारण एवं दिशाएं	B.A. (H) Hindi III Sem	DSC- 9 सामान्य भाषा विज्ञान
		इकाई 2. विविध माध्यमों के लिए रचनात्मक लेखन विज्ञापन लेखन	B.A(H)English, B.Sc(H) Statistics, Mathematics, B.Com. (H) III Sem	जनसंचार और रचनात्मक लेखन AEC (Hindi B)
		इकाई 3. निबंध मजदूरी और प्रेम सरदार पूर्ण सिंह	B.com. (P) III Sem	हिंदी गद्य विकास के विविध चरण GE (Hindi B)
		इकाई 2. कहानी बहादुर-- अमरकांत	B.com. (P) III Sem	हिंदी गद्य विकास के विविध चरण GE (Hindi C)
		इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप क्रिकेट मैच का अनुभव लेखन	B.Com. (P+H) III Sem	व्यवहारिक हिंदी AEC (Hindi A)
		इकाई 2. संपर्क भाषा के रूप में हिंदी के विविध रूप बाजार, दर्शनीय स्थल, क्रिकेट मैच का अनुभव लेखन	B.A. (P) III Sem	व्यावहारिक हिंदी AEC (Hindi A)
		इकाई 3. वापसी उषा प्रियंवदा	B.A. (P) III Sem	हिंदी कथा साहित्य DSC
	Theory	इकाई 4. वाक्य परिचय विराम चिन्ह	B.A (P) V Sem	हिंदी भाषा का व्यावहारिक व्याकरण DSC

Teaching Plan
(August – December, 2023)
Dr. Jitendra Veer Kalra
Assistant Professor, Department of Hindi

Month	Course/ Paper	Course/ Paper	Course/ Paper	Course/ Paper	Course/ Paper	Course/ Paper	Course/ Paper
August	B. Com (Prog.) GE Hindi 'B' Unit 4	B. A. (Hons.) Hindi, Sem I Hindi Kavita (Adikal evam Nirgun Bhakti Kavya) Unit 2	B. A. (Hons.) Hindi, Sem III Hindi Natak evam Ekanki Unit 3	B. A. (Hons.) Hindi, Sem IV Hindi Bhasha ka Vyavharik Vyakran Unit 1	GE I for Hons. Courses Hindi Cenema aur Uska Adhyayan Unit 4	AEC Hindi 'A' Batch II (Hindi, Stats, English, Maths) Sem III Vyavharik Hindi Unit 1	AEC Hindi 'A' Sem I Sampreshan aur Sanchar Unit 1
September	B. Com (Prog.) GE Hindi 'B' Unit 4	B. A. (Hons.) Hindi, Sem I Hindi Kavita (Adikal evam Nirgun Bhakti Kavya) Unit 2	B. A. (Hons.) Hindi, Sem III Hindi Natak evam Ekanki Unit 3	B. A. (Hons.) Hindi, Sem IV Hindi Bhasha ka Vyavharik Vyakran Unit 1	GE I for Hons. Courses Hindi Cenema aur Uska Adhyayan Unit 4	AEC Hindi 'A' Batch II (Hindi, Stats, English, Maths) Sem III Vyavharik Hindi Unit 1	AEC Hindi 'A' Sem I Sampreshan aur Sanchar Unit 1
October	B. Com (Prog.) GE Hindi 'B' Unit 4	B. A. (Hons.) Hindi, Sem I Hindi Kavita (Adikal evam Nirgun Bhakti Kavya) Unit 3	B. A. (Hons.) Hindi, Sem III Hindi Natak evam Ekanki Unit 3	B. A. (Hons.) Hindi, Sem IV Hindi Bhasha ka Vyavharik Vyakran Unit 3	GE I for Hons. Courses Hindi Cenema aur Uska Adhyayan Unit 4	AEC Hindi 'A' Batch II (Hindi, Stats, English, Maths) Sem III Vyavharik Hindi Unit 2	AEC Hindi 'A' Sem I Sampreshan aur Sanchar Unit 1
November	B. Com (Prog.) GE Hindi 'B' Unit 4	B. A. (Hons.) Hindi, Sem I Hindi Kavita (Adikal evam Nirgun Bhakti Kavya) Unit 3 (IA-test & asst.)	B. A. (Hons.) Hindi, Sem III Hindi Natak evam Ekanki Unit 3 (IA-test & asst.)	B. A. (Hons.) Hindi, Sem IV Hindi Bhasha ka Vyavharik Vyakran Unit 3	GE I for Hons. Courses Hindi Cenema aur Uska Adhyayan Unit 4	AEC Hindi 'A' Batch II (Hindi, Stats, English, Maths) Sem III Vyavharik Hindi Unit 2 (IA-test & asst.)	AEC Hindi 'A' Sem I Sampreshan aur Sanchar Unit 1
December	B. Com (Prog.) GE Hindi 'B' Unit 4	B. A. (Hons.) Hindi, Sem I Hindi Kavita (Adikal evam Nirgun Bhakti Kavya) Unit 3	B. A. (Hons.) Hindi, Sem III Hindi Natak evam Ekanki Unit 3	B. A. (Hons.) Hindi, Sem IV Hindi Bhasha ka Vyavharik Vyakran Unit 3	GE I for Hons. Courses Hindi Cenema aur Uska Adhyayan Unit 4	AEC Hindi 'A' Batch II (Hindi, Stats, English, Maths) Sem III Vyavharik Hindi Unit 2	AEC Hindi 'A' Sem I Sampreshan aur Sanchar Unit 1



श्री वेंकटेश्वर महाविद्यालय
हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: VAC

शिक्षक: डॉ. ध्रुव कुमार

सत्र: तृतीय

प्रश्नपत्र: साहित्य, संस्कृति और सिनेमा

अवधि

पाठ-योजना

1 से 4 सप्ताह

साहित्य, संस्कृति और सिनेमा का सामान्य परिचय
साहित्य, संस्कृति और सिनेमा: परिभाषा और स्वरूप
साहित्य, संस्कृति और सिनेमा का अंतःसंबंध
प्रायोगिक कार्य

5 से 8 सप्ताह

साहित्यिक कृतियों पर आधारित सिनेमा
आनंदमठ, तीसरी कसम, रजनीगंधा, पद्मावत आदि
फिल्मों में परिकल्पना और उनकी प्रासंगिकता
प्रायोगिक कार्य

9 से 12 सप्ताह

हिंदी सिनेमा में सामाजिक-सांस्कृतिक मूल्यों की
अभिव्यक्ति
सामाजिक-सांस्कृतिक मूल्य
सामाजिक-सांस्कृतिक मूल्य के शक्तिशाली उपकरण
के रूप में सिनेमा
प्रायोगिक कार्य

13 से 16 सप्ताह

मदर इंडिया, बंदिनी, पूरब और पश्चिम, हम आपके
हैं कौन, टॉयलेट, एक प्रेमकथा आदि फिल्मों का
विश्लेषण
प्रायोगिक कार्य

प्रधानाचार्य
Principal

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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: बी.ए. प्रोग्राम DSE

शिक्षक: डॉ. ध्रुव कुमार

सत्र: पंचम

प्रश्नपत्र: हिंदी भाषा का व्यावहारिक व्याकरण

अवधि

पाठ-योजना

1 से 4 सप्ताह

भाषा और व्याकरण
भाषा की परिभाषा एवं विशेषताएँ
व्याकरण की परिभाषा, महत्व,
भाषा और व्याकरण का अंतःसंबंध
ध्वनि, वर्ण, मात्राएँ

5 से 8 सप्ताह

शब्द परिचय
शब्दों के भेद - तत्सम, तद्भव, देशज,
विदेशज (स्रोत के आधार पर)
शब्दों की व्याकरणिक कोटियाँ
संज्ञा, सर्वनाम, विशेषण, क्रिया, क्रिया विशेषण,
संबंधबोधक, समुच्चयबोधक, विस्मयादिबोधक
शब्दगत अशुद्धियाँ, उपसर्ग, प्रत्यय
शब्द और पद में अंतर

9 से 12 सप्ताह

व्याकरण व्यवहार, लिंग, वचन, कारक, संधि
समास, मुहावरे, लोकोक्तियाँ, अपठित गद्य

13 से 16 सप्ताह

वाक्य परिचय,
वाक्य के अंग-उद्देश्य और विधेय
वाक्य के भेद (रचना के आधार पर)
वाक्यगत अशुद्धियाँ
विराम चिन्ह

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: बी.ए. प्रोग्राम

शिक्षक: डॉ. ध्रुव कुमार

सत्र: प्रथम

प्रश्नपत्र: DSC, हिंदी भाषा और साहित्य का इतिहास (इकाई 2,3)

अवधि

पाठ-योजना

1 से 4 सप्ताह

भाषा का सामान्य परिचय
साहित्य का सामान्य परिचय
हिंदी साहित्येतिहास का सामान्य परिचय

5 से 8 सप्ताह

भक्तिकाल: सामान्य पृष्ठभूमि
भक्तिकाल का नामकरण
भक्तिकाल की परिस्थितियाँ
भक्तिकाल की विशेषताएँ

9 से 12 सप्ताह

रीतिकाल: सामान्य परिचय
रीतिकाल का नामकरण
रीतिकाल की परिस्थितियाँ
रीतिकाल की विशेषताएँ

13 से 16 सप्ताह

भक्तिकाल और रीतिकाल में प्रमुख अंतर
भक्तिकाल के अवसान और रीतिकाल के
उदय के कारण
अभ्यास

प्रधानाचार्य
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शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: बी.ए. ऑनर्स (सं, मैथ, स्टेट्स)

शिक्षक: डॉ. ध्रुव कुमार

सत्र: तृतीय

प्रश्नपत्र: AEC, हिन्दी क, व्यावहारिक हिन्दी

अवधि

पाठ-योजना

1 से 7 सप्ताह

व्यावहारिक हिन्दी के विविध रूप,
बैंकों में प्रयोग होने वाली हिन्दी,
संपर्क भाषा के रूप में हिन्दी का महत्व,
बंबइया हिन्दी, कलकतिया हिन्दी, हैदराबादी हिन्दी

8 से 15 सप्ताह

सार्वजनिक स्थानों पर हिन्दी का प्रयोग
बैंकों में प्रचलित पारिभाषिक शब्दावली
कार्यालयों में प्रचलित हिन्दी की पारिभाषिक
शब्दावली
बाज़ार/ दर्शनीय स्थल, क्रिकेट मैच का अनुभव
लेखन

प्रधानाचार्य
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हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: बी.ए. प्रोग्राम (Hist+Stats)

शिक्षक: डॉ. ध्रुव कुमार

सत्र: प्रथम

प्रश्नपत्र: हिंदी ख, हिंदी औपचारिक लेखन

अवधि

पाठ-योजना

1 से 7 सप्ताह

कार्यालयी हिंदी
व्यावसायिक हिंदी
टिप्पण और प्रारूपण: सामान्य परिचय
प्रतिवेदन और विज्ञप्ति का महत्व

8 से 15 सप्ताह

स्ववृत्त लेखन
सूचना के अधिकार के लिए लेखन
कार्यालयी और व्यावसायिक पत्र लेखन
किसी व्यावसायिक कार्यक्रम के संदर्भ में प्रेस
विज्ञप्ति तैयार करना

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श्री वेंकटेश्वर महाविद्यालय
हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: BA P (Zoo, Bot, Chem, Hn)

शिक्षक: डॉ. ध्रुव कुमार

सत्र: प्रथम

प्रश्नपत्र: AEC, हिंदी भाषा: सम्प्रेषण और संचार

अवधि

पाठ-योजना

1 से 4 सप्ताह

सम्प्रेषण की अवधारणा,
सम्प्रेषण की प्रक्रिया
सम्प्रेषण के विविध आयाम

5 से 8 सप्ताह

सम्प्रेषण और संचार
सम्प्रेषण और संचार के विविध रूप
सम्प्रेषण के प्रकार

9 से 15 सप्ताह

सर्वेक्षण आधारित रिपोर्ट तैयार करना
अनुच्छेद लेखन
संवाद लेखन, डायरी लेखन
ब्लॉग लेखन, सम्पादकीय लेखन



प्रधानाचार्य
Principal

श्री वेंकटेश्वर महाविद्यालय
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श्री वेंकटेश्वर महाविद्यालय
हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: बी.ए. ऑनर्स हिंदी

शिक्षक: डॉ. ध्रुव कुमार

सत्र: पंचम

प्रश्नपत्र: हिंदी नाटक एवं एकांकी

अवधि

पाठ-योजना

1 से 4 सप्ताह

नाटक का सामान्य परिचय
नाटक के तत्व
नाटक का महत्त्व
बकरी नाटक का प्रतिपाद्य

5 से 8 सप्ताह

बकरी नाटक का महत्त्व
बकरी नाटक की विशेषताएँ
बकरी नाटक की मूल संवेदना
बकरी नाटक के तत्व
बकरी नाटक का उद्देश्य

9 से 12 सप्ताह

एकांकी, अर्थ और परिभाषा
एकांकी और नाटक में अंतर
एकांकी का महत्त्व

13 से 16 सप्ताह

‘स्ट्राइक’ एकांकी का कथ्य
‘स्ट्राइक’ एकांकी की मूल संवेदना
‘स्ट्राइक’ एकांकी के तत्व
‘स्ट्राइक’ एकांकी का उद्देश्य

प्रधानाचार्य
Principal

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श्री वेंकटेश्वर महाविद्यालय
हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: बी.ए. प्रोग्राम

शिक्षक: डॉ. ध्रुव कुमार

सत्र: तृतीय

प्रश्नपत्र: हिंदी ख, जनसंचार और रचनात्मक लेखन

अवधि

पाठ-योजना

1 से 7 सप्ताह

रचनात्मक लेखन का अर्थ और महत्व
रचनात्मक लेखन के विविध रूप
जनसंचार माध्यमों के लिए रचनात्मक लेखन
जनसंचार माध्यमों में हिंदी

8 से 15 सप्ताह

प्रिंट माध्यम के लिए लेखन
साक्षात्कार, यात्रा अनुभव लेखन
इलेक्ट्रॉनिक माध्यम के लिए लेखन
संवाद लेखन और गीत
विज्ञापन लेखन

प्रधानाचार्य
Principal

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श्री वेंकटेश्वर महाविद्यालय
हिंदी विभाग

शिक्षण कार्य-योजना (अगस्त-दिसंबर, 2023)

पाठ्यक्रम: SEC

शिक्षक: डॉ. ध्रुव कुमार

सत्र: तृतीय

प्रश्नपत्र: पटकथा लेखन

अवधि

पाठ-योजना

1 से 4 सप्ताह

पटकथा लेखन: परिचय
पटकथा के तत्व, पटकथा के प्रकार
पटकथा की शब्दावली

5 से 8 सप्ताह

पटकथा लेखन में शोध का महत्व
चरित्र की निर्मिति और विकास
एक दृश्य का लिखा जाना
तीन अंक और पाँच अंक को समझना

9 से 12 सप्ताह

वेब सीरीज़ के लिए पटकथा लेखन
लघु फिल्म के लिए पटकथा लेखन
वृत्तचित्र के लिए पटकथा लेखन

13 से 15 सप्ताह

पटकथा का पाठ और विश्लेषण
किसी आइडिया को स्क्रीनप्ले के तौर
पर विकसित करना सीखना

प्रधानाचार्य
Principal

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Sri Venkateswara College
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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

Teaching Plan, 2023-2024: Dr Lata, Department of Hindi, Sri Venkateswara College, DU

The workload included -

1. AEC, SEM II
2. HINDI (Hens) SEM II
3. GE SEM 114
4. GE SEM IV
5. AEC SEMIV

The pedagogy to engage students was diverse and aimed to ensure maximum participation of students. The lectures were held in the format of interaction aiming to strengthen or build up critical skills of students to get engaged/with the discipline and it included-

1. Contextualisation of Topics and its Correspondence to Contemporary Developments
2. Group activity by forming academic group of students
3. Organising discussion of relevant themes of papers
4. Preparation of advertisements activity
5. Dialogue Writings activity
6. Songs Writing Activity
7. Trained to participate in Interviews and skills required for successful engagement in Interviews

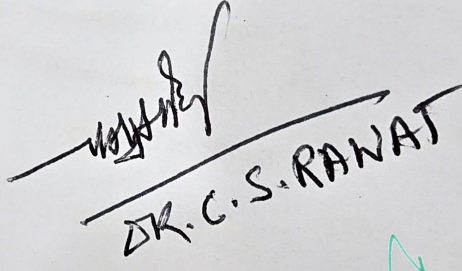
Requirement: ICT lab is required for IV sem paper AEC Hindi A. With the help of ICT, the students will be taught about CV making , waiting blog, etc.

Finally, The above mentioned activities were crafted in the scenario of emerging trends and role of Hindi Literature to engage the society in various ways including social media, online media and film industry etc. ; the pedagogy aimed not only to provide creative knowledge but also strengthen capability enhancement process leading to successful placement without compromising the critical and creative role as intellectual dedicated to carry forward legacy of India as civilisation for a better society.

Dr. Lata
Assistant Professor
Department of Hindi
Sri Venkateswara College
University of Delhi

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Principal
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SRI VENKATESHWARA COLLEGE			
DELHI UNIVERSITY,DHAULAN KUAN ,DELHI -110021			
TEACHING PLAN FOR 2023-24 (AUGUST -DECEMBER) ODD SEMESTER		NAME: CHANDERMOHAN SINGH RAWAT DEPARTMENT: HINDI	SEMESTER I, II AND IIIRD
MONTH	TOPICS	COURSE	PAPER/CODE NAME
AUGUST , SEPTEMBER AND OCTOBER		HINDI (HONS) IST SEM	HINDI KAVITA -DSC1
		HINDI (HONS) IIST SEM	SAMANYA BHASHA VIGYAN -DSC-9
		HINDI (HONS) IIIST SEM	PASHCHATYA KAVSHASTRA-DSE BAHHCC11
		COM (P) IST SEM AEC HN B	HINDI AUPCHARIK LEKHAN
	THEORY	AEC HINDI A FOR IST SEMESTER OF HISTORY, STATISTICS, ENGLISH, MATHS HONS. CLASSES	SAMPRESHAN AUR SANCHAR
		AEC HINDI B FOR IST SEMESTER OF COM (P)	HINDI AUPCHARIK LEKHAN
		AEC HINDI B FOR IIIST SEMESTER OF ENGLISH AND STATISTICS	JAN SANCHAR AUR RACHNATMAK LEKHAN
		AEC HINDI B FOR IST SEMESTER OF ZOOLOGY AND BOTANY	HINDI AUPCHARIK LEKHAN
		GE HINDI A FOR COM (P) IIIRD SEMESTER	HINDI BHASHA AUR SAHITYA KA UDBHAV AUR VIKAS
		AEC HINDI B FOR COM(P) IIIRD SEMESTER	JAN SANCHAR AUR RACHNATMAK LEKHAN
NOVEMBER		ASSIGNMENTS AND TESTS/ EXAMS TAKEN FOR INTERNAL ASSESSMENTS OF AEC, GE AND DSC OF ALL ASSIGNED CLASSES	
SEPTEMBER OCTOBER NOVEMBER	PRACTICAL CLASSES	VAC FOR IST SEMESTER	FIT INDIA
DECEMBER	ON 9TH DECEMBER	VAC PRACTICAL / TEST AND PROJECT FILE SUBMISSION ALONG WITH VIVA VOCE TAKEN BY INTERNAL AND SUBJECT TEACHING FACULTY	


DR. C. S. RAWAT

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SEMESTER WISE TEACHING PLAN (2022-2023)
SRI VENKATESWARA COLLEGE
August - December, 2023

Name of the Faculty: Dr. Ningmuanching

Department: History

Semester: ODD Semester

Month		Topics	Course	Paper Code/Name
August	Theory:	Understanding Gender and Patriarchy	BA(P) GE	Women in Indian History
August		Historiography: Women's History in India Women in Ancient India: Brahmanical Patriarchy in India, Women and Property	BA(P) GE	Women in Indian History
September		Women and Work: Voices from Tamilakam Women in Medieval India: the harem and the household, Imperial Women: Razia Sultn, NurJahan, Jahanara	BA(P) GE	Women in Indian History
October		Women and literary activities in Medieval	BA(P) GE	Women in Indian History

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		India Women in Modern India: Social Reforms and Women, Women and Indian Nationalism		
November		Women and Partition	BA(P) GE	Women in Indian History
August	Theory:	Evolution of Humans and Hunting-Gathering Cultures	BA (H) History	Social Formations and Cultural Patterns of the Ancient World-1
		Defining Civilizations	BA (P) History Major	Ancient Societies
		Discussion		
	Tutorials:			
September	Theory:	Transition to Food production	BA (H) History	Social Formations and Cultural Patterns of the Ancient World-1
		Bronze Age Civilizations: India/China	BA (P) History Major	Ancient Societies
			BA (P) History Major	Ancient Societies
	Tutorials:	Discussion		
		Assignmnets on selected topic.		
	<u>Assignment:</u>			


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October	Theory:	The Bronze Age	BA (H) History	Social Formations and Cultural Patterns of the Ancient World-1
		Bronze Age Civilizations: Mesopotamia	BA (P) History Major	Ancient Societies
	Tutorials:			
		Discussion		
	<u>Mid Term Test:</u>	Class test on topics covered		
September - October	Theory	Consequences of World War I	BA (P) DSE	Issues in Twentieth Century World History
November	Theory:	Nomadic Cultures in Transition	BA (H) History	Social Formations and Cultural Patterns of the Ancient World-1
	Tutorials:	Bronze Age Civilizations: Minoan/Mycenean	BA (P) History Major	Ancient Societies
		Discussion		



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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

August 2023-December 2023

Name of the Faculty: Dr. NUTI NAMITA

Department: HISTORY

Semester: ODD SEMESTER

Month		Topics	Course	Paper Code/Name
1.August	Theory:	Ancient Delhi and adjoining Areas: Indraprastha, Hastinapur, Panipat, Tilpat, Ashokan Edicts	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Tutorials:	TUTORIALS/ QUESTION /ANSWER SESSIONS- Doubt clearance	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
2.AUGUST	Theory:	Confucian Value System; Imperialism and China during the 19 th century Canton Trade System	B.A(HONS.) Second Year HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
	Tutorials:	Group Discussion; Doubt Clearance	B.A(HONS.) HISTORY THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
3.AUGUST	THEORY	China and the Great Divergence Debate Imperialism and China during the 19 th century Canton Trade system	B.A(HONS) THIRD YEAR HISTORY; FIFTH SEMESTER	DSE HISTORY OF MODERN CHINA (1840-1949)
	Tutorials:	TUTORIALS/ QUESTION /ANSWER SESSIONS; Doubt Clearance	B.A(HONS) THIRD YEAR HISTORY. FIFTH SEMESTER	DSE HISTORY OF MODERN CHINA (1840-1949)

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1.September	Theory:	Mehrauli Iron Pillar: Lalkot; Delhi's 13th and 14th Century settlements Case study of any two: Anangpur, Dehli-ikuhna's masjid-ijami "(old Delhi/Mehrauli)	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Tutorials;	TUTORIALS/ QUESTION ANSWER SESSIONS/ QUIZZES	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
2.September	Theory:	Opium Wars. Treaty of Nanking: Second Opium Wars: Taiping Rebellion, Self-Strengthening Movement	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
	Tutorials:	Quiz	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
3.September	Theory	Opium Wars. Treaty of Nanking: Second Opium Wars: Taiping Rebellion, Self-Strengthening Movement	B.A(HONS) THIRD YEAR HISTORY; FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
	Tutorials:	TUTORIALS/ QUESTION ANSWER SESSIONS/ QUIZZES	B.A(HONS) THIRD YEAR HISTORY: FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
1.OCTOBER	Theory:	Siri, Ghiyaspur-Kilukhri, Tughluqabad, and Firuzabad, Shifting of the capitals; Sufism	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Tutorials:	QUESTION/ ANSWER SESSIONS. REMEDIAL CLASSES FOR HINDI MEDIUM STUDENTS	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Assignment	ASSIGNMENT WAS GIVEN TO STUDENTS. TOPIC: Discuss the relevance of Literary and Archaeological sources in understanding Indraprastha	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY

2.OCTOBER	Theory:	Reform Movement of 1898: Boxer movement; Revolution of 1911 Sun-Yat-Sen and his ideology; Warlordism May Fourth Movement	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
	Assignment	Assignment was given. The Question was: What were the causes of the First Opium War? How far was the opium question responsible for the war?	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
3. OCTOBER	Theory	Reform Movement of 1898: Boxer movement; Revolution of 1911 Sun-Yat-Sen and his ideology; Warlordism May Fourth Movement	B.A(HONS) THIRD YEAR HISTORY; FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
	Tutorials :	QUESTION/ ANSWER SESSIONS. REMEDIAL CLASSES FOR HINDI MEDIUM STUDENTS	B.A(HONS) THIRD YEAR HISTORY; FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
	Assignment:	Assignment was given to students on the causes and historiography of Opium Wars in China	B.A(HONS) THIRD YEAR HISTORY; FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
1.NOVEMBER	Theory	17 th Century Delhi: Humayun's Tomb: Garden Tombs of the Mughals;	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Tutorials:	QUESTION/ ANSWER SESSIONS QUIZ WAS TAKEN	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Mid-term Test	Class test was taken on several Topics	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
2.NOVEMBER	Theory	Nationalism and Communism; 1921-1927, Formation of CCP, Re-organization of the KMT, First United Front;	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)

	Tutorials	Group Presentations AND Discussions	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
	Mid-term Test	Class test was taken on several topics. Taiping Movement, Self-Strengthening Movement, Boxer Rebellion	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
3.NOVEMBER	Theory	: Nationalism and Communism; 1921-1927, Formation of CCP, Re-organization of the KMT, First United Front;	B.A(HONS.) THIRD YEAR HISTORY, FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
	Tutorials:	QUESTION/ ANSWER SESSIONS	B.A(HONS.) THIRD YEAR HISTORY, FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
	Mid Term Test	CLASS TEST	B.A(HONS.) THIRD YEAR HISTORY, FIFTH SEMESTER	DSE-HISTORY OF MODERN CHINA (1840-1949)
1.DECEMBER	Theory:	Shajahanabad: Qila Mubarak (Red Fort) as a site of power and the morphology of the city. The Diwan-I Aam;	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
	Tutorials:	Revision; Online Quiz was taken	B.A(HONS.) FIRST SEMESTER	GE-1 DELHI THROUGH THE AGES: THE MAKING OF ITS EARLY MODERN HISTORY
2.DECEMBER	Theory:	Communism and Nationalism in China (1928-1949)- Kiangsi Soviet, Peasant Nationalism, Communist Victory	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)
	Tutorial	Online Quiz was taken	B.A(HONS.) SECOND YEAR HISTORY; THIRD SEMESTER	DSC; HISTORY OF MODERN CHINA (1840-1949)

3.DECEMBER	Theory:	Communism and Nationalism in China (1928-1949)- Kiangsi Soviet, Peasant Nationalism, Communist Victory	B.A(HONS) THIRD YEAR HISTORY: FIFTH SEMESTER	DSE- HISTORY OF MODERN CHINA (1840-1949)
	Tutorials:	TUTORIALS/ REVISION	B.A(HONS) THIRD YEAR HISTORY: FIFTH SEMESTER	DSE- HISTORY OF MODERN CHINA (1840-1949)

Ant. Navita



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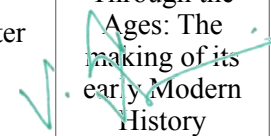
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: RAJBIR KAUR

Department: HISTORY

Semester: I, III, V

Month		Topics	Course	Paper Code/ Name
August	Theory	Unit IV: 18th Century Delhi - Understanding political and social changes Introducing the 18th Century in Indian History to the students.	B.A. (Hons.) Ist Year Ist Semester	GE-1 Delhi Through the Ages: The making of its early Modern History
	Tutorial	Introducing the course and its themes (units) to the students.		
	Theory	Unit I: Studying early medieval India 1. Sources: texts; inscriptions; coins 2. Perspectives on the early medieval	B.A. (Hons.) IInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Tutorial	Introducing the course and its themes (units) to the students.		
	Theory	UNIT - I Ethical Values from Indian Cultural Heritage • Vasudhaiva Kutumbakam • United We Stand, Divided We Fall • Ek Bharat, Shresht Bharat	B.A. (Hons.) IInd Year IIIrd Semester	VAC Culture and Communication
	Practical	Introducing the Practical Component of the course to the students with a focus on cultural values. Group Discussions on culture and our heritage Students were asked to conduct surveys/ interviews in their neighbourhood or commuting routes to assess the nature and quality of negotiating our cultural diversity and pluralist traditions and prepare a project report on the same.		
	Theory	Unit I: Understanding Popular Culture: Some Issues [a] Defining Popular Culture : Popular Culture as Folk Culture, Mass Culture, as the 'other' of High Culture, People's culture, etc.	B.A. (Prog.) IIIrd Year Vth Semester	SEC V Popular Culture
September	Theory	Unit IV: 18th Century Delhi - Understanding political and social changes (Contd.) Debate on 18th Century in India Alam, Muzaffar, "Introduction to the second edition: Revisiting the Mughal Eighteenth Century" in The Crisis of Empire in Mughal North India: Awadh and the Punjab 1707-1748.	B.A. (Hons.) Ist Year Ist Semester	GE-1 Delhi Through the Ages: The making of its early Modern History
	Tutorial	Interaction and Queries, Discussion with groups for Hindi medium students.		


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	Theory	Unit I: Studying early medieval India 2. Perspectives on the early medieval Debate on Periodisation & Feudalism Unit II: Political structures and processes 1. Evolution of political structures: Rajput polities; Chola state; Odisha	B.A. (Hons.) IInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Tutorial	Interaction and Queries, Discussion with groups for Hindi medium students.		
	Theory	UNIT - II Developing Life Skills • Empathy • Adaptability	B.A. (Hons.) IInd Year IIIrd Semester	VAC Culture and Communication
	Practical	Group Discussions on the aspects of empathy and adaptability in a multi-cultural urban society. Students were asked to visit old-age homes, hospitals, cancer wards, etc. to interact and write about their experiences with old people, caregivers, patients, nursing staff, helpers, etc. and prepare a project report on the same.		
	Theory	Unit I: Understanding Popular Culture: Some Issues [b] Popular Culture and History: The Historian and the archives [c] Popular Culture in Early Modern Europe or the City of Mumbai	B.A. (Prog.) IIIrd Year Vth Semester	SEC V Popular Culture
October	Theory	Unit IV: 18th Century Delhi - Understanding political and social changes (Contd.) Discussion on the political, social, economic and cultural changes in Delhi in the 18th century Ataullah, "Mapping 18th Century Delhi: the cityscape of a pre-Modern sovereign city".	B.A. (Hons.) Ist Year Ist Semester	GE-1 Delhi Through the Ages: The making of its early Modern History
	Tutorial	Discussion with regard to specific readings given for study, Discussion with groups for Hindi medium students.		
	Theory	Unit III: Social and economic processes 1. Agricultural expansion and social changes 2. Trade and urbanization	B.A. (Hons.) IInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Tutorial	Discussion with regard to specific readings given for study, Discussion with groups for Hindi medium students.		
	Theory	UNIT - II Developing Life Skills • Conserving our natural resources • Sharing knowledge resources	B.A. (Hons.) IInd Year IIIrd Semester	VAC Culture and Communication
	Practical	Group Discussions on conservation and preservation of the natural resources and to work towards an inclusive community while living in a multicultural environment.		



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	Theory	Unit II: Some Aspects of Popular Culture in India [a] Religion and everyday practice (i) Festivals and Rituals: Case studies of Navaratri in Madras / Urs in Ajmer / Kumbh Mela (ii) Everyday healing and petitioning the divine: Case studies of Jinns in Delhi / Popular Hinduism / Tantric practices (iii) Sacred Geographies, Sacred Spaces: Pilgrimage and pilgrim practices [b] Performative Traditions (i) Orality, Memory and the Popular: Case studies of women's Ramayanas in the oral tradition Andhra/ Rajasthan (ii) Theatre and Dance: (iii) Music: Popular music and Technology; Case studies of Devotional music / the Ghazal and the Cassette	B.A. (Prog.) IIIrd Year Vth Semester	SEC V Popular Culture
	Assignment/ Presentation	1. Critically evaluate the literary and archaeological evidence for Indraprastha. 2. 'The story of ancient monuments includes the rediscovery of their historical significance in modern times.' Discuss with special reference to the Ashokan inscriptions or the Mehrauli Iron Pillar. 3. Examine the development and changing landscape of Delhi between 10 to 14 centuries with special reference to any two sites (Anangpur Fort, Dehli-i Kuhna's Masjid-i Jami, Siri, Ghiyaspur-Kilukhari, Tughluqabad, Firuzabad) 4. Highlight the significance and characteristics of the architecture of Humayun's Garden Tomb. 5. What were the political, social and cultural 'changes' in 18 century Delhi? Explain with suitable examples.	B.A. (Hons.) Ist Year Ist Semester	GE-1 Delhi Through the Ages: The making of its early Modern History
	Assignment/ Presentation	1. Critically analyse the major issues and arguments given by historians in the recent debates about characterising early medieval India. 2. What are the various theories regarding the origin of the Rajputs? Explain. 3. Discuss the nature of the Chola State with reference to varied historiographic approaches. 4. Discuss the factors contributing to agrarian expansion during the period from c. 750 to 1200 CE. How did it affect the social sphere of the period? 5. Elucidate the phenomenon of agrarian expansion and pesantization of tribes during the early medieval period, and analyse the factors responsible for the same. 6. Explain the processes of trade and urbanisation in India during c.750 to 1200 C.E. 7. Discuss the various aspects of inter-regional and maritime trade during c.750-1200 C.E. 8. Highlight the salient features of Bhakti in Early medieval South India. 9. Highlight the important features of art and architecture during the early medieval period	B.A. (Hons.) IIInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Assignment/ Presentation	Make a project report on any one theme of the course as discussed in the practical classes involving them to do certain fieldwork (conduct surveys/interviews or make video documentaries etc.)	B.A. (Hons.) IIInd Year IIIrd Semester	VAC Culture and Communication Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

	Assignment/ Presentation	Write an essay on any aspect of Popular Culture in India (to choose any one theme from Unit II of the syllabus, preferably narrowed down to a particular theme or region.) involving them to do certain fieldwork (conduct survey/interviews or documentation) etc.	B.A. (Prog.) IIIrd Year Vth Semester	SEC V Popular Culture
	Mid-Term Test	Internal Class Test on the questions from the themes of the syllabus covered till then.	B.A. (Hons.) IIInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Mid-Term Test	Internal Class Test on the questions from the themes of the syllabus covered till then.	B.A. (Hons.) IIInd Year IIIrd Semester	VAC Culture and Communication
November	Theory	Unit IV: 18th Century Delhi - Understanding political and social changes (Contd.) Discussion on the political, social, economic and cultural changes in Delhi in the 18th century Chenoy, Shama Mitra, Shahjahanabad, a City of Delhi, 1638-1857. Raziuddin Aquil, "Violating Norms of Conduct" in The Muslim Question: Understanding Islam and Indian History.	B.A. (Hons.) Ist Year Ist Semester	GE-1 Delhi Through the Ages: The making of its early Modern History
	Tutorial	Discussion with regard to specific readings given for study, Discussion with groups for Hindi medium students.		
	Theory	Unit IV: Religious and visual cultures 1. Bhakti, Puranic Hinduism; Tantra; Buddhism and Jainism 2. Art and architecture: temples – regional styles Unit II: Political structures and processes 2. Symbols of political power: Brahmanas and temples; courtly cultures 3. Issue of 'Foreign and Indian': Arabs and Ghaznavids in the north-west, Cholas in Southeast Asia	B.A. (Hons.) IIInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Tutorial	Discussion with regard to specific readings given for study, Discussion with groups for Hindi medium students.		
	Theory	UNIT - III Effective Communication in Everyday Life • Empathetic listening • Considerate speaking • Analytical reading • Informed writing	B.A. (Hons.) IIInd Year IIIrd Semester	VAC Culture and Communication
	Practical	Group Discussions on developing communication skills in speaking, listening, reading and writing and to apply them in one's daily life.		



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		Unit II: Some Aspects of Popular Culture in India [c] Food Cultures (i) Recipes and the national project: Popular recipe books (ii) Food and Public Cultures of Eating: Udupi Hotels, Dum Pukht, South Asian food in a global world (iii) Cultures of Consumption: Tea-Coffee and the Indian Middle Class [d] Making of a new 'Public' (i) Popular Art: Imagining the nation in Calendar art (ii) Print media: Amar Chitra Katha (iii) Cinema: Constructing Family, Gender and Marriage through popular cinema	B.A. (Prog.) IIIrd Year Vth Semester	SEC V Popular Culture
December	Theory	Unit IV: 18th Century Delhi - Understanding political and social changes Revision on the themes	B.A. (Hons.) Ist Year Ist Semester	GE-1 Delhi Through the Ages: The making of its early Modern History
	Tutorial	Discussion on the previous year question papers.		
	Theory	Revision on the themes of the course	B.A. (Hons.) IIInd Year IIIrd Semester	DSC-1 History of India - III: 750-1200
	Tutorial	Discussion on the previous year question papers.		
	Theory	Revision of the course and discussion on the previous year question papers.	B.A. (Hons.) IIInd Year IIIrd Semester	VAC Culture and Communication
	Practical	Students made presentations on individual reports on the activities undertaken.		
	Theory	Revision of the course and discussion on the previous year question papers. Presentations on the projects done.	B.A. (Prog.) IIIrd Year Vth Semester	SEC V Popular Culture

Rajbir Kaur

Signature of the teacher

V. A.

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SEMESTER WISE TEACHING PLAN
(2022-2023)
SRI VENKATESWARA COLLEGE

August – December, 2023

Name of the Faculty: Dr. Sunitaa Saikia

Department: History

Semester: I- VAC/III- SEC/V- DSE

Month		Topics	Course	Paper Code/Name
August	Theory:	I. The Concept & Definition: What is History?	B.A.P. 3rd Year	DSE: Issues in 20 th Century World History – I
	Tutorials:	Introducing the course		
Sept	Theory:	II. 1 st WW: a) Consequences in Europe & the World b) League of Nations	B.A.P 3 rd Year	DSE: Issues in 20 th Century World History – I
		III. 1917 Russian Revolution: a) Formation of USSR		
	Tutorials (DSE):	I. Introduction to the Constitution of India: Explaining the Terms	B. A. 1 st Year	VAC – Constitutional Values and Fundamental Duties
		Further elaboration on the lecture classes Discussion on recommended readings given in the Syllabus		
	Assignment (DSE):	Choice of questions from the themes already covered from the syllabus and a month to submit after going through the prescribed readings.		
Oct	Theory:	III. b) Debates on Socialism & Role of Communist International IV. Fascism and Nazism (Germany, Japan, 2 nd WW)	B.A.P 3 rd Year	DSE: Issues in 20 th Century World History – I

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		II. Constitutional Values enshrined in the Preamble: Justice, Liberty, Equality and Fraternity	B. A. 1 st Year	VAC – Constitutional Values and Fundamental Duties
	Tutorials:	General clarification of topics already taken up in DSE class lectures		
	Practicals:	Students of VAC 1 st year to reflect upon the constitutional values and their contemporary relevance in day-to-day national life through group discussions		
	Mid-Term Test:	Internal Class Test from the themes already covered from the syllabus (DSE, VAC)		

Nov	Theory:	V. Modernity, Rights and Democracy	B.A.P 3 rd Year	DSE: Issues in 20 th Century World History – I
		III. Fundamental Duties	B. A. 1 st Year	VAC – Constitutional Values and Fundamental Duties
		I. Theory: iii) New Museology	B. A. 2 nd Year	SEC – Museum and Museology
	Tutorials:	Discussion of Past year DSE & SEC Question Papers.		
	Class Test:	Internal Class Test from the themes already covered from the syllabus (SEC)		
	Practicals & Project:	Students of VAC 1 st year to conduct a survey (minimum 30 respondents) to assess the awareness of the Fundamental Duties amongst the citizens and then submit a project on the same.		


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SEMESTER WISE TEACHING PLAN (2023-2024)

SRI VENKATESWARA COLLEGE

August 2023 - December 2023

Name of the Faculty: Dr Praveen Verma

Department: History

Semester: III- 1. RMW-I (BAH)

2. Cultural Transformation of Early Modern Europe (BAP)

Semester V- History of Africa, c.1500-1960s (BAH)

Month		Topics	Course	Paper Code/Name
August	Theory:	Unit 1- Transition from Feudalism to Capitalism A) issues and Debate B) question of Eurocentrism	BA (Hons) II year (III Semester)	RMW-I
		Unit 1- Key Concepts and historical background 1. idea of early modern 2. overview of classical and medieval legacy	BA (Prog) II year (III Semester)	Cultural Transformation of Early Modern Europe
		Unit-1Africa as 'Dark Continent' 1. Historical Gaze 2. Brief Survey of 15th Century	BA (Hons) final Year (V semester)	History of Africa, c.1500-1960s
		Unit-2 Trade in Gold and Slaves between Europe and Sub-Saharan Africa 1. Economy & Society 2. State in 15th-19th Century	BA (Hons) final Year (V semester)	History of Africa, c.1500-1960s
		Introducing the course and its theme to the students. Discussion in Hindi took place.		
	Tutorials:	discussion on same themes took place		
SEPTEMBER	Theory:	Unit 2- Early Colonial Expansion 1. Trade and Empire-Mines and Plantations 2. Labour Systems-Indigenous populations and African Slaves	BA (Hons) II yr (IV Semester)	RMW-I  प्रधानाचार्य Principal

		Unit 3- Renaissance 1. Origins 2. humanism in Italy and its Europe, Art		
		Unit 2- Renaissance 1. society and politics 2. humanism, Art & Literature	BA (Prog) IIyr (III Semester)	Cultural Transformation of Early Modern Europe
		Unit-3 Africa in Atlantic World 1. Slave and Slave-Ships 2. Slave rebellions 3. Contribution to the development of European Capitalism	BA (Hons) final Year (V semester)	History of Africa, c.1500-1960s
	Tutorials: Assignment:	discussions and doubts on concepts and class notes. Assignment were given		
OCTOBER	Theory:	Unit 4- European Reformation	BA (Hons) II yr (IV Semester)	RMW-I
		Unit-3- Upheaval in Religion 1. Papacy 2. protestant Sects 3. Counter reformation and cultural impact of Reformation	BA (Prog) IIyr (III Semester)	Cultural Transformation of Early Modern Europe
		Unit-4- Abolition of Slave Trade 1. End of Slave Trade 2. 'Legitimate Commerce' 3. 'Informal Empire'	BA (Hons) final Year (V semester)	History of Africa, c.1500-1960s
		Discussions over class notes and doubts. discussions in Hindi. Internal exam took place.		
	Tutorials: Mid Term Test:			
NOVEMBER	Theory:	Unit 5- Economic Developments of 16th Century 1. Shift from Mediterranean to Atlantic 2. Commercial Revolution 3. Price Revolution	BA (Hons) II yr (IV Semester)	RMW-I

		Unit 4- Conquest of the New world 1. material, social & cultural aspects 2. Case studies: Portugal & Spain	BA (Prog) IIyr (III Semester)	Cultural Transformation of Early Modern Europe
		Unit 5- Imperialism and ‘scramble 1. Collaboration, conflict and State Formation 2. making of Colonial Economy Unit 6- Decolonization 1. National Liberation Movement 2. Protest and Popular Movement	BA (Hons) final Year (V semester)	History of Africa, c.1500-1960s
	Tutorials:	Discussions over class notes and doubts. discussions in Hindi.		
DECEMBER		Unit 6- Emergence of European State Case Studies: Spain, France, England, Russia	BA (Hons) II yr (IV Semester)	RMW-I
		Unit 7- Case Studies 1. Apartheid in South Africa 2. colonial Experience in Algeria	BA (Hons) final Year (V semester)	History of Africa, c.1500-1960s
	Tutorials	Discussions over class notes and doubts. discussions in Hindi and exam preparations		

Green Wing


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SEMESTERWISE TEACHING PLAN
SRI VENKATESWAR COLLEGE
August-December, 2023 odd semester

Name of the Faculty: Professor Vandana Joshi Department: History

Semester: V History of Modern Europe BA Hons and BA Prog. Sem V Issues in world

History 20th Century I

Month		Topics	Course	Paper Code/Name
August	Theory:	1. The French Revolution [a] Crisis of the Ancien Regime [b] Intellectual currents [c] Social classes and emerging gender relations [d] Phases of the French Revolution 1789-99	BA HONS Core Course XI History	Modern European History
		Unit I: The Concept and Definition World History	BA Programme DSE	Issues in 20 th century world history
	Practicals:	Discussion on practice questions and their solutions		
	Tutorials:	The French Revolution: discussion on the historical background	BA HONS	Modern European History
		World History vs Global History: Concept and definition discussion	BAP /DSE	Issues in 20 th century world history

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September	Theory:	[e] Art and culture of the French Revolution [f] Napoleonic consolidation –reform and empire (g) Historiography of French Revolution III. Capitalist industrialization and social and economic transformation (Late 18 th century to AD 1914) [a] Process of capitalist development in industry and agriculture: case studies of Britain, France, the German States and Russia. [b] Evolution and differentiation of social classes: bourgeoisie, proletariat, landowning classes and peasantry.	BA HONS Core Course	Modern European History
		Unit 1 completed Unit II: First World War Background and causes of WWI film screening : All quiet on the Western Front (a) Consequences in Europe and the world, (b) League of Nations (shared with Ning Ching)	BAP/DSE	Issues in 20 th century world history
	Practicals:	Discussion and practice questions		
	Tutorials:	Allotment of Presentations and assignments		
		Allotment of Presentations and assignments		

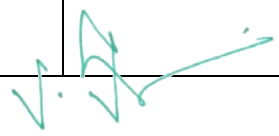

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October (on leave from 4.10 to 20.10.23)	Theory:	[c] Changing trends in demography and urban patterns [d] Family, gender and process of industrialization	BA HONS	Modern European History
		[Unit III: 1917 Russian Revolution] Screening of Sergei Eisenstein: battle Potempkin film (a) Formation of the USSR; (b) Debates on socialism and the role of the Communist International (Comintern) Unit IV: Fascism and Nazism Italy UNITED Nations (Saurabh Kumar)	BAP/DSE	Issues in 20 th century world history
	Practicals:	Presentations and test		
	Tutorials:	Presentations and assignments		
		Presentations and assignments		
	<u>Mid Term Test and Assignment submissions deadline</u>			



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November	Theory	IV Liberal democracy, working class movements and Socialism in the 19 th and 20 th Centuries: [a] The struggle for parliamentary democracy and civil liberties in Britain: popular movements –chartists and suffragettes [b] The making of democratic and constitutional rights [c] Forms of protest: food riots in France and England in early nineteenth century, Luddism; trends in labour movements: Britain, France and Germany [d] Early socialist thought, Marxian Socialism and the First and Second International. II. Restoration and revolution: c 1815-1848 [a] Forces of conservatism and restoration of old hierarchies	BA HONS	Modern European History
		Germany and Second World War Japan and second World war Unit V: Modernity, Rights and Democracy (b) Suffrage movement (England) Saurabh	BAP/DSE	Issues in 20 th century world history
	Practicals:			
	Tutorials:	Presentations and class test		
		Presentations and assignments		
December	Theory:	[b] Social, political and intellectual currents [c] Revolutionary and radical movements 1830-1848	BA HONS	Modern European History


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		(c) The formation of the United Nations (d) Art and politics (Picasso)	BAP DSE	Issues in 20th th century world history
	Practicals:			
	Tutorials:	Presentations and assignments		
		Presentations and assignments		



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Teaching Plan Odd Sem (2023-24)

Name of the Faculty: MS. Shakuntla Wadhwa

Department- Mathematics

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	The Euclidean Algorithm and linear Diophantine equation, Least non-negative residues and complete set of residues modulo n .	B.Sc(H)Maths Sem-III	DSE-1 Number Theory
	Tutorials	To discuss the doubts of students and solve various exercises of The Euclidean Algorithm and linear Diophantine equation, Least non-negative residues and complete set of residues modulo n .	B.Sc(H)Maths Sem-III	DSE-1 Number Theory
	Theory	Algebraic and order properties of , Absolute value of a real number, Bounded above and bounded below sets.	B.Sc(H)Maths Sem-I	DSC-2: Elementary Real Analysis
	Tutorials	To discuss the doubts of students and solve various exercises of Algebraic and order properties of , Absolute value of a real number, Bounded above and bounded below sets.	B.Sc(H)Maths Sem-I A	DSC-2: Elementary Real Analysis
	Practicals	1. Bisection method 2. Newton–Raphson method	B.Sc(H)Maths Sem-V A	Numerical Analysis

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September	Theory:	Linear congruences, The Chinese remainder theorem, and system of linear congruences in two variables, : Fermat's little theorem, Wilson's theorem and its converse, Application to solve quadratic congruence equation modulo odd prime p, Number-theoretic functions for the sum and number of divisors, Multiplicative function, Möbius inversion formula and its properties; Greatest integer function with an application to the calendar.	B.Sc(H)Maths Sem-III	DSE-1 Number Theory
	Tutorials:	To discuss the doubts of students and solve various exercises of Linear congruences, The Chinese remainder theorem, and system of linear congruences in two variables, : Fermat's little theorem, Wilson's theorem and its converse, Application to solve quadratic congruence equation modulo odd prime p, Number-theoretic functions for the sum and number of divisors, Multiplicative function, Möbius inversion formula and its properties; Greatest integer function with an application to the calendar.	B.Sc(H)Maths Sem-III	DSE-1 Number Theory
	Theory:	Supremum and infimum of a nonempty subset of $\mathbb{R}$, The completeness property of $\mathbb{R}$, Archimedean property, Density of rational numbers in $\mathbb{R}$, Sequences and their limits, Convergent sequence, Limit theorems.	B.Sc(H)Maths Sem-I A	DSC-2: Elementary Real Analysis
	Tutorials:	To discuss the doubts of students and solve various exercises of Supremum and infimum of a nonempty subset of $\mathbb{R}$, The completeness property of $\mathbb{R}$, Archimedean property, Density of rational numbers in $\mathbb{R}$, Sequences and their limits, Convergent sequence, Limit theorems.	B.Sc(H)Maths Sem-I A	DSC-2: Elementary Real Analysis
	Practicals	3. Secant method 4. Regula-Falsi method 5. LU decomposition method	B.Sc(H)Maths Sem-V A	Numerical Analysis

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October	Theory:	Euler's Phi-function, Euler's theorem and some properties of the Phi-function, The order of an integer modulo n and primitive roots for primes, Primitive roots of composite numbers n : when n is of the form $2k$, and when n is a product of two coprime numbers.	B.Sc(H)Maths Sem-III	DSE-1 Number Theory
	Tutorials:	To discuss the doubts of students and solve various exercises of Euler's Phi-function, Euler's theorem and some properties of the Phi-function, The order of an integer modulo n and primitive roots for primes, Primitive roots of composite numbers n : when n is of the form $2k$, and when n is a product of two coprime numbers.	B.Sc(H)Maths Sem-III	DSE-1 Number Theory
	Theory:	Monotone sequences, Monotone convergence theorem and applications, Subsequences, Bolzano-Weierstrass theorem, Notion of limit superior and limit inferior for bounded sequence with illustrations, Cauchy sequences of real numbers and Cauchy's convergence criterion.	B.Sc(H)Maths Sem-I A	DSC-2: Elementary Real Analysis
	Tutorials:	To discuss the doubts of students and solve various exercises of Monotone sequences, Monotone convergence theorem and applications, Subsequences, Bolzano-Weierstrass theorem, Notion of limit superior and limit inferior for bounded sequence with illustrations, Cauchy sequences of real numbers and Cauchy's convergence criterion.	B.Sc(H)Maths Sem-I A	DSC-2: Elementary Real Analysis
	Practicals	6. Gauss–Jacobi method 7. SOR method 8. Gauss–Seidel method 9. Lagrange interpolation	B.Sc(H)Maths Sem-V A	Numerical Analysis

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	<u>Assignment</u>	Plan to assign a syllabus-related assignment.		
	<u>Test</u>	Internal and Practical test		
November	Theory:	The quadratic residue and nonresidue of an odd prime and Euler's criterion, The Legendre symbol and its properties, Quadratic Reciprocity law and its application, Introduction to cryptography.	B.Sc(H) Maths Sem-III	DSE-1 Number Theory
	Tutorials:	To discuss the doubts of students and solve various exercises of The quadratic residue and nonresidue of an odd prime and Euler's criterion, The Legendre symbol and its properties, Quadratic Reciprocity law and its application, Introduction to cryptography.	B.Sc(H) Maths Sem-III	DSE-1 Number Theory
	Theory:	Convergence and divergence of infinite series, Sequence of partial sums of infinite series, Necessary condition for convergence, Cauchy criterion for convergence of series, Tests for convergence of positive term series: Statement of the integral test and convergence of p-series, Basic comparison test, Limit comparison test, Ratio, root and Raabe's tests, Alternating series.	B.Sc(H) Maths Sem-I A	DSC-2: Elementary Real Analysis
	Tutorials:	To discuss the doubts of students and solve various exercises of Convergence and divergence of infinite series, Sequence of partial sums of infinite series, Necessary condition for convergence, Cauchy criterion for convergence of series, Tests for convergence of positive term series: Statement of the integral test and convergence of p-series, Basic comparison test, Limit comparison test, Ratio, root and Raabe's tests, Alternating series.	B.Sc(H) Maths Sem-I A	DSC-2: Elementary Real Analysis
December	Practicals	10. Newton interpolation 11. Trapezoidal rule 12. Simpson's rule 13. Euler's method 14. Second order Runge-Kutta methods.	B.Sc(H) Maths Sem-V A	Numerical Analysis
	Theory:	Hill's cipher, Public-key cryptography and RSA encryption and decryption technique.	B.Sc(H) Maths Sem-III	DSE-1 Number Theory

Tutorials:	To discuss the doubts of students and solve various exercises of Hill's cipher, Public-key cryptography and RSA encryption and decryption technique. Further, to go over the entire syllabus again and discuss last year's exam questions.	B.Sc(H) Maths Sem-III	DSE-1 Number Theory
Theory:	Leibniz test, Absolute and conditional convergence	B.Sc(H) Maths Sem-I A	DSC-2: Elementary Real Analysis
Tutorials:	To discuss the doubts of students and solve various exercises of Leibniz test, Absolute and conditional convergence	B.Sc(H) Maths Sem-I A	DSC-2: Elementary Real Analysis
Practicals	Revision of All Practical.	B.Sc(H) Maths Sem-V A	Numerical Analysis

Shakuntla



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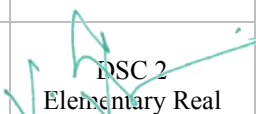
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

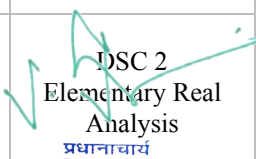
Name of the Faculty: Prof. Ramesh K Budhreja

Department: Mathematics

Semester: I and III

Month		Topics	Course	Paper Code/Name
August	Theory	Real Number System Real Numbers, Absolute value of a real number, Bounded above and bounded below Sets	B.Sc. (H) Mathematics I Year, Sem I	DSC 2 Elementary Real Analysis
	Tutorial	Examples based on above topics	B.Sc. (H) Mathematics I Year, Sem I	DSC 2 Elementary Real Analysis
	Practical	Yet to get the students of VAC – FIT INDIA Course	VAC FIT INDIA Sem III	VAC INDIA
September	Theory	Sequences Defining a Sequence, Convergence of a Sequence, Limit Theorems, Monotone Sequences, Monotone Convergence Theorem	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
	Tutorial	Examples and Questions based on above Topics	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
	Practical	Participation in Physical Activity. Fit India Protocol. Physical Activity, Health and Fitness. Indicators of Fitness. Practical/Practice- Aerobic Work Out / Physical Activity (Walking), Yoga - Asanas (Lying, Sitting and Standing positions) and Pranayama. Cardiovascular Testing by 12m/9 min Cooper Run/Walk test.	VAC FIT INDIA Sem III Sec A + B	VAC INDIA
October	Theory	Subsequences, Bolzano-Weierstrass Theorem for Sequences, Limit Superior And Limit Inferior for the Bounded Sequences. Introduction to Infinite Series, Convergence and Divergence of series.	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis


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	Tutorial	Examples and Questions based on above Topics	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
	Practical	Health Related Fitness and their Components- Muscular Strength and Endurance, Body Composition and Flexibility. Practical/practice- Flexibility Training: Back Saver Sit and Reach test, Muscular Strength Training: Curl Ups / Standing Broad Jump/ Vertical Jump/ Plyometric. Endurance Training: 1 Mile Rock Port Test or 12 /9 minutes Cooper run/walk test. Ideal Body Weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio. Nutrition and Fitness- Healthy Eating Plate, Balanced Diet, Caloric Content of Food. Practical/Practice- Preparing Daily Diet and Calorie Chart, Aerobic Work Out / Physical Activity (Walking), Assessment of Physical Activities with the Calorie intake.	VAC FIT INDIA Sem III Sec A + B	FIT INDIA
	Assignment	1 st Assignment given to the students. Assignment 1. Data of at least 10 persons to be collected and compared with the ideal standards.	B.Sc. (H) Mathematics I Year, Sem I Sec B VAC FIT INDIA Sem III	DSC 2 Elementary Real Analysis FIT INDIA
	Mid-Term Test	The Class Test of Elementary Real Analysis for the Internal Assessment was held on 27.10.2023.	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
November	Theory	Necessary condition for convergence, Cauchy Criteria for Convergence, Test for Convergence of positive term series, Integral Test, Comparison Test, Limit Comparison Test, D'Alembert's Ratio Test, Cauchy's nth Root Test, Raabe's Test	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
	Tutorial	Examples and Questions based on above Topics. 2 nd Assignment given on 30.11.2023.	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
	Practical	Asanas for digestive system excretory system. Different physical activities and games in the College ground. Sports Physiology and Psychology-Depression, Anxiety and Stress Scale (DASS), Rosenberg Self Esteem Scale. Practical/Practice- Skills learning and Participation in sports, Group Games / Relays/ Minor Games, Meditative Asanas and Pranayama, Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results. Creative and prolific physical activities and games in the College ground.	VAC FIT INDIA Sem III Sec A + B	FIT INDIA
December	Theory	Alternating Series, Leibnitz's Test, Absolute Convergence and Conditional Convergence	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis  प्रधानाचार्य Principal

	Tutorial	Examples and Questions based on above Topics	B.Sc. (H) Mathematics I Year, Sem I Sec B	DSC 2 Elementary Real Analysis
	Practical	Different physical activities and games in the College ground. Assignment- 2 given to the students. Revision of all the Units along with the physical activities done in the classes.	VAC FIT INDIA Sem III Sec A + B	FIT INDIA

RkBudhraja

Signature of the Teacher



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

2023-24 Odd Semester

Name of the Faculty:
Semester: V & III

Dr. Mainak Mukherjee

Department: Mathematics

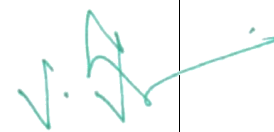
Month		Topics	Course	Paper Code/Name
August	Theory:	Metric spaces: definition and examples. Sequences in metric spaces.	B.Sc(H) Maths Sem-V A	C 11- Metric Spaces
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Metric spaces: definition and examples. Sequences in metric spaces.	B.Sc(H) Maths Sem-V A	C 11- Metric Spaces
	Theory:	Definition of upper and lower Darboux sums, Darboux integral, Inequalities for upper and lower Darboux sums	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Definition of upper and lower Darboux sums, Darboux integral, Inequalities for upper and lower Darboux sums	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
September	Theory:	Cauchy sequences, Complete Metric Spaces, Open and closed balls, neighbourhood, open set, interior of a set, Limit point of a set, closed set, diameter of a set, Cantor's Theorem.	B.Sc(H) Maths Sem-VA	C 11- Metric Spaces
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Metric spaces, Cauchy sequences, Complete Metric Spaces, Open and closed balls, neighbourhood, open set, interior of a set, Limit point of a set, closed set, diameter of a set, Cantor's Theorem.	B.Sc(H) Maths Sem-V A	DSC-8: Riemann Integration

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	Theory:	Necessary and sufficient conditions for the Darboux integrability; Riemann's definition of integrability by Riemann sum and the equivalence of Riemann's and Darboux's definitions of integrability, : Definition and examples of the Riemann-Stieltjes integral, : Riemann integrability.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Necessary and sufficient conditions for the Darboux integrability; Riemann's definition of integrability by Riemann sum and the equivalence of Riemann's and Darboux's definitions of integrability, : Definition and examples of the Riemann-Stieltjes integral, : Riemann integrability.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
October	Theory:	Subspaces, dense sets, separable spaces, Continuous mappings, sequential criterion and other characterizations of continuity, Uniform continuity.	B.Sc(H) Maths Sem-VA	C 11- Metric Spaces
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Subspaces, dense sets, separable spaces, Continuous mappings, sequential criterion and other characterizations of continuity, Uniform continuity.	B.Sc(H) Maths Sem-V A	
	Theory:	Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability; Intermediate value theorem for integrals, Fundamental Theorems of Calculus.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability; Intermediate value theorem for integrals, Fundamental Theorems of Calculus.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration


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	Assignments	To be given assignment related to syllabus.		
	Test	To take internal Test.		
November	Theory:	Homeomorphism, Contraction mappings, Banach Fixed point Theorem. Connectedness, connected subsets of $\mathbf{R}$, connectedness and continuous mappings. Compactness.	B.Sc(H) Maths Sem-V	C 11- Metric Spaces
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Homeomorphism, Contraction mappings, Banach Fixed point Theorem. Connectedness, connected subsets of $\mathbf{R}$, connectedness and continuous mappings. Compactness.	B.Sc(H) Maths Sem-V A	
	Theory:	Methods of integration: integration by substitution and integration by parts; Volume by slicing and cylindrical shells, Length of a curve in the plane and the area of surfaces of revolution, Improper integrals of Type-I, Type-II and mixed type, Convergence of improper integrals.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to Methods of integration: integration by substitution and integration by parts; Volume by slicing and cylindrical shells, Length of a curve in the plane and the area of surfaces of revolution, Improper integrals of Type-I, Type-II and mixed type, Convergence of improper integrals.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration



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December	Theory:	Compactness and boundedness, continuous functions on compact spaces and to revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-V A	C 11- Metric Spaces
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to compactness and boundedness, continuous functions on compact Spaces and to revise whole syllabus, to discuss last previous year questions papers.	B.Sc(H) Maths Sem-V A	
	Theory:	The beta and gamma functions and their properties.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration
	Tutorials:	To discuss the doubt of students and various exercise questions and examples related to The beta and gamma functions and their properties.	B.Sc(H) Maths Sem-III A	DSC-8: Riemann Integration

M. Munhoygi

Signature of the teacher

V. B. K.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Ms. Pratibha Gaur

Department: Mathematics

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 1: Limits, Continuity and Differentiability - Limit of a function, ϵ - δ definition of a limit	BA (P) Sem I	Topics in Calculus
	Theory	Unit 1: Continuity and Differentiability of Functions: Limits and continuity	GE Mathematics Sem I	Fundamentals of Calculus
	Tutorial	Covered problems of the topics discussed in theory.	BA (P) Sem I	Topics in Calculus
	Tutorial	Covered problems of the topics discussed in theory.	GE Mathematics Sem I	Fundamentals of Calculus
	Practical	Introduction to internet and web design. Basic concepts of web architecture.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
September	Theory	Infinite limits, Continuity and types of discontinuities; Differentiability of a function, Successive differentiation: Calculation of the nth derivatives, Leibnitz theorem; Partial differentiation, Euler's theorem on homogeneous functions.	BA (P) Sem I	Topics in Calculus
	Theory	Types of discontinuities; Differentiability of functions; Successive differentiation: Calculation of the nth derivatives, Leibnitz theorem; Partial differentiation, Euler's theorem on homogeneous functions.	GE Mathematics Sem I	Fundamentals of Calculus
	Tutorial	Covered problems of the topics discussed in theory.	BA (P) Sem I	Topics in Calculus
	Tutorial	Covered problems of the topics discussed in theory.	GE Mathematics Sem I	Fundamentals of Calculus
	Practical	HTML: Introduction to hypertext mark-up language (html), creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames. Solving related problems.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
October	Theory	Unit 2: Mean Value Theorems and its Applications Rolle's theorem, Mean value theorems and applications to monotonic functions and inequalities; Taylor's theorem, Taylor's series, Maclaurin's series	BA (P) Sem I	Topics in Calculus

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		expansions of e^x , $\sin(x)$, $\cos(x)$, $\log(1+x)$ and $(1+x)^m$; Indeterminate forms.		
	Theory	Unit 2: Mean Value Theorems and its Applications Rolle's theorem, Mean value theorems and applications to monotonic functions and inequalities; Expansion of functions: Taylor's theorem, Taylor's series, Maclaurin's series expansion of e^x , $\sin(x)$, $\cos(x)$, $\log(1+x)$ and $(1+x)^m$; Indeterminate forms.	GE Mathematics Sem I	Fundamentals of Calculus
	Mid Semester Internal Exam	Mid Semester Internal Exam was conducted based on the topics covered in Aug, Sept and Oct for the both courses.		
	Tutorial	Covered problems of the topics discussed in theory. Assignment-1 based on the topics covered in theory.	BA (P) Sem I	Topics in Calculus
	Tutorial	Covered problems of the topics discussed in theory. Assignment-1 based on the topics covered in theory.	GE Mathematics Sem I	Fundamentals of Calculus
	Practical	Cascading style sheet (CSS): Concept of CSS, creating style sheet, importing style sheets, CSS properties, CSS styling (background, text format, controlling fonts), CSS rules, Style Types, CSS Selectors, CSS cascade, working with block elements and objects, working with lists and tables, CSS id and class, box model (introduction, border properties, padding properties, margin properties). Mid semester Internal Exam (as a part of Continuous Assessment)	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
November	Theory	Unit 3: Tracing of Curves and Reduction Formulae-Asymptotes (parallel to axes and oblique), Concavity and inflexion points, Singular points, Tangents at the origin and nature of singular points, Curve tracing (cartesian and polar equations). Reduction formulae for $\int \sin^n x dx$, $\int \cos^n x dx$, $\int \sin^m x \cos^n x dx$ and their applications.	BA (P) Sem I	Topics in Calculus
	Theory	Unit 3: Tracing of Curves Concavity and inflexion points, Asymptotes (parallel to axes and oblique), Relative extrema, Tracing graphs of polynomial functions, rational functions, and polar equations.	GE Mathematics Sem I	Fundamentals of Calculus
	Tutorial	Covered problems of the topics discussed in theory. Assignment-2 based on the topics covered in theory	BA (P) Sem I	Topics in Calculus
	Tutorial	Covered problems of the topics discussed in theory. Assignment-2 based on the topics covered in theory	GE Mathematics Sem I	Fundamentals of Calculus
	Practical	Basics of Java script: Document object model, data types and variables, functions, methods and events, controlling program flow, built-in objects and operators, validations. Assignment- Solving the suggested questions as per the syllabus.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development

December	Theory	Revision of the units 1, 2, and 3.	BA (P) Sem I	Topics in Calculus
	Theory	Revision of the units 1, 2, and 3.	GE Mathematics Sem I	Fundamentals of Calculus
	Tutorial	Revision of the units 1, 2, and 3.	BA (P) Sem I	Topics in Calculus
	Tutorial	Revision of the units 1, 2, and 3.	GE Mathematics Sem I	Fundamentals of Calculus
	Practical	Revision of all the units & PYQs. Solving model questions.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development

Signature of the teacher

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SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

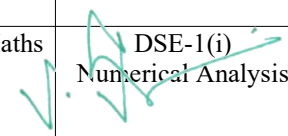
2023-24 Odd Semester, August-December, 2023

Name of the Faculty: Prof. Swarn Singh

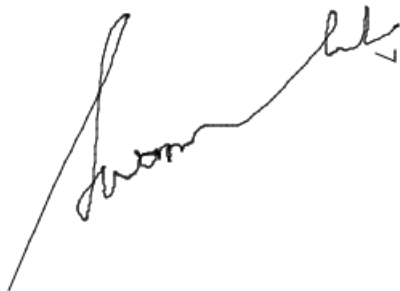
Department: Mathematics

Semester: V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	To introduce the concepts of Algorithms, Convergence, Bisection Method and various problems related to these and to discuss various theorems related to convergence of the method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Practicals:	Basic concepts of Mathematica and Practical (1) Bisection method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Tutorials:			
SEPTEMBER	Theory:	False position method, Fixed point iteration method, Newton's method, Secant method, LU decomposition, Gauss- Jacobi method, Gauss-Seidel method, SOR iterative method and to discuss various theorems related to convergence of these methods.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Practicals:	Practicals (2) Newton Raphson Method, (3) Secant method, (4) Regula Falsi Method (5) LU decomposition method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Tutorials:			
OCTOBER	Theory:	Partial and Scaled Partial Pivoting, Lagrange and Newton interpolation, Piecewise linear interpolation, First and higher order approximation for first derivative, approximation for second derivative, Richardson extrapolation method and to discuss various theorems related to these methods.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Practicals:	Practicals: (6) Gauss-Jacobi method (7) SOR method, (8) Gauss Siedel method (9) Lagrange Interpolation, (10) Newton Interpolation	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Tutorials:			


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	<u>Assignment</u>	Assignment to be given related to syllabus.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	<u>Mid Term Test</u>	To take internal Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
NOVEMBER	Theory	Numerical Integration by closed Newton-Cotes formulae: trapezoidal rule, Simson's rule and its error analysis, Euler's method to solve ODE's, Second order Runge- Kutta methods ,	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Practicals:	Practicals: (11) Trapezoidal rule (12) Simpson's rule (13) Euler's method	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Tutorials:			
	<u>Mid Term Test</u>	To take internal Lab Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
DECEMBER	Theory:	Modified Euler's method, Heun's method and optimal RK2 method. and to revise whole syllabus. To discuss previous year questions papers some of which are available on my Blog https://numericalmaths.wordpress.com/	B.Sc.(Hons.)Maths Sem V	DSE-1(i) Numerical Analysis
	Practicals:	Practical (14) Second order Runge-Kutta methods and revise all practicals	B.Sc.(Hons.)Maths Sem V	DSE-1 Numerical Analysis
	Tutorials:			




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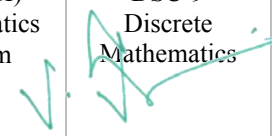
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Deepti Jain

Department: Mathematics

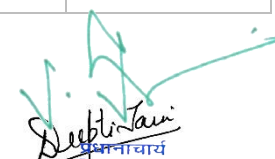
Semester: III/V

Month		Topics	Course	Paper Code/Name
August	Theory	The cardinality of a set; Definitions, examples and basic properties of partially ordered sets, Order-isomorphisms, Covering relations, Hasse diagrams	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Theory	Definitions, Examples and basic properties of ordered sets, Order-isomorphism, Hasse diagrams, Dual of an ordered set, Duality principle	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Tutorial	Exercise questions and doubts based on partially ordered sets and order-isomorphism	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Practical	1. Expressing relations as ordered pairs and creating relations. 2. Finding whether or not, a given relation is Reflexive	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Practical	1. Bisection method 2. Newton–Raphson method	B.Sc. (H) Mathematics V Sem	DSE-I (i) Numerical Analysis
September	Theory	Dual of an ordered set, Duality principle, Bottom and top elements, Maximal and minimal elements, Zorn's lemma, Building new ordered sets, Maps between ordered sets, Lattices as ordered sets, Lattices as algebraic structures, Sublattices	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Theory	Maximal and minimal elements, Building new ordered sets, Maps between ordered sets, Lattices as ordered sets, Lattices as algebraic structures, Sublattices, Products and homomorphisms; Definitions, Examples and properties of modular and distributive lattices, The M3 – N5 theorem with applications.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Tutorial	Exercise questions and doubts based on Lattices, Sublattices and Distributive and Modular Lattices	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Practical	3. Finding whether or not, a given relation is: i. Antisymmetric ii. Transitive iii. Partial order 4. Finding the following for a given partially ordered set i. Covering relations. ii. The corresponding Hasse diagram representation. iii. Minimal and maximal elements.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics


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	Practical	3. Secant method 4. Regula-Falsi method 5. LU decomposition method	B.Sc. (H) Mathematics V Sem	DSE-I (i) Numerical Analysis
October	Theory	Products, Lattice isomorphism; Definitions, examples and properties of modular and distributive lattices; The M3 – N5 theorem with applications, Complemented lattice, Relatively complemented lattice, Sectionally complemented lattice.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Theory	Complemented lattice, Relatively complemented lattice, Sectionally complemented lattice, Boolean algebras, De Morgan's laws, Boolean homomorphism, Representation theorem; Boolean polynomials, Boolean polynomial functions, Disjunctive normal form and conjunctive normal form, Minimal forms of Boolean polynomial, Quine-McCluskey method, Karnaugh diagrams.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Tutorial	Exercise questions and doubts based on Boolean Algebra, Boolean Polynomials and minimal forms of Boolean polynomials	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Practical	5. Finding the following for a subset S of a given partially ordered set P i. Whether a given element in P is an upper bound (lower bound) of S or not. ii. Set of all upper bounds (lower bounds) of S. iii. The least upper bound (greatest lower bound) of S, if it exists. 6. Creating lattices and determining whether or not, a given partially ordered set is a lattice.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Practical	6. Gauss-Jacobi method 7. SOR method 8. Gauss-Seidel method 9. Lagrange interpolation 10. Newton interpolation	B.Sc. (H) Mathematics V Sem	DSE-I (i) Numerical Analysis
	Assignment	Question from the topics including partially ordered sets, Lattices and Distributive and Modular Lattices.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
		Question from the topics including ordered sets, Distributive and Modular Lattices and Boolean Algebras.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Mid-Term Test	Test based on the topics covered.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
		Test based on the topics covered.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
November	Theory	Boolean algebras, De Morgan's laws, Boolean homomorphism, Representation theorem, Boolean polynomials, Boolean polynomial functions, Equivalence of Boolean polynomials, Disjunctive normal form and conjunctive normal form of Boolean polynomials; Minimal forms of Boolean polynomials, Quine-McCluskey method, Karnaugh diagrams.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics

	Theory	Switching circuits and applications of switching circuits. Unit 4: Graph Theory Introduction to graphs, Königsberg bridge problem, Instant insanity game; Definition, examples and basic properties of graphs, Subgraphs, Pseudographs, Complete graphs, Bipartite graphs, Isomorphism of graphs, Paths and circuits, Eulerian circuits, Hamiltonian cycles.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Tutorial	Exercise questions and doubts based on Switching Circuits and Graph Theory.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Practical	6. Finding the following for a given Boolean polynomial function: i. Representation of Boolean polynomial function and finding its value when the Boolean variables in it take particular values over the Boolean algebra $\{0,1\}$. ii. Display in table form of all possible values of Boolean polynomial function over the Boolean algebra $\{0,1\}$. 7. Finding the following: i. Dual of a given Boolean polynomial/expression. ii. Whether or not two given Boolean polynomials are equivalent. iii. Disjunctive normal form (Conjunctive normal form) from a given Boolean expression. iv. Disjunctive normal form (Conjunctive normal form) when the given Boolean polynomial function is expressed by a table of values. 8. Representing a given circuit diagram (expressed using gates) in the form of Boolean expression.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Practical	11. Trapezoidal rule 12. Simpson's rule 13. Euler's method 14. Second order Runge–Kutta methods.	B.Sc. (H) Mathematics V Sem	DSE-I (i) Numerical Analysis
December	Theory	Switching circuits and applications, Applications of Boolean algebras to logic, set theory and probability theory.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Theory	Adjacency matrix, Weighted graph, Travelling salesman problem, Shortest path, Dijkstra's algorithm.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Tutorial	Exercise questions and doubts based on Adjacency Matrices and Dijkstra's Algorithm.	B.Sc. (H) Mathematics V Sem	DSE-2 (ii) Discrete Mathematics
	Practical	9. Minimizing a given Boolean expression to find minimal expressions.	B.Sc. (H) Mathematics III Sem	DSC-9 Discrete Mathematics
	Practical	Revision of the topics done during the semester.	B.Sc. (H) Mathematics V Sem	DSE-I (i) Numerical Analysis


Signature of the teacher
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
 Odd Semester Teaching Plan (July-December 2023)

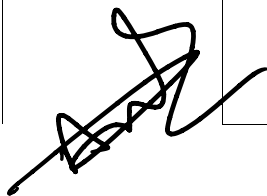
Name of the Faculty: Dr. Amit Kumar

Department: Mathematics

Month		Topics	Course	Paper Code/Name
August	Theory	Definition of upper and lower Darboux sums, Darboux integral, Inequalities for upper and lower Darboux sums.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Definition of upper and lower Darboux sums, Darboux integral, Inequalities for upper and lower Darboux sums.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Theory:	Basic definition of differential equation with examples, Order and Degree of the differential equation with examples, Linear and Nonlinear differential equations with examples, General solutions.	BA (Prog.) Sem-III	Differential Equation
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Ordinary and Partial differential equations, and Order, Degree.	BA(Prog.) Sem-III	Differential Equation
	Practicals	Troubleshooting in Python, Practical's on Turtle module. Expressing relations as ordered pairs and creating relations.	B.Sc(H) Maths Sem -III B.Sc(H) Maths Sem -III	DSE-1: Mathematical Python Discrete Mathematics

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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

September	Theory	Necessary and sufficient conditions for the Darboux integrability; Riemann's definition of integrability by Riemann sum and the equivalence of Riemann's and Darboux's definitions of integrability, Definition and examples of the Riemann-Stieltjes integral, Riemann integrability.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Necessary and sufficient conditions for the Darboux integrability; Riemann's definition of integrability by Riemann sum and the equivalence of Riemann's and Darboux's definitions of integrability, : Definition and examples of the Riemann-Stieltjes integral, : Riemann integrability.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Theory	Particular solutions and singular solutions with examples, Discuss the first order differential equations. First order exact differential equations including rules for finding integrating factors. Higher order differential equations, homogeneous and non homogeneous equations.	BA (Prog) Sem-III	Differential equations
	Tutorials	To discuss the doubt of students and various exercise questions and examples related discussed topics in the class.	BA (Prog)	Differential equations
	Practicals	Animation of decay Plotting, Random Number generation.	B.Sc(H) Maths Sem -III	DSE-1: Mathematical Python
		Finding the following for a subset S of a given partially ordered set P Whether a given element in P is an upper bound (lower bound) of S or not. Set of all upper bounds (lower bounds) of S The least upper bound (greatest lower bound) of S, if it exists.	B.Sc(H) Maths Sem-III	Discrete Mathematics
		Unit 1: Participation in Physical Activity. Fit India Protocol. Physical Activity, Health and Fitness. Indicators of Fitness. Practical/Practice- Aerobic Work Out / Physical Activity (Walking), Yoga - Asanas (Lying, Sitting and Standing positions) and Pranayama. Cardiovascular Testing by 12m/9 min Cooper Run/Walk test.	Value Addition Course (VAC 3) III Sem	VAC III Fit India  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

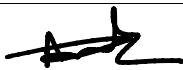


October	Theory	Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability; Intermediate value theorem for integrals, Fundamental Theorems of Calculus.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Tut	To discuss the doubt of students and various exercise questions and examples related to Riemann integrability of monotone functions and continuous functions, Properties of Riemann integrable functions, Definitions of piecewise continuous and piecewise monotone functions and their Riemann integrability; Intermediate value theorem for integrals, Fundamental Theorems of Calculus.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Theory	Wronskian and its properties linearly independence and linearly dependence solutions, examples and exercise questions, homogeneous with constant coefficient, Variation of parameters. Euler's equations, Simultaneous differential equations, Total differential equations with examples and exercise questions	BA (Prog) Sem-VI	Differential equations
	Assignments	To be given assignment related to syllabus.	B.Sc(H) Maths Sem-III B BA(Prog)-III	DSC8: Riemann Integration & Differential equations
	Practicals	Practical's on Linear Algebra with Numpy, Couples ordinary differential equations. 3..Finding the following for a given Boolean polynomial function: i. Representation of Boolean polynomial function and finding its value when the Boolean variables in it take particular values over the Boolean algebra $\{0,1\}$. ii. Display in table form of all possible values of Boolean polynomial function over the Boolean algebra $\{0,1\}$.	B.Sc(H) Maths Sem -III B.Sc(H) Maths Sem-III	DSE-1: Mathematical Python Discrete Mathematics
		Successfully accomplishing and concluding Unit 1. Unit 2: Health Related Fitness and their Components- Muscular Strength and Endurance, Body Composition and Flexibility. Practical/practice- Flexibility Training: Back Saver Sit and Reach test, Muscular Strength Training: Curl Ups / Standing Broad Jump/ Vertical Jump/ Plyometric. Endurance Training: 1 Mile Rock Port Test or 12 /9 minutes Cooper run/walk test. Ideal Body Weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio (Assignment 1 - Data of at least 10 persons to be collected and compared with the ideal standards	Value Addition Course (VAC 3) III Sem	VAC III Fit India  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

November	Theory	Methods of integration: integration by substitution and integration by parts; Volume by slicing and cylindrical shells, Length of a curve in the plane and the area of surfaces of revolution, Improper integrals of Type-I, Type-II and mixed type, Convergence of improper integrals.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Methods of integration: integration by substitution and integration by parts; Volume by slicing and cylindrical shells, Length of a curve in the plane and the area of surfaces of revolution, Improper integrals of Type-I, Type-II and mixed type, Convergence of improper integrals.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Practical	Practical's on Calculus and Algebra with SymPy.	B.Sc(H) Maths Sem-III	DSE-1: Mathematical Python
		Representing a given circuit diagram (expressed using gates) in the form of Boolean expression.	B.Sc(H) Maths Sem-III	Discrete Mathematics
		Unit 3- Nutrition and Fitness- Healthy Eating Plate, Balanced Diet, Caloric Content of Food. Practical/Practice- Preparing Daily Diet and Calorie Chart, Aerobic Work Out / Physical Activity (Walking), Assessment of Physical Activities with the Calorie intake. Asanas for digestive system excretory system. Different	Value Addition Course (VAC 3) III Sem	VAC III Fit India
	Theory	Order and degree of partial differential equations, Concept of linear partial differential equations, Formation of first order partial differential equations, Linear partial differential equations of first order and their solutions. Concept of non-linear partial differential equations, Lagrange's method, Charpit's method.	BA (Prog) Sem-III	Differential equations
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Lagrange's method, Charpit's method and others questions.	BA (Prog) Sem-III	Differential equations
December	Theory	The beta and gamma functions and their properties.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to the beta and gamma functions and their properties.	B.Sc(H) Maths Sem-III B	DSC8: Riemann Integration
	Theory	Classification of second order partial differential equations into elliptic, parabolic and hyperbolic through illustrations only.	BA (Prog) Sem-III	Differential Equations


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Tutorials	To discuss the doubt of students and various exercise questions and examples related to Classification of second order partial differential equations and others questions.	BA (Prog) Sem-III	Differential Equation
Practical	Practical's on Printing Documents with Pandas and LaTeX.	B.Sc(H) Maths Sem-III	DSE-1: Mathematical Python
	Mock test	B.Sc(H) Maths Sem-III B	Discrete Mathematics
	Assignment- 2 given to the students. Revision of all the Units along with the physical activities done in the classes. Preparations for final practical.	Value Addition Course (VAC 3) III Sem	VAC III Fit India

Dr. Amit Kumar 



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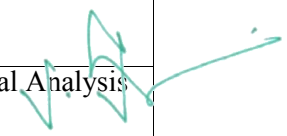
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
 2023-24 Odd Sem

Name of the Faculty: Dr. Sudhakar Yadav

Department: Mathematics

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Automorphism, Inner automorphism, Automorphism groups, Automorphism groups of finite and infinite cyclic groups, Characteristic subgroups, Commutator subgroup and its properties, Applications of factor groups to automorphism groups.	B.Sc(H) Maths Sem-V B	C12- Group Theory-II
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to Automorphism, Inner automorphism, Automorphism groups, Automorphism groups of finite and infinite cyclic groups. Characteristic subgroups, Commutator subgroup and its properties; Applications of factor groups to automorphism groups.		
	Theory	Permutation groups and group of symmetries, Cycle notation for permutations and properties, Even and odd permutations, Alternating groups.	B.Sc(H) Maths Sem-III B	Group Theory
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to permutation groups and groups of symmetries, cycle notation for permutations and properties, Even and odd permutations, alternating groups	B.Sc(H) Maths Sem-III B	Group Theory-I
	Practicals	1. Bisection method 2. Newton–Raphson method	B.Sc(H) Maths Sem-V	Numerical Analysis


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September	Theory	External direct products of groups and its properties, The group of units modulo n as an external direct product, Applications to data security and electric circuits, Internal direct products, Classification of groups of order $K \cdot C$, where K is a prime, Statement of the Fundamental theorem of finite abelian groups, The isomorphism classes of Abelian groups.	B.Sc(H) Maths Sem-VB	Group Theory-II
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to external direct products of groups and its properties, The group of units modulo n as an external direct product, Applications to data security and electric circuits, Internal direct products, Classification of groups of order, where K is a prime, Statement of the Fundamental theorem of finite abelian groups, The isomorphism classes of Abelian groups.	B.Sc(H) Maths Sem-VB	Group Theory-II
	Theory	Cosets and its properties, Lagrange's theorem and consequences including Fermat's Little theorem, Number of elements in product of two finite subgroups, Normal subgroups, Factor groups, Cauchy's theorem for finite Abelian groups.	B.Sc(H) Maths Sem-III B	Group Theory
	Tutorial s	To discuss the doubts of students and various exercise questions and examples related to Cosets and its properties, Lagrange's theorem and consequences including Fermat's Little theorem, Number of elements in product of two finite subgroups, Normal subgroups, Factor groups, Cauchy's theorem for finite Abelian groups.	B.Sc(H) Maths Sem-III B	Group Theory
	Practicals	3. Secant method 4. Regula-Falsi method 5. LU decomposition method	B.Sc(H) Maths Sem-V	
		To take the syllabus-related test	B.Sc(H) Maths Sem-VB/IIIB	Group Theory-II/ Group Theory/ Numerical Analysis

		To assign an assignment and a project	B.Sc(H) Maths Sem- VB/IIB	Group Theory-II/ Group Theory
OCTOBER	Theory	Group actions and permutation representations; Stabilizers and kernels of group actions, Groups acting on themselves by left multiplication and consequences; Conjugacy in S_n .	B.Sc(H) Maths Sem-VB	C12- Group Theory-II
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to Group actions and permutation representations; Stabilizers and kernels of group actions, Groups acting on themselves by left multiplication and consequences; Conjugacy in S_n	B.Sc(H) Maths Sem- VB	Group Theory-II
	Theory	Group homomorphisms, isomorphisms and properties, Cayley's theorem, First, Second and Third isomorphism theorems for groups, Automorphism, Inner automorphism.	B.Sc(H) Maths Sem- IIIB	Group Theory
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to Group homomorphisms, isomorphisms and properties, Cayley's theorem, First, Second and Third isomorphism theorems for groups, Automorphism, Inner automorphism, Automorphism groups, Automorphism groups of cyclic groups.	B.Sc(H) Maths Sem- IIIB	Group Theory
	Practical s	6. Gauss–Jacobi method 7. SOR method 8. Gauss–Seidel method 9. Lagrange interpolation	B.Sc(H) Maths Sem-V	Numerical Analysis
	Test	To take an internal test related to the syllabus and an internal lab test related to the above practicals	B.Sc(H) Maths Sem- III B/V B/V	Group Theory / C12- Group Theory-II/ Numerical Analysis
November	Theory	Conjugacy classes, Class equation, K-groups, State three Sylow theorems and give their applications, Finite simple groups, Nonsimplicity tests; Generalized Cayley's theorem, Index theorem.	B.Sc(H) Maths Sem-V B	Group Theory-II
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to Conjugacy classes, Class equation, K-groups, State three	B.Sc(H) Maths Sem- VB	Group Theory-II


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		Sylow theorems and give their applications, Finite simple groups, Nonsimplicity tests; Generalized Cayley's theorem, Index theorem.		
	Theory	Applications of factor groups to automorphism groups, External direct products of groups and its properties, The group of units modulo n as an external direct product, Applications to data security and electric circuits, Internal direct products.	B.Sc(H) Maths Sem-III B	Group Theory
	Tutorials	To discuss the doubts of students and various exercise questions and examples related to Applications of factor groups to automorphism groups, External direct products of groups and its properties, The group of units modulo n as an external direct product, Applications to data security and electric circuits, Internal direct products.	B.Sc(H) Maths Sem-III B	Group Theory
	Practicals	10. Newton interpolation 11. Trapezoidal rule 12. Simpson's rule 13. Euler's method 14. Second order Runge-Kutta methods.	B.Sc(H) Maths Sem-V	Numerical Analysis
December	Theory	Embedding theorem and applications; Simplicity.	B.Sc(H) Maths Sem-VB	Group Theory-II
	Tutorials:	To go over the entire syllabus again and discuss last year's exam questions	B.Sc(H) Maths Sem-III B /VB	C12- Group Theory-II/ Group Theory
	Theory	Fundamental theorem of finite Abelian groups and its isomorphism classes.	B.Sc(H) Maths Sem-III B	Group Theory
	Tutorials:	To go over the entire syllabus again and discuss last year's exam questions.	B.Sc(H) Maths Sem-III B	Group Theory
	Practicals	Revision of Practicals	B.Sc(H) Maths Sem-V	Numerical Analysis

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Semester Wise Teaching Plan
Sri Venkateswara College
2023-24 Odd Semester

Faculty: Dr. Nisha Bohra

Department: Mathematics

Semester: I/III

<u>Month</u>		<u>Topics</u>	<u>Course</u>	<u>Paper Name and code</u>
August	Theory 1	Polynomials, The remainder and factor theorem, Synthetic division	B.Sc. (H) Mathematics I A	DSC 1 Algebra
	Theory 2	Metric Spaces: Definitions and examples	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Tutorial Theory 1	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics I A	DSC 1 Algebra
	Tutorial Theory 2	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Practical 1	1) Expressing relations as ordered pairs and creating relations. 2) Finding whether or not, a given relation is: i. Reflexive ii. Antisymmetric iii. Transitive iv. Partial order	B.Sc. (H) Mathematics III A	DSC 9 Discrete Mathematics
September	Theory 1	Factored form of a polynomial, Multiple roots, Fundamental theorem of algebra, Relations between the roots and the coefficients of polynomial equations, Upper bounds for the real roots	B.Sc. (H) Mathematics I A	DSC 1 Algebra


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	Theory 2	Sequences in metric spaces, Cauchy sequences, Complete metric spaces, open and closed balls, Neighborhood, open set, Interior of a set, Limit point of a set.	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Tutorial Theory 1	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics I A	DSC 1 Algebra
	Tutorial Theory 2	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Practical 1	3) Finding the following for a given partially ordered set i. Covering relations. ii. The corresponding Hasse diagram representation. iii. Minimal and maximal elements.	B.Sc. (H) Mathematics III A	DSC 9 Discrete Mathematics
October	Theory 1	Results on imaginary, integral and rational roots, Newton's method for integral roots, Descartes' rule of signs	B.Sc. (H) Mathematics I A	DSC 1 Algebra
	Theory 2	Closed set, diameter of a set, Cantor's Theorem, Subspaces, dense sets, separable spaces, Continuous mappings, Sequential criteria and other characterizations of continuity	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Tutorial Theory 1	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics III B	Group Theory II, C12
	Tutorial Theory 2	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics V B	Metric spaces, C11

	Practical 1	4) Finding the following for a subset S of a given partially ordered set P i. Whether a given element in P is an upper bound (lower bound) of S or not. ii. Set of all upper bounds (lower bounds) of S . iii. The least upper bound (greatest lower bound) of S , if it exists. 5) Creating lattices and determining whether or not, a given partially ordered set is a lattice.	B.Sc. (H) Mathematics III A	DSC 9 Discrete Mathematics
	Internal Test	Internal Exam conducted on the basis of topics covered in the class	B.Sc. (H) Mathematics IA and V B	Algebra and Metric Spaces
	Assignment	Assignment given on the topics covered in the class	B.Sc. (H) Mathematics I A and V B	Algebra and Metric Spaces
November	Theory 1	Polar representation of complex numbers, De-Moivre's theorem for integer and rational indices and their applications, The n th roots of unity	B.Sc. (H) Mathematics I A	DSC 1 Algebra
	Theory-2	Uniform continuity, Homeomorphism, Contraction mappings, Banach Fixed point theorem, Connectedness, connectedness and continuous mappings	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Tutorial Theory 1	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics III B	Group Theory II, C!2
	Tutorial Theory 2	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics V B	Metric spaces, C11

	Practical 1	6) Finding the following for a given Boolean polynomial function: i. Representation of Boolean polynomial function and finding its value when the Boolean variables in it take particular values over the Boolean algebra $\{0,1\}$. ii. Display in table form of all possible values of Boolean polynomial function over the Boolean algebra $\{0,1\}$. 7) Finding the following: i. Dual of a given Boolean polynomial/expression. ii. Whether or not two given Boolean polynomials are equivalent. iii. Disjunctive normal form (Conjunctive normal form) from a given Boolean expression. iv. Disjunctive normal form (Conjunctive normal form) when the given Boolean polynomial function is expressed by a table of values.	B.Sc. (H) Mathematics III A	DSC 9 Discrete Mathematics
December	Theory 1	Cardan's solution of the cubic, Descartes' solution of the quartic equation.	B.Sc. (H) Mathematics I A	DSC1 Algebra
	Theory 2	Uniform continuity, Homeomorphism, Contraction mappings, Banach Fixed point theorem, Connectedness, connectedness and continuous mappings	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Tutorial Theory 1	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics I A	DSC1 Algebra

	Tutorial Theory 2	To discuss the doubt of the students and exercise problems based on the topic covered in the class.	B.Sc. (H) Mathematics V B	Metric spaces, C11
	Practical 1	8) Representing a given circuit diagram (expressed using gates) in the form of Boolean expression. 9) Minimizing a given Boolean expression to find minimal expressions.	B.Sc. (H) Mathematics III A	DSC 9 Discrete Mathematics

Nisha

Signature of Teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Rahul Thakur
Department: Mathematics
Semester: I & V

Month		Topics	Course	Paper Code/Name
August	Theory	Automorphism, inner automorphism, automorphism groups of finite and infinite cyclic groups, characteristic subgroups, commutator subgroup and its properties, applications of factor groups to automorphism groups.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Tutorial	Problems based on automorphisms, characteristic subgroups and commutator subgroup.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Theory	Statement of well ordering principle, the division algorithm in $\mathbb{Z}$.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Tutorial	Problems based on the division algorithm in $\mathbb{Z}$.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Practical	Presentation and analysis of data (univariate and bivariate) by frequency tables, descriptive statistics.	B.Sc. (H) Mathematics Sem-I Batch-A+B&B	Probability and Statistics
September	Theory	External direct products of groups and its properties, internal direct products, classification of groups of order p^2 , statement of the fundamental theorem of finite abelian groups, the isomorphism classes of Abelian groups, Group actions and permutation representations.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Tutorial	Applications of external direct products in data security and electric circuits.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Theory	Divisibility and the Euclidean algorithm, fundamental theorem of arithmetic, modular arithmetic and basic properties of congruences.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Tutorial	Solving linear congruences.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra

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	Practical	Stem and leaf plots, dot plots, histograms, boxplots, comparative boxplots, and probability plots.	B.Sc. (H) Mathematics Sem-I Batch-A+B&B	Probability and Statistics
October	Theory	Stabilizers and kernels of group actions, groups acting on themselves by left multiplication and consequences, conjugacy in S_n , conjugacy classes, class equation, p-groups.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Tutorial	Problems based on group actions and class equations of groups.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Theory	Groups, basic properties, symmetries of a square, dihedral group, order of a group, order of an element, subgroups, center of a group, centralizer of an element.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Tutorial	Solving exercise problems based on subgroups, order, center and centralizers.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Practical	Fitting of binomial, Poisson and normal distributions, illustrating the Central Limit Theorem through Excel.	B.Sc. (H) Mathematics Sem-I Batch-A+B&B	Probability and Statistics
	Assignment	Based on the taught topics.	B.Sc. (H) Mathematics Sem-V, Sec-A and B.Sc. (H) Mathematics Sem-I, Sec-A	Group Theory-II and Algebra
	Mid-Term Test	Based on the taught topics.	B.Sc. (H) Mathematics Sem-V, Sec-A and B.Sc. (H) Mathematics Sem-I, Sec-A	Group Theory-II and Algebra
November	Theory	Sylow theorems and their applications, finite simple groups, non-simplicity tests, Generalized Cayley's theorem, Index theorem.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Tutorial	Problems based on Sylow's theorems.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Theory	Cyclic groups and properties, generators of a cyclic group.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Tutorial	Problems based on cyclic groups and its generators.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Practical	Fitting of regression line using the principle of least squares, computation of sample correlation coefficient.	B.Sc. (H) Mathematics Sem-I Batch-A+B&B	Probability and Statistics

December	Theory	Embedding theorem and applications, Simplicity of A_5 .	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Tutorial	Problems based on simple and non-simple groups.	B.Sc. (H) Mathematics Sem-V, Sec-A	Group Theory-II
	Theory	Classification of subgroups of cyclic groups.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Tutorial	Solving exercise problems based on subgroups of cyclic groups.	B.Sc. (H) Mathematics Sem-I, Sec-A	Algebra
	Practical	Internal lab test.	B.Sc. (H) Mathematics Sem-I Batch-A+B&B	Probability and Statistics

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Teaching Plan: Odd Sem 2023-24

Name of the Faculty: Ms. Monika Meena

Department: Mathematics

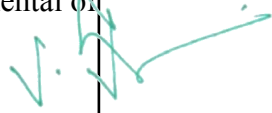
Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	The cardinality of a set and Questions. Basics of Relation and Cartesian Product.	B.Sc.(H) Mathematics Sem-III B	Discrete Mathematics
	Theory	Vedic Math: History of Vedic Maths and its Features Vedic Maths formulae: Sutras and Upsutras	Value Added Course	Vedic Mathematics-I
	Practical	Understanding Base and Complement	Value Added Course	Vedic Mathematics-I
	Theory	Limits: Definition and examples	Generic Elective Sem-I	Fundamental of Calculus
	Tutorials:	Questions based on Limit.	Generic Elective Sem-I	Fundamental of Calculus
	Practical	1. Basics for practical 2. Expressing relations as ordered pairs and creating relations.	B.Sc(H) Mathematics Sem-III A and B batch	Discrete Mathematics
September	Theory	Definitions, examples and basic properties of partially ordered sets, Order-isomorphisms, Covering relations, Hasse diagrams. Dual of an ordered set, Duality principle, Bottom and top elements, Maximal and minimal elements, Zorn's lemma, Building new ordered sets, Maps between ordered sets.	B.Sc(H) Mathematics Sem-III B	Discrete Mathematics

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	Theory	Addition in Vedic Maths: Without carrying, Dot Method Subtraction in Vedic Math: Nikhilam Navatashcaramam Dashatah (All from 9 last from 10) Fraction -Addition and Subtraction Multiplication in Vedic Math: Base Method (any two numbers upto three digits)	Value Added Course	Vedic Mathematics-I
	Practical	Practice Sheet based on Addition, Subtraction, Fraction and Multiplication.	Value Added Course	Vedic Mathematics-I
	Theory	Continuity, Types of discontinuities. Differentiability of functions. Successive differentiation, Leibnitz theorem. Partial differentiation	Generic Elective Sem-I	Fundamental of Calculus
	Tutorials:	Exercise question discussion.	Generic Elective Sem-I	Fundamental of Calculus
	Practical	1. Finding whether or not, a given relation is i. Reflexive ii. Antisymmetric iii. Transitive iv. Partial order 2. Finding the following for a given partially ordered set i. Covering Relations ii. The corresponding Hasse diagram representation iii. Minimal and maximal elements. 3. Finding the following for a subset S of a given partially ordered set P i. Whether a given element in P is an upper bound (lower bound) of S or not ii. Set of all upper bounds (lower bounds) of S iii. The least upper bound (greatest lower bound) of S, if it exists.	B. Sc.(H) Mathematics Sem-III A and B batch	Discrete Mathematics

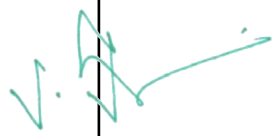
October	Theory	Lattices as ordered sets, Lattices as algebraic structures, Sublattices, Products, Lattice isomorphism. Definitions, examples and properties of modular and distributive lattices.	B.Sc(H) Mathematics Sem-III B	Discrete Mathematics
	Theory	Multiplication by Urdhva Tiryak Sutra Miracle multiplication: Any three-digit number by series of 1's and 9's Division by Urdhva Tiryak Sutra (Vinculum method) Squares of any two-digit numbers: Base method Square of numbers ending in 5: Ekadhikena Purvena Sutra	Value Added Course	Vedic Mathematics-I
	Practical	Practice Sheet based on Multiplication, Square, division and cube.	Value Added Course	Vedic Mathematics-I
	Theory	Euler's theorem on homogeneous functions. Rolle's theorem, Mean value theorems and applications to monotonic functions and inequalities. Taylor's theorem with Lagrange's and Cauchy's forms of remainders. Taylor's series, Maclaurin's series expansion of e^x , $\sin x$, $\cos x$, $\log(1+x)$, and $(1+x)^m$	Generic Elective Sem-I	Fundamental of Calculus
	Tutorials:	Exercise question discussion.	Generic Elective Sem-I	Fundamental of Calculus


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	Practical	1.Finding the following for a subset S of a given partially ordered set P 2..Creating lattices and determining whether or not a given partially ordered set is a lattice. 3..Finding the following for a given Boolean polynomial function: i. Representation of Boolean polynomial function and finding its value when the Boolean variables in it take particular values over the Boolean algebra $\{0,1\}$. ii. Display in table form of all possible values of Boolean polynomial function over the Boolean algebra $\{0,1\}$.	B.Sc(H) Mathematics Sem-III A and B batch	Discrete Mathematics
	Test	To take an internal test related to syllabus.	1.B.Sc(H) Mathematics Sem-III B 2.Generic Elective 3.Value Added Course	1.Discrete Mathematics 2. Fundamental of Calculus. 3. Vedic Mathematics-I
November	Theory	The M3–N5 theorem with applications, Complemented lattice, Relatively complemented lattice, Sectionally complemented lattice. Boolean algebras, De Morgan's laws, Boolean homomorphism, Representation theorem, Boolean polynomials, Boolean polynomial functions, Equivalence of Boolean polynomials Disjunctive normal form and conjunctive normal form of Boolean polynomials; Minimal forms of Boolean polynomials, Quine-McCluskey method, Karnaugh diagrams.	B.Sc. (H) Mathematics Sem-III B	Discrete Mathematics

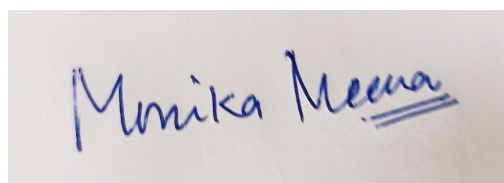


Theory	Easy square roots: Dwandwa Yoga (duplex) Sutra Square root of 2: Baudhayana Shulbasutra Circling a square: Baudhayana Shulbasutra Factoring Quadratic equation: Anurupyena, Adyamadyenantyamanty Sutra Concept angle (8) 0, 30, 45, 60 and 90 degree: Baudhayana number	Value Added Course	Vedic Mathematics-I
Practical	Practice Sheet based on Square root, Quadratic Equation and Baudhayana number .	Value Added Course	Vedic Mathematics-I
Theory	Indeterminate forms Concavity and inflexion points, Asymptotes (parallel to axes and oblique). Relative extrema Tracing graphs of polynomial function.	Generic Elective Sem-I	Fundamental of Calculus
Tutorials:	Exercise question discussion.	Generic Elective Sem-I	Fundamental of Calculus
Practical	1. Finding the following: i. Dual of a given Boolean polynomial/expression. ii. Whether or not two given Boolean polynomials are equivalent or not (using their Boolean polynomial functions). 2. Finding the following: i. Disjunctive normal form (Conjunctive normal form) from a given Boolean expression. ii. Disjunctive normal form (Conjunctive normal form) when the given Boolean polynomial function is expressed by a table of values. 3. Representing a given circuit diagram (expressed using gates) in the form of Boolean expression. 4. Minimizing a given Boolean expression to find minimal expressions.	B.Sc(H) Mathematics Sem-III B	Discrete Mathematics


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Assignment	To give assignments Related to the above syllabus.	1.B.Sc(H) Mathematics Sem-III B 2.Generic Elective 3.Value Added Course	1.Discrete Mathematics 2. Fundamental of Calculus. 3. Vedic Mathematics-I
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December	Theory	Switching circuits and applications, Applications of Boolean algebras to logic, set theory and probability theory. and Revision.	B.Sc(H) Mathematics Sem-III B	Discrete Mathematics
	Theory	Concept of Baudhayana (Pythagoras) Theorem Concept of pi: Baudhayana Shulbasutra and Revision	Value Added Course	Vedic Mathematics-I
	Practical	Use a circular structure to drive the value of Pi and Viva.	Value Added Course	Vedic Mathematics-I
	Theory	Tracing graphs of rational functions and Revision.	Generic Elective Sem-I	Fundamental of Calculus
	Tutorials:	Exercise question discussion.	Generic Elective Sem-I	Fundamental of Calculus
	Practical	Mock test	B.Sc. (H) Mathematics Sem-III B	Discrete Mathematics



Teacher's Signature



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Teaching Plan: Odd Semester 2023-24

Name of the Faculty: Dr. P. Devaki

Department: Mathematics

Semester: I/V

Month		Topics	Course	Paper Code/Name
Aug	Theory	Descriptive statistics: Populations, Samples, Stem-and-leaf displays, Dotplots, Histograms, Qualitative data, Measures of location, Measures of variability, Boxplots. Sample spaces and events, Probability axioms and properties.	B.Sc(H) Maths Sem-I Section- B	Probability and Statistics
	Lab	Presentation and analysis of data (univariate and bivariate) by frequency tables, descriptive statistics,	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Theory	Sample space, Probability set function, Real random variables - Discrete and continuous, Cumulative distribution function, Probability mass/density functions, Transformations, Mathematical expectation, Moments, Moment generating function, Characteristic function.	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics
	Tutorial	Practice of problems related to above topics	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics

Month		Topics	Course	Paper Code/Name
Sep	Theory	. Conditional probability, Bayes' theorem and independent events. Discrete random variables and probability distributions, Expected values; Probability distributions with their mean and variance: Binomial, geometric, hypergeometric, negative binomial, Poisson, and Poisson distribution as a limit	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics


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	Lab	stem-and-leaf plots, dotplots, histograms, boxplots, comparative boxplots, and probability plots.	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Theory	Discrete distributions: Uniform, Bernoulli, Binomial, Negative binomial, Geometric and Poisson; Continuous distributions: Uniform, Gamma, Exponential, Chi-square, Beta and normal; Normal approximation to the binomial distribution.	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics
	Tutorial	Practice of problems related to above topics	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics

Month		Topics	Course	Paper Code/Name
Oct	Theory	Continuous random variables, Probability density functions, Uniform distribution, Cumulative distribution functions and expected values. Normal and standard normal distributions with their percentiles	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Lab	Fitting of binomial, Poisson and normal distributions. Illustrating the Central Limit Theorem through Excel.	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Theory	Joint cumulative distribution function and its properties, Joint probability density function, Marginal distributions, Expectation of function of two random variables, Joint moment generating function, Conditional distributions and expectations.	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics
	Tutorial	Practice of problems related to above topics	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics
	Assignment	Assignment Related to above syllabus.	B.Sc(H) Maths Sem-I B/ B.Sc(H) Maths Sem-V	Probability and Statistics/ DSE-2/Probability Theory and Statistics

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	Test	Internal test related to syllabus covered.	B.Sc(H) Maths Sem-I B/ B.Sc(H) Maths Sem-V	Probability and Statistics/ DSE-2/Probability Theory and Statistics
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Month		Topics	Course	Paper Code/Name
Nov	Theory	Approximating the binomial distribution; Exponential distribution, Lognormal distribution. Sampling distribution and standard error of the sample mean, Central Limit Theorem and applications. Scatterplot of bivariate data, Regression line using principle of least squares (statement with normal equations), Predicted values and the residuals	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Lab	Fitting of regression line using the principle of least squares. Computation of sample correlation coefficient.	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Theory	The Correlation coefficient, Covariance, Calculation of covariance from joint moment generating function, Independent random variables, Linear regression for two variables, Method of least squares, Bivariate normal distribution	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics
	Tutorial	Practice of problems related to above topics	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics


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Month		Topics	Course	Paper Code/Name
Dec	Theory	Error sum of squares, Coefficient of determination, The sample correlation coefficient and properties.	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Lab	Lab test	B.Sc(H) Maths Sem-I Section-B	Probability and Statistics
	Theory	Chebyshev's theorem, Strong law of large numbers, Central limit theorem and weak law of large numbers.	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics
	Tutorial	Practice of problems related to above topics	B.Sc(H) Maths Sem-V	DSE-2/Probability Theory and Statistics

Devaki P

(Dr. P. Devaki)

V. B.

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SEMESTER-WISE TEACHING PLAN 2023-24

(SRI VENKATESWARA COLLEGE)

Name of the Faculty: Mr. Anuj Kumar

Department: Mathematics

Semester: V

Month	Teaching Activity	Topics	Course	Paper Code/ Name
Aug	Theory	Fundamentals of programming, Organization of logic flow in stored program model of computation, C++ as a general-purpose programming language, Structure of a C++ program, Common compilers and IDE's, Basic data-types. Variables and literals in C++, Operators, Expressions, Evaluation precedence, and Type compatibility. Outline of program development in C++, Debugging and testing.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-I C++ Programming for Mathematics
	Practical	1. Setting up of C++ programming environment; Program-development methodology and use IDE's or other tools. 2. Demonstration of sample programs for (i) "Hello World" (ii) Sum of an arithmetic progression. (iii) Value of $\sin x$ using series expansion. 3. Finding/demonstrating: (i) Machine epsilon. (ii) Integer and float overflow/underflow. (iii) Iteration and selection based logic.		
	Theory	Overview of Cryptography, Computer security concepts, Security attacks, Symmetric cipher model, Cryptanalysis and brute-force attack, Substitution techniques, Caesar cipher, Monoalphabetic ciphers, Playfair cipher, Hill cipher, Polyalphabetic ciphers, One-time pad.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-II Cryptography and Network Security
	Tutorial	Discussions and solving problems on Caesar Cipher and Hill Cipher.		

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Month	Teaching Activity	Topics	Course	Paper Code/ Name
Sep	Theory	Applications: Greatest common divisor, and Random number generation. Structured data-types in C++, Arrays and manipulating data in arrays. Applications: Factorization of an integer, and Euler's totient.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-I C++ Programming for Mathematics
	Practical	Implementation of the following: 1. Greatest common divisor (including Euclid's Method). 2. Random number generation (including a Monte Carlo Program).		
	Theory	Transposition techniques, Binary and ASCII, Pseudo-random bit generation, Stream ciphers and Block ciphers, Feistel cipher, Data Encryption Standard (DES), DES example. Review of basic concepts in Number theory and Finite Fields: divisibility, polynomial and modular arithmetic, Statements of Fermat's and Euler's theorems, Chinese remainder theorem, Discrete logarithm, Finite fields of the form $GF(p)$ and $GF(2^n)$.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-II Cryptography and Network Security
	Tutorial	Revision and Solving problems associated to DES and Chinese Remainder Theorem.		

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Month	Teaching Activity	Topics	Course	Paper Code/ Name
Oct	Theory	Objects and classes: Information hiding, Modularity, Constructors and destructors, Methods and polymorphism; Applications: Cartesian geometry using points (two and three dimensional), and Pythagorean triples. Containers and template libraries: sets, iterators, multisets, vectors, maps, lists, stacks and queues with applications in basic set algebra.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-I C++ Programming for Mathematics
	Practical	3. Factorization of an integer, and Euler's totient. 4.. Cartesian geometry using points (2 & 3-dimensional). 5. Pythagorean triples. 6. Basic set algebra.		
	Internal Assess.	Conducting Internal Exams and Submission of Assignments.		
	Theory	Advanced encryption standard (AES), AES transformation functions, AES key expansion, AES example. Principles of public-key cryptosystems, RSA algorithm and security of RSA, Elliptic curve arithmetic, Elliptic curve cryptography.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-II Cryptography and Network Security
	Tutorial	Discussion on AES and RSA, Solving the associated problems.		
	Internal Assess.	Conducting Internal Exams and Submission of Assignments.		

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Month	Teaching Activity	Topics	Course	Paper Code/ Name
Nov	Theory	Applications: modulo arithmetic, permutations, and polynomials. Arbitrary precision arithmetic using the GMP package; Linear algebra: Two-dimensional arrays in C++ with applications in finding eigenvalues, eigenvectors, rank, nullity, and solving system of linear equations in matrices.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-I C++ Programming for Mathematics
	Practical	7. Modulo arithmetic. 8. Permutations. 9. Polynomials.		
	Theory	Cryptographic Hash functions, Secure Hash algorithm. Digital signatures, Elgamal and Schnorr digital signature schemes, Digital signature algorithm, Wireless network and mobile device security.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-II Cryptography and Network Security
	Tutorial	Conducting an open discussion on Digital Signature algorithm.		



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Month	Teaching Activity	Topics	Course	Paper Code/ Name
Dec	Theory	Features of C++ for input/output & visualization: strings, streams, formatting methods, processing files in a batch, command-line arguments, visualization packages and plots.	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-I C++ Programming for Mathematics
	Practical	10. Arbitrary precision arithmetic using the GMP package. 11. Finding eigenvalues, eigenvectors, rank, nullity, and solving system of linear equations in matrices. 12. Plots (using the GNU plotutils package).		
	Theory	Email architecture, threats and security, Secure/Multipurpose Internet Mail Extension (S/MIME) and Pretty Good Privacy (PGP).	B.Sc.(H) Mathematics Sem V Sec A, B	DSE-II Cryptography and Network Security
	Tutorial	Conducting a write-up session on Internet Security and Privacy.		

Anuj Kumar



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

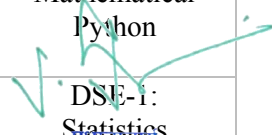
Name of the Faculty: Vikas Jorwal

Department: Mathematics

Semester: III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Introduction to Python Fundamentals and Basics. Drawing diverse shapes using code and Turtle;	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Practical	Installation, update, and maintenance of code, troubleshooting in Python, Practical's on Turtle module.	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Theory	Definitions of random sample, Parameter and statistic.	B.A. (Prog.) V Sem	DSE-1: Statistics
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.A. (Prog.) V Sem	DSE-1: Statistics
	Theory	An overview of number systems, Algebraic and transcendental numbers with some historical background	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Tutorial	Doubts based on theory lectures.	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Practical	Practical's on Transportation Problems using northwest method	B.A. (Prog.) V Sem	SEC: Transportation and Network Flow Problems
	Practical	1) Expressing relations as ordered pairs and creating relations	B.Sc. (H) Mathematics III Sem	Discrete Mathematics

September	Theory	Using matplotlib and NumPy for data organization, Structuring and plotting lines, bars, markers, contours and fields, managing subplots and axes; Pyplot and subplots, Animations of decay, Bayes update, Random walk.	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Practical	Practical's on Plotting with Numpy, matplotlib, Animation of decay Plotting, Random Number generation.	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Theory	Sampling distribution of mean, Standard error of sample mean;	B.A. (Prog.) V Sem	DSE-1: Statistics
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.A. (Prog.) V Sem	DSE-1: Statistics


 Vikas Jorwal
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	Theory	Fundamental arithmetic operations, Rules of divisibility, Hierarchy of operations and Modular arithmetic, Euclidean algorithm, Prime numbers, The sieve of Eratosthenes, Fundamental theorem of arithmetic, Euclid's lemma,	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Tutorial	Doubts based on theory lectures.	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Practical	Practical's on Transportation Problems using Least Count Method and VAM method.	B.A. (Prog.) V Sem	SEC: Transportation and Network Flow Problems
	Practical	2) Finding whether or not, a given relation is: i. Reflexive ii. Antisymmetric iii. Transitive iv. Partial order. 3) Finding the following for a given partially ordered set i. Covering relations. ii. The corresponding Hasse diagram representation. iii. Minimal and maximal elements	B.Sc. (H) Mathematics III Sem	Discrete Mathematics
October	Theory	NumPy for scalars and linear algebra on n-dimensional arrays; Computing eigenspace, Solving dynamical systems on coupled ordinary differential equations, Functional programming fundamentals using NumPy;	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Practical	Practical's on Linear Algebra with Numpy, Couples ordinary differential equations.	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Theory	Mean, variance of random sample from a normal population	B.A. (Prog.) V Sem	DSE-1: Statistics
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.A. (Prog.) V Sem	DSE-1: Statistics
	Theory	Fermat numbers, Mersenne numbers and Mersenne primes, prime testing method of Fermat, Statement and significance of the prime number theorem, Goldbach conjectures, Twin primes,	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Tutorial	Doubts based on theory lectures.	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Practical	Practical on Assignment Problems, Maximal flow problems	B.A. (Prog.) V Sem	SEC: Transportation and Network Flow Problems
	Practical	4) Finding the following for a subset S of a given partially ordered set P i. Whether a given element in P is an upper bound (lower bound) of S or not. ii. Set of all upper bounds (lower bounds) of S. iii. The least upper bound (greatest lower bound) of S, if it exists. 5) Creating lattices and determining whether or not, a given partially ordered set is a lattice.	B.Sc. (H) Mathematics III Sem	Discrete Mathematics

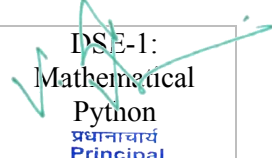


प्रधानाचार्य
Principal

श्री वेंकटेश्वर महाविद्यालय
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बीला कुआँ, नई दिल्ली Bala Kuan, New Delhi-21

November	Theory	Symbolic computation and SymPy: Differentiation and integration of functions,	B.Sc. (H) Mathematics	DSE-1: Mathematical
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		Limits, Solution of ordinary differential equations, Computation of eigenvalues, Solution of expressions at multiple points (lambdify), Simplification of expressions, Factorization, Collecting and canceling terms, Partial fraction decomposition, Trigonometric simplification, Exponential and logarithms, Series expansion and finite differences, Solvers, Recursive equations.	III Sem	Python
	Practical	Practical's on Calculus and Algebra with SymPy.	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
	Theory	Mean, variance of random sample from a finite population; Chi-square distribution, F distribution and t distribution,	B.A. (Prog.) V Sem	DSE-1: Statistics
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.A. (Prog.) V Sem	DSE-1: Statistics
	Theory	Uses of prime numbers, Perfect and amicable numbers, Pythagoreans triplets and its properties, Statement and historic background of Fermat's Last Theorem, Multiplication principle, Permutation and combinations,	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Tutorial	Doubts based on theory lectures.	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
	Practical	Practical's on Minimal Spanning Tree, Shortest Route problems, Travelling Salesman Problem.	B.A. (Prog.) V Sem	SEC: Transportation and Network Flow Problems
	Practical	6) Finding the following for a given Boolean polynomial function: i. Representation of Boolean polynomial function and finding its value when the Boolean variables in it take particular values over the Boolean algebra $\{0,1\}$. ii. Display in table form of all possible values of Boolean polynomial function over the Boolean algebra $\{0,1\}$. 7) Finding the following: i. Dual of a given Boolean polynomial/expression. ii. Whether or not two given Boolean polynomials are equivalent. iii. Disjunctive normal form (Conjunctive normal form) from a given Boolean expression. iv. Disjunctive normal form (Conjunctive normal form) when the given Boolean polynomial function is expressed by a table of values. 8) Representing a given circuit diagram (expressed using gates) in the form of Boolean expression.	B.Sc. (H) Mathematics III Sem	Discrete Mathematics

December	Theory	Pretty printing using SymPy; Pandas API for IO tools: interfacing Python with text/csv, HTML, LaTeX, XML, MSExcel, OpenDocument, and other such formats; Pylatex and writing document files from Python with auto-computed values, Plots and visualizations.	B.Sc. (H) Mathematics III Sem	 DSE-1: Mathematical Python प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21
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Practical	Practical's on Printing Documents with Pandas and LaTeX.	B.Sc. (H) Mathematics III Sem	DSE-1: Mathematical Python
Theory	Test of hypotheses based on a single sample.	B.A. (Prog.) V Sem	DSE-1: Statistics
Tutorial	Exercise questions and doubts based on Theory Lectures	B.A. (Prog.) V Sem	DSE-1: Statistics
Theory	Latin squares and magic squares	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
Tutorial	Doubts based on theory lectures.	B.A. (Prog.) V Sem	GE-1: General Mathematics-I
Practical	Practical's on PERT and CPM.	B.A. (Prog.) V Sem	SEC: Transportation and Network Flow Problems
Practical	9) Minimizing a given Boolean expression to find minimal expressions	B.Sc. (H) Mathematics III Sem	Discrete Mathematics

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Signature of the teacher

V. B.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

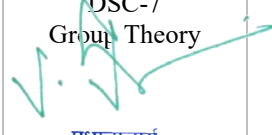
Name of the Faculty: Ms. Arushi

Department: Department of Mathematics

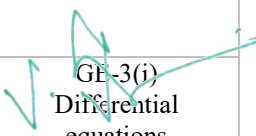
Semester: I, III

Month		Topics	Course	Paper Code/Name
August	Theory	Polynomials, The remainder and factor theorem, Synthetic division, Factored form of a polynomial, multiple roots, Fundamental theorem of algebra, relations between the roots and the coefficients of polynomial equations, upper bounds for the real roots	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Permutation groups and group of symmetries, cycle notation for permutations and properties, even and odd permutations, Alternating groups, cosets and its properties	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		First order ODE, basic concepts and ideas, first order exact differential equations, integrating factors and rules to find integrating factors, Linear equations and Bernoulli equations, initial value problems, applications of first order differential equations, orthogonal trajectories and rate problems	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Tutorial	Exercise questions and doubts based on applications of polynomials, The remainder and factor theorem, Synthetic division, Factored form of a polynomial, multiple roots, Fundamental theorem of algebra, relations between the roots and the coefficients of polynomial equations, upper bounds for the real roots	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Exercise questions and doubts based on applications of Permutation groups and group of symmetries, cycle notation for permutations and properties, even and odd permutations, Alternating groups, cosets and its properties	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Exercise questions and doubts based on applications of First order ODE, basic concepts and ideas, first order exact differential equations, integrating factors and rules to find integrating factors, Linear equations and Bernoulli equations, initial value problems, applications of first order differential equations, orthogonal trajectories and rate problems	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations

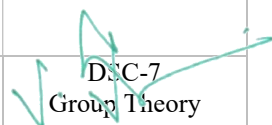
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September	Theory	Results on imaginary, integral and rational roots, Newtons method for integral roots, Descartes rule of signs, polar representation of complex numbers, De-Moivre's theorem for integer and rational indices and their applications, the n-th roots of unity, Cardan's solution of the cubic, Descartes' solution of the quartic equation, Statement of well ordering principle	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Lagrange's theorem and consequences including Fermat's little theorem, number of elements in product of two finite subgroups, normal subgroups, factor groups, Cauchy's theorem for finite Abelian groups, group homomorphisms and isomorphisms	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Basic theory of higher order linear differential equations, Wronskian and its properties, linear homogeneous equations with constant coefficients, linear non-homogeneous equations, method of undetermined coefficients	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Tutorial	Exercise questions and doubts based on applications of Results on imaginary, integral and rational roots, Newtons method for integral roots, Descartes rule of signs, polar representation of complex numbers, De-Moivre's theorem for integer and rational indices and their applications, the n-th roots of unity, Cardan's solution of the cubic, Descartes' solution of the quartic equation, Statement of well ordering principle	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Exercise questions and doubts based on applications of Lagrange's theorem and consequences including Fermat's little theorem, number of elements in product of two finite subgroups, normal subgroups, factor groups, Cauchy's theorem for finite Abelian groups, group homomorphisms and isomorphisms	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Exercise questions and doubts based on applications of Basic theory of higher order linear differential equations, Wronskian and its properties, linear homogeneous equations with constant coefficients, linear non-homogeneous equations, method of undetermined coefficients	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Assignment	Assignment given on polynomials, Synthetic division, multiple roots, relations between the roots and the coefficients of polynomial equations, upper bounds for the real roots	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
	Assignment	Assignment given on permutation group, group of symmetries, group homomorphisms and isomorphisms	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
				 प्रधानाचार्य Principal

	Assignment	Assignment given on Basic theory of higher order linear differential equations, Wronskian and its properties, linear homogeneous equations with constant coefficients, linear non-homogeneous equations, method of undetermined coefficients	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Practical	- Running instructions in interactive interpreter and a python script - Write a program to purposefully raise indentation error and correct it - Write a program to compute distance between two points taking input from the user (Pythagorean theorem) - Write a program add.py that takes 2 numbers as command line arguments and prints its sum - Write a program for checking whether the given number is an even number or not - Using a loop, write a program that prints out the decimal equivalents of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{10}$ - Write a program using a for loop that loops over a sequence. What is the sequence?	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python
October	Theory	The division algorithm in $\mathbb{Z}$, Divisibility and the Euclidean algorithm, Fundamental theorem of arithmetic, modular arithmetic and basic properties of congruence, Group and basic properties	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Isomorphism properties, Cayley's theorem, First, second and third isomorphism theorems for groups, Automorphism, inner automorphism	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Method of variation of parameters (only second order), two-point boundary value problems, Cauchy-euler equations, system of linear differential equations Partial differential equations, basic concepts and definitions, classification and construction of first order PDE	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Tutorial	Exercise questions and doubts based on applications of The division algorithm in $\mathbb{Z}$, Divisibility and the Euclidean algorithm, Fundamental theorem of arithmetic, modular arithmetic and basic properties of congruence, Group and basic properties	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Exercise questions and doubts based on applications of Isomorphism properties, Cayley's theorem, First, second and third isomorphism theorems for groups, Automorphism, inner automorphism	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Exercise questions and doubts based on applications of Method of variation of parameters (only second order), two-point boundary value problems, Cauchy-euler equations, system of linear differential equations Partial differential equations, basic concepts and definitions, classification and construction of first order PDE	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations

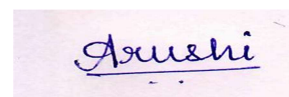

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	Practical	- Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero. - Find the sum of all primes below two million. Each new term in the Fibonacci sequence is generated by adding the previous two terms,. By starting with 1 and 2, the first 10 terms will be : 1,2,3,5,8,13,21,34,55,89,.... - By considering the terms in the Fibonacci sequence whose values do not exceed four million, find the sum of the even-valued terms. - Write a program to count the numbers of characters in the string and store them in a dictionary data structure. - Write a program to use split and join methods in the string and trace a birthday with a dictionary data structure. - Write a program combining lists that combines these lists into a dictionary - Write a program to count the frequency of characters in a given file. Can you see character frequency to tell whether the given file in a Python program file, C program file or text file?	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python
	Mid-Term Test	Syllabus for test is as follows: Polynomials, The remainder and factor theorem, Synthetic division, Factored form of a polynomial, multiple roots, Fundamental theorem of algebra, relations between the roots and the coefficients of polynomial equations, upper bounds for the real roots, Results on imaginary, integral and rational roots, Newtons method for integral roots, Descartes rule of signs, polar representation of complex numbers, De-Moivre's theorem for integrer and rational indices and their applications, the n-th roots of unity, Cardan's solution of the cubic, Descartes' solution of the quartic equation	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Syllabus for test is as follows: Permutation groups and group of symmetries, cycle notation for permutations and properties, even and odd permutations, Alternating groups, cosets and its properties, Lagrange's theorem and consequences including Fermat's little theorem, number of elements in product of two finite subgroups, normal subgroups, factor groups, Cauchy's theorem for finite Abelian groups, group isomorphisms and properties	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Syllabus for test is as follows: First order ODE, basic concepts and ideas, first order exact differential equations, integrating factors and rules to find integrating factors, Linear equations and Bernoulli equations, initial value problems, applications of first order differential equations, orthogonal trajectories and rate problems, Basic theory of higher order linear differential equations, Wronskian and its properties, linear homogeneous equations with constant	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		coefficients, linear non-homogeneous equations, method of undetermined coefficients, Method of variation of parameters (only second order), two-point boundary value problems, Cauchy-euler equations, system of linear differential equations		
		- Syllabus is as follows: - Running instructions in interactive interpreter and a python script - Write a program to purposefully raise indentation error and correct it - Write a program to compute distance between two points taking input from the user (Pythagorean theorem) - Write a program add.py that takes 2 numbers as command line arguments and prints its sum - Write a program for checking whether the given number is an even number or not - Using a loop, write a program that prints out the decimal equivalents of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{10}$ - Write a program using a for loop that loops over a sequence. What is the sequence? - Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero. - Find the sum of all primes below two million. Each new term in the Fibonacci sequence is generated by adding the previous two terms,. By starting with 1 and 2, the first 10 terms will be : 1,2,3,5,8,13,21,34,55,89,.... - By considering the terms in the Fibonacci sequence whose values do not exceed four million, find the sum of the even-valued terms. - Write a program to count the numbers of characters in the string and store them in a dictionary data structure. - Write a program to use split and join methods in the string and trace a birthday with a dictionary data structure. - Write a program combining lists that combines these lists into a dictionary - Write a program to count the frequency of characters in a given file. Can you see character frequency to tell whether the given file in a Python program file, C program file or text file?	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python
November	Theory	Symmetries of a square, Dihedral group, order of a group and element, subgroups, center of a group, centraliser of an element	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Automorphism groups, automorphism groups of cyclic groups, applications of factor groups to automorphism groups, External direct products of groups and its properties, the group of units modulo n as an external direct product, applications to data security and electric circuits	B.Sc. (H) Mathematics III Semester	 DSC-7 Group Theory प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		Method of characteristics and general solutions of first order PDE, Canonical forms and method of separation of variables for first order PDE	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Tutorial	Exercise questions and doubts based on applications of Symmetries of a square, Dihedral group, order of a group and element, subgroups, center of a group, centraliser of an element	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Exercise questions and doubts based on applications of Automorphism groups, automorphism groups of cyclic groups, applications of factor groups to automorphism groups, External direct products of groups and its properties, the group of units modulo n as an external direct product, applications to data security and electric circuits	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Exercise questions and doubts based on applications of Method of characteristics and general solutions of first order PDE, Canonical forms and method of separation of variables for first order PDE	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Practical	- Write a program to print each line of a file in reverse order. - Write a program to compute the number of characters, words and lines in a file. - Write a function ball collide that takes two balls as parameters and computes if they are colliding. - Find mean, median, mode for the given set of numbers in a list	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python
	Assignment	Assignment given on sum of odd numbers, Pythagorean theorem, combining lists that combines these lists into a dictionary, mean, median, mode for the given set of numbers in a list, compute the number of characters, words and lines in a file.	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python
December	Theory	Cyclic groups and properties, generators of a cyclic group, classification of subgroups of cyclic groups	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra
		Internal direct products, Fundamental theorem of finite abelian groups and its isomorphism classes	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Classification and reduction to canonical forms of second order linear PDE and their general solutions	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Tutorial	Exercise questions and doubts based on applications of Cyclic groups and properties, generators of a cyclic group, classification of subgroups of cyclic groups	B.Sc. (H) Mathematics I Semester	DSC-1 Algebra

		Exercise questions and doubts based on applications of Internal direct products, Fundamental theorem of finite abelian groups and its isomorphism classes	B.Sc. (H) Mathematics III Semester	DSC-7 Group Theory
		Exercise questions and doubts based on applications of Classification and reduction to canonical forms of second order linear PDE and their general solutions	B.Sc. (H) Mathematics III Semester	GE-3(i) Differential equations
	Practical	- Write a function nearly equal to test whether two strings are nearly equal. Two strings a and b are nearly equal when a can be generated by a single mutation on b. - Write a function dups to find all duplicates in the list.	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python



Signature of the teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Teaching Plan: Odd Semester 2023-24

Name of the Faculty: Mr. Mahendra Pratap Pal

Department: Mathematics

Semester: I & V

Month		Topics	Course	Paper Code/Name
Aug	Theory	Descriptive statistics: Populations, Samples, Stem-and-leaf displays, Dotplots, Histograms, Qualitative data, Measures of location, Measures of variability, Boxplots. Sample spaces and events, Probability axioms and properties.	B.Sc(H) Maths Sem-I Section- A	Probability and Statistics
	Practical	Presentation and analysis of data (univariate and bivariate) by frequency tables, descriptive statistics,	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics
	Theory	Sample space, Events, Probability Classical, Relative frequency and axiomatic approaches to probability, Theorems of total and compound. Conditional probability, Independent events, Baye's theorem.	B.A(P) Maths Sem-V	Statistics
	Tutorial	To discuss the doubt of students and various exercise questions and examples	B.A(P) Maths Sem-V	Statistics
	Theory	Transportation problem and its mathematical formulation, North West corner method, least cost method and Vogel's approximation method for determination of starting basic feasible solution. Algorithm for solving transportation problem.	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems


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	Practical	Transportation problem, Assignment problem	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
Sep	Theory	. Conditional probability, Bayes' theorem and independent events. Discrete random variables and probability distributions, Expected values; Probability distributions with their mean and variance: Binomial, geometric, hypergeometric, negative binomial, Poisson, and Poisson distribution as a limit	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics
	Practical	stem-and-leaf plots, dotplots, histograms, boxplots, comparative boxplots, and probability plots.	B.Sc(H) Maths Sem-I A	Probability and Statistics
	Theory	Random Variables, Discrete and continuous random variables, Probability distribution functions discrete random variables, p.m.f, c.d.f, Expectation, Moments, Moment generating functions of discrete random variables.	B.A(P) Maths Sem-V	Statistics
	Tutorial	To discuss the doubt of students and various exercise questions and examples	B.A(P) Maths Sem-V	Statistics
	Theory	Assignment problem and its mathematical formulation, Hungarian method for solving assignment problem, traveling salesperson problem.	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
	Practical	Traveling salesperson problem, Shortest-route problem	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
Oct	Theory	Continuous random variables, Probability density functions, Uniform distribution, Cumulative distribution functions and expected values. Normal and standard normal distributions with their percentiles	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics

	Practical	Fitting of binomial, Poisson and normal distributions. Illustrating the Central Limit Theorem through Excel.	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics
	Theory	Discrete distribution: Binomial distribution and its m.g.f., Discrete distribution: Poisson and its m.g.f. Geometric distribution, Continuous distribution: Normal and its m.g.f.	B.A(P) Maths Sem-V	Statistics
	Tutorials:	To discuss the doubt of students and various exercise questions and examples	B.A(P) Maths Sem-V	Statistics
	Theory	Network models, minimum spanning tree algorithm, shortest-route problem, maximum flow model.	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
	Practical	Minimum spanning tree algorithm, Maximum flow model	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
	Assignments	To give assignment Related to above syllabus.	B.Sc(H) Maths Sem-I A/ B.A(P) Maths Sem-V/ B.A(P) Sem-V	Probability and Statistics/ Statistics/ Transportation and Network Flow Problems
	Test	To take internal test related to syllabus.	B.Sc(H) Maths Sem-I A/ B.A(P) Maths Sem-V/ B.A(P) Sem-V	Probability and Statistics/ Statistics/ Transportation and Network Flow Problems


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Nov	Theory	Approximating the binomial distribution; Exponential distribution, Lognormal distribution. Sampling distribution and standard error of the sample mean, Central Limit Theorem and applications. Scatterplot of bivariate data, Regression line using principle of least squares (statement with normal equations), Predicted values and the residuals	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics
	Practical	Fitting of regression line using the principle of least squares. Computation of sample correlation coefficient.	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics
	Theory	Exponential distribution and its “memoryless” property, Bivariate distribution, conditional distribution and marginal. Correlation and regression distribution, Covariance.	B.A(P) Maths Sem-V	Statistics
	Tutorial :	To discuss the doubt of students and various exercise questions and examples	B.A(P) Maths Sem-V	Statistics
	Theory	Project network, CPM and PERT	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
	Practical	CPM and PERT	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
Dec	Theory	Error sum of squares, Coefficient of determination, The sample correlation coefficient and properties.	B.Sc(H) Maths Sem-I Section-A	Probability and Statistics
	Practical	Practical test	B.Sc(H) Maths Sem-I	Probability and Statistics

	Theory	Weak law of large numbers and central limit theorem for independent and identically distributed random variables	B.A(P) Maths Sem-V	Statistics
	Tutorial :	To discuss the doubt of students and various exercise questions and examples	B.A(P) Maths Sem-V	Statistics
	Theory	Revisions	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems
	Practical	Practical test	B.A(P) Sem-V SEC-3	Transportation and Network Flow Problems

Mahendra Pratap Pal

Signature of Teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Naman Sharma

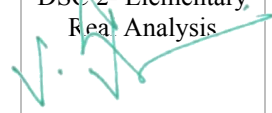
Department: Mathematics

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	Unit: Sequences- Sequences and their limits, Convergent sequence (Including the exercise questions and the PYQs)	BSc. (H) Maths Sem I FMH Sec A	DSC 2- Elementary Real Analysis
	Theory	Unit: Real Number System- Algebraic and order properties of $\mathbb{R}$ and related problems and questions.	BSc. (H) Maths Sem I FMH Sec B	DSC 2- Elementary Real Analysis
	Practical	Unit 1: Participation in Physical Activity. Fit India Protocol. Physical Activity, Health and Fitness. Indicators of Fitness. Practical/Practice- Aerobic Work Out / Physical Activity (Walking), Yoga - Asanas (Lying, Sitting and Standing positions) and Pranayama. Cardiovascular Testing by 12m/9 min Cooper Run/Walk test.	Value Addition Course (VAC 3) III Sem	VAC III Fit India
	Practical	Introduction to internet and web design. Basic concepts of web architecture	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
September	Theory	Unit: Sequences- Limit theorems, Monotone sequences, Monotone convergence theorem. (Including the exercise questions and the PYQs)	BSc. (H) Maths Sem I FMH Sec A	DSC 2- Elementary Real Analysis
	Theory	Unit: Real Number System- Absolute value of a real number, bounded above and bounded below sets, Supremum and infimum of a non-empty subset of $\mathbb{R}$. (Along with suggested problems & exercise questions)	BSc. (H) Maths Sem I FMH Sec B	DSC 2- Elementary Real Analysis
	Practical	Successfully accomplishing and concluding Unit 1. Unit 2: Health Related Fitness and their Components- Muscular Strength and Endurance, Body Composition and Flexibility. Practical/practice- Flexibility Training: Back Saver Sit and Reach test, Muscular Strength Training: Curl Ups / Standing Broad Jump/ Vertical Jump/ Plyometric. Endurance Training: 1 Mile Rock Port Test or 12 /9 minutes Cooper run/walk test. Ideal Body Weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio (Assignment 1 - Data of at least 10 persons to be collected and compared with the ideal standards.)	Value Addition Course (VAC 3) III Sem	VAC III Fit India

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	Practical	HTML: Introduction to hypertext mark-up language (html), creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames. Solving related problems.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
October	Theory	Unit: Sequences- Monotone convergence theorem, and applications/Exercise. Subsequences. (Including the exercise questions and the PYQs) Mid Semester Internal Examination .	BSc. (H) Maths Sem I FMH Sec A	DSC 2- Elementary Real Analysis
	Theory	Unit: Real Number System- Supremum and infimum of a non-empty subset of $\mathbb{R}$, The completeness property of $\mathbb{R}$. Mid Semester Internal Examination .	BSc. (H) Maths Sem I FMH Sec B	DSC 2- Elementary Real Analysis
	Practical	Unit 3- Nutrition and Fitness- Healthy Eating Plate, Balanced Diet, Caloric Content of Food. Practical/Practice- Preparing Daily Diet and Calorie Chart, Aerobic Work Out / Physical Activity (Walking), Assessment of Physical Activities with the Calorie intake. Asanas for digestive system excretory system. Different physical activities and games in the College ground.	Value Addition Course (VAC 3) III Sem	VAC III Fit India
	Practical	Cascading style sheet (CSS): Concept of CSS, creating style sheet, importing style sheets, CSS properties, CSS styling (background, text format, controlling fonts), CSS rules, Style Types, CSS Selectors, CSS cascade, working with block elements and objects, working with lists and tables, CSS id and class, box model (introduction, border properties, padding properties, margin properties). Mid semester Internal Exam (as a part of Continuous Assessment)	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
November	Theory	Unit: Sequences- Bolzano- Weierstrass theorem for sequences, Limit superior and limit inferior for bounded sequence, Cauchy sequence.	BSc. (H) Maths Sem I FMH Sec A	DSC 2- Elementary Real Analysis
	Theory	Unit: Real Number System- The completeness property of $\mathbb{R}$, Archimedean property, Density of rational numbers in $\mathbb{R}$.	BSc. (H) Maths Sem I FMH Sec B	DSC 2- Elementary Real Analysis
	Practical	Unit 4: Sports Physiology and Psychology- Depression, Anxiety and Stress Scale (DASS), Rosenberg Self Esteem Scale. Practical/Practice- Skills learning and Participation in sports, Group Games / Relays/ Minor Games, Meditative Asanas and Pranayama, Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results. Creative and prolific physical activities and games in the College ground.	Value Addition Course (VAC 3) III Sem	VAC III Fit India
	Practical	Basics of Java script: Document object model, data types and variables, functions, methods and events, controlling program flow, built-in objects and operators, validations. Assignment- Solving the suggested guideline questions as per the syllabus.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development
December	Theory	Cauchy's convergence criterion, along with suggested problems, exercise questions and PYQs. Successful accomplishment of Unit- Sequences.	BSc. (H) Maths Sem I FMH Sec A	DSC 2- Elementary Real Analysis
	Theory	Multiple Revisions & solving exercises and PYQs. Solving model questions.	BSc. (H) Maths Sem I FMH Sec B	DSC 2- Elementary Real Analysis


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	Practical	Successful accomplishment of the syllabus. Different physical activities and games in the College ground. Assignment- 2 given to the students. Revision of all the Units along with the physical activities done in the classes. Preparations for final practical.	Value Addition Course (VAC 3) III Sem	VAC III Fit India
	Practical	Revision of all the units & PYQs. Solving model questions.	Skill Enhancement Course (SEC 3) III Sem	SEC III Front End Web Design and Development

Naman sharma.

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Savita Rani
Department: Department of Mathematics
Semester: I, V
Practical*(Sem V) Faculty: Prof. Swarn Singh

Month		Topics	Course	Paper Code/Name
August	Theory	Introduce the concepts of Algorithms, Order and rate of convergence , Bisection Method	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Practical*	Basic concepts of Mathematica and Practical (1) Bisection method	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Tutorials			
September	Theory	Discuss various root finding methods as False position method, Fixed point iteration method, Newton's method, Secant method and their convergence analysis, stopping criteria and error bounds, Partial and Scaled Partial Pivoting, LU decomposition of matrices and its application in solving system of equations	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Practical*	(2) Newton Raphson Method, (3) Secant method, (4) Regula Falsi Method (5) LU decomposition method	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Tutorials			
	Practical	- Running instructions in interactive interpreter and a python script - Write a program to purposefully raise indentation error and correct it - Write a program to compute distance between two points taking input from the user (Pythagorean theorem)	B.Sc. (H) Mathematics I Semester	SEC Semester I Programming using Python
				प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुर्जी, नई दिल्ली / Dhaula Kuan, New Delhi-21

		- Write a program add.py that takes 2 numbers as command line arguments and prints its sum - Write a program for checking whether the given number is an even number or not - Using a loop, write a program that prints out the decimal equivalents of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{10}$ - Write a program using a for loop that loops over a sequence. What is the sequence?		
October	Theory	Gauss- Jacobi method, Gauss-Seidel method, SOR iterative method and various theorems related to convergence of these methods Lagrange and Newton interpolation, Piecewise linear interpolation, derivation of First and higher order approximation formulas for first derivative, approximation for second derivative	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Practical*	(6) Gauss-Jacobi method (7) SOR method,(8) Gauss-Seidel method (9) Lagrange Interpolation, (10) Newton Interpolation	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Tutorials			
	Practical	- Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero. - Find the sum of all primes below two million. Each new term in the Fibonacci sequence is generated by adding the previous two terms,. By starting with 1 and 2, the first 10 terms will be : 1,2,3,5,8,13,21,34,55,89,.... - By considering the terms in the Fibonacci sequence whose values do not exceed four million, find the sum of the even-valued terms. - Write a program to count the numbers of characters in the string and store them in a dictionary data structure. - Write a program to use split and join methods in the string and trace a birthday with a dictionary data structure. - Write a program combining lists that combines these lists into a dictionary	B.Sc. (H) Mathematics Semester I	SEC Semester I Programming using Python



		Write a program to count the frequency of characters in a given file. Can you see character frequency to tell whether the given file is a Python program file, C program file or text file?		
	Assignment	Assignment was based on the Unit I and Unit II of the syllabus covering the topics - Order and rate of convergence, bisection and method of false position, Newton method, secant method and their convergence analysis - Pivoting, LU decomposition of a matrix and its applications - Various methods to solve system of equations such as Gauss-Jacobi, Gauss-Seidel, SOR	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Mid-Term Theory Test	Internal test based on the Unit I and Unit II of the syllabus covering the topics - Order and rate of convergence, bisection and method of false position, Newton method, secant method and their convergence analysis - Pivoting, LU decomposition of a matrix and its applications - Various methods to solve system of equations such as Gauss-Jacobi, Gauss-Seidel, SOR method	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Mid-Term Lab Test	Lab test based on the syllabus covered in aforementioned (1)-(10) Practical	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Mid-Term Test	- Syllabus is as follows: - Running instructions in interactive interpreter and a python script - Write a program to purposefully raise indentation error and correct it - Write a program to compute distance between two points taking input from the user (Pythagorean theorem) - Write a program add.py that takes 2 numbers as command line arguments and prints its sum - Write a program for checking whether the given number is an even number or not - Using a loop, write a program that prints out the decimal equivalents of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{10}$ - Write a program using a for loop that loops over a sequence. What is the sequence? - Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero.	B.Sc. (H) Mathematics Semester I	SEC Semester I Programming using Python


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	• Find the sum of all primes below two million. Each new term in the Fibonacci sequence is generated by adding the previous two terms,. By starting with 1 and 2, the first 10 terms will be : 1,2,3,5,8,13,21,34,55,89,.... • By considering the terms in the Fibonacci sequence whose values do not exceed four million, find the sum of the even-valued terms. • Write a program to count the numbers of characters in the string and store them in a dictionary data structure. • Write a program to use split and join methods in the string and trace a birthday with a dictionary data structure. • Write a program combining lists that combines these lists into a dictionary • Write a program to count the frequency of characters in a given file. Can you see character frequency to tell whether the given file in a Python program file, C program file or text file?		
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Shavita Kaur

05/12/2023

V. Venkateswara

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

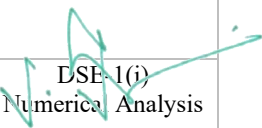
Name of the Faculty: Ms. Rimpi

Department: Department of Mathematics

Semester: I, V

Practical(Sem V) Faculty: Prof. Swarn Singh

Month		Topics	Course	Paper Code/Name
November	Theory	Process of combining two approximations to obtain a higher order approximation, namely Richardson extrapolation method. Numerical Integration by closed Newton-Cotes formulae: trapezoidal rule, Simpson's rule and its error analysis, Euler's method to solve ODE's, Second order Runge- Kutta methods , modified Euler's method,	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Practical	(11) Trapezoidal rule (12) Simpson's rule (13) Euler's method Practical (14) Second order Runge-Kutta methods	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis
	Tutorial			
	Practical	- Write a program to print each line of a file in reverse order. - Write a program to compute the number of characters, words and lines in a file. - Write a function ball collide that takes two balls as parameters and computes if they are colliding. - Find mean, median, mode for the given set of numbers in a list	B.Sc. (H) Mathematics Semester I	SEC Semester I Programming using Python
	Assignment	Assignment given on sum of odd numbers, Pythagorean theorem, combining lists that combines these lists into a dictionary, mean, median, mode for the given set of numbers in a list, compute the number of characters, words and lines in a file.	B.Sc. (H) Mathematics Semester I	SEC Semester I Programming using Python
December	Theory	Heun's method and optimal RK2 method. revise the syllabus and discuss exercise questions	B.Sc. (H) Mathematics Semester V	DSE-1(i) Numerical Analysis


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	Practical		B.Sc. (H) Mathematics Semester V	DSE-I(i) Numerical Analysis
	Tutorials			
	Practical	- Write a function nearly equal to test whether two strings are nearly equal. Two strings a and b are nearly equal when a can be generated by a single mutation on b. - Write a function dups to find all duplicates in the list.	B.Sc. (H) Mathematics Semester I	SEC Semester I Programming using Python

Rimpi

05/12/2023



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty : Dr. Pratima Vyas

Department : Physics

Semester : I / III / V Semester

Month		Topics	Course	Paper Code/Name
August	Theory	Unit – I - Zeroth and First Law of Thermodynamics: Fundamental idea of thermodynamic equilibrium and Zeroth Law of Thermodynamics, concept of work and heat, First law of Thermodynamics and its differential form, internal energy, applications of First law: General relation between CP and Cv, work done during various processes (all four) and related problems, Compressibility and Expansion Co-efficient for various processes. Unit – II - Second law of Thermodynamics : Reversible and Irreversible processes, Carnot engine and Carnot's cycle, Refrigerator, efficiency of Carnot engine and refrigerator,	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
September	Theory	Second Law of Thermodynamics: Kelvin-Planck and Clausius statements and their equivalence, Carnot's theorem, applications of Second Law of Thermodynamics in the light of Phase Change, Thermodynamic Scale of Temperature and its equivalence to Perfect Gas Scale. Unit – III – Entropy : Concept of Entropy, Entropy changes in Reversible and Irreversible processes with examples, Clausius Theorem, Clausius	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302) प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-2

		inequality, Second Law of Thermodynamics in terms of Entropy. Temperature-Entropy diagrams for Carnot's cycle and related problems, Entropy of perfect and real gases, conceptual problems related to Entropy during a Phase Change, Nernst Heat Theorem: Unattainability of Absolute Zero and Third Law of Thermodynamics. Unit – IV - Thermodynamic Potentials and Maxwell's Relations Basic concept of Thermodynamic Potentials, Internal Energy, Enthalpy, Helmholtz Free Energy, Gibbs Free Energy: their properties and applications.		
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
October	Theory	Surface Film and variation of Surface Tension with temperature, Magnetic work, Cooling due to Adiabatic Demagnetization, Phase Transitions : First order and Second order Phase Transitions with examples, Clausius Clapeyron Equation, Ehrenfest Equations, Derivation of Maxwell's Thermodynamic Relations and their applications in Clausius Clapeyron Equation, value of $C_P - C_V$, TdS equations, Energy equations, evaluation of C_P / C_V and Ratio of Adiabatic to Isothermal elasticity. Unit – V - Kinetic Theory of Gases and Molecular Collisions : Constrained maximization using Lagrange Multipliers, Maxwell-Boltzmann Law of Distribution of Velocities in an ideal gas and its experimental verification with any one method.	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
		As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103) प्रधानाचार्य Principal

	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
	Assignment	Assignments given at regular interval.	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302)
	Mid-Term Test	Conducted on 26/10/2023.	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302)
November	Theory	Mean, Root Mean Square and Most Probable Speeds, Maxwell-Boltzman equation for distribution of Energy: Average Energy and Most Probable Energy, Mean Free Path, Collision Probability, estimation of Mean Free Path, Continuity Equation for Transport Phenomena in ideal gases: Viscosity, Thermal Conductivity and Diffusion. Unit – VI - Real Gases : Behavior of Real Gases: Deviations from the Ideal Gas Equation, andrew's Experiments on CO ₂ Gas, Virial Equation, Continuity of liquid and gaseous states, Boyle Temperature,	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
		As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
December	Theory	Van der Waals Equation of State for Real Gases, Comparison with Experimental Curves: P-V diagrams, Value of Critical Constants, Law of Corresponding States, Free Adiabatic Expansion of a Perfect Gas, Joule Thomson Porous - Plug Experiment, Joule Thomson.	B.Sc. (H) Physics III Sem	DSC – 8 : Thermal Physics (2222012302)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)

	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty : Prof. K. C. Singh

Department : Physics

Semester : I / V Semester

Month		Topics	Course	Paper Code/Name
August	Theory	Time dependent Schrodinger equation: Time dependent Schrodinger equation and dynamical evolution of a quantum state; Properties of Wave Function. Interpretation of Wave Function: Probability and probability current densities in three dimensions; Conditions for Physical Acceptability of Wave Functions. Normalization. Linearity and Superposition Principles. Eigenvalues and Eigenfunctions. Position, momentum and Energy operators; commutator of position and momentum operators;	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics & Applications (32221501)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103)
September	Theory	Expectation values of position and momentum. Wave Function of a Free Particle. Time independent Schrodinger equation: Hamiltonian, stationary states and energy eigenvalues; expansion of an arbitrary wavefunction as a linear combination of energy eigenfunctions; General solution of the time dependent Schrodinger equation in terms of linear combinations of stationary states; Application to spread of Gaussian wave-packet for a free particle in one dimension; wave packets, Fourier transforms and momentum space wavefunction; Position-momentum uncertainty principle.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics & Applications (32221501)  प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

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	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
October	Theory	General discussion of bound states in an arbitrary potential: continuity of wave function, boundary condition and emergence of discrete energy levels; application to one-dimensional problem-square well potential; Quantum mechanics of simple harmonic oscillator: energy levels and energy eigenfunctions using Frobenius method; Hermite polynomials; ground state, zero point energy & uncertainty principle. Quantum theory of hydrogen-like atoms: time independent Schrodinger equation in spherical polar coordinates; separation of variables for second order partial differential equation; angular momentum operator & quantum numbers; Radial wavefunctions from Frobenius method; shapes of the probability densities for ground and first excited states;	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
	Assignment	Assignments given at regular interval.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
	Mid-Term Test	Conducted on 30/10/2023.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
November	Theory	Orbital angular momentum quantum numbers l and m ; s, p, d shells. Atoms in Electric and Magnetic Fields: Electron angular momentum. Angular momentum quantization. Electron Spin and Spin Angular Momentum. Larmor's Theorem. Spin Magnetic Moment. Stern-Gerlach Experiment. Normal Zeeman Effect: Electron Magnetic Moment and Magnetic Energy. Many electron atoms: Pauli's Exclusion Principle.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
		As listed in the syllabus.	B.Sc. (H) Physics I Sem	CC – XII : Solid State Physics (32221502)

				(2222011103)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)
December	Theory	Symmetric and Anti-symmetric Wave Functions. Spin orbit coupling. Spectral Notations for Atomic States. Total angular momentum. Spin-orbit coupling in atoms-L-S and J-J couplings.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC – XII : Solid State Physics (32221502)

Signature of the teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty : Dr. Narender Kumar

Department : Physics

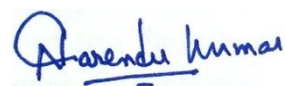
Semester : V Semester

Month		Topics	Course	Paper Code/Name
August	Theory & Tutorial	Basic Parameters of Stars: Determination of Distance by Parallax Method; Proper Motion, Brightness, Radiant Flux and Luminosity, Apparent and Absolute Magnitude Scales, Distance Modulus, Extinction, Determination of Temperature and Radius of a star; Stellar Spectra, Atomic Spectra Revisited.	B.Sc. (H) Physics V Sem	DSE- Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	DSE: Advanced Mathematical Physics-1 (Lab) 32227502
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Quantum Mechanics (Lab) 32221501
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Solid State Physics (Lab) 32221502
September	Theory & Tutorial	Basic Parameters of Stars: Introduction to Boltzmann and Saha Equations, Balmer Lines of H, H and K lines of Ca, Spectral Types and Their Temperature Dependence, Black Body Approximation, Luminosity Classification, H R Diagram and Relations Between Stellar Parameters.	B.Sc. (H) Physics V Sem	DSE- Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	DSE: Advanced Mathematical Physics-1 (Lab) 32227502
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Quantum Mechanics (Lab) 32221501

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	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Solid State Physics (Lab) 32221502
October	Theory & Tutorial	Observational Tools and Physical Principles: Observing through the atmosphere (Scintillation, Seeing, Atmospheric Windows and Extinction) Basic Optical Definitions for Telescopes: Magnification, Light Gathering Power, Limiting magnitude, Resolving Power, Diffraction Limit. Optical and Radio Telescopes, Current Indian Observatories. Virial theorem for N particle systems, applications in astrophysics. Systems in Thermodynamic Equilibrium, Equations for Hydrostatic equilibrium, Mean Molecular Weight of stellar gas, Stellar Energy Sources.	B.Sc. (H) Physics V Sem	DSE- Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	DSE: Advanced Mathematical Physics-1 (Lab) 32227502
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Quantum Mechanics (Lab) 32221501
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Solid State Physics (Lab) 32221502
November	Theory & Tutorial	Cosmology: Standard Candles (Cepheids and SNe Type1a), Cosmic Distance Ladder, Olbers Paradox, Hubble Expansion, Cosmological Principle, Newtonian Cosmology and Friedmann Models.	B.Sc. (H) Physics V Sem	DSE- Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	DSE: Advanced Mathematical Physics-1 (Lab) 32227502
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Quantum Mechanics (Lab) 32221501
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Solid State Physics (Lab) 32221502
December	Theory & Tutorial	Revision	B.Sc. (H) Physics V Sem	DSE- Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	DSE: Advanced Mathematical Physics-1 (Lab) 32227502

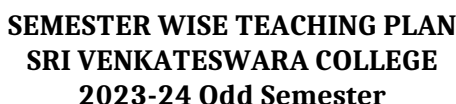
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Quantum Mechanics (Lab) 32221501
	Practical	As Listed in Syllabus.	B.Sc. (H) V Sem	CC: Solid State Physics (Lab) 32221502



Signature of the teacher



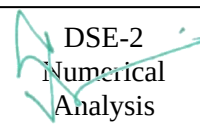
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Semester : I/III/ V Semester. Odd (2023-24)

Month		Topics	Course	Paper Code/Name
August	Theory	Approximation and errors in computing	B.Sc. (H) Physics III Sem. B.Sc. III Sem	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As given in the syllabus.	B.Sc. (H) Physics V Sem.	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 9: LIGHT AND MATTER (2222012303)
	Practical	Basic programming techniques using Python. Writing codes for solution of simultaneous linear equations using iterative methods.	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
September	Theory	Linear systems	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As given in the syllabus.	B.Sc. (H) Physics V Sem.	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	Programming for solution of simultaneous linear equations using direct methods.	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)

	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 9: LIGHT AND MATTER (2222012303)
October	Theory	Interpolation: Lagrange and Newton's methods etc.	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As given in the syllabus.	B.Sc. (H) Physics V Sem.	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	Programming for interpolation problems using Python.	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 9: LIGHT AND MATTER (2222012303)
	Assignment	Errors in computing, linear systems and interpolation	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Mid-Term Test	Errors in computing, linear systems and interpolation	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
November	Theory	Numerical integration	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As given in the syllabus.	B.Sc. (H) Physics	DSE-1 Advanced


 DSE-2
 Numerical
 Analysis
 GE
 (2223012001)
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			V Sem.	Mathematical Physics – 1 (32227502)
	Practical	Programming for problems of numerical integration using Python: Trapezoidal Rule, Simpson's Rule, etc.	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 9: LIGHT AND MATTER (2222012303)
December	Theory	Initial and boundary value problems	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As given in the syllabus.	B.Sc. (H) Physics V Sem.	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	Programming for initial and boundary value problems using Python: Euler and Runge Kutta methods, etc.	B.Sc. (H) Physics III Sem B.Sc. III Sem.	DSE-2 Numerical Analysis GE (2223012001)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 2 : Mechanics (2222011102)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 9: LIGHT AND MATTER (2222012303)

Prof. ANANT PANDEY

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Signature of the teacher



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Aug – Dec, 2023 - 2024: Odd Semester

Name of the Faculty : Dr. Main Pal
Department : Physics
Semester : I, III & V

Month		Topics Covered	Course	Paper Code
August	Theory	Unit 1: Complex Analysis: The field of complex numbers. Graphical, Cartesian and polar representation. Algebra in the complex plane. Triangle inequality. Roots of complex numbers. Regions in the complex plane – idea of open sets, closed sets, connected sets, bounded sets and domain. The complex functions and mappings. Limits of complex functions. Extended complex plane and limits involving the point at infinity.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		Unit 1: Introduction to Astronomy and Astronomical Scales: Overview of the Night Sky, Diurnal and Yearly motions of the Sun, Stars and Constellations. Size, Mass, Density and Temperature of Astronomical objects	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Tutorial	Discussion on doubts and queries	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		As Listed in Syllabus.	B.Sc. (H) Physics V Sem	DSE-1 : Advanced Mathematical Physics-I (32227502)
September	Theory	Continuity and differentiability of a complex function, Cauchy-Riemann equations in Cartesian and polar coordinates, sufficient conditions for differentiability, harmonic functions. Analytic functions, singular points. Elementary functions. Multi-functions, branch cuts and branch points.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		Basic concepts of Positional Astronomy: Celestial Sphere, Geometry of a Sphere, Spherical Triangle, Astronomical Coordinate Systems, Horizon System, Equatorial System, Conversion of Coordinates.	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)

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	Tutorial	Discussion on doubts and queries	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		As Listed in Syllabus.	B.Sc. (H) Physics V Sem	DSE-1 : Advanced Mathematical Physics-I (32227502)
		As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)
October	Theory	Integration in complex plane: contours and contour integrals, Cauchy-Goursat Theorem (No proof) for simply and multiply connected domains. Cauchy's Inequality. Cauchy's Integral formula. Taylor's and Laurent's theorems (statements only), types of singularities, meromorphic functions, residues and Cauchy's residue theorem, application of contour integration in solving real integrals.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		Unit 2 : Fourier Transform: Fourier Integral theorem (Statement only), Fourier Transform (FT) and Inverse FT, existence of FT, FT of single pulse		
		Rising and Setting Times, Measurement of Time, Sidereal Time, Apparent Solar Time, Mean Solar Time, Equation of Time, Astronomical Time Systems (LMT, UT, UTC).	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Tutorial	Discussion on doubts and queries	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		As Listed in Syllabus.	B.Sc. (H) Physics V Sem	DSE-1 : Advanced Mathematical Physics-I (32227502)
		As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python

				(2346001007)
November	Theory	finite sine train, trigonometric, exponential, Gaussian functions, properties of FT, FT of Dirac delta function, sine and cosine function, convolution theorem. Fourier Sine Transform (FST) and Fourier Cosine Transform (FCT), Solution of one dimensional Wave Equation using FT. Unit 3: Partial Differential Equations: Solutions to partial differential equations (2 or 3 independent variables) using separation of variables: Laplace's Equation in problems of rectangular geometry.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		Sun, the Milky Way and Astrochemistry: Solar Parameters, Sun's Internal Structure, Solar Photosphere, Solar Atmosphere, Chromosphere. Corona, Solar Activity. Basic Structure and Properties of the Milky Way, Nature of rotation of the Milky Way (Differential rotation of the Galaxy and Oort Constants,	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Tutorial	Discussion on doubts and queries	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)
	Practical	As Listed in Syllabus.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		As Listed in Syllabus.	B.Sc. (H) Physics V Sem	DSE-1 : Advanced Mathematical Physics-I (32227502)
		As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)
December	Theory	Solution of wave equation for vibrational modes of a stretched string. Solution of 1D heat flow equation. (Wave/Heat equation not to be derived).	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		Rotation Curve of the Galaxy and the Dark Matter, Nature of the Spiral Arms), Properties of and around the Galactic Nucleus. Molecular Spectroscopy, Interstellar molecules, Organic compounds in Interstellar Medium and Solar system.	B.Sc. (H) Physics V Sem	DSE – 2 : Astronomy and Astrophysics (32227506)
	Tutorial	Discussion on doubts and queries	B.Sc. (H) Physics V Sem	DSE-2 : Astronomy and Astrophysics (32227506)

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	Practical	As Listed in Syllabus.	B.Sc. (H) Physics III Sem	DSC-7 : Mathematical Physics-III (2222012301)
		As Listed in Syllabus.	B.Sc. (H) Physics V Sem	DSE-1 : Advanced Mathematical Physics-I (32227502)
		As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)

Dr. Main Pal




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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty : Dr. Ram Lal Awasthi

Department : Physics

Semester : V Semester

Month		Topics	Course	Paper Code/Name
August	Theory	Linear Vector Spaces Abstract Systems: Binary Operations and Relations. Introduction to Groups and Fields. Vector Spaces and Subspaces. Linear Independence and Dependence of Vectors. Basis and Dimensions of a Vector Space. Change of basis. Homomorphism and Isomorphism of Vector Spaces. Linear Transformations. Algebra of Linear Transformations. Non-singular Transformations.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics - 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics & Applications (32221501)
September	Theory	Representation of Linear Transformations by Matrices. Matrices, Addition and Multiplication of Matrices: Null Matrices. Diagonal, Scalar and Unit Matrices. Upper- Triangular and Lower-Triangular Matrices. Transpose of a Matrix. Symmetric and Skew-Symmetric Matrices. Conjugate of a Matrix. Hermitian and Skew-Hermitian Matrices. Singular and Non-Singular matrices. Orthogonal and Unitary Matrices. Similar Matrices. Trace of a Matrix. Inner Product. Eigen-values and Eigenvectors: Finding Eigen – values and Eigen vectors of a Matrix. Diagonalization of Matrices.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics - 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics - 1 (32227502)


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	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
October	Theory	Properties of Eigen-values and Eigen Vectors of Orthogonal, Hermitian and Unitary Matrices. Cayley-Hamilton Theorem (Statement only). Finding inverse of a matrix using Cayley-Hamilton Theorem. Use of Matrices in Solving ordinary second order differential equations and Coupled Linear Ordinary Differential Equations of first order. Functions of a Matrix. Cartesian Tensors: Transformation of Co-ordinates and fundamentals of Tensors. Einstein's Summation Convention. Relation between Direction Cosines. Algebra of Tensors: Sum, Difference and Product of Two Tensors. Contraction. Quotient Law of Tensors. Symmetric and Anti-symmetric Tensors. Invariant Tensors: Kronecker and Alternating Tensors. Association of Anti-symmetric Tensor of Order Two and Vectors.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics - 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics &Applications (32221501)
	Assignment	Assignments give at regular interval	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Mid-Term Test	Conducted on 25 October 2023	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
November	Theory	Applications of Cartesian Tensors: Vector Calculus using Cartesian Tensors: Scalar and Vector Products of 2, 3, 4 vectors. Gradient, Divergence and Curl of Tensor Fields. Tensor notation of Laplacian operator. Proof of Vector Identities involving scalar and vector products and vector identities involving Del operator using Tensor	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics - 1 श्री वेङ्कटेश्वर महाविद्यालय Dr. Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-110021

		notation. Isotropic Tensors (Definition only). Tensorial Character of Physical Quantities. Moment of Inertia Tensor. Stress and Strain Tensors: Symmetric Nature. Elasticity Tensor. Generalized Hooke's Law. General Tensors: Transformation of Co-ordinates. Contravariant & Covariant Vectors. Contravariant, Covariant and Mixed Tensors. Kronecker Delta and Permutation Tensors.		
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics & Applications (32221501)
December	Theory	Algebra of Tensors. Sum, Difference & Product of Two Tensors. Contraction. Quotient Law of Tensors. Symmetric and Anti-symmetric Tensors. Metric Tensor in cartesian, cylindrical, spherical coordinates.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics - 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	DSE – 1 : Advanced Mathematical Physics – 1 (32227502)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics V Sem	CC-XI: Quantum Mechanics & Applications (32221501)

Signature of the teacher



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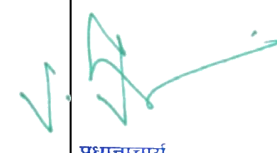
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. M. Anil Kumar
Department: Physics
Semester: I, III and VAC (I-Sem)

Month		Topics	Course	Paper Code/Name
August	Theory 1	Differential equation of simple harmonic oscillator, its solution and characteristics	B.Sc. (H) Physics I Sem	DSC-3 Waves and oscillations (2222011103)
	Theory 2	Duality of Light and matter (5 Hours) Light an EM wave - Hertz"s experiments; Particle characteristic by Photoelectric effect and Compton Effect (only concept)	B.Sc (H) Physics III Sem	DSC-9 Light and matter (2222012303)
	Practical VAC	No Class	B.Sc. (H) I Sem	VAC – 1 : Digital Empowerment (6967001004)
	Practical 1	1. Mechanics a) Determination of moment of inertia of a flywheel (Symmetric and Asymmetric). b) Determination of g and velocity for a freely falling body using digital timing technique. c) Measurement of length (or diameter) using vernier calliper, screw gauge and travelling microscope. d) Study the random error in observations. e) Determination of Young's modulus using optical lever method. f) Determination of coefficient of Viscosity using poiseuille's method.	B.Sc. (H) Physics I Sem	DSC – 2 Mechanics (2222011102)
	Practical 2	2. Light and Matter a) Determination of refractive index of material of prism using mercury (Hg) light. b) To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. c) To determine wavelength of sodium light using Newton"s Rings. d) To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film. e) To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. f) To determine dispersive power of a plane diffraction grating using mercury lamp. g) To determine resolving power of a plane diffraction grating using sodium lamp. h) To determine the wavelength of laser source using diffraction of single slit. i) To determine the wavelength of laser source	B.Sc. (H) Physics III Sem	DSE-9 Light and Matter (2222012303)


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		using diffraction of double slit. j) To determine wavelength and angular spread of He-Ne laser using plane diffraction grating.		
September	Theory 1	Energy in simple harmonic motion, linearity and superposition principle, rotating vector representation of simple harmonic oscillation, motion of simple and compound pendulum (Bar and Kater's pendulum), loaded spring.	B.Sc. (H) Physics I Sem	DSC-3 Waves and oscillations (2222011103)
	Theory 2	wave characteristic by interference and diffraction Wave properties of particles: de Broglie hypothesis, wavelength of matter waves; Particle wave complementarity: Velocity of de Broglie wave and need of a wave packet;	B.Sc (H) Physics III Sem	DSC-9 Light and matter (2222012303)
	Practical VAC	a) Needs and challenges b) Vision of Digital India: DigiLocker, E-Hospitals, e-Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns c) Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education	B.Sc. (H) I Sem	VAC – 1 : Digital Empowerment (6967001004)
	Practical 1	1. Mechaics a) Determination of moment of inertia of a flywheel (Symmetric and Asymmetric). b) Determination of g and velocity for a freely falling body using digital timing technique. c) Measurement of length (or diameter) using vernier calliper, screw gauge and travelling microscope. d) Study the random error in observations. e) Determination of Young's modulus using optical lever method. f) Determination of coefficient of Viscosity using poiseuille's method.	B.Sc. (H) Physics I Sem	DSC – 2 Mechanics (2222011102)
	Practical 2	1. Light and Matter a) Determination of refractive index of material of prism using mercury (Hg) light. b) To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. c) To determine wavelength of sodium light using Newton's Rings. d) To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film. e) To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. f) To determine dispersive power of a plane diffraction grating using mercury lamp. g) To determine resolving power of a plane diffraction grating using sodium lamp. h) To determine the wavelength of laser source using diffraction of single slit. i) To determine the wavelength of laser source using diffraction of double slit. j) To determine wavelength and angular spread of He-Ne laser using plane diffraction grating.	B.Sc. (H) Physics III Sem	DSE- 9 Light and matter (2222012303)



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श्री वेंकटेश्वर महाविद्यालय
Sri Venkateswara College
दिल्ली विश्वविद्यालय / University of Delhi
धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

October	Theory 1	Superposition of N collinear harmonic oscillations with (1) equal phase differences and (2) equal frequency differences, Beats Superposition of two perpendicular harmonic oscillations: Graphical and Analytical Methods. Lissajous Figures with equal and unequal frequencies, effect of variation of phase	B.Sc. (H) Physics I Sem	DSC-3 Waves and oscillations (2222011103)
	Theory 2	Group and Phase velocities and relation between them; Equivalence of group and particle velocity, Dispersion of wave groups. By Light waves: Division of amplitude and wave-front. Two-slit interference experiment with photons: Young's double slit experiment. Lloyd's Mirror. Phase change on reflection: Stokes' treatment. Interference in Thin Films: parallel and wedge-shaped films. Fringes of equal inclination (Haidinger Fringes); Fringes of equal thickness (Fizeau Fringe).	B.Sc. (H) Physics III Sem	DSE- 9 Light and matter (2222012303)
	Practical VAC	a) Electronic Communication: electronic mail, blogs, social media b) Collaborative Digital platforms c) Tools/platforms for online learning d) Collaboration using file sharing, messaging, video conferencing	B.Sc. (H) I Sem	VAC – 1 : Digital Empowerment (6967001004)
	Practical 1	1. Mechanics a) Determination of moment of inertia of a flywheel (Symmetric and Asymmetric). b) Determination of g and velocity for a freely falling body using digital timing technique. c) Measurement of length (or diameter) using vernier calliper, screw gauge and travelling microscope. d) Study the random error in observations. e) Determination of Young's modulus using optical lever method. f) Determination of coefficient of Viscosity using poiseuille's method.	B.Sc. (H) Physics I Sem	DSC – 2 Mechanics (2222011102)
	Practical 2	2. Light and Matter a) Determination of refractive index of material of prism using mercury (Hg) light. b) To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. c) To determine wavelength of sodium light using Newton's Rings. d) To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film. e) To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. f) To determine dispersive power of a plane diffraction grating using mercury lamp. g) To determine resolving power of a plane diffraction grating using sodium lamp. h) To determine the wavelength of laser source using diffraction of single slit. i) To determine the wavelength of laser source using diffraction of double slit. j) To determine wavelength and angular spread of He-Ne laser using plane diffraction grating.	B.Sc. (H) Physics III Sem	DSE- 9 Light and matter (2222012303)



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	Assignment 1	Assignments are given on Waves and Oscillations on regular basis.	B.Sc (H) Physics I Sem & III Sem	DSE-3 &9 Waves and Oscillations (2222011103)& DSC – 9 : Light and matter (2222012303)
	Assignment 2	Assignments are given on Light and Matter on regular basis.		
	Mid-Term Test 1	Mid Exam Conducted successfully on Waves and Oscillations on 26 Oct 2023.	B.Sc (H) Physics I Sem	DSE-3 : Waves and Oscillations (2222011103)
	Mid-Term Test 2	Mid Exam Conducted successfully on Light and matter on 27 Oct 2023.	B.Sc (H) Physics I Sem	DSC-9 : Light and Matter (2222012303)
	Mid-Term Term 3	Mid Exam Conducted successfully on Digital Empowerment.	B.Sc (H) Physics I Sem	VAC – 1 : Digital Empowerment (6967001004)
November	Theory 1	Damped Oscillations: Equation of motion, dead beat motion, critically damped system, lightly damped system: relaxation time, logarithmic decrement, quality factor Forced Oscillations: Equation of motion, complete solution, steady state solution, resonance, sharpness of resonance, power dissipation, quality factor Coupled oscillators, normal coordinates and normal modes, energy relation and energy transfer.	B.Sc. (H) Physics I Sem	DSC-3 Waves and oscillations (2222011103)
	Theory 2	Newton's Rings: Measurement of wavelength and refractive index. By matter waves: Two-slit interference experiment with electrons. Single photon interference. By Light waves: Fraunhofer diffraction: Single slit. Double slit. Diffraction grating. Resolving power of grating. Fresnel Diffraction: Fresnel's Assumptions. Fresnel's Half Period Zones for Plane Wave. Explanation of Rectilinear Propagation of Light.		
	Practical VAC	a) Online security and privacy b) Threats in the digital world: Data breach and Cyber Attacks c) Blockchain Technology d) Security Initiatives by the Govt of India.	B.Sc. (H) I Sem	VAC – 1 : Digital Empowerment (6967001004)



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	Practical 1	1. Mechanics a) Determination of moment of inertia of a flywheel (Symmetric and Asymmetric). b) Determination of g and velocity for a freely falling body using digital timing technique. c) Measurement of length (or diameter) using vernier calliper, screw gauge and travelling microscope. d) Study the random error in observations. e) Determination of Young's modulus using optical lever method. f) Determination of coefficient of Viscosity using poiseuille's method.	B.Sc. (H) Physics I Sem	DSC – 2 Mechanics (2222011102)
	Practical 2	2. Light and Matter a) Determination of refractive index of material of prism using mercury (Hg) light. b) To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. c) To determine wavelength of sodium light using Newton's Rings. d) To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film. e) To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. f) To determine dispersive power of a plane diffraction grating using mercury lamp. g) To determine resolving power of a plane diffraction grating using sodium lamp. h) To determine the wavelength of laser source using diffraction of single slit. i) To determine the wavelength of laser source using diffraction of double slit. j) To determine wavelength and angular spread of He-Ne laser using plane diffraction grating.	B.Sc. (H) Physics III Sem	DSE- 9 Light and matter (2222011103)
December	Theory 1	Di-atomic molecules, representation of a general solution as a linear sum of normal modes, normal modes of N coupled oscillators. One dimensional plane wave, classical wave equation, standing wave on a stretched string (both ends fixed), normal modes. Travelling wave solution.	B.Sc. (H) Physics I Sem	DSC-3 Waves and oscillations (2222011103)
	Theory 2	Theory of a Zone Plate: Multiple Foci of a Zone Plate. Fresnel diffraction of Straight edge, a slit and a wire by Fresnel Half Period Zones. By matter waves: Experimental study of matter waves: Davisson-Germer experiment; Electron microscope: applications SEM, TEM.	B.Sc (H) Physics III sem	DSC-9 Light and matter (2222011103)
	Practical VAC	a)Netiquettes b) Ethics in digital communication c) Ethics in Cyberspace.	B.Sc. (H) I Sem	VAC – 1 : Digital Empowerment (6967001004)



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	Practical 1	1. Mechanics a) Determination of moment of inertia of a flywheel (Symmetric and Asymmetric). b) Determination of g and velocity for a freely falling body using digital timing technique. c) Measurement of length (or diameter) using vernier calliper, screw gauge and travelling microscope. d) Study the random error in observations. e) Determination of Young's modulus using optical lever method. f) Determination of coefficient of Viscosity using poiseuille's method.	B.Sc. (H) Physics I Sem	DSC – 1 Mechanics (2222011102)
	Practical 2	2. Light and Matter a) Determination of refractive index of material of prism using mercury (Hg) light. b) To determine the dispersive power and Cauchy constants of the material of a prism using mercury source. c) To determine wavelength of sodium light using Newton's Rings. d) To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film. e) To determine wavelength of (1) Na source and (2) spectral lines of Hg source using plane diffraction grating. f) To determine dispersive power of a plane diffraction grating using mercury lamp. g) To determine resolving power of a plane diffraction grating using sodium lamp. h) To determine the wavelength of laser source using diffraction of single slit. i) To determine the wavelength of laser source using diffraction of double slit. j) To determine wavelength and angular spread of He-Ne laser using plane diffraction grating.	B.Sc. (H) Physics III Sem	DSE- 9 Light and matter (2222011103)

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Vivek Panwar

Department: Physics

Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	1. Plotting elementary functions and their combinations, Interpreting graphs of functions using the concepts of calculus, Taylor's series expansion for elementary Functions. 2. Mechanics	1. B.Sc. (H) Physics I Sem 2. B.Sc(H) Biological Sciences (III Sem)	1. DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
	Tutorial	NA	NA	NA
	Practical	1. Binary and decimal arithmetic, Basics of scientific computing. 2. Laboratory Practicals	1. B.Sc. (H) Physics I Sem 2. B.Sc(H) Biological Sciences (III Sem)	1. DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
September	Theory	1. Ordinary differential equations 2. Mechanics, Dielectrics	1. B.Sc. (H) Physics I Sem 2. B.Sc(H) Biological Sciences (III Sem)	1. DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
	Tutorial	NA	NA	NA
	Practical	1. Basic elements of Python 2. Laboratory Practicals	1. B.Sc. (H) Physics I Sem 2. B.Sc(H) Biological Sciences (III Sem)	1. DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
October	Theory	1. Vector Algebra Vector Differential Calculus 2. Waves and Optics	1. B.Sc. (H) Physics I Sem 2. B.Sc(H) Biological Sciences (III Sem)	1. DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist

	Tutorial	NA	NA	NA
	Practical	1.Control structures 2.Laboratory Practicals	1.B.Sc. (H) Physics I Sem 2. B.Sc(H)Biological Sciences (III Sem)	1.DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
	Assignment	Initial Value problem, Applications to Physics problems		
	Mid-Term Test	Functions, Ordinary Differential equations, Vector Algebra		
November	Theory	1.Vector Integral Calculus Probability Distributions 2. Spectroscopy	1.B.Sc. (H) Physics I Sem 2. B.Sc(H)Biological Sciences (III Sem)	1.DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
	Tutorial	NA	NA	NA
	Practical	1.Control Structures, Inbuilt functions, user- defined functions, global and local variables 2.Laboratory Practicals	1.B.Sc. (H) Physics I Sem 2. B.Sc(H)Biological Sciences (III Sem)	1.DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
December	Theory	1. Probability Distributions	1.B.Sc. (H) Physics I Sem 2. B.Sc(H)Biological Sciences (III Sem)	1.DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist
	Tutorial	NA	NA	NA
	Practical	1.Functions 2.Laboratory Practicals	1.B.Sc. (H) Physics I Sem 2. B.Sc(H)Biological Sciences (III Sem)	1.DSC-1 Mathematical Physics 2. DSC-7 Physics for Biologist


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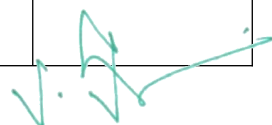
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty : Dr Raghavendra Vemuri

Department : Physics

Semester : V

Month		Topics	Course	Paper Code/Name
August	Theory	Crystal Structure: Amorphous and Crystalline Materials. Lattice Translation Vectors. Lattice with a Basis. Types of Lattices. Unit Cell, Symmetry and Symmetry Elements. Miller indices.	B.Sc. Physics (H) V-Sem	CC-XII: Solid State Physics (32221502)
September	Theory	Reciprocal Lattice. Brillouin Zones. Diffraction of X-rays: single crystal and powder method. Bragg's Law, Laue Condition. Ewald's' construction. Atomic and Geometrical Factor. Simple numerical problem on SC, BCC, FCC. Elementary Lattice Dynamics: Lattice Vibrations and Phonons: Linear Monoatomic and Diatomic Chains. Acoustical and Optical Phonons. Qualitative Description of the Phonon Spectrum in Solids. Dulong and Petit's Law, Einstein and Debye theories of specific heat of solids. T ₃ law	B.Sc. Physics (H) V-Sem	CC-XII: Solid State Physics (32221502)
October	Theory	Electrons in Solids: Electrons in metals- Introduction to Drude Model, Density of states (1- D, 2-D, 3-D) (basic idea), Elementary band theory: Kronig Penney model. Band Gap, direct and indirect bandgap. Effective mass, mobility, Hall Effect (Metal and Semiconductor Magnetic Properties of Matter: Dia-, Para-, Ferri- and Ferromagnetic Materials. Classical Langevin Theory of dia- and Para- magnetism. Hund's rule.	B.Sc. Physics (H) V-Sem	CC-XII: Solid State Physics (32221502)


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	Assignment	Kronig penney model, Dia-, Para-, Ferri- and Ferromagnetic Materials, Hall Effect, Diffraction of X-rays: single crystal and powder method. Einstein and Debye theories of specific heat of solids.	B.Sc. Physics (H) V-Sem	CC-XII: Solid State Physics (32221502)
	Mid-Term Test	Examination was conducted on 26 Oct 2023	B.Sc. Physics (H)	CC-XII: Solid State Physics (32221502)
November	Theory	Curie's law. B-H Curve. soft and hard material and Energy Loss Hysteresis. Weiss's Theory of Ferromagnetism and Ferromagnetic Domains Polarization. Local Electric Field in solids. Depolarization Field. Electric Susceptibility. Polarizability. Clausius Mossotti Equation. Classical Theory of Electric Polarizability. AC polarizability, Normal and Anomalous Dispersion. Complex Dielectric Constant. Langevin-Debye equation. Landau theory for ferromagnetic materials (No derivation).	B.Sc. Physics (H) V-Sem	CC-XII: Solid State Physics (32221502)
December	Theory	Superconductivity: Experimental Results. Critical Temperature. Critical magnetic field. Meissner effect. Type I and type II super conductors. London's Equation and Penetration Depth. Isotope effect. Idea of BCS theory (No derivation).	B.Sc. Physics (H) V-Sem	CC-XII: Solid State Physics (32221502)

Signature of the teacher

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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester**

Name of the Faculty : Dr Raghavendra Vemuri

Department : Physics

Semester : III (Odd Semester)

Month		Topics	Course	Paper Code/Name
September	Practical	Understanding Creativity • Understanding the concept and process of creativity; students exploring within themselves the nature of the creative process; approaches to understanding creativity (Ref. B1) • Differentiate between invention and innovation (Ref. OR1) • Understanding entrepreneurial mindset and skills(creativity, decision making, risktaking behaviour, networking) and entrepreneurship in different contexts (eg. Social, Cooperative, Commercial, Public, Not for Profit organisations) (Ref. B1) • Case studies of some successful innovations/start-ups – Different group can be given a different Case Study and the groups can have a discussion on same (Ref. Suggestive Case Studies A)	All courses	SEC: Innovation and Entrepreneurship 3126000004
October	Practical	Ideation • Identifying a specific problem through observation, contemplation, networking and research (Ref. B2) • Generating ideas for problem solving using mind mapping, brainstorming, focus groups, idea generation tool kit (SCAMPER) (Ref. B1) • Learning through failures of others – case studies of some ventures that could not sustain – Different group can be given a different Case Study and the groups can have a discussion on same (Ref. Suggestive Case Studies B)	All courses	SEC : Innovation and Entrepreneurship 3126000004


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	Mid-Term Test	Exam was conducted on 28 Oct 2023	All courses	SEC : Innovation and Entrepreneurship 3126000004
November	Practical	Understanding the business • Building a business plan using the lean canvas model (Ref. OR2) • Understanding customers/stakeholders and evaluating the business plan through survey/questionnaire/interview/secondary research (Ref. B1 and B2) • Designing, prototyping and iteration (Ref. B2) • Networking and growth strategies (Ref. B3) • Building and managing organisations (Ref. B3) • Role of leadership and team-based culture (Ref. B3 and OR4)	All courses	SEC : Innovation and Entrepreneurship 3126000004
December	Practical	Venturing Forth • Financing the innovation: pitching and communicating the idea • Sources of finance: crowdfunding, venture capital, equity funds, angel investing, borrowing (including government initiatives, bank and public funded schemes) • Various forms of IPR (patent, copyright, trademark, geographical indication, industrial design) (Ref. OR7 and OR8) • Setting and scaling up (Ref. B3) • Entrepreneurial resilience and ongoing creativity (Ref. B1)	All courses	SEC : Innovation and Entrepreneurship 3126000004

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Ruchi Gupta

Department: Physics

Semester: I/III Odd Semester

Month		Topics	Course	Paper Code/Name
August	Theory	Fundamentals of Dynamics: Inertial and Non-inertial frames, Newton's Laws of Motion and their invariance under Galilean Transformations	B.Sc. (H) Physics I Sem	DSC-2 Mechanics (2222011102)
	Tutorial	N.A.	N.A.	N.A.
	Practical	1.Binary and decimal arithmetic, Basics of scientific computing	B.Sc. (H) Physics I Sem	DSC – 1 : Mathematical Physics 1 (2222011101)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC – 3 : Waves and Oscillations (2222011103)
	Practical	NA	All Courses	VAC – 1 : Digital Empowerment (6967001004)
September	Theory	Non-Inertial systems, momentum of variable mass system, Dynamics of system of a particles, Principle of conservation of momentum, Impulse, Determination of centre of mass of discrete and continuous objects having cylindrical and spherical symmetry, Differential analysis of a static vertically hanging massive rope , Postulates of special theory of relativity, Lorentz Transformations	B.Sc. (H) Physics I Sem	DSC-2 Mechanics (2222011102)
	Tutorial	N.A.	N.A.	N.A.
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC-1 Mathematical Physics (2222011101)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC-3 Waves and Oscillations

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 P.G. Education Department, New Delhi-2

				(2222011103)
	Practical	Digital Empowerment	All courses	VAC-III : Digital Empowerment (6967001004)
October	Theory	Relativity (Unit-4), Rotational Dynamics (Unit-2)	B.Sc. (H) Physics I Sem	DSC-2 Mechanics (2222011102)
	Tutorial	N.A.	N.A.	N.A.
	Practical	Control structures	B.Sc. (H) Physics I Sem	DSC-1 Mathematical Physics (2222011101)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC-3 Waves and Oscillations (2222011103)
	Practical	Digital Empowerment	All Course	VAC-III : Digital Empowerment (6967001004)
	Assignment	Unit-1 : Fundamental of Dynamics	B.Sc. (H) Physics I Sem	DSC-2 Mechanics (2222011102)
	Mid-Term Test	1.Unit-4 : Relativity	1.B.Sc. (H) Physics I Sem	DSC-2 Mechanics 2.VAC III Sem
	Mid-Term Test	Digital Empowerment	All courses	VAC-III : Digital Empowerment (6967001004)
November	Theory	Unit-1: Work and Energy, Collisions	B.Sc. (H) Physics I Sem	DSC-2 Mechanics (2222011102)
	Tutorial	N.A.	N.A.	प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

	Practical	Control Structures, Inbuilt functions, user-defined functions, global and local variables	B.Sc. (H) Physics I Sem	DSC-1 Mathematical Physics (2222011101)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics I Sem	DSC-3 Waves and Oscillations (2222011103)
	Practical	Digital Empowerment	All Course	VAC-III : Digital Empowerment (6967001004)
December	Theory	Collisions, Unit-3 : Central force motion	B.Sc. (H) Physics I Sem	DSC-2 Mechanics (2222011102)
	Tutorial	N.A.	N.A.	N.A.
	Practical	Functions	B.Sc. (H) Physics I Sem 3.VAC III Sem	1.DSC-1 Mathematical Physics (2222011101) 3.VAC-III (6967001004)
	Practical	As listed in the syllabus.		2. DSC-3 Waves and Oscillations (2222011103)
	Practical	Digital Empowerment		VAC-III : Digital Empowerment (6967001004)

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Aug – Dec, 2023-24 Odd Semester

Name of the Faculty : Dr. Aniruddh Singh

Department : Physics

Semester : I/ III

Month		Topics	Course	Paper Code/Name
August	Theory	History of astronomy, wonders of the Universe, overview of the night sky, diurnal and yearly motions of the Sun, size, mass, density and temperature of astronomical objects, basic concepts of positional astronomy: Celestial sphere, Astronomical coordinate systems, Horizon system and Equatorial system	B.Sc. 1Sem	GE-1 Introduction to Astronomy (2224001001)
	Tutorial	Numerical Problems relating to size, mass, density temperature of astronomical objects.	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Practical			
September	Theory	Stellar energy sources, determination of distance by parallax method, aberration, proper motion, brightness, radiant flux and luminosity, apparent and absolute magnitude scales, distance modulus, determination of stellar temperature and radius, basic results of Saha ionization formula and its applications for stellar astrophysics, stellar spectra, dependence of spectral types on temperature, luminosity classification, stellar evolutionary track on Hertzsprung-Russell diagram	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Tutorial	Numericals based upon brightness, radiant flux, luminosity, absolute and apparent magnitude,	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Practical	Understanding Creativity • Understanding the concept and process of creativity; students exploring within themselves the nature of the creative process; approaches to understanding creativity (Ref. B1) • Differentiate between invention and innovation (Ref. OR1) • Understanding entrepreneurial mindset and skills(creativity, decision making, risktaking behaviour, networking) and entrepreneurship in different contexts (eg. Social, Cooperative, Commercial, Public, Not for	All courses	SEC – 3 : Innovation and Entrepreneurship Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-2

		Profit organisations) (Ref. B1) • Case studies of some successful innovations/start-ups – Different group can be given a different Case Study and the groups can		
	Practical	have a discussion on same (Ref. Suggestive Case As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)
October	Theory	Basic Optical Definitions for Telescopes: Magnification, Light Gathering Power, Limiting magnitude, Resolving Power, Diffraction Limit. Optical telescopes, radio telescopes, Hubble space telescope, James Web space telescope, Fermi Gamma ray space telescope.	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Tutorial	Numericals based on light gathering power, limiting magnitude, resolving power, diffraction limit.	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Practical	Ideation • Identifying a specific problem through observation, contemplation, networking and research (Ref. B2) • Generating ideas for problem solving using mind mapping, brainstorming, focus groups, idea generation tool kit (SCAMPER) (Ref. B1) • Learning through failures of others – case studies of some ventures that could not sustain – Different group can be given a different Case Study and the groups can have a discussion on same (Ref. Suggestive Case Studies B)	All courses	SEC – 3 : Innovation and Entrepreneurship 3126000004
	Practical	As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)
	Assignment	1 Assignment based on unit one of the syllabus	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Mid-Term Test	1 mid-term exam based on the syllabus covered till the exam date.	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
November	Theory	Solar parameters, Sun's internal structure, solar photosphere, solar atmosphere, chromosphere, corona, solar activity, origin of the solar system, the nebular	B.Sc. 1 Sem	प्रधानाचार्य GE-1 Introduction to Astronomy (2224001001) श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi नई दिल्ली / New Delhi-22

		model, tidal forces and planetary rings. Basic structure and properties of different types of Galaxies Nature of rotation of the Milky Way (Differential rotation of the Galaxy), Idea of dark matter.		
	Tutorial	Presentation based on solar atmosphere and solar activity, origin of the solar system.	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Practical	Understanding the business • Building a business plan using the lean canvas model (Ref. OR2) • Understanding customers/stakeholders and evaluating the business plan through survey/questionnaire/interview/secondary research (Ref. B1 and B2) • Designing, prototyping and iteration (Ref. B2) • Networking and growth strategies (Ref. B3) • Building and managing organisations (Ref. B3) • Role of leadership and team-based culture (Ref. B3 and OR4)	All courses	SEC – 3 : Innovation and Entrepreneurship 3126000004
	Practical	As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)
December	Theory	Standard Candles (Cepheids and SNe Type1a), Cosmic distance ladder, Olber's paradox, Hubble's expansion, History of the Universe, Astronomy in ancient, medieval and early telescopic era of India, Current Indian observatories, LIGO.	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Tutorial	Group discussion on Hubble's expansion, History of the universe and astronomy in ancient and modern India,	B.Sc. 1 Sem	GE-1 Introduction to Astronomy (2224001001)
	Practical	Venturing Forth • Financing the innovation: pitching and communicating the idea • Sources of finance: crowdfunding, venture capital, equity funds, angel investing, borrowing (including government initiatives, bank and public funded schemes) • Various forms of IPR (patent, copyright, trademark, geographical indication, industrial design) (Ref. OR7 and OR8) • Setting and scaling up (Ref. B3) • Entrepreneurial resilience and ongoing creativity (Ref. B1)	All courses	SEC – 3 : Innovation and Entrepreneurship 3126000004

	Practical	As Listed in Syllabus.	All Courses	SEC – 1 : Essentials of Python (2346001007)
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Signature of the teacher



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**SEMESTER WISE
TEACHING PLAN ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Namita Pandey
Semester: I/III/V

Department: Political Science

Month		Topics	Course	Paper Code/Name
JULY	Theory	Approaches to Understanding Patriarchy. Feminist theory of Sex/Gender Distinction Biologism vs. Social Construction Understanding Patriarchy and Feminism	BA(Hons), Fifth Semester, Political Science	Feminism: Theory and Practice
	Practicals			
	Tutorials	Discussion on Sylvia Walby - Theorizing Patriarchy		
AUGUST	Theory:	Liberal Theory of Feminism. Discussion of First Wave of Feminism with special reference to Mary Wollstonecraft & other Feminist authors. Marxist theory of Feminism with special reference to Marx and Engels perspective on Feminism		
	Practicals:			
	Tutorials:	Understanding Sex/Gender distinctions in day to day living		
	Assignment:	Critically Examine the liberal theory of Feminism from Marxian Perspective		


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SEPTEMBER	Theory:	Socialist Theory of Feminism with Special reference to Dual Patriarchy, Zilla Einstein's notion of Capitalist Patriarchy Emphasis on Women's Question from Neomarxist Perspective Radical Theory of Feminism		
	Practicals:			
	Tutorials:	A discussion on Betty Friedans Feminine Mystique, Simon De Beauvoir's Second Sex		
	<u>Test</u>	A Critical Comparison between Radical and Socialist Feminism		
OCTOBER	Theory:	Origin of Feminist in the West: Women in French Revolution, Suffrage Movement in Britain and West, Feminism in Scoalist Countries, Women in Russian Revolution, Feminist Movements in China and Cuba, Feminist Issues and Womens Participation in Anti Colonial and national Liberation Movements with special reference to India		
	Practicals:			
	Tutorials:	Class Presentation on Women in Indian National Movement		


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NOVEMBER	Theory:	Traditional Histiography and Feminist Critiques: A Criticism of Traditional History by Analyzing the Social Reform movement and Indian National Movement & Position of Women in India Family in India: Patrilineal and Matrilineal, Patterns of Consumption, Intra Household Bargaining and Entitlement, Property Rights Women in Work, Sexual Division of Productive and Reproductive Work, Paid, Underpaid and Unpaid work, Visible and Invisible Work, Methods of Computing Women's Work, Female Head Households		
	Practicals:			
	Tutorials:	A discussion on domestic labor debate emerging in the context of unpaid labour		

Navit

V.A.

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**SEMESTER WISE TEACHING
PLAN (2021-2022)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Arup Singh
Course: BA (Hons)
Paper: Indian Political Thought - II

Department: Political Science
Semester: V

Month		Topics	Course	Paper Code/Name
July	Theory	Unit-1 Traditions of Pre-colonial Indian Political Thought (10 lectures) a) Epistemic Foundations of Indian Political Thought b) Brahmanic, Shramanic, Islamic and Syncretic.		
	Practicals			
	Tutorials			
August	Theory:	Unit-2: Manu: Social Laws Unit-3: Kautilya: Theory of State		
	Practicals:			
	Tutorials:			
	Assignment:			
September	Theory:	Unit 4 Ved Vyasa (Shantiparva): Rajadharma Unit 5 Aggannasutta (Digha Nikaya): Theory of kingship		
	Practicals:			
	Tutorials:			
	Test			
October	Theory:	Unit 6 Barani: Ideal Polity Unit 7 Abul Fazal: Monarchy		
	Practicals:			
	Tutorials:			
November	Theory:	Unit 8 Kabir: Syncretism		
	Practicals:			
	Tutorials:			

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Name of the Faculty: Dr Arup Singh
Course: BA (Hons)
Paper: State Politics DSE

Department: Political Science
Semester: III

Month		Topics	Course	Paper Code/Name
July	Theory	Unit-1 State politics in India Relevance and frameworks of analysis		
	Practicals			
	Tutorials			
August	Theory:	Unit-II: States reorganisation and formation of states		
	Practicals:			
	Tutorials:			
September		UNIT – III Agrarian politics Rise of an agrarian capitalist class, rural markets, land acquisition and farmers’ movements		
October		UNIT – IV Political economy of development and reforms in the states Policy, politics, and regional business.		
November		UNIT – V Electoral politics in states Political parties, leadership, and mobilisation		



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SEMESTER WISE TEACHING PLAN
Odd Semester (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr. Haokam Vaiphei**
 ODD Semester: **I/III/V**

Department: **Political Science**

Name of the paper: Nationalism in India (3 Lecture per Week)

Month		Topic	Course	Paper Code/Name
August	Theory	Unit-1 Approaches to the Study of Nationalism in India: Nationalist, Imperialist, Marxist, and Subaltern		
	Assignment	Write an article your Idea of India or any unsung Hero		
	Tutorials			
September	Theory	UNIT – II Reformism and Anti-Reformism in the Nineteenth Century: Major Social and Religious Movements in 19th century		
	Practicals			
	Tutorials	Ecological Approach & Public Policy		
October	Theory	Unit-III Nationalist Politics and Expansion of its Social Base a. Phases of Nationalist Movement: Liberal Constitutionalists, Swadeshi and the Radicals; Beginning of Constitutionalism in India b. Gandhi and Mass Mobilisation: Non-Cooperation Movement, Civil Disobedience Movement, and Quit India Movement c. Revolutionaries, Socialists, and Communists		
	Practicals			
	Tutorials			
	Test	Internal Test		
November	Theory	Unit-IV & V Social Movements Peasants, Tribals, Workers, Women and anti-caste movements Partition, Independence and Integration of states Communalism in Indian Politics, The Two-Nation Theory and Partition, Independence and Integration of Indian States		
	Practicals			

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	Tutorials			
December	Theory	FW Riggs		
	Practicals			
	Tutorials			

Name of the Paper: DSC Administration & Public Policy: Concepts & Theories (BAP) SEM III (5 lectures/week)

Month		Topic	Course	Paper Code/Name
July	Theory	Public administration as a discipline Meaning, scope and significance of the subject, public and private administration, brief evolution and major approaches, and comparative approaches to public administration.	BA (P) V Semester DSC	
	Assignment			
	Tutorials			
August	Theory	Administrative theories the classical theory, scientific management, the human - relation theory, and rational decision making		
	Practicals			
	Tutorials			
	Assignment	Write an Article on any Public Policy issues		
September	Theory	Development administration Elements of development administration. Time and space dimensions in the study of development administration, politics of development administration.		
	Practicals			
	Tutorials			
October	Theory	Understanding Public Policy concept and theories		
	Practicals			
	Tutorials			
	Test	Unit 1		
November	Theory	Relevance of policy making in public administration and process of policy formulation and implementation and evaluation.		
	Practicals			
	Tutorials			

Name of the Paper: Colonialism and Nationalism in India (DSE) I SEM (3 classes/week)

Month		Topic	Course	Paper Code/Name
August	Theory	Colonialism & Nationalism: a. Main perspectives on colonialism: Liberalism, Marxism, Postcolonialism	BA (H) SEM I DSE Paper	

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		b. Approaches to the study of nationalism in India: Nationalist, Imperialist, Marxist, and Subaltern interpretations		
	Practicals			
	Assignment	Write an article on your idea of India. Minimum: 1500 words		
September	Theory	Colonial Rule in India and its impact: a. Constitutional developments and the colonial state b. Colonial ideology of civilizing mission: Utilitarians and Missionaries c. Impact on agriculture, land relations, industry and ecology		
	Practicals			
	Tutorials	Civilizing Mission		
	Assignment	Book Review Presentation		
October	Theory	Reform and Resistance: a. The 1857 rebellion b. Major social and religious movements c. Education and the rise of the new middle class Nationalist Politics and Expansion of its Social Base a. Phases of the Nationalist Movement: Liberal constitutionalist, Swadeshi and the Radicals, Formation of the Muslim League b. Gandhi and mass mobilization: Non-cooperation, Civil Disobedience, and Quit India Movements c. Socialist alternatives: Congress socialists, Communists d. Communalism in Indian Politics e. The two-nation theory, negotiations over partition		
	Practicals			
	Test	Internal Test		
November	Theory	Social Movements a. The Women's Question: participation in the national movement and its impact b. The Caste Question: anti-Brahmanical Politics c. Peasant, Tribals, and Workers movements		
	Practicals			
	Tutorials			



(Dr. Haokam Vaiphei)
Assistant Professor
Department of Political Science



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SEMESTER WISE TEACHING PLAN
Odd Semester (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr. Latika Bishnoi**
Department: **Political Science**
Semester: **V**

Name of the Paper: **Classical Political Philosophy, V SEM (5 classes/week)**

Month		Topic	Course	Paper Code/Name
July	Theory	Text and InterpretationS	Honours Core Discipline Paper	232502
	Practicals			
	Tutorials			
August	Theory	Antiquity Plato Philosophy and Politics, Virtues, Justice, Philosopher King/Queen, Communism, Plato on Democracy, Women and Guardianship, Philosophic Education and Good Aristotle (2 weeks) Forms, Virtue, man as zoon politikon, Citizenship, Justice, State and Household, Classification of governments		
	Practicals			
	Tutorials			
	Group Project			
September	Theory	Machiavelli Vice and Virtue, Analyzing Power through Prince, Religion and morality, Republicanism, statecraft		
	Practicals			
	Tutorials			
	Test			
October	Theory	Possessive Individualism Hobbes Human nature, State of Nature, Social Contract and role of consent, State and sovereignty Locke Laws of Nature, Natural Rights, Justification of Property, Right to Dissent		
	Practicals			
	Tutorials			
November- December	Theory	Locke Laws of Nature, Natural Rights, Justification of Property, Right to Dissent		
	Practicals			
	Tutorials			

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Name of the Paper: GE-Understanding Gandhi
Semester : V

Month		Topic	Course	Paper Code/Name
July	Theory	Swaraj Satyagraha (Truth and Non Violence) Trusteeship	GE-	62325501
	Practicals			
	Tutorials			
August	Theory	Swadeshi Religion and Politics		
	Practicals			
	Tutorials			
	Assignment			
September	Theory	Modern Civilization Nationalism		
	Practicals			
	Tutorials			
	Internal Test			
October	Theory	Communal Unity Women Question		
	Practicals			
	Tutorials			
November- December	Theory	Untouchability		
	Practicals			
	Tutorials			

Lavina Bishu

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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Ravuru Narasaiah**

Department: **Political Science**

Even Semester: **I**

Name of the Paper: **Ideas and Institutions in Indian Political Thought (DSC)**

Month		Topic	Course	Paper Code/Name
August	Theory	Unit-I Statecraft in Ancient India	B.A. (Honours)	2322101102/DSC
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
September	Theory	Unit-II Dharma, Dhamma, Danda		
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
October	Theory	Unit- III Nyaya, Niti Unit- IV Sabha, Samiti		
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
November	Theory	Unit- V Rajya, Rashtra Unit- VI Varna, Jati		
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
December	Theory	Unit- VI Varna, Jati		
	Practicals			
	Tutorials			

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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Ravuru Narasaiah**

Department: **Political Science**

Even Semester: **I**

Name of the Paper: **Ideas in Indian Political Thought (GE)**

Month		Topic	Course	Paper Code/Name
August	Theory	Unit-I: Dharma and Danda: Kautilya	B.A. (Honours)	2324001001/GE
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
September	Theory	Unit-I: Dharma and Danda: Kautilya Unit-II: Gender: Tarabai Shinde		
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
October	Theory	Unit- III: Culture and Nationalism: Vivekananda Unit- IV: Swaraj: Gandhi		
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
November	Theory	Unit- V: Nyaya: Ambedkar Unit- VI: Hindutva: Savarkar		
	Practicals			
	Tutorials	Discussion and Presentation by Students.		
December	Theory	Unit- VII: Integral Humanism: Deen Dayal Upadhyaya		
	Practicals			
	Tutorials			

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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Ravuru Narasaiah**

Department: **Political Science**

Even Semester: **V**

Name of the Paper: **Themes in Comparative Political Theory (DSE)**

Month		Topic	Course	Paper Code/Name
August	Theory	Unit-I: Distinctive Features of Indian and Western Political Thought	B.A. (Program)	62327503/DSE
	Practicals			
	Tutorials			
September	Theory	Unit-II: Western Thought: Thinkers and Themes A. Aristotle on Citizenship B. Locke on Rights C. Rousseau on inequality		
	Practicals			
	Tutorials			
October	Theory	Unit-II: Western Thought: Thinkers and Themes D. J.S. Mill on Liberty and Democracy E. Marx and Bakunin on State		
	Practicals			
	Tutorials			
November	Theory	Unit-III: Indian Thought: Thinkers and Themes A. Ambedkar and Lohia on Social Justice B. Nehru on Democracy		
	Practicals			
	Tutorials			
December	Theory	Unit-III: Indian Thought: Thinkers and Themes C. Jayaprakash Narayanan on Democracy		
	Practicals			
	Tutorials			

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SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ashish Kumar Thakur

Department: Political Science

Semester: B.A. (H) Sem I

Paper Name: - Understanding Political Theory

Month		Topics	Course	Paper Code/Name
August		Course objective: This course introduces the various ways of theorizing politics. The idea is to introduce and assess the conventional as well as contemporary approaches to understanding politics. Unit 1 What is Politics: Theorizing the 'Political' McKinnon, C. (2008), Issues in Political Theory. New York: Oxford University Press. Bhargava, R. (2008), Political Theory: An Introduction. New Delhi: Pearson Longman, pp. 2-16.	B.A.(H) Sem I	Understanding Political Theory
	Practicals			
	Tutorials			

September		Unit 2 Approaches to Political Theory: Normative, Historical and Empirical Unit 4 Critical Perspectives in Political Theory: Feminist and Postmodern		
	Practicals:			
	Tutorials:			
October	Theory:	Unit 4 Critical Perspectives in Political Theory: Feminist and Postmodern		
	Practicals:			
	Tutorials:	• Discussion - Previous year questions - Individual doubts • Revision		

November	Theory:	Unit 5 The Idea of Political Community: Political Discussion - Previous year questions - Individual doubts ➤ Revision		 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-2
	Practicals:			

	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.
December	Theory:	Discussion - Previous year questions - Individual doubts - CA Revision
	Practicals:	
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.

Ashish

Semester: B.A. (H) Sem III

Paper Name: - Political Theory: Concepts and Debates

Month		Topics	Course	Paper Code/Name
August		Course objective: This course will familiarize students with the basic normative concepts in political theory and encourage them to understand how they manifest in social practices while engaging in relevant debates.	B.A.(H) Sem III	Political Theory: Concepts and Debates
		Unit 1 Freedom • McKinnon, C. (2008), Issues in Political Theory. New York: Oxford University Press. • Bhargava, R. (2008), Political Theory: An Introduction. New Delhi: Pearson Longman. • Knowles, D. (2001) Political Philosophy. London: Routledge.		
	Practicals			
	Tutorials			
September		Unit 2 Equality Unit 3 Justice • Smits, K. (2009), Applying Political Theory: Issues and Debates. Palgrave Macmillan. • McKinnon, C. (2008), Issues in Political Theory. New York: Oxford University Press.		 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21
	Practicals:			
	Tutorials:			

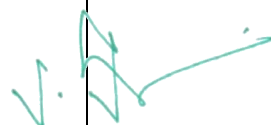
October	Theory:	Unit 3 Justice Unit 4 Rights		
	Practicals:			
	Tutorials:	• Discussion - Previous year questions - Individual doubts • Revision		

November	Theory:	Unit 4 Rights Unit 5 Democracy Discussion - Previous year questions - Individual doubts ➤ Revision		
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		
December	Theory:	Discussion - Previous year questions - Individual doubts - CA Revision		
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		

Ashish

Semester: B.A. (H) Sem V

Paper Name: - India's Foreign Policy in a Globalizing World

Month		Topics	Course	Paper Code/Name
August		Course objective: This course's objective is to teach students the domestic sources and the structural constraints on the genesis, evolution and practice of India's foreign policy. Unit 1 India's Foreign Policy: From a Postcolonial State to an Aspiring Global Power • Ian Hall (ed), (2014), The Engagement of India: Strategies and Responses, Washington, DC, Georgetown University Press. • Muchkund Dubey, (2016), India's Foreign Policy: Coping with the	B.A.(H) Sem V	India's Foreign Policy in a Globalizing World  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Changing World, New Delhi, Orient Blackswan Pvt. Ltd. • Harsh V.Pant (ed), (2009) “India’s foreign Policy in a Unipolar World”, New Delhi, Routledge. • Harsh, V. Pant, (2016), India’s Foreign Policy-An Overview”, New Delhi: Orient Blackswan.		
	Practicals			
	Tutorials			
September		Unit 2 India’s Relations with the USA and Russia Unit 3 India’s Engagements with China • Harsh, V. Pant, (ed) (2019), “New Directions in India’s foreign Policy: Theory and Praxis”, New Delhi: Cambridge University Press. • David M.Malone, (2011), “Does the Elephant Dance? Contemporary Indian Foreign Policy, New Delhi, Oxford University Press		
	Practicals:			
	Tutorials:	Assignment: Question assigned from above topics making up the internal assessment requirement.		
October	Theory:	Unit 4 India in South Asia: Debating Regional Strategies Unit 5 India’s Negotiating Style and Strategies: Trade, Environment and Security Regimes		
	Practicals:			
	Tutorials:	• Discussion - Previous year questions - Individual doubts - Assignments • Revision		
November	Theory:	Unit 5 India’s Negotiating Style and Strategies: Trade, Environment and Security Regimes Unit 6 India in the Contemporary Multipolar World Discussion - Previous year questions - Individual doubts		 प्रधानाचार्य Principal श्री. वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		- Assignments ➤ Revision		
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		
December	Theory:	Discussion - Previous year questions - Individual doubts - Assignments Revision		
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		

Ashish



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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Durgesh Kumar

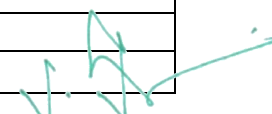
Department: **Political Science**

Even Semester: **I/III/III**

Name of the Paper: **Introduction to Political Theory**

BA (P) Ist Semester

Month		Topic	Course	Paper Code/Name
August	Theory	What is Political Theory and What is its relevance		DSC 1A
	Assignment	Assignments on Various topics related to Political Theory.		
September	Theory	Relevance of Political Theory		
	Practicals			
	Tutorials			
October	Theory	Concept 1. Liberty 2. Equality 3. Justice 4. Rights		
	Practicals			
	Tutorials			
November	Theory	Debates in Political Theory A. Protective Discrimination and Principles of Fairness B. Public vs Private debate: Feminist Perspective		
	Practicals			
	Tutorials			
	Test	Internal Test		
December	Theory	Censorship and its limit		
	Practicals			
	Tutorials			

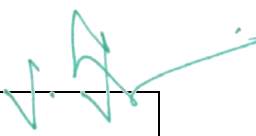

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Name of the Paper: **Theory and Practice of Democracy**
BA(P) 3rd Semester

Month		Topic	Course	Paper Code/Name
August	Theory	Origins of the Idea 1. Ancient Greece and India. 2. Modern Development		DSC
	Practicals			
	Assignment			
September	Theory	3. Procedural and Substantive Account 4. Contemporary Innovation		
	Practicals			
	Tutorials			
October	Theory	Institutions 1. Constitutionalism 2. Legislatures and Legislation 3. Political Parties 4. Media and Civil Society		
	Practicals			
	Tutorials			
November	Theory	Contemporary Debates 1. Diversity 2. Representation		
	Practicals			
	Tutorials			
	Test	Internal Test		
December	Theory	3. Globalization and Global Issues		
	Practicals			
	Tutorials			

Name of the Paper: **Constitutional Values and Fundamental Duties**
VAC 1st Semester

Month		Topic	Course	Paper Code/Name
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August	Theory	The Constitution of India- An Introduction 1. Federal Republic, Rule of Law, Separation of Power		VAC
	Practicals			
	Assignment			
September	Theory	The Constitution of India- An Introduction 1. Federal Republic, Rule of Law, Separation of Power 2. Sovereignty, Socialism, Democracy		
	Practicals			
	Tutorials			
October	Theory	3. Secularism and Sarva Dharma Sama Bhava Constitutional Values 1. Justice: Social, Political, Economic 2. Liberty: Thought, Expression, Belief, Faith, Worship 3. Equality: Equality before Law and		
	Practicals			
	Tutorials			
November	Theory	4. Fraternity: Dignity, Unity and Integrity Fundamental Duties 1. Reflecting on the Ancient Indian Notion of Righteousness and Duty Consciousness 2. Fundamental Duties- Article 51A(a)-(k)		
	Practicals			

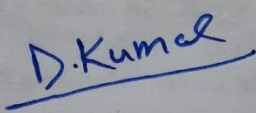

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December	Tutorials			
	Test	Internal Test		
	Theory	3. Legal Status of Fundamental Rights		
	Practicals			
	Tutorials			

Even Semester: **III**

Name of the Paper: **Nationalism in India**

Month		Topic	Course	Paper Code/Name
July	Theory			
	Practicals			
	Tutorials			
September	Theory	Unit - I Approaches to Study Nationalism in India	1) Colonialist 2) Nationalist 3) Marxist 4) Subaltern	General Elective Course
	Practicals			
	Tutorials			
	Theory	Unit- II Reformism and Anti-Reformism in the Nineteenth Century	1) Religious Movements in the 19 th century.	General Elective Course
	Practicals	Internal Assessment of Students.		
	Tutorials	0		
November	Theory	Unit- III Nationalist Politics and Expansion of its Social Base. Unit -IV Social Movements	1) Phases of Nationalist Movement. 2) Gandhi and Mass Mobilization. 3) Socio-Cultural Organization 4) Peasants, Tribals, Workers, Women and Anti Caste Movements	General Elective Course
	Practicals			
	Tutorials	0		
December	Theory	Unit-V Partition, Independence, and Integration of States	1) Communalism 2) Two-Nation Theory 3) Integration of Indian States	General Elective Course
	Practicals			
	Tutorials			



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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Preeti Singh
Department: **Political Science**
Odd Semester: **III**

Name of the Paper: **Constitutional Government and Democracy in India (DSC)**

Month		Topic	Course	Paper Code/Name
August	Theory	Unit I: The Constituent Assembly and the Constitution		
			DSC BA Honrs. Political Science	Constitutional Government and Democracy in India
	Tutorials	The Constituent Assembly and the Constitution		
September	Theory	Unit II: The Organs of Government: Legislature, Executive and Judiciary		
	Tutorials	Unit II: The Organs of Government: Legislature, Executive and Judiciary		
October	Theory	Unit II: The Organs of Government: Legislature, Executive and Judiciary		
	Tutorials	Unit II: The Organs of Government: Legislature, Executive and Judiciary		
November	Theory	Unit III Federalism and Decentralization Unit IV Constitutional Provisions and National Security Laws		
	Tutorials	Unit III and IV		
December(till classes are dispersed)	Theory	Unit IV Constitutional Provisions and National Security Laws		
	Tutorials	Unit IV		


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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Preeti Singh
Department: **Political Science**
Odd Semester: **V**

Name of the Paper: **Development Process and Social Movements in Contemporary India DSE Paper**

Month		Topic	Course	Paper Code/Name
August	Theory	Unit I: Development Process Since Independence		
			DSE BA Honrs. Political Science V Semester	Development Process and Social Movements in Contemporary India
	Tutorials	Unit I		
September	Theory	Unit II Industrial Development Strategy and it's Impact on the Social Structure		
	Tutorials	Unit II		
October	Theory	Unit III: Agrarian Development Strategy and it's Impact on the Social Structure		
	Tutorials	Unit III		
November	Theory	Unit III: Agrarian Development Strategy and it's Impact on the Social Structure		
		Unit IV: Social Movements		
	Tutorials	Unit III and IV		
December (till classes are dispersed)	Theory	Unit IV: Social Movements		
	Tutorials	Unit IV		




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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Preeti Singh
Department: **Political Science**

Name of the Paper: **Political Leadership and Communication (SEC paper)**

Month		Topic	Course	Paper Code/Name
September	Theory	Unit I Explaining Political Communication	SEC	
			All courses	Political Leadership and Communication
	Practical	Unit I		
October	Theory	Unit II Exploring Leadership		
	Practical	Unit II		
November	Theory	Unit III Expanding Political Communication and Leadership Unit IV Extending Political Communication and Leadership		
	Practical	Unit III and IV		
December (Till classes are dispersed)	Theory	Unit V Executing Political Communication and Leadership		
	Practical	Unit V		

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Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: V / August- December (2023 -2024)

Name of the Paper: Your Laws and Your Rights -BA Program (SEC Paper)

Month		Topic	Course	Paper Code/Name
August	Theory	1.Rule of Law and the Criminal Justice System in India,	SEC Paper	
	Tutorials	Criminal Justice, Civil and Political Rights in India, Stages to deal criminal cases		
September	Theory	2.Laws Relating to Criminal Justice Administration in India 3a. Gender: The protection of women against domestic violence, rape and sexual harassment 3b. Caste: Laws abolishing untouchability and providing protection against atrocities		
	Tutorials	How to file a complaint, First Information Report (FIR) , Detention, arrest and bail, Rights of the arrested person, special rights for women and children. Domestic Violence and laws related to Gender and Caste		
	Internal Test	Rule of Law and the Criminal Justice System in India, Laws Relating to Criminal Justice Administration in India		
October	Theory	3c. Class: laws concerning minimum wages 3d. Disability and equality of participation and opportunity 4. Empowerment of Access to Information, Rights of the Consumer		
	Tutorials	Issues related to disability, Class and the question of equality, How to file RTI and procedure to fill RTI, consumer rights		
November	Theory	5. Livelihood: Rural employment guarantee schemes Redistribution , recognition of Traditional rights of forest dwellers and the issues of women's property rights 6. Introduction of how to Access the Identification Documents and Social Security Schemes		
	Tutorials	Explaining the various Identity Cards and Social Security Schemes in India		
	Assignment	Implementation of above acts and its amendments with respect of the state owned by the student		
December	Theory	Procedure of the Identification Cards like Aadhar, PAN, Passport, Driving License, Ration Card etc.		
	Tutorials	How to apply and procedure of the Identification Cards		
	Assignment	Write the above mention laws with reference to their state and explanation of its institutional mechanism		

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Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: I/ August- December (2023 -2024)

Name of the Paper: Constitutional Values and Fundamental Duties (VAC-I)

		Topics	Course	Paper
September	Theory	Introduction to the Indian Constitution and its Preamble, Objectives and Resolutions of the Drafting committee to prepare Constitution, Features of Indian Constitution, Concepts such as Federal Republic, Rule of Law, Separation of Powers, Sovereignty, Socialism, Democracy, Secularism and Sarva Dharma Sama Bhava	VAC-I	
	Practical	Preamble to the Constitution of India, 1950	-	-
October	Theory	Idea of Justice: Social, Political and Economical Liberty: Thought, Expression, Belief, Faith, Worship Equality: Equality before law & equal application of laws Fraternity: Dignity, Unity and Integrity	-	
	Practical	How to prepare project report based on field work, Methodology and sampling	-	-
	Assignment	Features and Principles of Indian Constitution with suitable illustrations		
November	Theory	Fundamental Duties Reflecting on the ancient Indian notions of righteousness and duty consciousness The Constitution of India, Articles – (12-35)	-	
	Practical	Students are required to conduct a survey (minimum 25 respondents) on assessing the awareness of the constitutional duties amongst the citizens.	-	-
December	Theory	Explanation of Fundamental Duties- Article 51A [(a)-(k)] Fundamental Rights and Legal status of Fundamental Duties - Judicial approach	-	
	Test	Unit2 & Unit3	-	-
	Practicals	Students may share their experiences of their field work on Fundamental Duties and Values in the form of a Report.		

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Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: I / August- December (2023 -2024)

Name of the Paper: Public Administration in India-BA Program (DSC Paper)

Month		Topic	Course	Paper Code/Name
August	Theory	1. Indian Administration Colonial legacy Civil Services in the Constitutional Framework; Appointment Training, Promotion PMO, Cabinet Secretariat Major Initiatives in Administrative Reforms	DSC Paper	
	Tutorials	Evolution of Public Administration as a discipline Evolution of Civil Services in India First Administrative Reforms Commission Second Administrative Reforms Commission		
September	Theory	2. Decentralization Concept of Decentralization Significance of Decentralization Approaches to the study of Decentralization Different types of Decentralization Decentralization in India Local Self Governance: Rural Local Self Governance: Urban 3. Budget: (a) Concept of Budget and Budget Cycle in India		
	Tutorials	Decentralization and its policies 73 rd & 74 th CAA and its Powers and Functionaries Budget Cycle in India		
	Internal Assignment	1. Explain the major initiatives in Administrative Reforms 2. Explain the panchayat acts according to 73 rd & 74 th with reference to their state.		
October	Theory	3(b) Budget Types: Line Budgeting, Performance Planning Budgeting, Zero Based Budgeting 3(c) Budget: Role of Finance Ministry 4. Technology and Public Administration in India Digital India Programme E-Governance: Government Initiatives		
	Tutorials	Explanation of the Budget Cycle, Budget formulation, Budget Enactment and Budget Execution Concept of Good Governance Good Governance in India Key Pillars of Digital India		
November	Theory	5. Social Welfare Administration Social Welfare in India, Evolution of welfare administration in India Types of welfare policies, Education Policy, Health Policy, Employment and		 प्रधानाचार्य Principal

		Food Security Policy		
	Tutorials	Concept of Social Welfare Right to Education National Health Mission MGNREGA act and NFSA act		
	Internal Test	Budget Cycle in India and Technology in the field of Public Administration, Key pillars of Digital India		
December	Theory	Issues and Debates in Indian Administration Ethics in Administration: Integrity vs Corruption Accountability: RTI, Lokpal, Citizen's Charter Relationship between Political Executive and Permanent Executive Generalists and Specialists Gender Sensitivity and Gender Participation		
	Tutorials	Introduction of the Ethics in Administration, Evolution of Public service delivery institutions and its Transparency, Role of Political leaders and District collectors, Importance of the Gender in the society		

Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: V/ August- December (2023 -2024)

Name of the Paper: Administration and Public Policy: Concepts and Theories (sharing)-BA Program (DSE Paper)

		Topics	Course	Paper
August	Theory	Understanding public policy Meaning of Public Policy Characteristics of public policy Types of public policy	DSE	
	Tutorials	Public policy and its characteristics Various types of public policies	-	-
September	Theory	Significance of policy analysis Levels of policy analysis Different forms of policy study Relevance of public policy	-	
	Tutorials	Various levels of policy analysis Different forms of public policies	-	-


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October	Theory	Models of policy making *Process model *Institutional model *Rational model *Elite model *Incremental model *Group model *Public choice model *System model *Game theory	-	
	Tutorials	Different models to understand the concept of public policies	-	-
November	Theory	What is Policy Cycle Understanding Policy Formulation Policy Implementation Policy Evaluation	-	
	Tutorials	Introduction of the policy cycle and its role in the formation of policies		
December	Theory	Features of Good Policy Challenges Faced by Policy Cycle Significance of Public Policy		
	Tutorials	Features and challenges of Policy cycle		

J. Lakshmi Reddy

V. B. S.

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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Garima Sharma
Department: **Political Science**
Even Semester: **III**

Name of the Paper: **Ancient and Medieval Indian Political Thought**

Month		Topic	Course	Paper Code/Name
July	Theory			
	Practicals			
	Tutorials			
September	Theory	Unit - I Foundations of Indian Political Thought. Unit – II Manu Unit- III Brihaspati	1) Sources of Indian Political Thought. 2) Idea of Social Law and Justice. 3) State craft.	Discipline-Specific Core Course
	Practicals			
	Tutorials	0		
October	Theory	Unit- IV Shukra/Usana Unit- V Kautilya Unit -VI Aggannasutta	1) Concept of Kingship. 2) Theory of State.	Discipline-Specific Core Course
	Practicals	1) Discussion and Presentation by Students. 2) Internal Assessment of Students.		
	Tutorials	0		
November	Theory	Unit- VII Tiruvalluvar Unit-VIII Basavanna Unit- IX Adi Shankracharya	1) Ethical Life and politics.	Discipline-Specific Core Course
	Practicals	1) Movie Screening on Gurunanak and Discussion. 2) Discussion and Presentation by Students.		
	Tutorials	0		
December	Theory	Unit-X Kabir and Gurunanak Unit -XI Abu'lFazal	1) Syncretism 2) Monarchy	Discipline-Specific Core Course
	Practicals			
	Tutorials			





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SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr Garima Sharma
 Department: **Political Science**
 Even Semester: **III**

Name of the Paper: **Nationalism in India**

Month		Topic	Course	Paper Code/Name
July	Theory			
	Practicals			
	Tutorials			
September	Theory	Unit - I Approaches to Study Nationalism in India	1) Colonialist 2) Nationalist 3) Marxist 4) Subaltern	General Elective Course
	Practicals			
	Tutorials	0		
	Theory	Unit- II Reformism and Anti-Reformism in the Nineteenth Century	1) Religious Movements in the 19 th century.	General Elective Course
	Practicals	1) Discussion and Presentation by Students. 2) Internal Assessment of Students.		
	Tutorials	0		
November	Theory	Unit- III Nationalist Politics and Expansion of its Social Base. Unit -IV Social Movements	1) Phases of Nationalist Movement. 2) Gandhi and Mass Mobilization. 3) Socio-Cultural Organization 4) Peasants, Tribals, Workers, Women and Anti Caste Movements	General Elective Course
	Practicals	1) Discussion and Presentation by Students.		
	Tutorials	0		
December	Theory	Unit-V Partition, Independence, and Integration of States	1) Communalism 2) Two-Nation Theory 3) Integration of Indian States	General Elective Course
	Practicals	1) Screening of Movie on Partition and Independence		
	Tutorials			

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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Garima Sharma
Department: **Political Science**
Even Semester: **III**

Name of the Paper: **Public Speaking in English Language and Leadership**

Month		Topic	Course	Paper Code/Name
July	Theory			
	Practicals			
	Tutorials			
September	Theory	Unit - I Introduction to Effective Communication	1) Oral Communication. 2) Importance of Listening. 3) Reading Public Speech	Sill Enhancement Course
	Practicals	1) Word Play Game		
	Tutorials	0		
October	Theory	Unit- II Public Speaking	1) What is Speech? 2) 3p's of Public Speaking. 3) Types of Public Speaking.	Skill Enhancement Course
	Practicals	1) Discussion and Presentation by Students. 2) Internal Assessment of Students.		
	Tutorials	0		
November	Theory	Unit- III Leadership Skills	1) Meaning and Features of Leadership 2) Leadership in Academic Life.	Skill Enhancement Course
	Practicals	1) Discussion and Presentation by Students. 2) Movie Discussion.	1) Diary of Annie Frank 2) Hanna Arendt	
	Tutorials	0		
December	Theory	Unit-IV Importance of Public Speaking	1) Ethics in Public Speaking.	Skill Enhancement Course
	Practicals	1) Mock Parliament		
	Tutorials			

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SEMESTER WISE TEACHING PLAN ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ms. Mitalee Mahapatra (Guest Faculty)
Department: **Political Science**
Even Semester: **I/III/V**

Name of the Papers: **Understanding Political Theory- Sem 1- DSC:1**
Ideas in Indian Political Thought- Sem 1- GE-1
Ancient and Medieval Indian Political Thought- Sem 3- DSC-8
Themes in Comparative Political Theory- Sem 5- DSE-1A

Month	Topic	Course	Paper Code/Name
July	Theory		
	Practicals		
	Tutorials		
September	Theory	Approaches To Political Theory: Difference between Political Philosophy, Theory and Science	Understanding Political Theory- DSC-1
	Theory	Kautaliya: Theory of State	Ancient and Medieval Indian Political Thought-DSC-8
	Theory	Dharma and Danda of Kautaliya	Ideas in Indian Political Thought- GE-1
	Theory	Kautaliya on State	Themes in Comparative Political Theory-DSE-1A
	Theory	Approaches To Political Theory: Normative, Empirical and Historical	Understanding Political Theory- DSC-1
October		Traditions of Political Theory: Liberalism: Classical, Welfare and Neo-liberal	
	Theory	Abul Fazal: Monarchy Kabir and Guru Nanak: Syncretism Manu: Social Laws	Ancient and Medieval Indian Political Thought-DSC-8
	Theory	Gender: Tarabai Shinde Swaraj: Gandhi	Ideas in Indian Political Thought- GE-1
	Theory	Gandhi on Swaraj	Themes in Comparative Political Theory-DSE-1A
	Theory	Traditions of Political Theory: Marxist- classical and Neo- Marxism	Understanding Political Theory- DSC-1
November	Theory	Manu: Social Laws and Concept of Justice Brihaspati: Statecraft, Justice	Ancient and Medieval Indian Political Thought-DSC-8
	Theory	Culture and Nationalism: Vivekanand	Ideas in Indian Political Thought- GE-1

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		Hindutava: Savarkar			
	Theory	Tilak on Swaraj		Themes in Comparative Political Theory-DSE-1A	62327503
December	Theory	Traditions of Political Theory: Anarchism		Understanding Political Theory- DSC-1	2322101101
	Theory	Brihaspati: Inter-state Relations		Ancient and Medieval Indian Political Thought-DSC-8	2322102301
	Theory	Hindutava: Savarkar		Ideas in Indian Political Thought- GE-1	2324001001
	Theory	Pandita Ramabai: On Patriarchy		Themes in Comparative Political Theory-DSE-1A	62327503

V. Venkateswara


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SEMESTER WISE TEACHING PLAN
ODD Semester (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Amit Yadav
Semester: I/III/V

Department: Political Science

Month		Topics	Course	Paper Code/Name
September	Theory	Citizenship, Religious Freedom (and Minority Rights)	BA(H) Sem III	Indian Constitution: Key Debates
		Danda: Kautilya, Gender: Tarabai Shinde	GE Sem I	Ideas in Indian Political Thought
		Nationalist Politics and Expansion of its Social Base: (a) Phases of Nationalist Movement: Liberal Constitutionalists, Swadeshi and the Radicals; Beginning of Constitutionalism in India	GE Sem III	Nationalism in India
		Development administration: Elements of development administration	BA(P) 5th sem	Administration and Public Policy: Concepts and Theories
	Practicals			
	Tutorials	Discussion around the above topics, answering doubts and other information regarding answer writing		
October	Theory:	Religious Freedom (and Minority Rights), Uniform Civil Code, Asymmetrical Federalism	BA(H) Sem III	Indian Constitution: Key Debates
		Gender: Tarabai Shinde, Culture and Nationalism: Vivekananda, Swaraj: Gandhi	GE Sem I	Ideas in Indian Political Thought
		Gandhi and mass mobilization: Non-cooperation and civil disobedience movement	GE Sem III	Nationalism in India
		Elements of development administration, Time and space dimensions in the study of development administration	BA(P) 5th sem	Administration and Public Policy: Concepts and Theories
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		

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	<u>Assignment:</u>	Questions assigned from above topics making up the internal assessment requirements, students divided in groups of five and each group given a different theme upon which presentation had to be done.		
November	Theory:	Asymmetrical Federalism, Emergency Provisions and Preventive Detention Laws, Constitutional Amendment.	BA(H) Sem III	Indian Constitution: Key Debates
		Swaraj: Gandhi, Nyaya: Ambedkar, Hindutva: Savarkar	GE Sem I	Ideas in Indian Political Thought
		Civil disobedience movement, quit India movement, Socialist Alternatives.	GE Sem III	Nationalism in India
		Time and space dimensions in the study of development administration, politics of development administration	BA(P) 5th sem	Administration and Public Policy: Concepts and Theories
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing along with visual presentations in the form of documentary screenings.		
	Test	A short write up from the topics covered so far in an exam kind of setting.		
December	Theory:	Constitutional Amendment, Language Question	BA(H) Sem III	Indian Constitution: Key Debates
		Integral Humanism: Deen Dayal Upadhyaya	GE Sem I	Ideas in Indian Political Thought
		Socialist Alternatives: Congress Socialists, Communists	GE Sem III	Nationalism in India
		Politics of development administration	BA(P) 5th sem	Administration and Public Policy: Concepts and Theories
	Practicals:			
	Tutorials:	Discussion around the whole syllabus, revising the core areas, answering doubts and other information regarding answer writing with relevant examples.		

Amit


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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Kanwar Singh

Department: Sanskrit

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	UNIT I: INTRODUCTION TO SANSKRIT GRAMMAR AND SANGHYA PRAKARAN	B.A. 3 RD YEAR (H)	C-12 SANSKRIT GRAMMAR
		UNIT I: INTRODUCTION TO APPLIED SANSKRIT AND KARAK (PRATHMA AND DWITIYA VIBHAGTI)	B.A. 1 ST YEAR (H)	DSC-1 APPLIED SANSKRIT
		UNIT IV: GENERAL INTRODUCTION TO SAMASA BASED ON LAGHUSIDDHANTAKAUMUDI	B.A. 1 ST YEAR (P)	DSC-1 SANSKRIT GRAMMAR
		UNIT IV: CULTURAL RECEPTION OF PANCHATANTRA	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

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SEPTEMBER	Theory:	UNIT I: SANGYA AND ACH SANDHI UNIT II: HAL SANDHI	B.A. 3 RD YEAR (H)	C-12 SANSKRIT GRAMMAR
		UNIT I: LAT, LARIT LAKAR AND SHABDRUPA UNIT III: ACH SANDHI	B.A. 1 ST YEAR (H)	DSC-1 APPLIED SANSKRIT
		UNIT IV: KEWAL SAMASA AND AVYAYIBHAVA SAMASA	B.A. 1 ST YEAR (P)	DSC-1 SANSKRIT GRAMMAR
		UNIT IV: CULTURAL RECEPTION OF PANCHATANTRA	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
OCTOBER	Theory:	UNIT II: VISARGA SANDHI UNIT III: PRACTICE OF APPLICATIONS OF SANDHIS IN PRESCRIBED TEXTS LITERARY TEXTS	B.A. 3 RD YEAR (H)	C-12 SANSKRIT GRAMMAR
		UNIT V: DIAGNOSIS OF ILLNESS UNIT VI: PANCHA KOSHA	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA
		UNIT III: VYANJANA AND VISARGA SANDHI AND KARAK (TRITIYA, CHATURTHI AND PANCHMI VIBHAGTI) TIGANT AATMNEPADA	B.A. 1 ST YEAR (H)	DSC-1 APPLIED SANSKRIT
		UNIT IV: AVYAYIBHAVA SAMASA	B.A. 1 ST YEAR (P)	DSC-1 SANSKRIT GRAMMAR


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		UNIT IV: CULTURAL RECEPTION OF PANCHATANTRA	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
NOVEMBER		UNIT IV: AVAYIYBHAV AND TATPURUS SAMAS UNIT V: BAHUVRIHI AND DWANDVA SAMAS UNIT VI: TADDHIT PRATYA	B.A. 3 RD YEAR (H)	C-12 SANSKRIT GRAMMAR
		UNIT VI: PANCH KOSHA AND BHRIGUVALLI	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA
		UNIT II: KRIDANTH PRATYA UNIT III: VACHYA UNIT IV: SAMASA	B.A. 1 ST YEAR (H)	DSC-1 APPLIED SANSKRIT
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	Assignments:	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
	Tests:	TESTS WILL BE TAKEN TIMELY.		
DECEMBER	Theory:	UNIT VI: TADDHIT PRATYA	B.A. 3 RD YEAR (H)	C-12 SANSKRIT GRAMMAR
		UNIT VI: BHRIGUVALLI	B.A. 3 RD YEAR (H)	DSE-7 FUNDAMENTALS OF AYURVEDA
		UNIT IV: SAMASA	B.A. 1 ST YEAR (H)	DSC-1 APPLIED SANSKRIT
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. VEDANIDHI

Department: Sanskrit

Semester: I/III/V

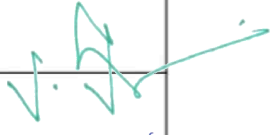
Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	UNIT I: Introduction to Sanskrit Linguistics	B.A. 2ND YEAR (H) SEM-III	DSC-8: Sanskrit Linguistics
		UNIT I: Introduction to Indian Epigraphy	B.A. 2ND YEAR (H) SEM-III	DSC-9: Indian Epigraphy I
		UNIT III: Introduction to Vibhaktiyarth Prakarana based on Laghusiddhantakaumudi	B.A. 1 ST YEAR (P) SEM- I	DSC-1 Sanskrit Grammar
		UNIT III: Introduction to Nationalistic thoughts in Sanskrit Literature	B.A. 3 rd YEAR (H/P) SEM - V	GE-4 Nationalistic thought in Sanskrit Literature
	Tutorials:	Tutorials regarding the topics will be taken.		

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धौला कुर्मी, नई दिल्ली / Dha

SEPTEMBER	Theory:	UNIT III: Concept of Indo-European language and its modern review	B.A. 2ND YEAR (H) SEM-III	DSC-8: Sanskrit Linguistics
		UNIT III: Antiquity of the Art of Writing	B.A. 2ND YEAR (H) SEM-III	DSC-9: Indian Epigraphy I
		UNIT III: Karta & karm karaka Prathama & Dvitiya vibhakti	B.A. 1 ST YEAR (P) SEM- I	DSC-1 Sanskrit Grammar
		UNIT III: Nationalistic Thought in Vishnu Purana and Ramayana	B.A. 3 rd YEAR (H/P) SEM - V	GE-4 Nationalistic thought in Sanskrit Literature
		UNIT I: History of Yoga & Significance of Asana. Effect of Pranayama • Importance of Dhyana	B.A. & B.S.C(H/P) 1 st YEAR SEM-1	VAC: Yoga: Philosophy and Practice
		UNIT I: History of Yoga & Significance of Asana Effect of Pranayama • Importance of Dhyana	B.A. & B.S.C(H/P) 2 nd YEAR SEM-III	VAC: Yoga: Philosophy and Practice
	Tutorials:	Tutorials regarding the topics will be taken.		
OCTOBER	Theory:	UNIT III: Indo-European language family and Sanskrit	B.A. 2ND YEAR (H) SEM-III	DSC-8: Sanskrit Linguistics
		UNIT III: Introduction to Ancient Indian Scripts. Reading and writing skills of Asokan Brahmi Script	B.A. 2ND YEAR (H) SEM-III	DSC-9: Indian Epigraphy I

		UNIT III: Karana & Sampradana karaka. Tiritiya & Chaturthi vibhakti	B.A. 1 ST YEAR (P) SEM- I	DSC-1 Sanskrit Grammar
		UNIT III: Nationalistic Thought in Raghuvamsham	B.A. 3 rd YEAR (H/P) SEM - V	GE-4 Nationalistic thought in Sanskrit Literature
		UNIT II: Patanjali's Yogasutra: a summary • First sutra • Second sutra • Chakras (psychic centres)	B.A. & B.Sc. (H/P) 1 st YEAR SEM-1	VAC: Yoga: Philosophy and Practice
		UNIT II: Patanjali's Yogasutra: a summary • First sutra • Second sutra • Chakras (psychic centres)	B.A.& B.Sc. (H/P) 2 nd YEAR SEM-III	VAC: Yoga: Philosophy and Practice
	Tutorials:	Tutorials regarding the topics will be taken.		
NOVEMBER		UNIT III: Main parts of linguistics and usefulness of linguistics	B.A. 2ND YEAR (H) SEM-III	DSC-8: Sanskrit Linguistics
		UNIT III: Introduction to Gupatan Brahmi,	B.A. 2ND YEAR (H) SEM-III	DSC-9: Indian Epigraphy I
		UNIT III: Apadana & Adhikarana karaka. panchami & saptami vibhakti	B.A. 1 ST YEAR (P) SEM- I	DSC-1 Sanskrit Grammar
		UNIT III: Nationalistic Thought in Mahabharata	B.A. 3 rd YEAR (H/P) SEM - V	GE-4 Nationalistic Thought in Sanskrit Literature
		UNIT III: Surya Namaskar Selected Asana Pranayama Relaxation exercises for the eyes (7 steps) neck (4 steps) Concentration on Bhru madhya	B.A. & B.Sc. (H/P) 1 st YEAR SEM-1	VAC: Yoga: Philosophy and Practice
		UNIT III: Surya Namaskar Selected Asana Pranayama	B.A. & B.Sc. (H/P) 2 nd YEAR SEM-III	VAC: Yoga: Philosophy and Practice

		Relaxation exercises for the eyes (7 steps) neck (4 steps) Concentration on Bhramadhy		
	Tutorials:	Tutorials regarding the topics will be taken.		
	Assignments:	Assignments will be given regarding the topics.		
	Tests:	Tests will be taken timely.		
DECEMBER	Theory:	UNIT III: General Introduction to the History of Sanskrit and Comparative Philology	B.A. 2ND YEAR (H) SEM-III	DSC-8: Sanskrit Linguistics
		UNIT III: Introduction to Kharoshthi, Sharda, Kutil, Scripts'	B.A. 2ND YEAR (H) SEM-III	DSC-9: Indian Epigraphy I
		UNIT III: Shashthi Vibhakti	B.A. 1 ST YEAR (P) SEM- I	DSC-1 Sanskrit Grammar
		UNIT III: Nationalistic Thought in Puranas'	B.A. 3 rd YEAR (H/P) SEM - V	GE-4 Nationalistic Thought in Sanskrit Literature
		UNIT IV: Asana: the basics Nadishodhana Prarnayama	B.A & B.Sc. (H/P) 1 st YEAR SEM-1	VAC: Yoga: Philosophy and Practice
		UNIT IV: Asana: the basics Nadishodhana Prarnayama	B.A. & B.Sc. (H/P) 2 nd YEAR SEM-III	VAC: Yoga: Philosophy and Practice
	Tutorials:	Tutorials regarding the topics will be taken.		


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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sunita Atal

Department: Sanskrit

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	UNIT I: Introduction to Indian Medicine System, Ayurveda	B.A. 3 RD YEAR (H)	DSE -7 FUNDEMANTELS OF AYURVEDA
		UNIT I: Nationalistic Thought in Modern Sanskrit Poetry	B.A. 2nd YEAR (P)	GE-4 NATIONALSTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT I UNIT 1: Origin and Development of stage in Different ages : Pre-historic, Vedic age, Epic-Puranic age	B.A. 2nd YEAR (P)	DSC-5 SANSKRIT THEATRE
		UNIT I: Origin and Development of Sanskrit Narratives	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
		UNIT 1: Fundamentals of Philosophy	B.A. 2nd YEAR (P)	GE-7 FUNDAMENTALS OF INDIAN PHILOSOPHY

Tutorials: TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.

SEPTEMBER	Theory:	UNIT I: Introduction to Indian Medicine System, Ayurveda UNIT 2: History Of Ayurveda, Main Acaryas of Ayurveda Asthang Ayurveda	B.A. 3 RD YEAR (H)	DSE -7 FUNDEMANTELS OF AYURVEDA
		UNIT 2 : Metaphysics	B.A. 2nd YEAR (P)	GE-7 FUNDAMENTALS OF INDIAN PHILOSOPHY
		UNIT 6 : Nationalistic Thought in Modern Sanskrit Poetry	B.A. 2nd YEAR (P)	GE-4 NATIONALSTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT I UNIT 1: Origin and Development of stage in Different ages : Pre-historic, Vedic age, Epic-Puranic age	B.A. 2nd YEAR (P)	DSC-5 SANSKRIT THEATRE
		UNIT 2 : Distinctive Features of Sanskrit Narratology	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
OCTOBER	Theory:	UNIT 3 : Basic Principles of Ayurveda	B.A. 3 RD YEAR (H)	DSE -7 FUNDEMANTELS OF AYURVEDA
		UNIT I: Nationalistic Thought in Modern Sanskrit Poetry	B.A. 2nd YEAR (P)	GE-4 NATIONALSTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT 2 :Theatre –Types and Construction	B.A. 2nd YEAR (P)	DSC-5 SANSKRIT THEATRE

	UNIT 3 : Art-Forms as Medium Of Sanskrit Narrative	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	UNIT 3: Schools Of Indian Philosophy	B.A. 2nd YEAR (P)	GE-7 FUNDAMENTALS OF INDIAN PHILOSOPHY
	UNIT 4: General Introduction to Shabda Shakti : Abhidha and Lakshana	B.A. 2nd YEAR (P)	DSC-3 LITERARY CRITICISM
	UNIT 2 Samas	B.A. 1st YEAR (P)	SANSKRIT GRAMMER
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.	
NOVEMBER	UNIT 3: Schools of Indian Philosophy UNIT 4 : Orthodox Schools	B.A. 2nd YEAR (P)	GE-7 FUNDAMENTALS OF INDIAN PHILOSOPHY
	UNIT I: Nationalistic Thought in Modern Sanskrit Poetry	B.A. 2nd YEAR (P)	GE-4 NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
	UNIT 4: Actor , Rasa	B.A. 2nd YEAR (P)	DSC-5 SANSKRIT THEATRE
	UNIT 5: Shabda Shakti : Vyanjana	B.A. 2nd YEAR (P)	DSC-3 LITERARY CRITICISM
	UNIT 2 Samas	B.A. 1st YEAR (P)	SANSKRIT GRAMMER
	UNIT 4 Cultural Reception of Panchtantra	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.	
	Assignments:	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.	


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	<u>Tests:</u>	TESTS WILL BE TAKEN TIMELY.		
DECEMBER	<u>Theory:</u>	UNIT 4 : Orthodox Schools	B.A. 2nd YEAR (P)	GE-7 FUNDAMENTALS OF INDIAN PHILOSOPHY
		UNIT 6: Nationalistic Thought in Modern Sanskrit Poetry	B.A. 2nd YEAR (P)	GE-4 NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT 4: Actor , Rasa	B.A. 2nd YEAR (P)	DSC-5 SANSKRIT THEATRE
		UNIT 6: General Introduction to Literary Criticism	B.A. 2nd YEAR (P)	DSC-3 LITERARY CRITICISM
		UNIT 2 Samas	B.A. 1st YEAR (P)	SANSKRIT GRAMMER
		UNIT 4 Cultural Recpetion of Panchtantra	B.A. 1 ST YEAR (H/P)	GE-4 SANSKRIT NARRATOLOGY
	<u>Tutorials:</u>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr. Ravi Kumar Meena**

Department: **Sanskrit**

Semester: **I/III/V**

Month		Topics	Course	Paper Code/Name
AUGUST	Theory:	UNIT I: Introduction to Epigraphy and Types of Inscriptions, Role of Indian Inscriptions in the reconstruction of Ancient Indian History and Culture.	B.A. 2 nd YEAR (H) Semester- III	DSC-9 : INDIAN EPIGRAPHY-I
		UNIT II : Introduction to Sanskrit Linguistics Phonetics. Experimental Phonetics. Vocal Organs. Phonemics, Sound and Phoneme, Phonetic Changes.	B.A. 2 nd YEAR (H) Semester- III	DSC-8 : SANSKRIT LINGUISTICS
		UNIT V : Yogasutra of Patanjali : Vibhuti Paada Introduction to Yogasutra. Sutras – 1 to 2.	B.A. 3 rd Year (P) Semester- V	SEC/AEEC – 6 : YOGASUTRA OF PATANJALI
		UNIT I : Definitions, Concepts of Nation and Indian Nationalism.	B.A. 3 rd YEAR (P) Semester - V	GE-4 : NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT : II Introduction to Laghusiddhaantaakumudi : Sandhi Prakarana.	B.A. 1 ST Year (P) Semester - I	DSC 1 : SANSKRIT GRAMMAR
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 st and 2 nd Year (also)		

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Sri Venkates
दिल्ली विश्वविद्यालय
घोला कुर्ओ, नई दिल्ली / D

SEPTEMBER	Theory:	UNIT II : History of Epigraphical Studies in India. History of Decipherment of Ancient Indian Scripts.	B.A. 2 nd YEAR (H) Semester- III	DSC-9 : INDIAN EPIGRAPHY-I
		UNIT II : Phonetics Laws- Grimm's Law, Grassman's Law, Verner's Law, Palatal Law, Cerebral Law. Morphology. Parts of Speech Grammatical Categories.	B.A. 2 nd YEAR (H) Semester- III	DSC-8 : SANSKRIT LINGUISTICS
		UNIT V : Yogasutra of Patanjali : Vibhuti Paada Sutras – 3 to 7.	B.A. 3 rd Year (P) Semester- V	SEC/AEEC – 6 : YOGASUTRA OF PATANJALI
		UNIT I : Definitions, Concepts of Nation and Indian Nationalism.	B.A. 3 rd YEAR (P) Semester – V	GE-4 : NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT : II Laghusiddhaantaakumudi : Sandhi Prakarana. Ac sandhi.	B.A. 1 ST Year (P) Semester - I	DSC 1 : SANSKRIT GRAMMAR
		UNIT I : General Introduction to Upanisads. Text Introduction to Ishavasyopanishad – Karma,	B.A. 1 ST Year (H) Semester - I	AEC-B (X) : INTRODUCTORY UPANISHAD AND GITA
		UNIT I : Definition and types of yoga : Karma Yoga, Gyana Yoga, Bhakti Yoga, Laya Yoga, Raja Yoga, Hatha Yoga, Mantra Yoga, Kundalini Yoga.	B.A. 2 nd YEAR (H/P) Semester- III	YOGA IN PRACTICE
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 st and 2 nd Year (also)		
OCTOBER	Theory:	UNIT II : Contribution of Indologists in the field of Epigraphy : Fleet, Cunningham, Princep, Buhler, D.C. Sarcar, Gaurishankar Ojha, Rajbali Pandey, R.G. Bhandarkar.	B.A. 2 nd YEAR (H) Semester- III	DSC-9 : INDIAN EPIGRAPHY-I

		UNIT II : Morphology. Parts of Speech Grammatical Categories.	B.A. 2 nd YEAR (H) Semester- III	DSC-8 : SANSKRIT LINGUISTICS
		UNIT V : Yogasutra of Patanjali : Vibhuti Paada Sutras – 8 to 12.	B.A. 3 rd Year (P) Semester- V	SEC/AEEC – 6 : YOGASUTRA OF PATANJALI
		UNIT II : Definitions, Concepts of Nation and Indian Nationalism.	B.A. 3 rd YEAR (P) Semester - V	GE-4 : NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT : II Laghusiddhaantakaumudi : Sandhi Prakarana. hal sandhi.	B.A. 1 ST Year (P) Semester - I	DSC 1 : SANSKRIT GRAMMAR
		UNIT I : Text Introduction to Ishavasyopanishad – Vidya-Avidya, Satya, Atman.	B.A. 1 ST Year (H) Semester - I	AEC-B (X) : INTRODUCTORY UPANISHAD AND GITA
		UNIT I : Ashtanga Yoga. Shat Chakra's.	B.A. 2 nd YEAR (H/P) Semester- III	YOGA IN PRACTICE
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 st and 2 nd Year (also)		
NOVEMBER		UNIT IV: Chronology- General Introduction to Ancient Indian Chronology. System of Dating the Inscriptions (Chronograms) Main Eras- Saptarshi Samvat, Veer Samvat, Bauddha Samvat,	B.A. 2 nd YEAR (H) Semester- III	DSC-9 : INDIAN EPIGRAPHY-I
		UNIT II : Syntax. Taxeme.	B.A. 2 nd YEAR (H) Semester- III	DSC-8 : SANSKRIT LINGUISTICS
		UNIT V : Yogasutra of Patanjali : Vibhuti Paada Sutras – 12 to 15.	B.A. 3 rd Year (P) Semester- V	SEC/AEEC – 6 : YOGASUTRA OF PATANJALI
		UNIT II : Definitions, Concepts of Nation and Indian Nationalism.	B.A. 3 rd YEAR (P) Semester - V	GE-4 : NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT III :		

		Nationalistic Thought in Vedic and Classical Literature.		
		UNIT : II Laghusiddhaantakaumudi : Sandhi Prakarana. Visarga sandhi.	B.A. 1 ST Year (P) Semester - I	DSC 1 : SANSKRIT GRAMMAR
		UNIT II : Introduction to Gita : Background, Purpose, Gyanyoga Karmayoga	B.A. 1 ST Year (H) Semester - I	AEC-B (X) : INTRODUCTORY UPANISHAD AND GITA
		UNIT II : Asana's and their advantages Asana in standing position. Asana in sitting position. Asana in stomach side position.	B.A. 2 ND YEAR (H/P) Semester- III	YOGA IN PRACTICE
	<u>Tutorials:</u>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 ST and 2 ND Year (also)		
	<u>Assignments:</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
	<u>Tests:</u>	TESTS WILL BE TAKEN TIMELY.		
DECEMBER	<u>Theory:</u>	UNIT IV: Chronology- Maurya Samvat, Vikrama Era, Saka Samvat, Gupta Samvat, Harsha Samvat, Solar Year and Lunar Year.	B.A. 2 ND YEAR (H) Semester- III	DSC-9 : INDIAN EPIGRAPHY-I
		UNIT II : Semantics. Semanteme.	B.A. 2 ND YEAR (H) Semester- III	DSC-8 : SANSKRIT LINGUISTICS
		UNIT VI : General Survey of Yoga Darshana.	B.A. 3 RD Year (P) Semester- V	SEC/AEEC – 6 : YOGASUTRA OF PATANJALI
		UNIT III : Nationalistic Thought in Vedic and Classical Literature.	B.A. 3 RD YEAR (P) Semester - V	GE-4 : NATIONALISTIC THOUGHT IN SANSKRIT LITERATURE
		UNIT : II Laghusiddhaantakaumudi : Sandhi Prakarana. Visarga sandhi.	B.A. 1 ST Year (P) Semester - I	DSC 1 : SANSKRIT GRAMMAR
		UNIT II : Bhaktiyoga.	B.A. 1 ST Year (H) Semester - I	AEC-B (X) : INTRODUCTORY UPANISHAD AND GITA

		UNIT I : Asana in backbone side position. Practice of pranayama.	B.A. 2 ND YEAR (H/P) Semester- III	YOGA IN PRACTICE
	<u>Tutorials:</u>	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



**SEMESTER WISE TEACHING
PLAN (2023-2024) Odd Semester
SRI VENKATESWARA COLLEGE**

Name of the Faculty: M. Krishna Rao

Department: Sanskrit

Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	AECC/SEC: Yoga sutra of Patanjali Unit:1 (Samadhi pada Su.1-16	B.A. (P) 3 rd year 5 th Sem	AECC/SEC: Yoga sutra of Patanjali (62136938)
		Unit:2 Kavyaprakash: Kavyakarana	B.A. (P) 3 rd Year 5 th Sem	DSE-3 Literary Criticism (62137903)
		UNIT: I Sanskrit Grammer: SanjyaPrakarana	B.A (P). 1 ST Year 1 st Sem	DSC:1 Sanskrit Grammer (2132201101)
		MA IN Sankrit	MA 2 nd Year 3 rd Sem	TUTORIALS has been taken
		Unit:III Drma: subject-matter (vastu)	B.A (P) 2 nd Year 3 rd Sem	Sanskrit Theater (2132202301)
	Tutorials	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
September	Theory:	AECC/SEC: Yoga sutra of Patanjali Unit:1 (Samadhi pada Su.1-16	B.A. 3 rd YEAR (P) 5 th Sem	AECC/SEC: Yoga sutra of Patanjali (62136938)
		Unit: 1 Kavyaprakash: Kavya vaishisthya , kavya prayojana	B.A (P). 3 rd YEAR 5 th Sem	DSE-3 Literary Criticism (62137903)
		UNIT: I Sanskrit Grammer: SanjyaPrakarana	B.A (P). 1 ST YEAR 1 st Sem	DSC:1 Sanskrit Grammer (2132201101)
		Unit:III Drma: subject-matter (vastu)	B.A. (P) 2 nd Year 3 rd Sem	Sanskrit Theater (2132202301)
		AEC 1: SKT (C) Unit: 1 Shabdarup	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003
		AEC 2: SKT (C) Unit: 1 Essence of Indian Culture – Sprituality	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 2 nd Year 3 rd Sem	AEC 2: SKT (C) Culture and Society: 2131002006
		SEC: Yoga- Unit:I & II practical part & theory	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	SEC: Yoga in Practice: 2136000001

		MA IN SANSKRIT	MA 1 ST Year 1 st Sem MA 2 nd Year 3 rd Sem	TUTORIALS has been taken
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

	Assignment:	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS		
October	Theory:	AECC/SEC: Yoga sutra of Patanjali Unit:1 (Samadhi pada Su.1-16 and 17-20)	B.A. 3 rd YEAR (P) 5 th Sem	AECC/SEC: Yoga sutra of Patanjali (62136938)
		Unit: 3 Kavyaprakasha: Kavya swarupa	B.A. 3 rd YEAR (P) 5 th Sem	DSE-3 Literary Criticism (62137903)
		UNIT: I Sanskrit Grammar: SanjyaPrakarana	B.A (P). 1 st YEAR 1 st Sem	DSC:1 Sanskrit Grammar (2132201101)
		Unit:III Drma: subject-matter (Neta)	B.A. (P) 2 nd Year 3 rd Sem	Sanskrit Theater (2132202301)
		AEC 1: SKT (C) Unit: 1 Shabdarup & Dhaturup	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003
		AEC 2: SKT (C) Unit: 1 Essence of Indian Culture – Lifestyle (5 Yama, 5 niyama)	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 2 nd Year 3 rd Sem	AEC 2: SKT (C) Culture and Society: 2131002006
	Tutorials:	SEC: Yoga- Unit:I & II practical part & theory (Asanas)	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	SEC: Yoga in Practice: 2136000001
		MA IN SANSKRIT	MA 1 st Year 1 st Sem MA 2 nd Year 3 rd Sem	TUTORIALS has been taken
		Test	TESTS WILL BE TAKEN TIMELY	
November & December	Theory:	AECC/SEC: Yoga sutra of Patanjali Unit:1 (Samadhi pada Su.21-29)	B.A. 3 rd YEAR (P) 5 th Sem	AECC/SEC: Yoga sutra of Patanjali (62136938)
		Unit: 3 KavyaPrakasha: Kavya bheda	B.A. 3 rd YEAR (P) 5 th Sem	DSE-3 Literary Criticism (62137903)
		UNIT: I Sanskrit Grammar: SanjyaPrakarana	B.A (P). 1 st YEAR 1 st Sem	DSC:1 Sanskrit Grammar (2132201101)
		Unit:III Drma: abhinaya (Angika, Vaachika, aahaarya & Satvika)	B.A. (P) 2 nd Year 3 rd Sem	Sanskrit Theater (2132202301)
		AEC 1: SKT (C) Unit: 1 kaaraka Unit:II Vakya Rachana & Shabda koSha	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003
		AEC 2: SKT (C) Unit: 2 Indian Social Thinkers: Fundamentals: Gandhi, Baudha, kautilya	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 2 nd Year 3 rd Sem	AEC 2: SKT (C) Culture and Society: 2131002006
	Theory:	SEC: Yoga- Unit:I & II practical part & theory (All Asanas)	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	SEC: Yoga in Practice: 2136000001
		AECC/SEC: Yoga sutra of Patanjali Unit:1 (Samadhi pada Su.21-29)	B.A. 3 rd YEAR (P) 5 th Sem	AECC/SEC: Yoga sutra of Patanjali (62136938)

		MA IN SANSKRIT	MA 1 st Year 1 st Sem MA 2 nd Year 3 rd Sem	TUTORIALS has been taken
	Tutorials: & Practical	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN. & Practical exam happens		



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Prof. Nabanipa Bhattacharjee

Department: Sociology

Semester: I

Month		Topic(s)	Course	Paper Code/Name
August	Theory	Formations of Indian Society; Stern's understanding of changing India	BAH; Discipline Specific Core 02	Sociology of India I
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Stern's conception of how post-liberalization India is undergoing rapid change.	BAH; Sociology of India I	Sociology of India I
September	Theory	Formations of Indian Society; Beteille's understanding of India's heritage of diversity; Zelliott's views on caste in contemporary India; Mayer's study of changing nature of caste relations in Ramkheri; Omvedt's study of rural-agrarian class structure in India	BAH; Discipline Specific Core 02	Sociology of India I
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Relation of caste and class in rural India; changing character of caste; features of caste	BAH; Discipline Specific Core 02	Sociology of India I
October	Theory	Structure of urban class following Breman's work; character of the post-liberalization Indian middle class; interrogation of Indian tribal identity and the politics surrounding it	BAH; Discipline Specific Core 02	Sociology of India I

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	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Fernandes's views about the significance of middle class in the context of contemporary India; Xaxa's view about issues concerning formation of tribal identity	BAH; Discipline Specific Core 02	Sociology of India I
	Assignment (Internal Assessment)	India is undergoing major socio-economic transformation. Discuss with reference to Robert Stern.	BAH; Discipline Specific Core 02	Sociology of India I
	Mid-Term Test (Internal Assessment)	Topics: Formations of Indian Society (02 Readings); Caste (02 Readings); Middle Class (01 Reading); Tribe (01 Reading) Questions: Define caste. How does Zelliot describe and analyze the caste system OR Write an essay continuity and change in the caste system in the village of Ramkheri Write an essay on the character of the post-liberalization Indian middle class OR The question of tribal identity is a complex one. Elaborate with reference to Xaxa	BAH; Discipline Specific Core 02	Sociology of India I
November	Theory	Gender and caste by Dube; Wadley's understanding of the joint family and its changing nature in North India; Fruzzetti's ethnographic analysis of Muslim rituals in a West Bengal town; Srinivas's analysis of the various kinds of change in the South Indian village of Rampura	BAH; Discipline Specific Core 02	Sociology of India I

	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Caste and women interface and complexities in India; mapping the trajectory of change in the joint family system; Muslim life cycle and religious rituals	BAH; Discipline Specific Core 02	Sociology of India I
December	Theory	Pendse's descriptive analysis of workers in Bombay city; Gooptu's analysis of post-liberalization character of Indian cities	BAH; Discipline Specific Core 02	Sociology of India I
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Critical reading of Indian urban life in the aftermath of liberalization; state of the working class in Bombay	BAH; Discipline Specific Core 02	Sociology of India I



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Prof. Nabanipa Bhattacharjee
Department: Sociology
Semester: II

Month		Topics	Course	Paper Code/Name
August	Theory	Ideas of India in the Sociological Imagination; cultural approach to the study of India during pre-colonial and colonial period	BAH; Discipline Specific Core 07	Sociology of India II
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Cohn's understanding of the construction of colonial discourse about Indian society and culture	BAH; Discipline Specific Core 07	Sociology of India II
September	Theory	Indological and Subaltern approaches to the study of Indian history and society	BAH; Discipline Specific Core 07	Sociology of India II
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Critical reading of the debate on "For a Sociology of India" through the writings of Dumont & Pocock and Bailey; Guha's critique of the elite historiographies of colonial India	BAH; Discipline Specific Core 07	Sociology of India II

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October	Theory	Nation in the Public Imagination; focus on the writings of Gandhi and Ambedkar	BAH; Discipline Specific Core 07	Sociology of India II
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Analytical reading of Gandhi's <i>Hind Swaraj</i> and Ambedkar's <i>Annihilation of Caste</i> ; discussion on their ideas of India	BAH; Discipline Specific Core 07	Sociology of India II
	Assignment (Internal Assessment)	Describe how the cultural approach contributed to the construction of the idea of India	BAH; Discipline Specific Core 07	Sociology of India II
	Mid-Term Test (Internal Assessment)	Topics: Indological Approach (02 Readings); Subaltern Approach (01 Reading); M.K. Gandhi (01 Reading); V.D. Savarkar (01 Reading) Questions: Write an essay on the Indological approach to the study of Indian society and culture OR Discuss the subaltern critique of elite historiographies Write an essay on Gandhi's idea of India OR How does Savarkar conceptualize the Hindu <i>rashtra</i>. Elaborate with reference to <i>Hindutva: Who is a Hindu?</i>	BAH; Discipline Specific Core 07	Sociology of India II
November	Theory	Nation in the Public Imagination: focus on the writings of Nehru and Savarkar	BAH; Discipline Specific Core 07	Sociology of India II

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	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Analytical reading of Nehru's <i>Discovery of India</i> and Savarkar's <i>Hindutva: Who is a Hindu?</i> ; discussion on their ideas of India	BAH; Discipline Specific Core 07	Sociology of India II
December	Theory	The Nation and the Constitution; Srinivas's discussion on the trajectory of nation building in India	BAH; Discipline Specific Core 07	Sociology of India II
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Analytical reading of the process of how the nation was built in post-independence India	BAH; Discipline Specific Core 07	Sociology of India II



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Prof. Nabanipa Bhattacharjee
Department: Sociology
Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	Thinking through Religion; thematic and variegated mapping of the evolution of sociology of religion; forms of religious life in pre-modern societies and cultures	BAH; Discipline Specific Core 09	Sociology of Religion
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Davies's and Durkheim's complimentary readings on the history of emergence and delineation of the field of sociology of religion; understanding of the relationship between sacred and profane	BAH; Discipline Specific Core 09	Sociology of Religion
September	Theory	Magic, Science and Religion; Atheism; Religion and Ritual	BAH; Discipline Specific Core 09	Sociology of Religion
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Relationship between magic, science and religion (Malinowski); meanings and shades of atheism (Schaffner & Cragun); rites of passage (Van Gennep)	BAH; Discipline Specific Core 09	Sociology of Religion

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October	Theory	Religion and Ritual; Sociological Engagements with World Religions	BAH; Discipline Specific Core 09	Sociology of Religion
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Ritual symbolism in the context of death and food (Parry); Hinduism as a religious practice (Srinivas & Shah); Islam as lived experience and reality (Gilsenan)	BAH; Discipline Specific Core 09	Sociology of Religion
	Assignment (Internal Assessment)	With reference to European and North American scholarship map the trajectory of the emergence of sociology of religion as a field of study	BAH; Discipline Specific Core 09	Sociology of Religion



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	Mid-Term Test (Internal Assessment)	Topics: Religion in Sociology (02 Readings); Magic, Science and Religion (01 Reading); Hinduism (01 Reading); Death Ritual (01 Reading) Questions: Define and distinguish between sacred and profane. Elaborate on Durkheim's understanding of religion in the context of the binary OR Define and distinguish between magic, science and religion. How does Malinowski describe and analyze the interface between the three Hinduism is sociologically understood through practice. Elaborate OR Write an essay on death rituals with reference to Jonathan Parry	BAH; Discipline Specific Core 09	Sociology of Religion
November	Theory	Sociological Engagements with World Religions	BAH; Discipline Specific Core 09	Sociology of Religion
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	Christianity and modernity (Parsons); emergence and growth of the Christian movement and modernization process in Anglo-America; emergence and growth of Buddhism; the nature of the Buddha (Gethin)	BAH; Discipline Specific Core 09	Sociology of Religion
December	Theory	Religion, State and Society	BAH; Discipline Specific Core 09	Sociology of Religion
	Practical	NA	NA	NA
	Tutorial (Continuous Assessment through Presentations)	India as a secular state; understanding the secular character of India (Smith)	BAH; Discipline Specific Core 09	Sociology of Religion



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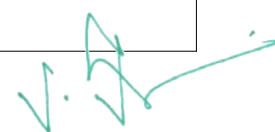
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Padma Priyadarshini
Department: Sociology
Semester: I

Month		Topic(s)	Course	Paper Code/Name
August	Theory	1.The Sociological Imagination	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
	Practical	NA	NA	NA
	Tutorial	Assignment on Socratic Reasoning : “The Sociological Imagination” and its contemporary relevance.	B.A.H. Sociology - Core Course-1	Introduction to Sociology
September	Theory	2. The Sociological Consciousness 3. Sociology and Commonsense 4. What is Sociology?	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
	Practical	NA	NA	NA
	Tutorial	Written Assignment and discussion on Sociology and commonsense AND on the sociological consciousness	B.A.H. Sociology - Core Course-1	Introduction to Sociology
October	Theory	5. Sociology and Social Anthropology 6. Social Groups	B.A.H. Sociology - Core Course-1	Introduction to Sociology

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	Practical	NA	NA	NA
	Tutorial	Flipped Class Room Technique. Presentation on Culture	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
	<u>Mid Sem Exam</u>	MCQ and short answer questions on Sociological Imagination, Sociological Consciousness and Sociology and Commonsense.	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
November	Theory	7. Social Institutions 8. Social Change	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
	Practical	NA	NA	NA
	Tutorial	.Discussion on different types of social groups.	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
	<u>Assignment</u>	Write up on what is culture and what is popular culture with reference to the article by Sharmila Rege	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
December	Theory	Lecture on the three units: Thinking Sociologically, The Emergence of Sociology and Sociological concepts	B.A.H. Sociology - Core Course- 1	Introduction to Sociology
	Practical	NA	NA	NA
	Tutorial	Exam Paper Discussion and Assignment Reports.	B.A.H. Sociology - Core Course-1	Introduction to Sociology



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Padma Priyadarshini
Department: Sociology
Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	1. What is environmental Sociology? 2. The realism-constructionism debate.	B.A.H. Sociology - DSE- 03	Environmental Sociology.
	Practical	NA	NA	NA
	Tutorial	Ecological Dialogue: Going beyond the realism-constructionism debate.	B.A.H. Sociology - DSE- 03	Environmental Sociology
September	Theory	3. The Treadmill of Production approach. 4. Ecological Modernization.	B.A.H. Sociology - DSE- 03	Environmental Sociology
	Practical	NA	NA	NA
	Tutorial	The meaning of the treadmill metaphor and its ecological consequences.	B.A.H. Sociology - DSE- 03	Environmental Sociology

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September (contd)	Theory	5. The Sociology of Risk 6. Eco-feminism and feminist environmentalism.	B.A.H. Sociology - DSE- 03	Environmental Sociology
	Practical	NA	NA	NA
	Tutorial	Do men and women share different relationships with nature and environment? Discuss.	B.A.H. Sociology - DSE- 03	Environmental Sociology
	<u>Assignment</u> —	Group Presentations on the movements: Chipko, Narmada, Anti-mining and the Seed movement.	B.A.H. Sociology - DSE- 03	Environmental Sociology
October	Theory	7. Chipko movement 8. Narmada movt.	B.A.H. Sociology - DSE- 03	Environmental Sociology
	Practical	NA	NA	NA
	Tutorial	Relevance of transnational coalitions In contemporary environmental movements.	B.A.H. Sociology - DSE- 03	Environmental Sociology
	<u>Mid-Semester Exam</u>	Topics: 1.Environmental sociology. 2. Realism-Constructionism debate.	B.A.H. Sociology - DSE- 03	Environmental Sociology

November	Theory	9. Anti-Mining 10. Seed movement. 12. Indian Environmentalism	B.A.H. Sociology - DSE- 03	Environmental Sociology
	Practical	NA	NA	NA
	Tutorial	Discussion on -How green was our green revolution?	B.A.H. Sociology - DSE- 03	Environmental Sociology
December	Theory	11.Social Ecology	B.A.H. Sociology - DSE 03	Environmental Sociology
	Practical	NA	NA	NA
	Tutorial	Question Paper Discussion and discussion on movements.		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Urmi Bhattacharyya

Department: Sociology

Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	The Logic of Social Research - Sociological Imagination	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Tutorial	Discussion on conceptualizing C.W.Mill's concept of Sociological Imagination	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Practical	NA		
September	Theory	The Problem of Objectivity -positivism -Value Neutrality	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Tutorial	Discussions on what is value-free sociology and on the significance of value-neutrality Durkheim and Weber	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Practical	NA		
October	Theory	Reflexivity - Alvin Gouldner Methodological Perspectives: - Comparative Method	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Tutorial	What is reflexivity? Tracing connection Weber's ideas of objectivity value-embedddness History of the comparative method	B. A. (H) Sociology – Core Course	Sociological Research Methods I

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	Practical	NA		
	Assignment	On the possibility and relevance of objectivity in the social sciences	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Mid-Term Test	Theme: What are social facts? What are the rules for demonstrating proof for establishing such facts?	B. A. (H) Sociology – Core Course	Sociological Research Methods I
November	Theory	The Feminist Method - Martin Hammersely Modes of Inquiry: Theory and Research Robert Merton Analysing data: qualitative and quantitative	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Tutorial	How did the comparative method find a place in anthropology and sociology? Is there a distinct feminist methodology?	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Practical	NA		
December	Theory	Research design and Ethics	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Tutorial	Discussion on research design, techniques of data collection, ethics	B. A. (H) Sociology – Core Course	Sociological Research Methods I
	Practical	NA		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

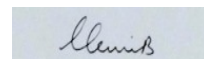
Name of the Faculty: Dr. Urmi Bhattacharyya
Department: Sociology
Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	Introducing Urban Sociology -The City in History	B. A. (H) Sociology – DSE	Urban Sociology
	Tutorial	Discussion and writing of concepts of community, city and neighbourhood	B. A. (H) Sociology – DSE	Urban Sociology
	Practical	NA		
September	Theory	Concepts: Urban, Urbanism and the city Cities and Capitalism Urban theory and urban experience	B. A. (H) Sociology – DSE	Urban Sociology
	Tutorial	Assisting students on how to write on the traditional approach to urbanism And how it changed with the development of capitalism	B. A. (H) Sociology – DSE	Urban Sociology
	Practical	NA		
October	Theory	Perspectives in Urban Sociology: City as Ecological Political Economy Network City as Culture	B. A. (H) Sociology – DSE	Urban Sociology
	Tutorial	Identifying the basic principles underlying the Chicago School and the human ecological approach Recognize the theoretical distinctions between the different perspectives	B. A. (H) Sociology – DSE	Urban Sociology

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	Practical	NA		
	Assignment	By reflecting on the social changes brought about by the development of capitalism write an essay on how the forces of money, time and space, shape urban experience.	B. A. (H) Sociology – DSE	Urban Sociology
	Mid-Term Test	Theme: Write a note on the principle features underlying urbanism as a way of life	B. A. (H) Sociology – DSE	Urban Sociology
November	Theory	Movements and Settlements: Migration and Community Caste, class and gender: Politics of urban space	B. A. (H) Sociology – DSE	Urban Sociology
	Tutorial	Discussions on the ethnographic case of migration in the Indian context; Resettlement and diaspora	B. A. (H) Sociology – DSE	Urban Sociology
	Practical	NA		
December	Theory	Politics of Urban Space: culture and leisure	B. A. (H) Sociology – DSE	Urban Sociology
	Tutorial	Discussions on how intersections of class, caste and gender influence/ shape urban spaces	B. A. (H) Sociology – DSE	Urban Sociology
	Practical	NA		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Satheesh Perumalla

Department: Sociology

Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	Volti, Rudi. 2011, "An Introduction to the Sociology of Work and Occupations.	B.A. (H) Sociology DSE 04	Sociology of Work
	Tutorial			
	Practical			
September	Theory	Grint, Keith. 2005, "Classical Approaches to Work: Marx, Durkheim and Weber" Uberoi, J.P.S. 1970, "Work, Study and Industrial worker in England" Ramaswamy E. A. and Uma Ramaswamy. 1981, Industry and Labour Bell, Daniel. 1976, The Coming of Post-Industrial Society	B.A. (H) Sociology DSE 04	Sociology of Work
	Tutorial			
	Practical			
October	Theory	Kumar, Krishan. 1973, Prophecy and Progress Kumar, Krishan. 1999, From Post-Industrial to Post-Modern Society Erikson, Kai. 1990, "On Work and Alienation" Taylor, Steve. 1998, "Emotional Labour and the new Workplace" Devine, Fiona. 1992, "Gender Segregation in the Engineering and Science Professions: A case of continuity and change"	B.A. (H) Sociology DSE 04	Sociology of Work

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	Tutorial			
	Practical			
	Assignment 10 marks	Presentation and assignments on various themes of the syllabus.	B.A. (H) Sociology DSE 04	Sociology of Work
	Mid-Term Test 1 (10 Marks)	Internal Assessment test on first three units: Work in Historical Perspective, Interlinking Work and Industry and Forms of Industrial Culture and Organisation	B.A. (H) Sociology DSE 04	Sociology of Work
November	Theory	Chowdhry, Prem. 1993, "High Participation, Low Evaluation: Women and Work in Rural Haryana Edgell, Stephen. 2006, "Unpaid Work-Domestic and Voluntary work Coser, 1990, "Forced Labour in Concentration Camps" Bremar, Jan. 2003, "The Informal Sector" in Veena Das Talib, Mohammad. 2010, Writing Labour- Stone Quarry workers in Delhi	B.A. (H) Sociology DSE 04	Sociology of Work
	Tutorial			
	Practical			
December	Theory	Visvanathan, Shiv. 1986, "Bhopal: the Imagination of a Disaster. Zonabend, Françoise. 2009, "The Nuclear Everyday	B.A. (H) Sociology DSE 04	Sociology of Work
	Tutorial			
	Practical			

P. Sathish

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V. H. K.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Satheesh Perumalla
Department: Sociology
Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	Durkheim, E. 1958. The Rules of Sociological Method	B.A. (H) Sociology Core Course 11	Sociological Thinkers –I
	Tutorial			
	Practical			
September	Theory	Durkheim, E. 1951. Suicide: A Study in Sociology Durkheim, E. 1964. The Division of Labour in Society	B.A. (H) Sociology Core Course 11	Sociological Thinkers –I
	Tutorial			
	Practical			
October	Theory	Marx, K. and F. Engels.- Theses on Feuerbach , A Critique of the German Ideology. --Manifesto of the Communist Party --Wage Labour and Capital	B.A. (H) Sociology Core Course 11	Sociological Thinkers –I
	Tutorial			
	Practical			
	Assignment			
	Mid-Term Test (10 marks)	Internal Test on Durkheim and Political economy of Karl Marx	B.A. (H) Sociology Core Course 11	Sociological Thinkers –I
November	Theory	-Abstract of Preface from A Contribution to the Critique of Political Economy Weber, Max. 1947. The Theory of Social and Economic Organization	B.A. (H) Sociology Core Course 11	Sociological Thinkers –I

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		Weber, Max. 2002. The Protestant Ethic and the Spirit of Capitalism, Chapters I, II, III, IV		
	Tutorial			
	Practical			
December	Theory	Weber, Max. 2002. The Protestant Ethic and the Spirit of Capitalism chapter V Weber, Max. 'Science as a Vocation'	B.A. (H) Sociology Core Course 11	Sociological Thinkers –I
	Tutorial			
	Practical			

P. Sathish

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Niharika Jaiswal

Department: Sociology

Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	The Promise of Sociological Research: Mill Merton Goode and Hatt	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Tutorial			
	Practical	Analyse the interpretation of social reality using Mills perception of the Sociological Imagination	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
September	Theory	The Process of Social Research Bailey Bernard Cresswall	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Tutorial	Describe the different Stages of doing Research		Introduction to Research Methods
	Practical			
October	Theory	Primary and Secondary Sources of Data Types of Primary data: Quantitative and Qualitative Data	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Tutorial	Write short notes on: Quantitative, Qualitative and Mixed Methods	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods

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	Practical			
	Assignment	Discuss the interdependence of theory and empirical research	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Mid-Term Test	Analyse the characteristics of the 'Sociological Imagination'	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
November	Theory	Introduction to Census and NSS data Introduction to Digital Research	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Tutorial	Elaborate on the evolution of Census in India	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Practical			
December	Theory	Basic Data Analysis	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Tutorial	Discuss the tabulation and classification as a quantitative research method	B.A.H. Discipline Specific Core Course 01	Introduction to Research Methods
	Practical			

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Niharika Jaiswal

Department: Sociology

Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	Conceptualising Disease, Sickness and Illness B.S. Turner: Medical Power and Social Knowledge	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Tutorial			
	Practical	Explain the social construction of Health, sickness and illness	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
September	Theory	Freund: Health, Illness and the Social Body Lupton, 'Medicine as culture: Illness, Disease and the body'	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Tutorial	Explain the subjective interpretation of illness	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Practical			
October	Theory	Systems approach – Parsons Political Economy of Health – Lynn Morgan Health as a Power Discourse- Foucault	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Tutorial	How can one assimilate dependency theory with the anthropological perspective	B.A.H. Sociology DSE 03	Sociology of Health and Medicine

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	Practical			
	Assignment	Discuss the limitations of biomedical model of health and medicine	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Mid-Term Test	Explain why Foucault's interpretation the power discourse embedded in the narratives of health and medicine	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
November	Theory	Feminist approach Medical Pluralism ART	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Tutorial	Discuss the feminist concerns with respect to prevalent practices of medical industry	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Practical			
December	Theory	Mental Health Digital Technologies and Health	B.A.H. Sociology DSE 03	Sociology of Health and Medicine
	Tutorial			
	Practical			

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Niharika Jaiswal

Department: Sociology

Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	An invitation to sociological explanation: Mills, 'The Sociological Imagination'	B.A. H. Sociology UGCF: GE	Sociology and Everyday Life
	Tutorial			
	Practical	Explain social reality using arguments from 'the sociological Imagination'	B.A.H Sociology UGCF: GE	Sociology and Everyday Life
September	Theory	Journey Into Everydyay Social Worlds: Curra, 'Groups, Societies and Social Relationships' Johnsson 'Culture, Symbols, Ideas and the Stuff of Life' Barnes 'A Pack of lies: Towards a Sociology of Lying'	B.A.H Sociology. UGCF: GE	Sociology and Everyday Life
	Tutorial			
	Practical	Explain the material and immaterial aspects of culture?	B.A.H Sociology UGCF: GE	Sociology and Everyday Life
October	Theory	Ervin Goffman, 'Introduction Sennet Richard 'Everyday Diplomacy: Reformation Conversations Put to Practical Use' Collin's, 'The Sociology of God'	B.A.H Sociology UGCF: GE	Sociology and Everyday Life
	Tutorial	Enunciate the nuances of communication and conversations.	B.A.H Sociology UGCF: GE	Sociology and Everyday Life
	Practical			

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	Assignment	Discuss the different aspects of culture.	B.A. UGCF: GE	Sociology and Everyday Life
	Mid-Term Test	Explain the principal characteristics of a sociological imagination	B.A. UGCF: GE	Sociology and Everyday Life
November	Theory	Wharton, 'Gender, Childhood and Family Life' Hochschild 'Paying Respects with Feelings: The Gift Exchange'	B.A. UGCF: GE	Sociology and Everyday Life
	Tutorial			
	Practical			
December	Theory	Mills 'On Intellectual Craftsmanship'	B.A. UGCF: GE	Sociology and Everyday Life
	Tutorial			
	Practical			

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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester**

Name of the Faculty: Dr. Saba Firdaus

Department: Sociology

Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	-	SEC, B.A Programme	Society Through the Visual
	Tutorial	N.A		
	Practical	N.A		
September	Theory	Introduction To the Sociological Study of the Visual Understanding Society through the Visual Making Sense of Visuals	SEC, B.A Programme	Society Through the Visual
	Tutorial	N.A		
	Practical	N.A		
October	Theory	Sociology and the Practice of Photography Image Making Through Photography Photography: Self and Society Photography as a tool of Research	SEC, B.A Programme	Society Through the Visual
	Tutorial	N.A		

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	Practical	N.A		
	Assignment	Visual Ethnography	SEC, B.A Programme	Society Through the Visual
	Mid-Term Test	Internal Test on first two units	SEC, B.A Programme	Society Through the Visual
November	Theory	Video and Film In Sociology of Society Representing through Video and Film Film and Video as a Research Tool	SEC, B.A Programme	Society Through the Visual
	Tutorial	N.A		
	Practical	N.A		
December	Theory	Sociology, Multimedia and Hypermedia As a tool of Research	SEC, B.A Programme	Society Through the Visual
	Tutorial	N.A		
	Practical	N.A		



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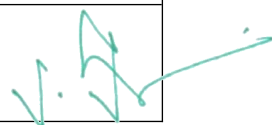
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Saba Firdaus
Department: Sociology
Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	-	BA – UGCF SEC	Life Skill Education
	Tutorial			
	Practical			
September	Theory	Life Skills: Introduction Basic Life Skills: Concept, Components and Significance Life Skill Education: National Perspective Universal Human Values	BA – UGCF SEC	Life Skill Education
	Tutorial	N.A		
	Practical	Group Discussion and Debates	BA – UGCF SEC	Life Skill Education
October	Theory	Basic Life Skills Team Work Skills, Innovative Leadership Career Building Skills	BA – UGCF SEC	Life Skill Education
	Tutorial			


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	Practical	Assignments and Projects	BA – UGCF SEC	Life Skill Education
	Assignment	Preparing their Resume and Curriculum Vitae	BA – UGCF SEC	Life Skill Education
	Mid-Term Test	Internal test from first two units	BA – UGCF SEC	Life Skill Education
November	Theory	Significant Life Skills and Techniques Cognitive Life Skills Behavioural Life Skills	BA – UGCF SEC	Life Skill Education
	Tutorial	N.A		
	Practical	Reflection and writing on situation-based questions Self-Reflection exercises	BA – UGCF SEC	Life Skill Education
December	Theory	Application of Life Skills in Field Work Stress Management and Coping Strategies Case Management	BA – UGCF SEC	Life Skill Education
	Tutorial	N.A		
	Practical	Brainstorming Exercises, Role Plays for Team Building	BA – UGCF SEC	Life Skill Education

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Saba Firdaus
Department: Sociology
Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	-	B.A. UGCF - VAC	Social and Emotional Learning
	Tutorial			
	Practical			
September	Theory	Self Awareness and Happiness Introduction Getting to know each other Expectations from the course	B.A. UGCF - VAC	Social and Emotional Learning
	Tutorial	None		
	Practical	Who is in your circle Introduction to your self Making reflective journals Practising mindfulness	B.A. UGCF - VAC	Social and Emotional Learning
October	Theory	Social Relationships/ Mindfulness Sharing vs Power: Peers, Family and Friends Going beyond power relationships Practising silence and reflection	B.A. UGCF - VAC	Social and Emotional Learning
	Tutorial			

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	Practical			
	Assignment	Activities done in class such as journaling and SWOT analysis	B.A. UGCF - VAC	Social and Emotional Learning
	Mid-Term Test	First unit complete for test	B.A. UGCF - VAC	Social and Emotional Learning
November	Theory	Identity, self-Image, Status, Self-Worth and Digital Identity	B.A. UGCF - VAC	Social and Emotional Learning
	Tutorial			
	Practical	Writing and imagining about personal identity in different contexts. Self-reflection about self-worth and self esteem	B.A. UGCF - VAC	Social and Emotional Learning
December	Theory	Lifestyle Choices, Stress and its Management Dealing with Depression, anxiety and disappointment	B.A. UGCF - VAC	Social and Emotional Learning
	Tutorial			
	Practical	Quiz cards, Movie viewing Activities related to discrimination, gendered identity, social media identity	B.A. UGCF - VAC	Social and Emotional Learning

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Garima Rath
Department: Sociology
Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	-	B.A Prog 3 rd Semester: DSC 06	Polity and Society
	Tutorial	NA		
	Practical	NA		
September	Theory	Tom Bottomore Chapter 9 Political Institutions	B.A Prog 3 rd Semester: DSC 06	Polity and Society
	Tutorial	NA		
	Practical	NA		
October	Theory	Robert Nisbet- The Sociological Tradition Chapter 4- Authority	B.A Prog 3 rd Semester: DSC 06	Polity and Society
	Tutorial	NA		

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	Practical	NA		
	Assignment	NA		
	Mid-Term Test	Describe the various kinds of political systems and highlight the difference in political behaviours inherent in those systems.	B.A Prog 3 rd Semester: DSC 06	Polity and Society
November	Theory	Partha Chatterjee- Chapter 10 Democracy and Economic Transformation Lucia Michelutti- The Vernacularization of Democracy: Political Participation and Popular Politics in North India	B.A Prog 3 rd Semester: DSC 06	Polity and Society
	Tutorial	NA		
	Practical	NA		
December	Theory	Sudipta Kaviraj- Nationalism in The Oxford Companion to Politics in India.	B.A Prog 3 rd Semester: DSC 06	DSC 06/ Polity and Society
	Tutorial	NA		
	Practical	NA		

Farima Rath

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V. A.

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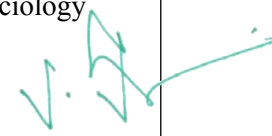
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Garima Rath

Department: Sociology

Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	-	B.A Hons Sociology DSC 08	Political Sociology
	Tutorial	NA		
	Practical	NA		
September	Theory	Tom Bottomore- Political Sociology- Introduction- pp 7-19 Max Weber- Sociological Writings- 9-13, 23-24	B.A Hons Sociology DSC 08	Political Sociology
	Tutorial	Max Weber- Sociological Writings- 28-46, 59-67	B.A Hons Sociology DSC 08	Political Sociology
	Practical	NA		
October	Theory	Frances Piven and Richard Cloward- Rule Making, Rule Breaking and Power Michel Foucault- Two Lectures in Culture/Power/History Ralph Miliband- Class Power and State Power Ettore Albertoni- Mosca and the Theory of Elitism	B.A Hons Sociology DSC 08	Political Sociology
	Tutorial	Pierre Bourdieu- Rethinking the State- Genesis and Structure of the Bureaucratic Field Presentations for Continuous Assessment by Group 1 and 2	B.A Hons Sociology DSC 08	Political Sociology


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	Practical	NA		
	Assignment	Distinguish between power and authority. Explain the different types of authority highlighted by Weber.	B.A Hons Sociology DSC 08	Political Sociology
	Mid-Term Test	Explain the various methodological debates inherent in political sociology.	B.A Hons Sociology DSC 08	Political Sociology
November	Theory	Partha Chatterjee - The State in The Oxford Companion to Politics in India Anthony Smith and John Hutchinson- Nationalism Noberto Bobbio- The Future of Democracy	B.A Hons Sociology DSC 08	Political Sociology
	Tutorial	T.H. Marshall- Extracts from Citizenship and Social Class Presentation for Continuous Assessment by Group 3,4,5 and 6	B.A Hons Sociology DSC 08	Political Sociology
	Practical	NA		
December	Theory	Paul Brass – National Power and Local Politics in India Myron Weiner- The Struggle For Equality: Caste in Indian Politics P.N. Howard- Deep Democracy, Thin Citizenship: The Impact of Digital Media in Political Campaign Strategy	B.A Hons Sociology DSC 08	Political Sociology
	Tutorial	Presentations for Continuous Assessment by Group 7,8 and 9.	B.A Hons Sociology DSC 08	Political Sociology
	Practical	NA		

Garima Lath

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Garima Rath
Department: Sociology
Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	-	B.A. P Sociology DSC 02	Family and Marriage
	Tutorial	NA		
	Practical	NA		
September	Theory	William Goode- The Theoretical Importance of Family Claude Levi-Strauss- The Family	B.A. P Sociology DSC 02	Family and Marriage
	Tutorial	A.M. Shah- Basic Terms and Concepts in the study of Family in India (1-15)	B.A. P Sociology DSC 02	Family and Marriage
	Practical	NA		
October	Theory	A.M. Shah- Basic Terms and Concepts in the study of Family in India (16-36) Rajni Palriwala- Negotiating Patriliney: Intrahousehold Consumption and Authority in Rajasthan Tiplut Nongbri- Gender and the Khasi Family Structure	B.A. P Sociology DSC 02	Family and Marriage
	Tutorial	Kate Weston- Families we Chose (103-120) Presentations for Continuous Assessment	B.A. P Sociology DSC 02	Family and Marriage
	Practical	NA		

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	Assignment	Highlights Levi-Strauss views on origin of family and its relationship to marriage	B.A. P Sociology DSC 02	Family and Marriage
	Mid-Term Test	Explain the theoretical importance of Family.	B.A. P Sociology DSC 02	Family and Marriage
November	Theory	Kate Weston- Families we Chose (121-136) Arlie Hochschild- The Second Shift J. Carsten, Siobhan Magee, Eirini Papadaki and Koreen Reece- Marriage in Past, Present and Future Tense	B.A. P Sociology DSC 02	Family and Marriage
	Tutorial	Priti Ramamurthy- Marriage, Labour circulation and smallholder Capitalism in Andhra Pradesh Presentations for Continuous Assessment	B.A. P Sociology DSC 02	Family and Marriage
	Practical	NA		
December	Theory	Prem Chowdhry- Enforcing Cultural Codes: Gender and Violence in Northern India Ravinder Kaur and Priti Dhanda- Surfing for Spouses: Marriage Websites and the 'New'	B.A. P Sociology DSC 02	DSC 02/ Family and Marriage
	Tutorial	Katherine Lemons- When Marriage Breaks Down How Do Contracts Matter? Contracts and Divorce in Contemporary		
	Practical	NA		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Kanchan Biswas
Department: Sociology
Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	N/A	B.A. UGCF GE	
	Tutorial	N/A		
	Practical	N/A		
September	Theory	Unit 1. Understanding Climate Change Anthropocene Population and Consumption Development and Sustainability	B.A. UGCF GE	Sociology of Climate Change
	Tutorial	Sustainable development goals	B.A. UGCF GE	Sociology of Climate Change
	Practical	N/A		
October	Theory	Unit 2. Governing Climate Change Policy and Protocols	B.A. UGCF GE	Sociology of Climate Change
	Tutorial	Writing Term Paper	B.A. UGCF GE	Sociology of Climate Change

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	Practical	N/A		
	Assignment	What are the anthropogenetic factors of Climate change?	B.A. UGCF GE	Sociology of Climate Change
	Mid-Term Test	Internal exam on first two units	B.A. UGCF GE	Sociology of Climate Change
November	Theory	Unit 3 Experiencing Climate Change Social Inequalities	B.A. UGCF GE	Sociology of Climate Change
	Tutorial	Answer writing and feedback on internal assignments	B.A. UGCF GE	Sociology of Climate Change
	Practical	N/A		
December	Theory	Development and Sustainability Group Presentations	B.A. UGCF GE	Sociology of Climate Change
	Tutorial	Environmental sociology as sub- discipline	B.A. UGCF GE	Sociology of Climate Change
	Practical	N/A		

Kamchan Sisuan

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Kanchan Biswas

Department: Sociology

Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	N/A	B.A. MDC	Invitation to Sociology
	Tutorial	N/A		
	Practical	N/A		
September	Theory	Unit I: Introducing Sociology	B.A. MDC	Invitation to Sociology
	Tutorial	Relations of sociology with other social sciences.	B.A. MDC	Invitation to Sociology
	Practical	N/A		
October	Theory	Unit2- The emergence of sociology	B.A. MDC	Invitation to Sociology
	Tutorial	Emergence of sociology as a discipline in institutions.	B.A. MDC	Invitation to Sociology
	Practical	N/A		
	Assignment	Enlightenment Thinkers and their impact on Sociology as a Discipline	B.A. MDC	Invitation to Sociology
	Mid-Term Test	Class test on First two units.	B.A. MDC	Invitation to Sociology
November	Theory	Unit 3- Basic concepts	B.A. MDC	Invitation to Sociology


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		Culture Social Interactions and Institutions Social Change		
	Tutorial	Approaches and methods in Social sciences	B.A. MDC	Invitation to Sociology
	Practical	N/A		
December	Theory	Class presentations	B.A. MDC	Invitation to Sociology
	Tutorial	Methodology of the social sciences	B.A. MDC	Invitation to Sociology
	Practical	N/A		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: KANCHAN BISWAS

Department: SOCIOLOGY

Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	N/A	B.A. MDC	Polity and Society
	Tutorial	N/A		
	Practical	N/A		
September	Theory	Unit I. On Studying Polity and Society	B.A. MDC	Polity and Society
	Tutorial	Theoretical and conceptual underpins of sociology for the study of Polity.	B.A. MDC	Polity and Society
	Practical	N/A		
October	Theory	Unit II Conceptual Foundations	B.A. MDC	Polity and Society
	Tutorial	Types of Political Institutions	B.A. MDC	Polity and Society
	Practical	N/A		
	Assignment	Explain social cage and social closure in terms of social network and hierarchies determining power in society.	B.A. MDC	Polity and Society
	Mid-Term Test	Class test on first two units.	B.A. MDC	Polity and Society

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November	Theory	Unit III: Themes in Politics and Society in India	B.A. MDC	Polity and Society
	Tutorial	Bureaucracy and Red-Tapism	B.A. MDC	Polity and Society
	Practical	N/A		
December	Theory	Class Presentations	B.A. MDC	Polity and Society
	Tutorial	Relationship between political institutions and other social and economic institutions	B.A. MDC	Polity and Society
	Practical	N/A		



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Rahul Jha
Department: Sociology
Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory	-	GE, B.A Programme	Polity & Society in India
	Tutorial	N.A		
	Practical	N.A		
September	Theory	On studying Politics and Society in India India: Democratic Progress and Problems Political Identities: Nation, Caste, Religion & Ethnicity	GE, B.A Programme	Polity & Society in India
	Tutorial	N.A		
	Practical	N.A		
October	Theory	On State Society and Discourse in India Themes in Politics and Society in India Political Economy Political Machine	GE, B.A Programme	Polity & Society in India
	Tutorial	N.A		

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	Practical	N.A		
	Assignment	Relationship between polity and society in India.	GE, B.A Programme	Polity & Society in India
	Mid-Term Test	Internal Test on first two units	GE, B.A Programme	Polity & Society in India
November	Theory	Political Institutions Parties and Party System The Vernacularization of Democracy	GE, B.A Programme	Polity & Society in India
	Tutorial	N.A		
	Practical	N.A		
December	Theory	Protest and Resistance in Indian Politics	GE, B.A Programme	Polity & Society in India
	Tutorial	N.A		
	Practical	N.A		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Rahul Jha
Department: Sociology
Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	-	VAC	Ethics and Culture
	Tutorial	N.A		
	Practical	N.A		
September	Theory	Consequentialist vs categorical moral reasoning- Pulley Problem Meaning of Values, Rawls's theory of Justice: Veil of ignorance	VAC	Ethics and Culture
	Tutorial	N.A		
	Practical	Case study based on consequentialist & categorical moral reasoning	VAC	Ethics and Culture
October	Theory	Aristotle's Nicomachean Ethics, Deontological vs Teleological Debates, Vivekananda's moral thoughts, Premchand's Panch Parmeshwar	VAC	Ethics and Culture
	Tutorial	N.A		

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	Practical	Mindfulness, thinking of tough problems and using ethical frameworks to decide the morally right thing to do	VAC	Ethics and Culture
	Assignment	Essay on Indian Culture, field visit	VAC	Ethics and Culture
	Mid-Term Test	Internal Test on first two units	VAC	Ethics and Culture
November	Theory	The Kantian idea of morality and freedom, Rawls Resourcism, & Lexical Ranking, Neitzche, William Blake & Wordsworth's poems, Discussion on Indian Culture & Language	VAC	Ethics and Culture
	Tutorial	N.A		
	Practical	Case study based discussions, values inherited from family & friends, social activity discussion	VAC	Ethics and Culture
December	Theory	Neo Kantian, Mature Enlightenment, Ethical lessons from life of great Indian thinkers and scholars, Eliot	VAC	Ethics and Culture
	Tutorial	N.A		
	Practical	Practical file discussion, Discussing cases that help debate and navigate ethical dilemmas	VAC	Ethics and Culture

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Rahul Jha

Department: Sociology

Semester: I

Month		Topics	Course	Paper Code/Name
August	Theory	-	SEC	Personality Development and Communication
	Tutorial	N.A		
	Practical	N.A		
September	Theory	Introduction to communication, Need for Communication, Process for Communication, Signs, Symbols	SEC	Personality Development and Communication
	Tutorial	N.A		
	Practical	AIM framework presentation of different groups- Audience, Intent, Message	SEC	Personality Development and Communication
October	Theory	Intercultural, intracultural, International Communication, Silence, business cases, Memos, circular, Emotional intelligence	SEC	Personality Development and Communication
	Tutorial	N.A		

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	Practical	Questionnaire preparation, extempore presentation, letter writing, business case discussion & presentation	SEC	Personality Development and Communication
	Assignment	Questionnaire, letter writing	SEC	Personality Development and Communication
	Mid-Term Test	Internal Test on first two units	SEC	Personality Development and Communication
November	Theory	Barriers to communication, conflict, management of conflict, negotiation techniques	SEC	Personality Development and Communication
	Tutorial	N.A		
	Practical	Case Study presentations, Prisoners dilemma discussion	SEC	Personality Development and Communication
December	Theory	Negotiation, Leadership, Selling, Body language	SEC	Personality Development and Communication
	Tutorial	N.A		
	Practical	Case based presentations	SEC	Personality Development and Communication

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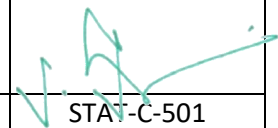
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Prof. Veena Budhraja

Department: Statistics

Semester: III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Probability Distributions: Generating functions, Bivariate probability generating functions.	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
	Theory	Completeness: The Completeness property of R ; Archimedean property in R ; Neighbourhood and limit points: Neighbourhood,	B.Sc. (H) Statistics Sem. III	DSC-9: Mathematical Analysis
	Practical	Applications of Partial Fraction Theorem. 2 Problems based on (covariance) stationary processes	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
September	Theory	Stochastic Process: Introduction, Stationary Process, Markov Chains: Definition of Markov Chain, transition probability matrix	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
	Theory	Open Set, Closed Set, Supremum and Infimum, Limit Point of a Set; Sequences: Definition of a Sequence, Convergent Sequence, Divergent Sequence, Oscillatory Sequence, Cauchy Sequence, Monotone Sequence	B.Sc. (H) Statistics Sem. III	DSC-9: Mathematical Analysis
	Practical	Simulation of Markov chains and Calculation of transition probability matrices. Stability of Markov chains. To check whether the given	B.Sc. (H) Statistics	STAT-C-501 Stochastic Processes and Queuing Theory


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		chain is irreducible or not. Computation of probabilities in case of generalizations of independent Bernoulli trials	Sem. V	Processes and Queuing Theory
October	Theory	Order of Markov chain, Markov chain as graphs, higher transition probabilities. Generalization of independent Bernoulli trials, classification of states and chains, stability of Markov system	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
	Theory	Infinite series, positive termed series and their convergence, Comparison test, D'Alembert's ratio test	B.Sc. (H) Statistics Sem. III	DSC-9: Mathematical Analysis
	Practical	Simulation and applications of Poisson processes. Calculation of probabilities for given birth and death processes	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
	Assignment	Assignment on p.g.f's and Markov chain and Poisson process. Assignment based on neighborhoods, open set, closed set, sequences, series	B.Sc. (H) Statistics Sem. V Sem. III	STAT-C-501 Stochastic Processes and Queuing Theory, DSC-9: Mathematical Analysis
	Mid-Term Test	Unit 1 and 2 Unit 1 for Sem. III	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
November	Theory	Poisson Process: postulates of Poisson process, properties of Poisson process, inter-arrival time. Gambler's Ruin Problem: Classical ruin problem, expected duration of the game.	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory

	Theory	Cauchy's n^{th} root test, Raabe's test. Gauss test, Cauchy's condensation test and integral test (Statements and Examples only).	B.Sc. (H) Statistics Sem. III	DSC-9: Mathematical Analysis
	Practical	Calculation of probabilities for ruin problems. 7. Problems based on (M/M/1) queuing models	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
December	Theory	Poisson Process: pure birth process, Yule Furry process, birth and death process, pure death process.	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory
	Theory	Absolute convergence of series, Conditional convergence.	B.Sc. (H) Statistics Sem. III	DSC-9: Mathematical Analysis
	Practical	Based on Gambler's Ruin Problem:	B.Sc. (H) Statistics Sem. V	STAT-C-501 Stochastic Processes and Queuing Theory

Signature of the teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Prof M.K.Sukla
 Department: Statistics
 Semester: I and V
 Paper Name: 1. Econometrics, 2. Calculus and 3. Basic Statistics

Month		Topics	Course	Paper Code/Name
August	Theory	Introduction: Objective behind building econometric models, nature of econometrics	B.Sc. (H) Statistics, Semester V	STAT- DSE 2-(B): Econometrics
		Differential Calculus: Review of limits, continuity and differentiability. Partial differentiation and total differentiation	B.Sc. (H) Statistics, Semester I	Calculus
		Bi-variate data: Scatter diagram, principle of least-squares and fitting of polynomials and exponential curves	GE-I Semester I	Basic Statistics
	Practical	Problems based on Karl Pearson correlation coefficient (with/without change of scale and origin).	GE-I Semester I	Basic Statistics
		Numerical based on the continuous functions and its properties.	B.Sc. (H) Statistics, Semester I	Calculus
September	Theory	General Linear Model building	B.Sc. (H) Statistics, Semester V	STAT- DSE 2-(B): Econometrics
		L-Hospital's rule, Leibnitz rule for successive differentiation. Euler's theorem on homogeneous functions.	B.Sc. (H) Statistics, Semester I	Calculus
		Correlation and Regression Bivariate data: Definition, scatter diagram, simple, partial and multiple correlation (3 variables only), rank correlation	GE-I Semester I	Basic Statistics
	Practical	Problems based on estimation of General linear model	B.Sc. (H) Statistics, Semester V	STAT- DSE 2-(B): Econometrics

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October		Problems based on Karl Pearson correlation coefficient (with/without change of scale and origin). Problems based on Spearman rank correlation.	GE-I Semester I	Basic Statistics
		Numerical based on the LHospital's rule, Euler's theorem, and maxima and minima.	B.Sc. (H) Statistics, Semester I	Calculus
	Theory	General linear model (GLM)	B.Sc. (H) Statistics, Semester V	STAT- DSE 2-(B): Econometrics
		Differential Equations Exact differential equations. Differential equations of first order and first-degree Higher Order Differential Equations: Linear differential equations of order n	B.Sc. (H) Statistics, Semester I	Calculus
		Simple linear regression, principle of least squares	GE-I Semester I	Basic Statistics
	Practical	Testing of parameters of General linear model, Forecasting of General linear mode	B.Sc. (H) Statistics, Semester V	STAT- DSE 2-(B): Econometrics
		Practical's based on Verification of Euler's Theorem and Applications of differentiation Calculate income and price elasticity of demand, Determination of price and quantity for which total revenue is maximum	B.Sc. (H) Statistics, Semester I	Calculus
		Problems based on Lines of regression, angle between two lines of regression Fitting of polynomials and exponential curves.	GE-I Semester I	Basic Statistics
	Assignment	LHospital's rule, Euler's theorem, and maxima and minima. Differential equations of first order and first-degree Higher Order Differential Equations.	B.Sc. (H) Statistics, Semester I	Calculus
	Mid-Term Test	-----	-----	-----


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November	Theory	Estimation under linear restrictions.	B.Sc. (H) Statistics, Semester V	STAT- DSE 2-(B): Econometrics
		Homogeneous and nonhomogeneous linear differential equations of order n with constant coefficients, Different forms of particular integrals. The Cauchy-Euler's equation of order n. Formation and solution of a partial differential equations. Equations easily integrable.	B.Sc. (H) Statistics, Semester I	Calculus
		Fitting of polynomials and exponential curves.	GE-I Semester I	Basic Statistics
	Practical	Practical's based on Applications of Integration Practical's based on Applications of Differential	B.Sc. (H) Statistics, Semester I	Calculus
		Practical's based on Fitting of polynomials and exponential curves.	GE-I Semester I	Basic Statistics
December	Theory	Linear partial differential equations of first order. Homogeneous linear partial differential equations with constant coefficients. Different cases for complimentary functions and particular integrals	B.Sc. (H) Statistics, Semester I	Calculus
	Practical	Verify that the area under the curve is unity under the given p.d.f. and also calculate A.M, Median, Mode and St. Deviation	B.Sc. (H) Statistics, Semester I	Calculus

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Ramesh Kumar
Department: Statistics
Semester: I, III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Statistical Methods: Definition and scope of Statistics, concepts of statistical population and sample. Types of Data: Concepts of population and sample, quantitative and	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
	Theory	Large sample tests: Definitions of random sample, parameter and statistic, sampling distribution of a statistic, sampling distribution of sample mean, standard errors of sample mean, and sample proportion.	B.Sc. (H) III Sem	GE-3 Sampling Distributions
	Practical	Large Sample Tests: Testing of significance and confidence intervals for single proportion and difference of two proportions	B.Sc. (H) III Sem	GE-3 Sampling Distributions
	Practical	1. Graphical representation of data- frequency polygon, histogram and ogive. 2. Practical based on arithmetic mean and to find missing frequencies given arithmetic mean.	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
September	Theory	Collection and Scrutiny of Data: Primary data. Secondary data – its major sources. Complete enumeration. Construction of tables with one or more factors of classification, frequency distributions and cumulative frequency distributions and their graphical representations (Histograms, frequency polygon), stem and leaf displays.	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics

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	Theory	Null and alternative hypotheses, level of significance, Type I and Type II errors, their probabilities and critical region. Large sample tests, use of CLT for testing single proportion, difference of two proportions, single mean, difference of two means, standard deviation and difference of standard deviations by classical and p-value approaches.	B.Sc. (H) III Sem	GE-3 Sampling Distributions
		Queuing System: General concept, steady state distribution, queuing model, M/M/1 with finite and infinite system capacity, waiting time distribution (without proof).	B.Sc. (H) Statistics V Sem	STAT-C-501 Stochastic Processes and Queuing Theory
	Practical	Practical based on median and partition vales using formulae and to find them graphically also, Practical based on mode by using formula, graphically, method of grouping, Practical based on combined mean and combined variance, Practical based on quartile deviation using formula and graphically, Practical based on mean deviation and standard deviation, Practical based on coefficient of variation.	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
		Testing of significance and confidence intervals for difference of two standard deviations.	B.Sc. (H) III Sem	GE-3 Sampling Distributions
October	Theory	Measures of Central Tendency: Mathematical and positional, partition values, Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation, graphical representation of various measures of location and dispersion (Ogives, Histograms, Box Plot) Moments: Raw moments, Central moments, Absolute moments, Factorial moments, Sheppard's corrections, skewness and kurtosis, Types of frequency distributions.	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
	Theory	Chi square distribution: Definition and derivation of χ^2 distribution with n degrees of freedom (d.f.) using m.g.f., nature of probability curve for different degrees of freedom, mean, variance, m.g.f., cumulant generating function, mode, additive property and limiting form of χ^2 distribution.	B.Sc. (H) III Sem	GE-3 Sampling Distributions

		M/M/1 with finite and infinite system capacity, waiting time distribution (without proof).	B.Sc. (H) Statistics V Sem	STAT-C-501 Stochastic Processes and Queueing Theory
	Practical	Practical based on moments about origin and moments about any arbitrary point, Practical on skewness based on mean, median, mode and standard deviation, Practical based on central moments, skewness and kurtosis, Practical based on fitting of polynomials, Practical based on fitting of exponential curves, power curves	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
		To test if the population variance has a specific value and its confidence intervals, To test the goodness of fit, To test the independence of attributes, Test based on 2 x 2 contingency table without and with Yates' corrections	B.Sc. (H) III Sem	GE-3 Sampling Distributions
	Assignment	DSC-1, Application of Descriptive statistics GE-III, Large sample tests		
	Mid-Term Test	Based on Unit -1 and 2		
November	Theory	Bivariate data: Definition, scatter diagram, Karl Pearson's coefficient of correlation. Spearman's rank correlation coefficient (Introductory with interpretation). Principle of least squares and fitting of polynomials and exponential curves, lines of regression, properties of regression coefficients, angle between two regression lines, and residual variance.	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
	Theory	Tests of significance and confidence intervals based on χ^2 distribution. t and F distributions: Student's t and Fishers t-distributions, Derivation of its p.d.f., nature of probability curve with different degrees of freedom, mean, variance, moments and limiting form of t distribution	B.Sc. (H) III Sem	GE-3 Sampling Distributions
		M/M/1/N with finite and infinite system capacity, waiting time distribution.	B.Sc. (H) Statistics V Sem	STAT-C-501 Stochastic Processes and Queueing Theory.

	Practical	Practical based on Karl Pearson correlation coefficient, Practical based on correlation coefficient for a bivariate frequency distribution, Practical based on lines of regression, angle between lines and estimated values of variables, Practical based on rank correlation with ties, Practical based on rank correlation without ties	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
		Testing of significance and confidence intervals for single mean and difference of two means and paired t – test	B.Sc. (H) III Sem	GE-3 Sampling Distributions
December	Theory	Theory of attributes: consistency and independence of data with special reference to attributes, Association of attributes: concept, Yules coefficient of Colligation and	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
	Theory	Snedecore's F-distribution: Derivation of F distribution, nature of probability curve with different degrees of freedom, mean, variance and mode. Distribution of $1/F(n_1, n_2)$. Relationship between t, F and χ^2 distributions. Test of	B.Sc. (H) III Sem	GE-3 Sampling Distributions
	Practical	Practical based on association and independence of attributes, Practical based on fundamental set of class frequencies in attributes (find missing frequencies given fundamental set of class frequencies)	B.Sc. (H) Statistics I Sem	DSC-1 Descriptive Statistics
	Practical	Testing of significance and confidence intervals of an observed sample correlation coefficient, Testing and confidence intervals of equality of two population variances.	B.Sc. (H) III Sem	GE-3 Sampling Distributions

Signature of the teacher

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SRI VENKATESWARA COLLEGE

SEMESTER WISE TEACHING PLAN (2023-2024)

Teacher Name: Dr Chetan Department: Statistics Semester: Odd Semester

Second Year Semester I

Paper Name: DSC II: Introduction to Probability (NEP)

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	Introduction to probability, random experiments, sample space, events and algebra of events. Definitions of Probability Classical, Statistical. Limitations of Classical definition. Probability of union and intersection of events, Probability of occurrence of exactly m and at least m events out of n events and Matching problems. Numerical based on above topics.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Practical	Problem based long run relative frequency to establish statistical definition of probability Problem based on geometric probability. Problem based on permutations and combinations when all objects are distinguishable.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Tutorials	--	--	--


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	StaFa	Statistics Familiarization Activity (StaFa) I have been given to the students.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
II^{ed} Month	Theory	Conditional Probability, laws of addition and multiplication, theorem of total probability, Examples based on conditional probability and laws of addition and multiplication, independent events – Pairwise mutual independence, Bayes' theorem and its applications, Geometric Probability.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Practical	Problem based on permutations and combinations when not all objects are different.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability

		Computation of probability related to occurrence of exactly m and at least m events out of n events. Computation of probabilities related to matching problems Computation of conditional probabilities using addition and multiplication laws. Problem related to application of Bayes Theorem.		
	Tutorials	--	--	--
	Assignment	Assignments will be given on different topics related with curriculum to each student.	B.Sc. (Hons.)	DSC II: Introduction to

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			Statistics	Probability
III^{ed} Month	Theory	Distribution function and properties, Discrete random variables - p.m.f., discrete distribution function, Continuous random variables p.d.f, illustrations and properties of random variables. Measures of central tendency, dispersion, skewness and kurtosis for continuous probability distributions, Examples based on random variables, Continuous distribution functions and their properties, Univariate transformation of random variables, Examples based on univariate transformations.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Practical	Computation of distribution function of discrete and continuous random variables and calculations of probabilities of events thereof. Graphical representation of probability function and distribution function of discrete/continuous arbitrary random variables. Finding expectation, variance and covariances of discrete as well as continuous random variables	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Tutorials	--	--	--
	Revision /D oubt	Revision/Doubt Classes will be taken on different topics	B.Sc. (Hons.)	DSC II: Introduction to

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	Classes	related with curriculum.	Statistics	Probability
	StaFa	Statistics Familiarization Activity (StaFa) I have been given to the students.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability

IVth Month	Theory	Expectation of random variable and its properties (addition and multiplication theorem of expectation), Variance and Covariance in terms of expectation and their properties, Examples based on Expectation and its properties.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Practical	Finding expectation, variance and covariances of linear function of discrete as well as continuous random variables. Constructing sample space for two dimensional random variable.	B.Sc. (Hons.) Statistics	DSC II: Introduction to Probability
	Tutorials	--	--	--

Second Year Semester III

Paper Name: VAC III: Swachh Bharat (NEP)

Month		Topics	Course	Paper Code/Name
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Ist Month	Theory	Introduction to Swachh Bharat Abhiyan (SBA) Gandhian philosophy of Cleanliness Swachh Bharat Abhiyan {SBA} Hygiene, Sanitation & Sustainable Waste Management Agencies and nodal Ministries for SBA	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Practical	Identify plastic and e-waste in and around the institution and suggest innovative technologies to minimize wastage. Identify events/fests that generate maximum waste and ways to minimize it. Visit canteen/shops and track the lifecycle of wet/dry waste in and around the institution and document the findings in the form of a Project Report.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Tutorials	--	--	--
II^{ed} Month	Theory	Different phases of the SBA and its evaluation Citizens' Responsibilities: Role of Swacchagrahi		VAC: Swachh Bharat
	Practical	Visit canteen/shops and track the lifecycle of wet/dry waste in and		VAC: Swachh Bharat


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		around the institution and document the findings in the form of a Project Report. Conduct interviews of stakeholders to understand the level of awareness. Conduct a Clean Audit of the Institution and identify areas for action.		
	Tutorials	--	--	--
	Assignment	Practical assignments will be given on different topics.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
III^{ed} Month	Theory	Swachh Bharat: Rural and Urban Facets: Indicators for Swachh Bharat Sanitation coverage across households (2014 vs. 2022), Open Defecation Free (ODF} Villages: Parameters, ODF plus model: Key indicators. Sustainable sanitation, Waste/water and solid waste management, Garbage Free Cities.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Practical	Conduct cleanliness drives. Organise Swachhata Pakhwada meetings, rallies, and mobilization camps within the identified communities. Students may participate in the Swachh Bharat Internship programme.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Tutorials	--	--	--


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	Assignment	Practical assignments will be given on different topics.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
IVth Month	Theory	Prospects and Challenges: Prospects and Challenges, Operational and Financial issues, Monitoring & Supervision, Community Mobilization.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Practical	If required students can share their experiences in the form of a Project Report. Any other Practical/Practice as decided from time to time	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Assignment	Practical assignments will be given on different topics.		
	Tutorials	--	--	--

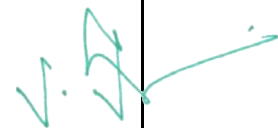
Third Year Semester V

Paper Name: DSE II (B): Econometrics

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	Multicollinearity: Introduction and concepts, detection of multicollinearity. Numerical based on above topics.	B.Sc. (Hons.) Statistics	STAT- DSE 2- (B): Econometric s

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	Practical	Problems based on estimation of General linear model. Testing of parameters of General linear model. Forecasting of General linear model.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometrics
	Tutorials	--	--	--
II^{ed} Month	Theory	Consequences, tests and solutions of multicollinearity. Numerical based on above topics.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometrics
	Practical	Problems related to consequences of Multicollinearity. Diagnostics of Multicollinearity.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometrics
	Tutorials	--	--	--
	Assignment	Assignments were given on different topics related with curriculum to each student.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometrics
III^{ed} Month	Theory	Generalized least squares estimation, Aitken estimators. Concept of Autocorrelation. Numerical based on above topics.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometrics
	Practical	Problems related to consequences of Autocorrelation (AR(I)). Diagnostics of Autocorrelation. Estimation of General linear model under Autocorrelation. Problems related to consequences Heteroscedasticity. Diagnostics of Heteroscedasticity. Estimation of problems of	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometrics


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		General linear model under Heteroscedastic disturbance terms.		
	Tutorials	--	--	--
	Revision /D oubt Classes	Revision/Doubt Classes were given on different topics related with curriculum.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometric s
IVth Month	Theory	Consequences of autocorrelated disturbances, detection and solution of autocorrelation. Numerical based on above topics.	B.Sc. (Hons.) Statistics	STAT- DSE 2-(B): Econometric s
	Practical	Problems concerning specification errors as a reason for induction of	B.Sc. (Hons.)	STAT- DSE 2-(B):

		Autocorrelation, Heteroscdasticity and Multicollinearity. Problems related to General linear model under (Aitken Estimation). Problems on Autoregressive and Lag models.	Statistics	Econometric s
	Tutorials	--	--	--


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Note: In addition to Teaching Plan, three (02) Mentor Mentee Contact Classes (MMCC) were taken with the allotted students.

Dr Chetan

Assistant Professor (Statistics)



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Teaching Plan

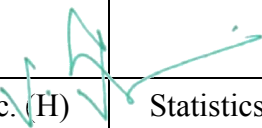
Name of the Faculty: Dr.Nagendra Kumar Kalaparathi

Department: STATISTICS

Semester: III

Paper Name: Skill Enhancement Course (SEC): Statistics with R

Month		Topics	Course	Paper Code/Name
August	Theory	Data extraction and spreadsheet exploration Extraction of economics and financial data from Prowessiq, RBI, IMF, World Bank, or an equivalent financial/ economic database. (The student should be able to save and export the data to 'R-environment' for further analysis.	B.Sc. (H) Statistics, Semester III	Statistics with R
September	Theory	Basics of R language Overview of the R language: Installing R&R studio: Using R studio, Scripts, Text editors for R, Graphical User Interfaces (GUIs) for R, Creating and storing R workspaces, installing packages and libraries, and Mathematical operations. Data types in R-Numeric, Integer, Character, Logical, Complex, and missing data. Data structures in R Vectors creation arithmetic operations of vectors vector subsetting sorting and sequencing functions Matrix and arrays creation arithmetic operations of matrix subsetting use of drop function	B.Sc. (H) Statistics, Semester III	Statistics with R
	Practical	Practical's based on the data structures, arrays vectors and operators	B.Sc. (H) Statistics	Statistics with R


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			Semester III	
October	Theory	Factors converting a vector into factor assigning levels and labels ordered factor. List creating a list, accessing elements from a list, adding a new element and eliminating an existing element from the list, converting the list to vectors. Data frames creation of data frame adding new columns rows and removing columns assessing columns using the dollar sign, importing a data set important file formats such as CSV text spreadsheet, aggregate function and subsetting of data frames, apply function, manipulation using dpl package, select filter, arrange mutant and group by function pipe operator	B.Sc. (H) Statistics, Semester III	Statistics with R
	Practical	Practical's based on Factors converting a vector into factor assigning levels and labels ordered factor. List creating a list, accessing elements from a list, Practical's based on Data frames, importing a data set important file formats such as CSV text spreadsheet, aggregate function and subsetting of data frames, apply function, manipulation using dpl package, select filter, arrange mutant and group by function pipe	B.Sc. (H) Statistics, Semester III	Statistics with R
	Assignment	Data types, Data structures, Vectors and Operations, Data visualization and Basic Statistical techniques	B.Sc. (H) Statistics, Semester III	Statistics with R
	Mid-Term Test	-----	-----	-----
November	Theory	Programming fundamentals logical operators, conditional statements if, else, else if, statements in r while loop for loop repeat loop creating functions in R. Reading data in R (file formats such as CSV text and xlsx), writing data to external files (file formats such as CSV, text, and xlsx), writing a table to a file, print function.	B.Sc. (H) Statistics, Semester III	Statistics with R

		Summarising and exploring data descriptive statistics (mean, median, mode, variance, skewness, five-point summary), dealing with missing data in R, data cleaning (dplyr package, tidyr package and pipe operator), exploratory data analysis Data visualization using inbuilt functions and ggplot2 package (pie chart, bar chart, line chart, histogram, box plot, scatter plot, normal, Q-Q plot)		
	Practical	Summarising and exploring data descriptive statistics (mean, median, mode, variance, skewness, five-point summary), dealing with missing data. Data cleaning (dplyr package, tidyr package and pipe operator), exploratory data analysis Data visualization using inbuilt functions and ggplot2 package (pie chart, bar chart, line chart, histogram, box plot, scatter plot, normal, Q-Q plot)	B.Sc. (H) Statistics, Semester III	Statistics with R
December	Theory	Regression analysis using R: Regression vs Correlation, Simple and Multiple regression, Ordinary least square, Assumptions of classical normal linear regression model (CNLRM), corplot package, car package lmtest package, scatter plot (using plot function and ggplot2 package) to understand the relationship between variables, lm, abline, predict, resid function, interpreting 'summary table' of the regression model, normality of residuals (qq norm and qq plot functions), multicollinearity (correlation matrix, corplot and VIF function) autocorrelation (acf plot and Durbin Watson test) heteroscedasticity (graphically, bptest ncvt test) impact on estimates and inferences in case of violations of assumptions of CNLRM methods to take care of violations. Time series data, components of a time series data, additive and multiplicative time series model, ts function, diff function, the plot of a time series data, time series data with linear trend	B.Sc. (H) Statistics, Semester III	Statistics with R

	Practical	Correlation and Regression models, Simple and Multiple regression, Ordinary least square, Assumptions of classical normal linear regression model. Multicollinearity, autocorrelation and heteroscedasticity Time series data, components of a time series data, additive and multiplicative time series model	B.Sc. (H) Statistics, Semester III	Statistics with R
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Teaching Plan

Name of the Faculty: Dr.Nagendra Kumar Kalaparthi

Department: Statistics

Semester: V

Paper Name:		Topics	Course	Paper Code/Name
August	Theory	Introduction to Operations Research (O.R.): Definition and phases of O.R. Model building, various types of O.R. problems. Linear Programming Problem (L.P.P.): Mathematical formulation of the L.P.P, graphical solutions of L.P.P. Simplex method for solving L.P.P. Charne's M-technique for solving	B.Sc. (H) Statistics, Semester V	Operations Research
	Practical	Practical based on Mathematical formulation of L.P.P and solving the problem using graphical method and Simplex Method. And also Practical based on Big M method involving artificial variables.	B.Sc. (H) Statistics, Semester V	Operations Research
September	Theory	L.P.P. involving artificial variables. Special cases of L.P.P. Concept of Duality in L.P.P: Dual simplex method. Economic interpretation of Duality. Post-optimality analysis. Transportation Problem: Initial solution by North West corner rule, Least cost method and Vogel's approximation method (VAM), MODI's method to find the optimal solution, special cases of transportation problem	B.Sc. (H) Statistics, Semester V	Operations Research
	Practical	Practical based on dual simplex method Transportation Problems, North-West Corner Method, Least Cost Method and Vogel's Approximation Method	B.Sc. (H) Statistics, Semester V	Operations Research
October	Theory	Assignment problem: Hungarian method to find optimal assignment, special cases of assignment problem.	B.Sc. (H) Statistics, Semester V	Operations Research


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	Practical	Practical based on Assignment Problems and Hungarian Method. And also, Special Cases of Assignment problems	B.Sc. (H) Statistics, Semester V	Operations Research
	Assignment	Based on the Linear programming Problem, Transportation problems, Assignment problems, Game theory and Networking related topics for Assignment	B.Sc. (H) Statistics, Semester V	Operations Research
	Mid-Term	-----	-----	-----
November	Theory	Modified dominance property to reduce the game matrix and solution to rectangular game with mixed strategy Networking: Shortest route and minimal spanning tree problem. Inventory Management: ABC inventory system, characteristics of inventory system. EOQ Model and its variations, with and without shortages, Quantity Discount Model with price breaks.	B.Sc. (H) Statistics, Semester V	Operations Research
	Practical	Problems based on game matrix: Graphical solution to $m \times 2$ / $2 \times n$ rectangular game and Mixed strategy, Dominance Principle. Networking problem: Minimal spanning tree problem and Shortest route problem	B.Sc. (H) Statistics, Semester V	Operations Research
December	Theory	EOQ Model and its variations, with and without shortages, Quantity Discount Model with price breaks.	B.Sc. (H) Statistics, Semester V	Operations Research
	Practical	Practical's based on optimal inventory policy for EOQ models and its variations and all-units quantity discounts model	B.Sc. (H) Statistics, Semester V	Operations Research

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Teaching Plan

Name of the Faculty: Dr.Nagendra Kumar Kalaparthi

Department: Statistics

Semester: I

Paper Name: Basic Statistics

Month		Topics	Course	Paper Code/Name
August	Theory	Elementary Statistics Concepts of a statistical population and sample from a population, quantitative and qualitative data, nominal, ordinal and time-series data, discrete and continuous data. Presentation of data by tables and by diagrams,	B.Sc. (H) Statistics, Semester I	Basic Statistics
	Practical	Problems based on graphical representation of data.	B.Sc. (H) Statistics, Semester I	Basic Statistics
September	Theory	Frequency distributions for discrete and continuous data, graphical representation of a frequency distribution by histogram and frequency polygon, cumulative frequency distributions (inclusive and exclusive methods). Descriptive Statistics Measures of location (or central tendency)	B.Sc. (H) Statistics, Semester I	Basic Statistics
	Practical	Problems based on measures of central tendency using raw data, grouped data and for change of origin and scale. Problems based on measures of dispersion using raw data, grouped data and for change of origin and scale.	B.Sc. (H) Statistics, Semester I	Basic Statistics


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October	Theory	Descriptive Statistics Measures of location (or central tendency) and dispersion, moments, measures of skewness and kurtosis, cumulants. Bi-variate data: Scatter diagram, principle of least-squares and fitting of polynomials and exponential curves a	B.Sc. (H) Statistics, Semester I	Basic Statistics
	Practical	Problems based on Moments using raw data, grouped data and for change of origin and scale. Problems based on relationships between moments about origin and central moments.	B.Sc. (H) Statistics, Semester I	Basic Statistics
	Assignment	Measures of central tendency, Dispersion Skewness, Kurtosis and Correlation.	B.Sc. (H) Statistics, Semester I	Basic Statistics
	Mid-Term Test	-----	-----	-----
November	Theory	Correlation and Regression Bivariate data: Definition, scatter diagram, simple, partial and multiple correlation (3 variables only), rank correlation.	B.Sc. (H) Statistics, Semester I	Basic Statistics
	Practical	Problems based on relationships between moments about origin and central moments. Problems based on Skewness and kurtosis. Problems based on Karl Pearson correlation coefficient (with/without change of scale and origin). Problems based on Spearman rank	B.Sc. (H) Statistics, Semester I	Basic Statistics
December	Theory	Simple linear regression, principle of least squares and fitting of polynomials and exponential curves.	B.Sc. (H) Statistics, Semester I	Basic Statistics

	Practical	Problems based on Lines of regression, angle between two lines of regression Fitting of polynomials and exponential curves.	B.Sc. (H) Statistics, Semester I	Basic Statistics
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. Kalpana Yadav

Department: Statistics

Semester: III

Month		Topics	Course	Paper Code/Name
August	Theory	Sampling distributions: definition of parameter, statistic, standard error and their concepts, Sampling distribution of various statistics. Introduction to hypothesis testing, formulation of null and alternative hypothesis.	G.E and B.A(P)	DSC-3 and G.E.3A Sampling Distributions
		Numerical Analysis: Factorial, finite differences and interpolation. Operators, E and divided difference. Newton's forward, backward and divided differences interpolation formulae	B.Sc. (H) III Sem	DSC-9 Mathematical Analysis
	Practical	Examples based on null and alternative approach.	G.E and B.A(P)	DSC-3 and G.E.3A Sampling Distributions
		Practical on Formation of difference table, fitting of polynomial and missing terms for equal interval of differencing. Also Based on Newton's Gregory forward difference and backward interpolation formula.	B.Sc. (H) III Sem	DSC-9 Mathematical Analysis

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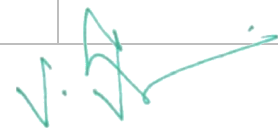
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September	Theory	Type I and Type II errors, level of significance and critical region. Large sample tests: for single mean, single proportion, difference of two means, difference of two proportions, difference of two standard deviations. Lagrange's interpolation formulae. Central differences, Gauss and Stirling interpolation formulae.	G.E and B.A(P) B.Sc. (H) III Sem	DSC-3 and G.E.3A Sampling Distributions DSC-9 Mathematical Analysis
	Practical	Examples based on Type I and Type II error. Practical work based on large sample tests. Based on Newton's divided difference, Lagrange's interpolation formula, Gauss forward, Gauss backward central difference interpolation formula, Stirling's central difference interpolation formula.	G.E and B.A(P) B.Sc. (H) III Sem	DSC-3 and G.E.3A Sampling Distributions DSC-9 Mathematical Analysis
October	Theory	Chi square distribution: Definition and derivation of pdf of χ^2 with degrees of freedom (d.f.) using m.g.f, nature of pdf curve for different degrees of freedom, mean, variance, m.g.f, cumulant generating function, mode, additive property and limiting form of Chi square distribution. Tests of significance and confidence intervals based on Chi-Square Distribution. Numerical integration. Trapezoidal rule, Simpson's one-third rule, three-eighth Rule.	G.E and B.A(P) B.Sc. (H) III Sem	DSC-3 and G.E.3A Sampling Distributions DSC-9 Mathematical Analysis


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				Analysis
	Practical	Practical based on Chi square distribution. Practical based on method of reversion of series, Trapezoidal Rule.	G.E and B.A(P) B.Sc. (H) III Sem	DSC-3 and G.E.3A Sampling Distributions DSC-9 Mathematical Analysis
	Assignment	Questions Based on Unit I and II Questions based on Chapter 1 and 2 of Numerical Analysis.	G.E and B.A(P) B.Sc. (H) III Sem	DSC-3 and G.E.3A Sampling Distributions DSC-9 Mathematical Analysis
	Mid-Term Test	Unit I Chapter 1 and 2	G.E and B.A(P) B.Sc. (H) III Sem	DSC-3 and G.E.3A Sampling Distributions DSC-9 Mathematical Analysis

November	Theory	Student's and Fishers t-distribution: Derivation of pdf, nature of probability curve with different degrees of freedom, mean, variance, moments and limiting form of the distribution, Distribution of sample correlation coefficient when population correlation coefficient is zero. Tests of significance and confidence intervals based on t distribution. Distribution of F statistic: derivation of pdf, nature of probability curve with different degrees of freedom, mean, variance, moments, mode and limiting form of the distribution, Test of significance and confidence intervals based on F distribution. Weddle's rule with error terms. Stirling's approximation to factorial n. Solution of difference equations of first order. Real Analysis-Unit III- Review of limit, continuity and differentiability, uniform Continuity and boundedness of a function. Rolle's and Lagrange's Mean Value theorems.	G.E and B.A(P)	DSC-3 and G.E.3A
	Practical	Practical based on t and F-distributions. Simpson's one-third rule, Simpson's three-eighth rule, Weddle's rule and also to find sum by Euler-Maclaurin summation formula.	G.E and B.A(P)	DSC-3 and G.E.3A
			B.Sc. (H) III Sem	DSC-9 Mathematical Analysis
			B.Sc. (H) III Sem	DSC-9 Mathematical Analysis


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December	Theory	Distribution of $\frac{1}{F(n_1, n_2)}$ of Relationship between t, F and χ^2 distributions.	G.E and B.A(P)	DSC-3 and G.E.3A Sampling Distributions
		Taylor's theorem with Lagrange's and Cauchy's form of remainder (without proof). Taylor's and Maclaurin's series expansions of $\sin x$, $\cos x$, $\log(1+x)$.	B.Sc. (H) III Sem	DSC-9 Mathematical Analysis
	Practical	Revision and doubt session of the practicals covered so far	G.E and B.A(P)	DSC-3 and G.E.3A Sampling Distributions
			B.Sc. (H) III Sem	DSC-9 Mathematical Analysis

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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester**

Name of the Faculty: Dr.M.S.RAVIKUMAR

Department: STATISTICS

Semester: I

Paper Name: Skill Enhancement Course (SEC): Advanced Spreadsheets Tools / 2346001001

Month		Topics	Course	Paper Code/Name
August	Theory	Templates, Efficiency, and Risk, Data Validation; Functions and Power functions, Array Formulae, Tables, Advanced Range Names, What-if-analysis: Goal-seek. Data tables, and Scenario Manager; Data analysis Tool Pak: Descriptive Statistics, Moving averages, Histogram, Covariance, correlation, and Regression analysis; solver add-in. Problem Solving using Solver, Integrating excel with other tools: MS word, outlook, Power Point, Access, Power BI.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
	Practical	Templates, Efficiency, and Risk, Data Validation; Functions and Power functions, Array Formulae, Tables, Advanced Range Names, What-if-analysis: Goal-seek. Data tables, and Scenario Manager; Data analysis Tool Pak: Descriptive Statistics, Moving averages, Histogram, Covariance, correlation, and Regression analysis; solver add-in. Problem Solving using Solver, Integrating excel with other tools: MS word, outlook, Power Point, Access, Power BI.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools

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September	Theory	Index and Match, Offset, Dynamic, Charting, Database functions, Text functions, and Error functions: IfError, IsError, Aggregate, Circular Reference, Formula Auditing, Floating-Point, Errors, Form Controls, Visual Basic. Recording Macros, Absolute and relative macros, editing macros, Use of spinner buttons and command buttons; Sub Procedure, Function Procedure; Working with Loops: Do_while loop, For_Next loop; Creating User Forms: Message Box, Input Box; If_Then_Else.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
	Practical	Index and Match, Offset, Dynamic, Charting, Database functions, Text functions, and Error functions: IfError, IsError, Aggregate, Circular Reference, Formula Auditing, Floating-Point, Errors, Form Controls, Visual Basic.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
October	Theory	Conditional Formatting, Charts that Inspire Slicers, Sparklines, Graphics Tricks and Techniques, Worksheet Automation using Macros: Absolute and relative macros, editing macros, Creating new functions using macros, Use of spinner buttons and command buttons.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
	Practical	Recording Macros, Absolute and relative macros, editing macros, Use of spinner buttons and command buttons; Sub Procedure, Function Procedure; Working with Loops: Do_while loop, For_Next loop; Creating User Forms: Message Box, Input Box; If_Then_Else.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
	Assignment	Syntax of all the Excel commands.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
	Mid-Term Test	-----	-----	-----
November	Theory	Conditional Formatting, Charts that Inspire Slicers, Sparklines, Graphics Tricks and Techniques, Worksheet Automation using Macros: Absolute and relative macros, editing macros, Creating new functions using macros, Use of spinner buttons and command buttons. Working with External Data, Advanced Uses of PivotTables, PowerPivot,	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools

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		Reporting with PowerPivot, Power query, Dashboard, Creating a spreadsheet in the area of: Loan and Lease statement; Ratio Analysis; Payroll Accounting;		
	Practical	Charts that Inspire Slicers, Sparklines, Graphics Tricks and Techniques, Worksheet Automation using Macros: Absolute and relative macros, editing macros, Creating new functions using macros, Use of spinner buttons and command buttons. Working with External Data, Advanced Uses of	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
December	Theory	Capital Budgeting, Portfolio Management, Breakeven analysis, and Sensitivity analysis; Operations Management: Constraint, Forecasting & Trend Analysis optimization, Assignment Problems, Depreciation Accounting; Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression Analysis.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools
	Practical	Loan and Lease statement; Payroll Accounting; Capital Budgeting, Graphical representation of data; Frequency distribution and its statistical parameters; Correlation and Regression Analysis.	B.Sc. (H) Statistics, Semester I	2346001001/ Advanced Spreadsheets Tools

Signature of the teacher

Name of the Faculty: Dr.M.S.RAVIKUMAR

Department: STATISTICS

Semester: III

Paper Name: Advanced Probability Distributions (APD) / 2372012302

Month		Topics	Course	Paper Code/Name
August	Theory	Negative Binomial Distribution: Probability distribution, particular cases, moment generating function, cumulants, limiting case, derivation of moments from binomial distribution and recurrence relation for probabilities of negative binomial distribution. Examples and applications based on the distribution. Hypergeometric Distribution: Probability distribution, mean, variance, approximation to Binomial Distribution and recurrence relation. Examples and	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College

		applications based on the distribution.		
	Practical	1. Practical based on application of Negative Binomial Distribution. 2. Practical based on fitting of Negative Binomial Distribution. 3. Practical based on application of Hypergeometric Distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
September	Theory	Geometric Distribution: Probability distribution, lack of memory property, moments and moment generating function. Examples and applications based on the distribution. Multinomial Distribution: Probability distribution and practical application. Rectangular or Uniform Distribution: Definition, probability distribution and cumulative probability distribution, moments, and moment generating function, characteristic function and mean deviation about mean. Examples and applications based on the distribution. Gamma Distribution: Definition and properties, probability distribution, mean, variance, moment generating function, cumulant generating function, additive property and limiting case. Examples and applications based on the distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
	Practical	4. Practical based on fitting of Geometric Distribution. 5. Practical based on lack of memory property of Geometric Distribution. 6. Practical based on application of Geometric Distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
October	Theory	Beta Distribution: Beta Distribution of the first kind: Definition, probability distribution and cumulative probability distribution, mean, variance and harmonic mean. Beta Distribution of the second kind: Definition, probability distribution, mean, variance and harmonic mean. Examples and applications based on the distributions. Exponential Distribution: Definition, probability distribution and cumulative probability distribution, moment generating function, mean, variance and lack of memory property. Examples	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions

		and applications based on the distribution.		
	Practical	7. Practical based on application of Multinomial Distribution. 8. Practical based on application of Rectangular Distribution. 9. Practical based on application of Gamma Distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
	Assignment	All the distributions definitions, and properties and statements.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
	Mid-Term Test	-----	-----	-----
November	Theory	Two Parameter Laplace Distribution: Definition, probability distribution, characteristic function and moments. Examples and applications based on the distribution. Standard Laplace (Double Exponential) Distribution: Definition, probability distribution, characteristic function and moments. Weibull Distribution: Probability distribution, moments and practical applications.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
	Practical	10. Practical based on application of Beta Distribution. 11. Practical based on application of Exponential Distribution. 12. Practical based on lack of memory property of Exponential Distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
December	Theory	Logistic Distributions: Probability distribution, moments and practical applications. Cauchy Distribution: Definition, probability distribution, characteristics function, additive property and moments. Examples and applications based on the distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions
	Practical	13. Practical based on application of Weibull Distribution. 14. Practical based on application of Logistic Distribution. 15. Practical based on application of Cauchy Distribution.	B.Sc. (H) Statistics, Semester III	2372012302 / Advanced Probability Distributions

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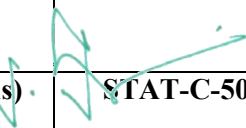
Teaching Plan 2023-24

Name of the Faculty: Dr. Alok Kumar Singh

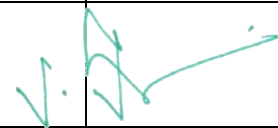
Department: Statistics

Semester: V

Month		Topics	Course	Paper Code/Name
August	Theory:	Overview of C, Constants, Variables and Data Types	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming
	Practicals:	Plotting of a graph Roots of a quadratic equation (with imaginary roots also)	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using
September	Theory:	Operators and Expressions, Managing Input and Output Operations, Decision Making and Branching, Develop programs to do statistical computing	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming
	Practicals:	Sorting of an array and hence finding median Mean, Median and Mode of a Grouped Frequency Data Variance and coefficient of variation of a Grouped Frequency Data Preparing a frequency table	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming
October		Decision Making and Looping, Develop programs to do statistical computing, Arrays, Develop programs to do statistical computing related to arrays, matrices etc,	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using


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	Theory:	Character Arrays, Strings		C/C++ Programming
	Practicals:	Value of n! using recursion Matrix addition, subtraction, multiplication Transpose and Trace Chi-square contingency table	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming
	<u>Assignment</u>	Based on topic covered up to September		
November	Theory	File Management in C, Develop programs to do statistical computing using files input/output files, User- defined Functions, Develop programs to do statistical computing using user defined functions, recursion.	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming
	Practicals:	t-test for difference of means Paired t-test, F-ratio test	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming
	Theory:	Structure and Pointers, Develop programs to do statistical computing with the concept	B.Sc. (Hons) Statistics	STAT-C-502 Statistical


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		of structures and pointers, Dynamic Memory Allocation and the Preprocessor		Computing Using C/C++ Programming
	Practicals:	Multiple and Partial correlation. Compute ranks and then calculate rank correlation Fitting of lines of regression	B.Sc. (Hons) Statistics	STAT-C-502 Statistical Computing Using C/C++ Programming



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Teaching Plan 2023-24

Name of the Faculty: Dr. Alok Kumar Singh

Department: Statistics

Semester: GE-1 Basic Statistics

Paper: GE-I (Basic Statistics)

Month		Topics	Course	Paper Code/Name
September-2023	Theory	Introduction to statistics, development, importance and scope of statistics Measurement scales and types of data . Presentation of data by tables and graphs Measures of central tendency, cumulative frequency distributions	GE-1	GE-1, Basic Statistics
	Practicals	Graphical representation of data	GE-1	GE-1, Basic Statistics
	Tutorials	--	--	--
October-2023	Theory	Measures of Dispersion, Moments, skewness, kurtosis, cumulants, Bivariate data	GE-1	GE-1, Basic Statistics
	Practicals	Problems based on measures of central tendency	GE-1	GE-1, Basic Statistics
	Tutorials	--	--	--


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November-2023	Theory	Bivariate data, scatter diagram, principle of least squares and curve fitting, Pearson's correlation, rank correlation,		
	Practicals	Practicals based on measures of dispersion	GE-1	GE-1, Basic Statistics
	Assignment	Assignment based on Unit I and Unit II	GE-1	GE-1, Basic Statistics
	Tutorials	--	--	--
December-2023	Theory	Fitting of polynomials, exponential curves Karl Pearson correlation coefficient Partial and multiple correlations		
	Practicals	Regression, Multiple and partial correlation	GE-1	GE-1, Basic Statistics
	Assignment Test	Practical Assignment Test	GE-1	GE-1, Basic Statistics
	Tutorials	--	--	--



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

ODD SEMESTER 2023-24

Name of the Faculty: Dr. Tanuja Sriwastava

Department: Statistics

Semester: I, III, V

Month		Topic	Course	Paper Code/ Name
August	Theory	Integral Calculus: Review of integration and definite integral.	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		Introduction to times series data, application of time series from various fields, Components of a times series, Decomposition of time series. Estimation of trend by free hand curve method, method of semi averages, fitting mathematical curve and growth curves.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
	Practical	Verification of Euler's Theorem.	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		1. Fitting and plotting of modified exponential curve by different methods. 2. Fitting and plotting of Gompertz curve by different methods.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
		Applications of Partial Fraction Theorem. 2 Problems based on (covariance) stationary processes	B.Sc. (H) Statistics, Semester V	STAT-C-501 Stochastic Processes and Queuing Theory
September	Theory	Differentiation under integral sign, Double integral, changes of order of integration.	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		Introduction to savings & Importance of savings, Management of spending & exercising financial discipline, financial goals (individuals), Steps of financial planning, Meaning, importance & measurement of Time value of money, Concept of Annuity, Concept and calculation of EMI, Real vs Nominal Return	Semester I	VAC 1: Financial Literacy
		Estimation of trend by method of moving averages. Detrending: effect of elimination of trend on other components of a time series. Seasonal Component: Estimation of seasonal component by the methods of – simple averages Ratio to Trend, Ratio to Moving Averages and Link Relative method. Deseasonalization	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
	Practical	Applications of differentiation	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		Numerical questions based on unit 1.	Semester I	VAC 1: Financial Literacy

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				Literacy
		3. Fitting and plotting of logistic curve by different methods. 4. Fitting of trend by Moving Average Method for given extent and for estimated extent. 5. Fitting of trend by Spencer's 15-point and 21-point formulae.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
		To check whether the given chain is irreducible or not. Computation of probabilities in case of generalizations of independent Bernoulli trials	B.Sc. (H) Statistics, Semester V	STAT-C-501 Stochastic Processes and Queuing Theory
October	Theory	Beta and Gamma functions: Properties and relationship between them. Linear partial differential equations of first order.	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		Types of Bank Account and Cards, Offline/Online opening Accounts, Different Banking and Digital Payment, Digital Banking Products, Mobile Banking, Cards, EMV Technology, Cash Re-Cyclers, Cash Deposit Machines – CDRs, Branchless Banking, Automated Teller Machines, POS (point of sale) Terminals, Marketing of Digital Banking Products and new developments in Digital Banking, Payment Systems BHIM/UPI, Internet Banking, Financial Frauds, and Debt trap	Semester I	VAC 1: Financial Literacy
		Cyclic Component: Harmonic Analysis. Random Component: Variate difference method. Stationary Time series: Weak stationarity, autocorrelation function and the correlogram. Some Special Processes: Moving-average (MA) process and Autoregressive (AR) processes.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
	Practical	Applications of Integration	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		A project assigned to the students based on various financial products.	Semester I	VAC 1: Financial Literacy
		6. Measurement of Seasonal indices: a) Simple Averages method b) Ratio-to-Trend method c) Ratio-to-Moving Average method d) Link Relative method	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
		Simulation and applications of Poisson processes. Calculation of probabilities for given birth and death processes	B.Sc. (H) Statistics, Semester V	STAT-C-501 Stochastic Processes and Queuing Theory
	Theory	Homogeneous linear partial differential equations with constant coefficients. Different cases for complimentary functions and particular integrals.	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus

	Process and objectives of investment, Concept and measurement of return & risk, Introduction to portfolio risk and return, Diversification & Portfolio formation, Mutual fund & Pension Funds schemes including SIP, Risk Management and need for protection planning, Risk of mortality, health, disability, and property, Life and non-life insurance schemes, Inflation in the time value of money, Health insurance	Semester I	VAC 1: Financial Literacy
	Estimation of the parameters of AR (1) and AR (2). Autocorrelation functions of AR(1) and AR(2) processes. Introduction to methods of Forecasting a time series. Forecasting by the methods of Exponential smoothing. Introduction to ARMA and ARIMA models.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
Practical	Applications of Differential Equations	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
	A project related to building a dummy portfolio of stocks and tracking their returns.	Semester I	VAC 1: Financial Literacy
	7. Estimation of variance of the random component by variate difference method. 8. Forecasting by exponential smoothing.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
	Calculation of probabilities for ruin problems. 7. Problems based on (M/M/1) queuing models	B.Sc. (H) Statistics, Semester V	STAT-C-501 Stochastic Processes and Queuing Theory
Assignment	Based on the numerical problems of differential and integral calculus	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
	Based on the application of financial literacy	Semester I	VAC 1: Financial Literacy
	Based on the component of time series.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
Test	Internal Examination will be based on course covered in theory classes.	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus

			Semester I	VAC 1: Financial Literacy
			B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
December	Theory	Different cases for complimentary functions and particular integrals (Continued).	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		Introduction to personal Income Tax, Basic definitions, Heads of Income, Personal Tax Planning- Tax Exemptions and Deduction, Income Tax slabs, Income Tax calculation	Semester I	VAC 1: Financial Literacy
		Short-term forecasting methods Brown's discounted regression, Box-Jenkins method and Bayesian forecasting.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
	Practical	Verify that the area under the curve is unity under the given p.d.f. and also calculate	B.Sc. (H) Statistics, Semester I	DSC 3: Calculus
		Students may file a dummy IT return.	Semester I	VAC 1: Financial Literacy
		9. Plotting of Correlogram of moving average.	B.Sc. (H) Statistics, Semester V	STAT-DSE – 1 (A): Time Series Analysis
		Based on Gambler's Ruin Problem	B.Sc. (H) Statistics, Semester V	STAT-C- 501 Stochastic Processes and Queuing Theory

Signature of the teacher



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Odd Semester -2022-23

Name of the Faculty: Dr. Dipika

Department: Statistics

Semester: I, III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Introduction to Operations Research (O.R.): Definition and phases of O.R. Model building, various types of O.R. problems.	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
		Concept of population and sample, complete enumeration versus sampling, sampling and non-sampling errors. Types of sampling: non-probability and probability sampling, basic principles of sample survey, Steps involved in survey sampling.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		Fundamentals of statistics. Diagrammatic representation of data. Measures of central tendency: location and positional. Partition values,	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
	Practicals			
September	Theory	Linear Programming Problem (L.P.P.): Mathematical formulation of the L.P.P, graphical solutions of L.P.P.	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
		Simple random sampling (SRS) with and without replacement, their properties, procedures of selecting a simple random sample, estimation of population mean and total, sampling for proportions, determination of sample size, bivariate population.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation. Moments: raw and central, Measures of skewness and kurtosis. Bivariate data: definition, scatter diagram.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory

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October	Practicals	1. To select SRS with and without replacement. 2. For a population of size 5, estimate population mean, population mean square and population variance. Enumerate all possible samples of size 2 by WR and establish all properties relative to SRS. 3. For a population of size 5, estimate population mean, population mean square and population variance. Enumerate all possible samples of size 2 by WOR and establish all properties relative to SRS.	B.Sc.(H) Statistics	DSCC VI: sample surveys
	Theory	1. Problems based on graphical representation of data. Histograms (equal class intervals and unequal class intervals), frequency polygon, ogive curve. 2. Problems based on mean using raw data, grouped data for change of origin and scale. 3. Problems based on arithmetic mean and to find missing frequencies given arithmetic mean. 4. Problems based on median and partition values using formulae and to find them graphically also. 5. Problems based on mode by using formula, graphically, method of grouping.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
		Simplex method for solving L.P.P. Charne's M-technique for solving L.P.P. involving artificial variables.	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
		Stratified Random Sampling: Estimation of population mean and total, Allocation of sample in different strata using equal, proportional, optimum and Neyman allocations, comparison with SRS, practical difficulties in adopting Neyman allocation, estimation of gain in precision due to stratification.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		Correlation and regression: Karl Pearsons coefficient of correlation, Spearman's rank correlation coefficient, lines of regression, properties of regression coefficients, angle between two regression lines. Principle of least-square and fitting of linear curve.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory

	Practical	4. Estimate mean, standard error and the sample size for SRSWOR. 5. Stratified Sampling: allocation of sample to strata by proportional. Compare the efficiencies of above method relative to SRS. 6. Stratified Sampling: allocation of sample to strata by Neyman's methods. Compare the efficiencies of above method relative to SRS. 7. Estimation of gain in precision in stratified sampling.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		6. Problems based on mean deviation and standard deviation. 7. Problems based on combined mean and variance. 8. Problems based on coefficient of variation. 9. Comparison of data using consistency approach. 10. Problems on skewness based on mean, median, mode and standard deviation. 11. Problems based on central moments. 12. Relationships between moments about origin and central moments. 13. Problems based on skewness and kurtosis.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory



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November	Theory	Special cases of L.P.P. Concept of Duality in L.P.P: Dual simplex method. Economic interpretation of Duality.	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
		Systematic Random Sampling: Estimation of population mean and total, comparison with SRS and stratified sampling in the presence of linear trend, Yates' correction, definition of circular systematic sampling. Ratio method of estimation, first approximation to ratio estimator and its bias, first approximation to variance of ratio estimator, estimator of variance of ratio estimator, comparison of ratio with SRS. Regression method of estimation, first approximation to linear regression estimator and its bias.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		Probability: Introduction, Random experiment, sample point and sample space, event, algebra of events, Definition of Probability - classical, relative frequency and axiomatic approaches to probability, merits and demerits of these approaches (only general ideas to be given). Theorems on probability,	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
	Practical	8. Comparison of systematic sampling with stratified sampling and SRS in the presence of a linear trend and using end's correction. 9. Ratio estimation: Calculate the population mean or total of the population. Calculate mean squares. Compare the efficiency of ratio estimator relative to SRS.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		14. Problems based on Karl Pearson correlation coefficient. 15. Problems based on Spearman's rank correlation with ties. 16. Problems based on Spearman's rank correlation without ties. 17. Problems based on lines of regression and estimated values of variables.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
	Assignment	Assignments will be based on unsolved problems	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
		Assignments will be based on units I & II	B.Sc.(H) Statistics	DSCC VI: sample surveys

		Assignments will be based on units I & II	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
	Test	Internal Examination will be based on course covered in theory classes.	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
			B.Sc.(H) Statistics	DSCC VI: sample surveys
			B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
December	Theory	Post-optimality analysis.	B.Sc. (H) Statistics	STAT-DSE-2(A): Operations Research
	-	First approximation to variance of the linear regression estimator, estimator of variance of the linear regression estimator, comparison with SRS and ratio estimator.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		conditional probability, independent events: pairwise and mutually independent. Bayes theorem and its applications.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory
	Practical	10. Regression estimation: Calculate the population mean or total of the population. 11. Calculate mean squares. Compare the efficiency of regression estimator relative to SRS.	B.Sc.(H) Statistics	DSCC VI: sample surveys
		18. Problems on regression coefficients.	B.A. Program with Statistics as minor	Descriptive Statistics and probability theory



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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. SURESH K
Department: Tamil
UGCF Semester: I

2023 ODD Semester				
Month	Theory/ Practical	Paper Name & Topics	Course	UPC
August	Theory	<u>An Introduction to Tamil Language</u> Introduction to art of Language	B.A Prog Tamil DSC	UPC : 2082661101
	Theory	<u>Basic Tamil</u> Introduction to Tamil Vowel & Consonant	Common Prog. Group-GEL-B	UPC : 2085001110
	Theory	<u>Basic Tamil</u> • Introduction to sounds along with sound –images (Alphabets and Numbers)	Common Prog. Group-AEC-B	UPC : 2081001035
September	Theory	<u>An Introduction to Tamil Language</u> Introduction to Indian & Dravidian Languages	B.A Prog Tamil DSC	UPC : 2082661101
	Theory	<u>Basic Tamil</u> • Introduction to Tamil Pronoun & its Subjunctives Tamil Noun, Numbers & its Subjunctives • Tamil adjectives & prepositions	Common Prog. Group-GEL-B	UPC : 2085001110
	Theory	<u>Basic Tamil</u> • Introduction to Noun, Pronoun & Prepositions	Common Prog. Group-AEC-B	UPC : 2081001035


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Month	Theory/ Practical	Paper Name & Topics	Course	UPC
October	Theory / Assignment	<u>An Introduction to Tamil Language</u> History of Tamil Script	B.A Prog Tamil DSC	2082661101
	Theory/ Assignment	<u>Basic Tamil</u> • Introduction to Verb & Time/Tense • Conjugation of different verbs	Common Prog. Group-GEL-B	2085001110
	Theory Assignment	<u>Basic Tamil</u> Script introduction- Introduction of Numerals (up to 100)	Common Prog. Group-AEC-B	2081001035
November	Theory Mid-Term Test	<u>An Introduction to Tamil Language</u> Origin and Development of Tamil Language	B.A Prog Tamil DSC	2082661101
	Theory Mid-Term Test	<u>Basic Tamil</u> • Making simple sentences in Tamil • Making Negative sentences in Tamil	Common Prog. Group-GEL-B	2085001110
	Theory Mid-Term Test	<u>Basic Tamil</u> Introducing basic simple Tamil sentence formation	Common Prog. Group-AEC-B	2081001035
December	Theory	<u>An Introduction to Tamil Language</u> <u>Introduction to Dravidian Languages.</u>	B.A Prog Tamil DSC	2082661101
	Theory	<u>Basic Tamil</u> Conjunctions and its usage	Common Prog. Group-GEL-B	2085001110
	Theory	<u>Basic Tamil</u> Everyday Vocabulary:	Common Prog. Group-AEC-B	2081001035



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. SURESH K
Department: Tamil
UGCF Semester: III

2023 ODD Semester

Month	Theory/ Practical	Paper Name & Topics	Course	UPC
August	Theory	<u>Creative Writing in Tamil</u> • Definition of creative writing • Qualities of creator (Writer)	Common Prog. Group-GEL-A	2084002002
	Theory	<u>Intermediate Tamil</u> • Dynamics of Tamil word	Common Prog. Group-GEL-B	2084002001
	Theory	<u>Intermediate Tamil</u> • Rules of Verb formation	Common Prog. Group-AEC-B	2081002047
September	Theory	<u>Creative Writing in Tamil</u> • Characters of creator • Creation and Creator	Common Prog. Group-GEL-A	2084002002
	Theory	<u>Intermediate Tamil</u> • Rules of Verb formation	Common Prog. Group-GEL-B	2084002001
	Theory	<u>Intermediate Tamil</u> • Subject, Object, Verb construction (SOV structure)	Common Prog. Group-AEC-B	2081002047
October	Theory	<u>Creative Writing in Tamil</u> • Introduction of Fiction writing, • Prose and Drama	Common Prog. Group-GEL-A	2084002002
	Theory	<u>Intermediate Tamil</u>	Common Prog.	2084002001

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	Assignment	Subject, Object, Verb construction (SOV structure)	Group-GEL-B	
	Theory	<u>Intermediate Tamil</u> Making simple sentences, Interrogative sentences	Common Prog. Group-AEC-B	2081002047

Month	Theory/Practical	Paper Name & Topics	Course	UPC
November	Theory	<u>Creative Writing in Tamil</u> - Definition of Poetry - Free verses and Haiku	Common Prog. Group-GEL-A	2084002002
	Theory	<u>Intermediate Tamil</u> Making simple sentences, Interrogative sentences, Exclamatory sentences.	Common Prog. Group-GEL-B	2084002001
	Theory	<u>Intermediate Tamil</u> Exclamatory sentences.	Common Prog. Group-AEC-B	2081002047
December	Theory	<u>Creative Writing in Tamil</u> - Creative skills of Poem, Short story - One act play	Common Prog. Group-GEL-A	2084002002
	Theory	<u>Intermediate Tamil</u> Technical Terms	Common Prog. Group-GEL-B	2084002001
	Theory	<u>Intermediate Tamil</u> Technical Terms	Common Prog. Group-AEC-B	2081002047



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Prof. S. Seenivasan
Department: Tamil
UGCF Semester: I

2023 ODD Semester

Month	Theory/Practical	Paper Name & Topics	Course	UPC
August	Theory	<u>INTRODUCTION TO TAMIL FOLKLORE</u> • Introduction to Tamil Folklore	Common Prog. Group-GEL-A	2085001111
	Theory	<u>TRANSLATION AND INTERPRETATION IN TAMIL</u> -History of Tamil Translation & Interpretation, qualities of Translator & Interpreter. -Purpose, Problems & Usages of Translation & Interpretation.	Common Prog. Group-AEC-A	2081001017
September	Theory	<u>INTRODUCTION TO TAMIL FOLKLORE</u> • Folklore and other Arts	Common Prog. Group-GEL-A	2085001111
	Theory	<u>TRANSLATION AND INTERPRETATION IN TAMIL</u> -Basic requirements: Knowledge of Source Language (SL) and Target Language (TL) -Target groups: Translation - Readers from different fields	Common Prog. Group-AEC-A	2081001017
October	Theory	<u>INTRODUCTION TO TAMIL FOLKLORE</u> • Folk Tradition and Culture of Tamils	Common Prog. Group-GEL-A	2085001111

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	Theory Assignment	<u>TRANSLATION AND INTERPRETATION IN TAMIL</u> -Interpretation - Person/group from different profession - Methods of Translation and Interpretation	Common Prog. Group-AEC-A	2081001017
November	Theory Mid-Term Test	<u>INTRODUCTION TO TAMIL FOLKLORE</u> • Tamil Folk Arts and Crafts	Common Prog. Group-GEL-A	2085001111
	Theory Mid-Term Test	<u>TRANSLATION AND INTERPRETATION IN TAMIL</u> -Types: Literary, Administrative, Legal, Technical, and Knowledge based etc. -Review of sample translations	Common Prog. Group-AEC-A	2081001017
December	Theory	<u>INTRODUCTION TO TAMIL FOLKLORE</u> • History of Tamil Folklore	Common Prog. Group-GEL-A	2085001111
	Theory	<u>TRANSLATION AND INTERPRETATION IN TAMIL</u> -Practical Translation: Tamil to other languages and vice versa -Interpretation practice: Tamil to other languages and vice versa	Common Prog. Group-AEC-A	2081001017



**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Prof. S. Seenivasan
Department: Tamil
UGCF Semester: III

2023 ODD Semester

Month	Theory/Practical	Paper Name & Topics	Course	UPC
August	Theory	STUDY OF TAMIL NOVELS • Introduction to Tamil Fiction • Creation and Creator	B.A Prog Tamil DSC	2082662301
	Theory	JOURNALISTIC WRITINGS IN TAMIL • Brief History of Tamil Journalism • Journalistic writing and reporting from the field	Common Prog. Group-AEC-A	2081002017
September	Theory	STUDY OF TAMIL NOVELS • Role of Fiction in Tamil Literature • Early period Novels	B.A Prog Tamil DSC	2082662301
	Theory	JOURNALISTIC WRITINGS IN TAMIL • Types of writings based on investigation, news covering, reporting,	Common Prog. Group-AEC-A	
October	Theory	STUDY OF TAMIL NOVELS • Narration and Folk Elements • Language in Novel	B.A Prog Tamil DSC	2082662301
	Assignment			
	Theory	JOURNALISTIC WRITINGS IN TAMIL • Writing, editing and giving suitable titles, feature writing and column writing	Common Prog. Group-AEC-A	2081002017
	Assignment			

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November	Theory	STUDY OF TAMIL NOVELS • Characterization and Novel • Plot and Novel	B.A Prog Tamil DSC	2082662301
	Mid Term Test			
	Theory	<u>JOURNALISTIC WRITINGS IN TAMIL</u> • Editing, Editorial, Proof- Reading and Ethics	Common Prog. Group-AEC-A	2081002017
December	Mid Term Test			
	Theory	STUDY OF TAMIL NOVELS • Socio and Cultural Reflections in Novel • Regionalism in Novels	B.A Prog Tamil DSC	2082662301
	Theory	<u>JOURNALISTIC WRITINGS IN TAMIL</u> • Usages of Interview- Interview with different persons of various social strata.	Common Prog. Group-AEC-A	2081002017



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**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Prof. S. Seenivasan
Department: Tamil
CBCS Semester: V

2023 ODD Semester

Month	Theory/Practical	Topics	Course	Paper code/Name
August	Theory	<u>Selected Texts : Novel & Short Story (Tamil)</u> History of Tamil Novel Literature	B.A Prog Tamil Discipline	62087504
September	Theory	<u>Selected Texts : Novel & Short Story (Tamil)</u> Characterization of the Novel THAGANAM	B.A Prog Tamil Discipline	62087504
October	Theory Assignment	<u>Selected Texts : Novel & Short Story (Tamil)</u> Social History of the workers in Grave yards Thaganam Novel in History of Tamil Novel Literature	B.A Prog Tamil Discipline	62087504
November	Theory Mid Term Test	<u>Selected Texts : Novel & Short Story (Tamil)</u> <u>Plot of Thaganam Novel</u> <u>Modern Short story and Thaganam Novel</u>	B.A Prog Tamil Discipline	62087504
December	Theory	<u>Selected Texts : Novel & Short Story (Tamil)</u> Cultural Reflections of Society in Thaganam Novel	B.A Prog Tamil Discipline	62087504


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Prof. S. Seenivasan, TIC-Dept. of Tamil



Sri Venkateswara College

Semester wise Teaching Plan 2023-2024 Odd Semester

Name of the Faculty: Dr. T. SATHEESH

Department: Telugu

Semester: I, III

Month	Theory/ Practical/ Test	Topics	Course	Paper Code/Name
August	Theory	Origin and Development of Telugu short story	B.A. (Prog.) I Sem	DSC-1 Study of literary texts: Telugu Short Stories
	Theory	Telugu Sathaka sahithyam: An Introduction	Comm. (Prog.) III Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Introduction to Telugu Vowel & Consonant sounds & along with the sound-image	Comm. (Prog.) I Sem	AEC (B)-I Basic Telugu
	Theory	Compound verbs Making compound sentences in Telugu using conjunction	Comm. Prog. III sem	AEC (B)-II Intermediate Telugu
September	Theory	Origin and Development of Telugu short story	B.A. (Prog.) I Sem	DSC-1 Study of literary texts: Telugu Short Stories
	Theory	Features of Sathakam Categories in Sathaka sahithyam	Comm. (Prog.) III Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Script introduction Introduction of Numerals (up to 70+30)	Comm. (Prog.) I Sem	AEC (B)-I Basic Telugu
	Theory	Making complex sentences in Telugu	Comm. Prog. III sem	AEC (B)-II Intermediate Telugu
	Assignment	Questions from the topics Origin and Development of Telugu short story Telugu Sathaka Sahithyam	B.A. (Prog.) I Sem B.A. (Prog.) III Sem	DSC-1 Study of literary texts: Telugu Short Stories GE-2 Telugu Sathaka Sahithyam
October	Theory	Features of Telugu short story And Select short stories	B.A. (Prog.) I Sem	DSC-1 Study of literary texts: Telugu Short Stories

	Theory	Sumati Sathakam (1-20 Poems)	Comm. (Prog.) III Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Introduction to Telugu Noun & Pronoun, its Subjunctives Telugu qualifiers/object	Comm. (Prog.) I Sem	AEC (B)-I Basic Telugu
	Theory	Reading comprehension	Comm. Prog. III sem	AEC (B)-II Intermediate Telugu
	Mid-Term Test	Questions from the topics	B.A. (Prog.) I Sem B.A. (Prog.) III Sem	DSC-1 Study of literary texts: Telugu Short Stories GE-2 Telugu Sathaka Sahithyam
November	Theory	Select short stories	B.A. (Prog.) I Sem	DSC-1 Study of literary texts: Telugu Short Stories
	Theory	Bhaskara Sathakam (1-20 Poems)	B.A. (Prog.) III Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Telugu prepositions Conjunctions and their usage	Comm. (Prog.) I Sem	AEC (B)-I Basic Telugu
	Theory	Paragraph and letter Writing Conversation writing	Comm. Prog. III sem	AEC (B)-II Intermediate Telugu
December	Theory	Select short stories	B.A. (Prog.) I Sem	DSC-1 Study of literary texts: Telugu Short Stories
	Theory	Sathakam (1-20 Poems)	Comm. (Prog.) III Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Making simple sentences in Telugu (basic syntactical rules)	Comm. (Prog.) I Sem	AEC (B)-I Basic Telugu
	Theory	Translation from English to Telugu Translation from Telugu to English	Comm. Prog. III sem	AEC (B)-II Intermediate Telugu



Signature of the Teacher



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Semester wise Teaching Plan 2023-2024 Odd Semester

Name of the Faculty: Dr. Dattaiah Attem

Department: Telugu

Semester: I, III, V

Month	Theory/ Practical/Test	Topics	Course	Paper Code/Name
August	Theory	Kanyaka – Gurajada Janmabhoomi–Rayaprolu Venkata Subba Rao	B.A. (Prog.) V Sem	DSE-V Modern Telugu poetry and drama
	Theory	Pre-Nannaya Literature.	B.A. (Prog.) III Sem	DSC-III History of Telugu Literature (Up to 15th Century)
	Theory	Kavitravam (Nannaya, Tikkana, Errana): An Introduction	Comm. (Prog.) I Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation and Interpretation: An Introduction	Comm. (Prog.) I Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	Beginnings of Communication Era, Early Telugu Journals and Editors Print, Electronic and New Media Editor and Editorial department, Journalist	Comm. Prog. III sem	AEC (A)-II Journalistic Writings in Telugu
September	Theory	Anugna – Pingali & Katuri Smasaanavaati - Jashuva	B.A. (Prog.) V Sem	DSE-V Modern Telugu poetry and drama
	Theory	Nannaya Era	B.A. (Prog.) III Sem	DSC-III History of Telugu Literature (Up to 15th Century)
	Theory	Kavitravam (Nannaya, Tikkana, Errana): An Introduction	Comm. (Prog.) I Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation and Interpretation: An Introduction	Comm. (Prog.) I Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	News, News collection and writing, Lead, Body, Column writing and Feature writing,	Comm. Prog. III sem	AEC (A)-II Journalistic Writings in Telugu

		Editor and Editorial, Interview and Reporting, investigation,		
	Assignment	Questions from the topics	-	-
October	Theory	Daasabodha – Gadiyaram Venkata Sesha Sastry Mahaprasthanam – Sri Sri	B.A. (Prog.) V Sem	DSE-V Modern Telugu poetry and drama
	Theory	Sivakavi Yugam and Ramayana Poets	B.A. (Prog.) III Sem	DSC-III History of Telugu Literature (Up to 15th Century)
	Theory	Ramayana Poets (Ranganatha, Bhaskara, Molla): An Introduction	B.A. (Prog.) I Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation Theories, Methods and Problems of translation	Comm. (Prog.) I Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	news covering, editing and giving suitable titles Elements and stages of journalistic	Comm. Prog. III sem	AEC (A)-II Journalistic Writings in Telugu
	Mid-Term Test	Questions from the topics	-	-
November	Theory	Sankranti–Tummala Sitaramamurthy Adviteeyam–Balagangadhara Tilak	B.A. (Prog.) V Sem	DSE-V Modern Telugu poetry and drama
	Theory	Tikkana Yugam	B.A. (Prog.) III Sem	DSC-III History of Telugu Literature (Up to 15th Century)
	Theory	Prabandha poets or Asta Diggaja poets and their: An Introduction	B.A. (Prog.) III Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation Theories, Methods and Problems of translation	Comm. (Prog.) I Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	Journalistic writing and reporting from the field Conducting Interviews and debates with a demonstration Analysis of both evil and sound samples of writing for the media	Comm. Prog. III sem	AEC (A)-II Journalistic Writings in Telugu
December	Theory	N.G.O - Acarya Atreya	B.A. (Prog.) V Sem	DSE-V Modern Telugu poetry and drama

	Theory	Srinatha Yugam	B.A. (Prog.) I Sem	DSC-III History of Telugu Literature (Up to 15th Century)
	Theory	History of Telugu people: An Introduction	B.A. (Prog.) I Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Practical and Machine Translation and Interpretation practice	Comm. (Prog.) III Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	Freelancing: scope and worthw hileness of the topic Editing and Proof-reading Laws and ethics in Journalistic writings Writing and reporting: Practical components	Comm. (Prog.) I Sem	AEC (A)-II Journalistic Writings in Telugu

Signature of the Teacher

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SEMESTER WISE TEACHING PLAN (AUGUST 2023- DECEMBER 2023)
SRI VENKATESWARA COLLEGE

Faculty Name: Prof. Anita Verma , Department: Zoology; Semester: III (Odd Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
AUGUST	THEORY (1 PERIOD)	UNIT- 4: Physiology of Respiration Overview of respiratory system; Mechanism of respiration, Respiratory volumes and capacities;	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	PRACTICAL (4 PERIODS)	Preparation of haemin and haemochromogen crystals.	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	NO CLASSES	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	NO CLASSES	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Protista, Porifera, Cnidaria. Study of museum specimens: Amoeba, Euglena, Paramecium, Sycon, Euplectella, Obelia, Physalia, Aurelia, Metridium.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY
	THEORY (1 PERIOD)	UNIT- 4: Physiology of Respiration Transport of oxygen and carbon dioxide in blood; Dissociation curves and the factors influencing it;	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS प्रधानाचार्य श्री. वेकटेश्वर स्वामी Sri Venkateswara College दिल्ली विश्वविद्यालय धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

SEPTEMBER		regulation of respiration.		
	PRACTICAL (4 PERIODS)	To understand the components of blood, their functions and Hematopoiesis. Measurement and statistical analysis of variations observed in the student population in the class for the following parameters: White blood cells using haemocytometer Hemoglobin Blood pressure	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit IV: Respiratory Physiology Structure and function of respiratory tract and lungs; Ventilation, External and Internal respiration;	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	Preparation of temporary mount of neurons	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	STUDY OF GENERAL CHARACTERISTICS AND CLASSIFICATION OF Platyhelminthes AND Nematelminthes. STUDY OF larval stage of Taenia solium, Male and female Ascaris lumbricoides. General Characteristics and Classification up to classes OF Annelida. Study of museum specimens: Aphrodite, Nereis, Chaetopterus, Pheretima, Hirudinaria.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY

Aditya

V. B.

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OCTOBER	THEORY (1 PERIOD)	UNIT- 5: Renal Physiology Structure of kidney and its functional unit; Mechanism of urine formation MID-TERM TEST	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	PRACTICAL (4 PERIODS)	Measurement and statistical analysis of variations observed in the student population in the class for the following parameters: Red blood cells using haemocytometer Examination of histological sections of mammalian oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, kidney. To study whole blood hemolysis with ammonium chloride solution. Detection of abnormal constituents in urine and their physiological significance.	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit IV: Respiratory Physiology: Transport of oxygen and carbon dioxide in blood. Unit VI: Renal Physiology: Functional anatomy of kidney MID-TERM TEST	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1) Preparation of haemin and haemochromogen crystals. 2) Haemoglobin estimation using Sahli's haemoglobinometer. 3) Determination of ABO Blood group.	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
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	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Arthropoda. Study of museum specimens: Palaemon, Cancer, Limulus, Palamnaeus, Scolopendra. ZOO VISIT FOR PROJECT WORK	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY
NOVEMBER	THEORY (1 PERIOD)	UNIT- 5: Renal Physiology Regulation of water balance; Regulation of acid-base balance. ASSIGNMENT: PPT	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	PRACTICAL (4 PERIODS)	Revision of Examination of histological sections of mammalian oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, kidney. Study of Electrocardiogram; Analysis of ECG records and calculation of heart rate. Revision of other Practicals and Mock Practicals	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit VII: Reproductive Physiology: Structure of testis and ovary; Spermatogenesis and Oogenesis. ASSIGNMENT: PPT	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1) Recording of blood pressure using a Sphygmomanometer. 2) Examination and detailed study of permanent histological sections of mammalian: Kidney, Pancreas, Testis and Ovary. 3) Preparation of temporary mount of blood cells (blood film preparation).	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY


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	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Mollusca, Echinodermata. Study of museum specimens: Chiton, Dentalium, Pila, Unio, Octopus, Pentaceros, Echinus, Cucumaria, Antedon.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY
DECEMBER	THEORY (1 PERIOD)	ASSIGNMENT ASSESSMENT: PPT	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	PRACTICAL (4 PERIODS)	Practical Exam	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit II: Functioning of Excitable Tissue (Nerve and Muscle): Mechanism of muscle contraction (Sliding filament theory). ASSIGNMENT ASSESSMENT :PPT	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	Examination and detailed study of permanent histological sections of mammalian Stomach, Duodenum, Liver, Lung REVISION AND TEST	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	REVISION AND TEST	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY



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**SEMESTER WISE TEACHING PLAN (2023-2024)****SRI VENKATESWARA COLLEGE****August-December, 2023****Name of the Faculty: Prof. Vartika Mathur****Department: Zoology****Semester: III, V (Odd)**

Month		Topics	Course	Paper Code/Name
AUGUST	Theory: (1 period)	Introduction to Wildlife: Values of wildlife - positive and negative; Conservation ethics; Importance of conservation; Causes of depletion	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
	Theory: (1 period)	Introduction to Animal Behavior, history of Ethology	B. Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals (4 periods)	Instructions for maintaining records; Simulation exercises using beads or seeds to study the Mendel's laws and gene interactions,	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Practicals (4 periods)	Instructions for maintaining records, Introduction to Animal Behavior and overview of exercises	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals: (2+2 periods)	Instructions for maintaining records, Introduction to Wildlife conservation & management and overview of exercises	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
SEPTEMBER	Theory: (1+1) periods	Population Estimation: Faecal analysis of ungulates and carnivores: Faecal samples, slide preparation and hair identification	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
		Pioneers of Modern Ethology, Proximate and ultimate causes of behaviour; Stereotyped behaviours (Orientation, Reflexes); Individual behavioural patterns	B. Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals:	Verification of Mendelian ratios using Chi-square analysis/test Study of human karyotype Pedigree analysis of some human inherited traits	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		To study behavioural response of woodlice to dry and wet conditions. To study geotaxis behavior and understand habituation To study circadian functions in humans, instructions for recording daily activity for report	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Demonstration of basic equipment needed in wildlife studies (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses)	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
OCTOBER	Theory:	Pug marks and census methods; Project Tiger-conservation and management challenges in Tiger reserves;.	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
		Instinct versus Learned behaviour; Associative learning; Classical and Operant conditioning	B. Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals	Linkage maps based on data from <i>Drosophila</i> crosses. Linkage maps based on data from conjugation.	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics

Vartika Mathur

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		Nest and nesting behavior of birds and social insects, Courtship behavior of birds and insects,	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Study of animal evidences in the field: Identification of animals through pugmarks, hoof marks and scats; Identification of Big cats: Lion, Tiger, Cheetah, Leopard and Jaguar	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
	<u>Assignment</u>	Topics for presentation assigned to students related to disorders affecting the various tissues, bone, muscles, nervous, reproductive and endocrine system	B. Sc. (H) Zoology 2 nd year Sem III	CC-VI: Physiology
		1) How Drosophila melanogaster is used as a model organism? 2) Highlight any 1 area of research related to implication of transposons.	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
NOVEMBER	Theory	Human-wildlife conflict; Eco-tourism	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
		Habituation, Imprinting	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals:	Use of probability in solving problems in genetics.	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Study of actogram construction of locomotor activity of mouse; Visit to Delhi Zoo and observation of animal behaviour for report	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Identification of mammalian fauna, avian fauna herpeto-fauna through direct and indirect evidences Trail/ transect monitoring for abundance and diversity estimation of mammals and bird (direct and indirect evidences Field trip to Jim Corbett National Park	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
	<u>Mid Term Test</u>	Test questions in DU exam pattern of covered topics	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
		Test questions in DU exam pattern of covered topics	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Theory:	Discussion of Mid-term Test paper and previous year question papers	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
		Discussion of Mid-term Test paper and previous year question papers	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
DECEMBER	Practicals:	Revision exercises and test, viva for practical exams	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Revision exercises and test, viva for practical exams Report submission	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Revision exercises and test, viva for practical exams, Report submission	B.Sc. Life Sciences Sem III	DSE-I/ Wildlife Conservation & Management

V. K. Singh

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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Academic Planner: Odd Semester 2021 (July–November)

Name of the Faculty: Prof. Om Prakash

Department: Zoology

Semester: I/III/V

Theory:

B.Sc. (H) Zoology Semester V (ZH DSE Course-VIII/ Immunology)

Practical:

B.Sc. (P) Life Sciences Semester V (DSE I- Animal Biotechnology)

B.Sc. (H) Zoology Semester V (ZH DSE Course-VIII/ Immunology)

Month		Topics	Course	Paper Code/Name
August	Theory	Immunology Unit1: Overview of Immune System Historical perspective of Immunology, Early theories of Immunology, Clonal Selection Theory, Cardinal features of vertebrate immune system, Hematopoiesis, Cells and organs of the Immune system.	B.Sc. (Hons.) Zoology Sem V TZH	ZH DSE Course-VIII/ Immunology
	Practical	Animal Biotechnology To study following techniques through photographs: Southern Blotting (Demonstration) Western Blotting DNA sequencing (Sanger's Method) PCR (Demonstration) DNA fingerprinting and case studies (photographs only to study crime, or paternity cases) Immunology 1. Demonstration of lymphoid organs. 2. Histological study of spleen, thymus and lymph nodes through slides/photographs.	B.Sc. (P) Life Sciences Semester V B.Sc. (Hons.) Zoology Sem V TZH	DSE-1/Animal Biotechnology ZH DSE Course-VIII/ Immunology

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September	Theory	Immunology Unit2: Innate and Adaptive Immunity Anatomical barriers, Inflammation, Cell and molecules involved in innate Immunity, Adaptive Immunity (Cell-mediated and Humoral), Passive immunity; Active: Artificial and natural Immunity, Immunological Tolerance	B.Sc. (Hons.) Zoology Sem V TZH	ZH DSE Course-VIII/ Immunology
	Practicals	Animal Biotechnology Restriction digestion of lambda DNA with <i>EcoRI</i> and <i>HindIII</i> (Demonstration)	B.Sc. Life Sciences TLS	DSE-1/Animal Biotechnology
		Immunology Preparation of stained blood film to study various types of blood cells. 4. Basic patterns of precipitation by Ouchterlony's double immuno-diffusion method. 5. ABO Blood group antigen determination by heamagglutination.	B.Sc. (Hons.) Zoology Sem V TZH	ZH DSE Course-VIII/ Immunology



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October	Theory	Immunology Antigen Antigenicity and immunogenicity, Immunogens, Adjuvants and haptens, Factors influencing immunogenicity, B and T-Cell epitopes	B.Sc. (Hons.) Zoology Sem V TZH	ZH DSE Course-VIII/ Immunology
	Practicals	Animal Biotechnology Genomic DNA isolation from E.coli Plasmid DNA isolation (pUC18/19) from E.coli Project report on Animal Cell Culture/ visit to a biotechnology laboratory or industry. Immunology Cell counting and viability test from splenocytes of farm bred animals/cell lines. Demonstration of: (a) ELISA (b) Immunoelectrophoresis	B.Sc. Life Sciences TLS B.Sc. (Hons.) Zoology Sem V TZH	DSE-1/Animal Biotechnology ZH DSE Course-VIII/ Immunology



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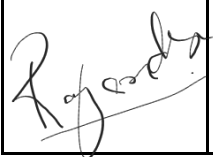


SEMESTER WISE TEACHING PLAN (AUGUST 2023- DECEMBER 2023)
SRI VENKATESWARA COLLEGE

Faculty Name: Dr. Rajendra Phartyal , Department: Zoology; Semester: I,III (Odd Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
AUGUST	THEORY (2 PERIODS)	Unitary and Modular populations; Unique and group attributes of population: density, natality, mortality, life tables, fecundity tables	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	PRACTICAL (4 PERIODS)	Study of life tables and plotting of survivorship curves of different types from hypothetical/ real data	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	THEORY (1 PERIOD)	Latitudinal Diversity gradient. Altitudinal and latitudinal variations in light intensity and photoperiod.	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	PRACTICAL (4 PERIODS)	Diel vertical migration using photographs	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	THEORY (1 PERIOD)	Population: Unitary and Modular populations; Metapopulation:	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-303; FUNCTIONAL ECOLOGY
	PRACTICAL (4 PERIODS)	Preparation of haemin and haemochromogen crystals	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (2 PERIODS)	survivorship curves, age ratio, sex ratio, dispersal and dispersion; Exponential and logistic growth, equations and patterns, r and k strategies;	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY


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 Dr. Rajendra Phartyal

SEPTEMBER		Intraspecific population regulation: density-dependent and independent factors. Types of species interactions, Interspecific competition: Lotka-Volterra model of competition, Gause's Principle with laboratory and field examples, Niche concept; Predation:		
	PRACTICAL (4 PERIODS)	Determination of population density in a natural or a hypothetical community by quadrat method and calculation of Shannon-Weiner diversity index. Study of an aquatic ecosystem: Phytoplankton and zooplankton Measurement of temperature, turbidity/penetration of light, determination of pH Dissolved oxygen content (Winkler's method), chemical oxygen demand	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	THEORY (1 PERIOD)	Light as an ecological factor affecting distribution, physiological processes of animals (Phyto and Zoo geography), in terrestrial and aquatic ecosystems. Discovery, diversity and functions of Bioluminescence.	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	PRACTICAL (4 PERIODS)	To study light penetration in water using Secchi disc. To test / survey for color blindness using Ishihara charts.	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	THEORY (1 PERIOD)	Density, natality, mortality, life tables, fecundity tables, survivorship curves, sex ratio, age pyramids, dispersal and dispersion; carrying capacity, population dynamics (exponential and logistic growth equation and patterns), i and K selection, density-dependent and independent population	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21	BS-DSC-303; FUNCTIONAL ECOLOGY

Rajendra

		regulation;		
	PRACTICAL (4 PERIODS)	To understand the components of blood, their functions and Hematopoiesis. Measurement and statistical analysis of variations observed in the student population in the class for the following parameters: White blood cells using haemocytometer Hemoglobin Blood pressure	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
OCTOBER	THEORY (2 PERIODS)	Lotka- Volterra equations, Functional and numerical responses, predator defence mechanisms, Resource partitioning. Community characteristics: species richness, dominance, diversity, abundance, guilds, ecotone and edge effect; Ecological succession with examples and types. Class Test	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	PRACTICAL (4 PERIODS)	Study of an aquatic ecosystem: Dissolved oxygen content (Winkler's method), chemical oxygen demand Free carbon dioxide and alkalinity	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	THEORY (1 PERIOD)	Three rhythmic domains, Biological clocks and circadian rhythms, night shift disorders and jet lag. Morphological and physiological color change in animals. Light as an inducer for biosynthesis/activation of biomolecules (Vitamin D, Melatonin, Thymine dimer formation) Class Test	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY

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	PRACTICAL (4 PERIODS)	To demonstrate the effect of light on soil fauna using Berlese funnel setup. To study the effect of light and darkness on the chromatophores of fish.	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	THEORY (1 PERIOD)	Niche concept, Population interactions: Positive and negative interactions; Competition, Gause's Principle for competition with laboratory and field examples, Lotka-Volterra equation for predation. Class test	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-303; FUNCTIONAL ECOLOGY
	PRACTICAL (4 PERIODS)	Measurement and statistical analysis of variations observed in the student population in the class for the following parameters: Red blood cells using haemocytometer Examination of histological sections of mammalian oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, kidney. To study whole blood hemolysis with ammonium chloride solution. Detection of abnormal constituents in urine and their physiological significance.	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (2 PERIODS)	Types of Ecosystems: Terrestrial ecosystem, vertical stratification in tropical forest; Food chain: detritus and grazing food chains, linear and Y-shaped food chains, food web; Energy flow through the ecosystem; Ecological pyramids and Ecological efficiencies; Biogeochemical cycle-nitrogen cycle. Assignments	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY  प्रधानाचार्य Principal श्री वैकुण्ठेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

NOVEMBER	PRACTICAL (4 PERIODS)	Study of ten endemic animals of India with slides/pictures/videos. visit to a National Park/Biodiversity Park/Wildlife Sanctuary. Revision of other Practicals and Mock Practicals	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	THEORY (1 PERIOD)	Photoreception in animals, evolution of eyes, color vision and visual processing in the human eye. Animal responses to changing photoperiodism. Assignemnts .	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	PRACTICAL (4 PERIODS)	To study various Bioluminescent organisms using photographs- Photinus pyralis, Aequorea victoria, Vampire squid, Anglerfish, Lanternfish, Viperfish, Black dragonfish, ^[1] Omphalotus nidiformes Revision and Mock Practical	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	THEORY (1 PERIOD)	History of ecology, Autecology and synecology, levels of Organisation, Laws of limiting factors (Liebig's law of minimum, Shelford's law of tolerance), ecological range (Eury and Steno). Assignments	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-303; FUNCTIONAL ECOLOGY
	PRACTICAL (4 PERIODS)	Revision of Examination of histological sections of mammalian oesophagus, stomach, duodenum, ileum, rectum, liver, trachea, lung, kidney. Study of Electrocardiogram; Analysis of ECG records and calculation of heart rate. Revision of other Practicals and Mock Practicals	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS

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DECEMBER	THEORY (2 PERIODS)	Ecology in wildlife conservation and management, Protected areas: National Parks, Biosphere reserves and Sanctuaries; Restoration ecology, Principles of Environmental impact assessment.	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	PRACTICAL (4 PERIODS)	Practical Exam	B. Sc. (H) ZOOLOGY SEMESTER I	ZOO-DSC III; CONCEPTS OF ECOLOGY
	THEORY (1 PERIOD)	Revision	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	PRACTICAL (4 PERIODS)	Practical Exam	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-102; PHOTOBIOLOGY
	THEORY (1 PERIOD)	Revision	B.Sc. (H) BIOLOGICAL SCIENCE SEMESTER I	BS-DSC-303; FUNCTIONAL ECOLOGY
	PRACTICAL (4 PERIODS)	Practical Exam	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: (Odd Semester 2023-2024, Aug-Dec)

Name of the Faculty: Dr. P.Jayaraj
Department: Zoology
Semester: I/III/V

Month		Topics	Course	Paper Code/Name
August	Theory	GROWTH AND REPRODUCTION (THEORY) - Unit 2 Pre Fertilization Changes - Pre-fertilization events- gametogenesis- spermatogenesis and oogenesis	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11
		IMMUNOLOGY Unit6: Cytokines Properties and functions of cytokines Unit7: Complement System Components and pathways of complement activation	B.Sc. (Hons.) Zoology Sem V TZH	VIII
	Practicals	GROWTH AND REPRODUCTION - Study of whole mounts of frog - early developmental stages	B.Sc. (H) Biological Science Zoology Sem V	BS-C11

		Endocrinology 1. Study of the permanent slides of all the endocrine glands 2. Estrous cycle of rat.- Vaginal smear	B.Sc (Hons.) Biological Science TBS Sem V	DSE 4
		Immunology 1. Demonstration of lymphoid organs. 2. Histological study of spleen, thymus and lymph nodes through slides/photographs.	B.Sc. (Hons.) Zoology Sem V TZH	VIII
September	Theory	GROWTH AND REPRODUCTION - types of eggs in animals - Unit 3 Post Fertilization Changes and Early Development - Post Fertilization Events; Types of Cleavages; Blastula;	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11
		IMMUNOLOGY Biological consequences of complement activation	B.Sc. (Hons.) Zoology Sem V TZH	VIII

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Practicals:	GROWTH AND REPRODUCTION Study of whole mounts of chick- early developmental stages	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11
	Endocrinology 3. Castration/ ovariectomy (subject to availability of rat). 4. Study of LH and HCG hormones through Ovulation and Pregnancy kits available in the market.	B.Sc (Hons.) Biological Science TBS Sem V	
	Immunology 3. Preparation of stained blood film to study various types of blood cells. 4. Basic patterns of precipitation by Ouchterlony's double immuno-diffusion method. 5. ABO Blood group antigen determination by heamagglutination.	B.Sc. (Hons.) Zoology Sem V TZH	VIII

October	Theory	GROWTH AND REPRODUCTION Fate Maps, Morphogenetic movements during gastrulation; Gastrulation in frog and chick and human	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11
		IMMUNOLOGY Unit 9: Immune Dysfunction Hypersensitivity: Gell and Coombs' classification and various types of hypersensitivities	B.Sc. (Hons.) Zoology Sem V TZH	VIII
	Practical	Immunology 6. Cell counting and viability test from splenocytes of farm bred animals/cell lines. 7. Demonstration of: (a) ELISA (b) Immunoelectrophoresis	B.Sc. (Hons.) Zoology Sem V TZH	VIII
		Study of section of chick embryo through selective developmental stages	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11

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		Endocrinology 5. Tissue processing, microtomy and hematoxylin/eosin staining of endocrine glands: ovary, testis, thyroid and adrenal.	B.Sc (Hons.) Biological Science TBS Sem V	
Mid Term Test	GROWTH AND REPRODUCTION Written test on topic covered before the mid semester break	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11	BS-C11
	IMMUNOLOGY Written test on topic covered before the mid semester break	B.Sc. (Hons.) Zoology Sem V TZH	DSE-9	ZH GE-VI
November	Theory	GROWTH AND REPRODUCTION - Placenta: Functions and types - Unit 4 Differentiation Organogenesis: Formation of CNS, Organogenesis of secondary girth	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11
		IMMUNOLOGY Autoimmunity: Brief account with reference to Hashimoto's Thyroiditis (Organ Specific) and Rheumatoid arthritis (Systemic). Immunodeficiency: Brief account with reference to SCID (Primary) and AIDS (Secondary)	B.Sc. (Hons.) Zoology Sem V TZH	DSE9
	Practicals:	GROWTH AND REPRODUCTION Videos showing selective embryonic events like cleavage; gastrulation 5. Measurement of animal/plant cell size using ocular and stage micrometer.	B.Sc. (H) Biological Science Zoology Sem V TBS	BS-C11
		Endocrinology 6. T3, T4 determination assays using ELISA. Estimation of blood glucose level using glucometer/ glucose kit.	B.Sc (Hons.) Biological Science TBS Sem V	DSE 4
		Immunology 8. Detection of complement activity using haemolysis of antibody coated SRBC and standard serum	B.Sc. (Hons.) Zoology Sem V TZH	
December		Revision exercises and practical test	TBS: Food, Nutrition Endocrinology and Health प्रधानाचार्य श्री. वेंकटेश्वर महाविद्यालय दिल्ली विश्वविद्यालय / University of Delhi धौला कूआ, नई दिल्ली / Dhula Kuan, New Delhi-21	

		Revision exercises and test	TZH: Immunology TBS: Growth and Reproduction	
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**SEMESTER WISE TEACHING PLAN (2023-2024)****SRI VENKATESWARA COLLEGE****August-December, 2023****Name of the Faculty: Dr. Richa Misra****Department: Zoology****Semester: III, V (Odd)**

Month		Topics	Course	Paper Code/Name
AUGUST	Theory: (3 periods)	Introduction to Mendelian Genetics, Mendelian Genetics and its Extension	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Theory: (1 period)	Introduction to Animal Behavior, Concept of society	B. Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals (4 periods)	Instructions for maintaining records; Simulation exercises using beads or seeds to study the Mendel's laws and gene interactions,	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Practicals (4 periods)	Instructions for maintaining records, Introduction to Animal Behavior and overview of exercises	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals: (2+2 periods)	Instructions for maintaining records, Introduction to Wildlife conservation & management and overview of exercises	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
SEPTEMBER	Theory: (3+1) periods	Polygenic Inheritance; Linkage, Crossing Over and Chromosomal Mapping	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Insects' society (Example: Honey bee); Foraging in honey bee and advantages of the waggle dance; Altruism, Inclusive fitness, Hamilton's rule	B. Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals:	Verification of Mendelian ratios using Chi-square analysis/test Study of human karyotype Pedigree analysis of some human inherited traits	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		To study behavioural response of woodlice to dry and wet conditions. To study geotaxis behavior and understand habituation To study circadian functions in humans, instructions for recording daily activity for report	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Demonstration of basic equipment needed in wildlife studies (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses)	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
OCTOBER	Theory:	Transposable Genetic elements, Recombination in Bacteria and viruses	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Communication and the senses (Chemical, Tactile, Auditory, Visual)	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals	Linkage maps based on data from <i>Drosophila</i> crosses. Linkage maps based on data from conjugation.	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Nest and nesting behavior of birds and social insects, Courtship behavior of birds and insects,	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology

Richa Misra

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				Chronobiology
		Study of animal evidences in the field: Identification of animals through pugmarks, hoof marks and scats; Identification of Big cats: Lion, Tiger, Cheetah, Leopard and Jaguar	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
	<u>Assignment</u>	1) How Drosophila melanogaster is used as a model organism? 2) Highlight any 1 area of research related to implication of transposons.	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
NOVEMBER	Theory	Extra-chromosomal Inheritance	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Sexual Behaviour: Asymmetry of sex, Sexual dimorphism, Mate choice, Intra-sexual selection (male rivalry), Inter-sexual selection (female choice), Courtship behaviour	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals:	Use of probability in solving problems in genetics.	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Study of actogram construction of locomotor activity of mouse; Visit to Delhi Zoo and observation of animal behaviour for report	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Identification of mammalian fauna, avian fauna, herpeto-fauna through direct and indirect evidences Trail/ transect monitoring for abundance and diversity estimation of mammals and bird (direct and indirect evidences) Field trip to Jim Corbett National Park	B.Sc. (H) Zoology/B.Sc Life Sciences 2 nd year Sem III	DSE-I/ Wildlife Conservation & Management
	<u>Mid Term Test</u>	Test questions in DU exam pattern of covered topics	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Test questions in DU exam pattern of covered topics	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
DECEMBER	Theory:	Discussion of Mid-term Test paper and previous year question papers	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Parental care, sexual conflict in parental care Discussion of Mid-term Test paper and previous year question papers	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
	Practicals:	Revision exercises and test, viva for practical exams	B.Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Revision exercises and test, viva for practical exams Report submission	B.Sc. (H) Zoology 3 rd year Sem V	DSE-I/ Animal Behaviour & Chronobiology
		Revision exercises and test, viva for practical exams, Report submission	B.Sc. Life Sciences Sem III	DSE-I/ Wildlife Conservation & Management

Richa Misra

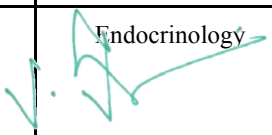

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SEMESTER WISE TEACHING PLAN (AUGUST 2023- DECEMBER 2023)
SRI VENKATESWARA COLLEGE

Faculty Name: Dr. Namita Nayyar , Department: Zoology; Semester: I, V (Odd Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
AUGUST	THEORY (1 PERIOD Section A and 1 Period Section B)	Salient features of protochordates and chordates	B.Sc Life Science I Year I Semester	Diversity of Animals
	THEORY (2 Periods Per Week)	History of endocrinology, characteristic of Hormones, Classification –Local and Circulating hormones,	B.Sc. (H) Biological Science Sem V	Endocrinology
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Protista, Porifera, Cnidaria. Study of museum specimens: <i>Amoeba</i> , <i>Euglena</i> , <i>Paramecium</i> , <i>Sycon</i> , <i>Euplectella</i> , <i>Obelia</i> , <i>Physalia</i> , <i>Aurelia</i> , <i>Metridium</i> .	B.Sc Life Science I Year I Semester {Batch I and II}	Diversity of Animals
	PRACTICAL (4 PERIODS)	Endocrinology 1. Study of the permanent slides of all the endocrine glands 2. Estrous cycle of rat.- Vaginal smear	B.Sc. (H) Biological Science Sem V	Endocrinology
SEPTEMBER	THEORY (1 PERIOD Section A and 1 Period Section B)	Retrogressive metamorphosis in protochordates, Osmoregulation, Migration in fish	B.Sc Life Science I Year I Semester	Diversity of Animals
	THEORY (2 Periods Per Week)	General classes of chemical messengers- peptide hormones, steroid hormones, neurotransmitters, neuropeptides, eicosanoids, pheromones. Cellular receptors and hormone action (nuclear receptors, cell surface receptors and coupled second messenger system).	B.Sc. (H) Biological Science Sem V	Endocrinology


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	PRACTICAL (4 PERIODS)	Study of General Characteristics and Classification of Platyhelminthes and Nematelminthes. Study of larval stages of <i>Taenia solium</i> , Male and female <i>Ascaris lumbricoides</i> . General Characteristics and Classification up to classes of Annelida. Study of museum specimens: <i>Aphrodite</i> , <i>Nereis</i> , <i>Chaetopterus</i> , <i>Pheretima</i> , <i>Hirudinaria</i> . Study of following specimens, general characteristics and classification: <i>Balanoglossus</i> <i>Amphioxus</i> and <i>Herdmania</i>	B.Sc Life Science I Year I Semester {Batch I and II}	Diversity of Animals
	PRACTICAL (4 PERIODS)	Endocrinology 3. Castration/ ovariectomy (subject to availability of rat). 4. Study of LH and HCG hormones through Ovulation and Pregnancy kits available in the market.	B.Sc. (H) Biological Science Sem V	Endocrinology
OCTOBER	THEORY (1 PERIOD Section A and 1 Period Section B)	Parental care in fishes, Parental care in Amphibians, Flight adaptations and Migration in birds,	B.Sc Life Science I Year I Semester {Batch I and II}	Diversity of Animals
	THEORY (2 Periods Per Week)	Unit III: Thyroid-Parathyroid system Thyroid gland: structure of thyroid gland, synthesis and functions of thyroid hormones, mode of action, regulation of thyroid hormone secretion; thyrocalcitonin. Disorders of thyroid gland (hyperthyroidism, Hypothyroidism, Graves disease, Goiter) Parathyroid Glands: Secretion and action of parathyroid Hormones, role of parathyroid hormone and calcitonin in calcium homeostasis, disorders of parathyroid gland (hyperparathyroidism).	B.Sc. (H) Biological Science Sem V	Endocrinology
	PRACTICAL (4 PERIODS)	5. Study of <i>Obelia</i> , <i>Physalia</i> , <i>Millepora</i> , <i>Aurelia</i> , <i>Tubipora</i> , <i>Corallium</i> , <i>Alcyonium</i> , <i>Gorgonia</i> , <i>Metridium/Adamsia</i> , <i>Pennatula</i> , <i>Fungia</i> , <i>Meandrina</i> , <i>Madrepora</i> 6. To submit a project report on corals and coral reefs 7. Study of Adult <i>Fasciola hepatica</i> , <i>Taenia solium</i> and their life stages (Slides/microphotographs)	B.Sc Life Science I Year I Semester {Batch I and II}	Diversity of Animals


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	PRACTICAL (4 PERIODS)	5. Tissue processing, microtomy and hematoxylin/eosin staining of endocrine glands: ovary, testis, thyroid and adrenal.	B.Sc. (H) Biological Science Sem V	Endocrinology
NOVEMBER	THEORY (1 PERIOD Section A and 1 Period Section B)	Biting mechanism in snakes, Origin of mammals.	B.Sc Life Science I Year I Semester {Batch I and II}	Diversity of Animals
	THEORY (2 Periods Per Week)	Diabetes mellitus. A brief account of hormones of gastrointestinal tract (Gastrin, Secretin family of hormones) and kidney (erythropoietin). Regulation of appetite and satiety: Leptin and Grehlin hormones.	B.Sc. (H) Biological Science Sem V	Endocrinology
	PRACTICAL (4 PERIODS)	Endocrinology 6. T3, T4 determination assays using ELISA. Estimation of blood glucose level using glucometer/ glucose kit.	B.Sc. (H) Biological Science Sem V	Endocrinology
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Mollusca, Echinodermata. Study of museum specimens: Chiton, Dentalium, Pila, Unio, Octopus, Pentaceros, Echinus, Cucumaria, Antedon.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY
DECEMBER		REVISION EXERCISES.		

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Odd Semester 2023 (August-December)

Name of the Faculty: Dr. Preeti Khandelwal

Department: Zoology

Semester: I, III, V

Course: GE (Generic Elective): B.Sc. (Hons.)-Semester III: Food, Nutrition and Health
 B.Sc. (Prog.) Life Sciences-Semester III
 B.Sc. (Prog.) Life Sciences-Semester V: Animal Biotechnology (DSE)
 B.Sc. (Hons.) Zoology-Semester III: Biochemistry: Metabolic Processes (DSC)
 VAC (Value Added Course): Yoga-Philosophy & Practice

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 1: Basic concept of food and nutrition Components of nutrients (Macronutrients and Micronutrients)	GEIII	
		Unit 2: Dietary sources and physiological functions Carbohydrates, Proteins, Lipids, Vitamins and Minerals (Iron, Iodine, Calcium, Selenium, Zinc), beneficial effects of dietary fibers, elemental idea of Probiotics, Prebiotics and Organic food.		
		Unit 3: Protein Metabolism Catabolism of Amino Acids: *Transamination, Deamination *Urea Cycle Unit 2: Lipid Metabolism *Beta-oxidation of saturated fatty acid with even number of Carbon atoms	B.Sc. (Hons.) Zoology-Sem III	
		Unit 3: Protein Metabolism Structure, classification and properties of amino acids, basics of protein structure; transamination, deamination, glutamine formation, glucose-alanine cycle and urea cycle	B.Sc. (Prog.) Life Sciences-Semester III	

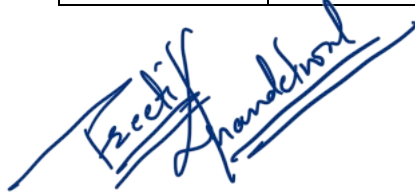
Preeti Khandelwal

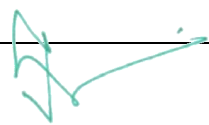
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	Practical	- To study following techniques through photographs: - Southern Blotting (Demonstration) - Western Blotting - DNA sequencing (Sanger's Method) - PCR (Demonstration) - DNA fingerprinting and case studies (photographs only to study crime, or paternity cases)	B.Sc. (Prog.) Life Sciences-Semester V	
September	Theory	Unit 3: Nutritional Requirements Study of different age groups (infants, preschool children, school children, adolescents, adults, elderly), and in pregnant women and lactating mother. Unit 4: Concept of balanced diet Food groups, food pyramid. Food and culture, food hypersensitivity: food allergy (nuts and seafood) and Food intolerance (lactose and gluten)	GE III	
		Unit 2: Lipid Metabolism *Omega oxidation of saturated fatty acid with even number of Carbon atoms *Biosynthesis of Palmitic acid *Ketogenesis Unit 3: Carbohydrate Metabolism *Glycolysis *Citric acid cycle *Pentose phosphate pathway	B.Sc. (Hons.) Zoology-Sem III	
		Unit 3: Understanding Asanas & Pranayama *Asana: the basics *Surya Namaskara *Nadishodhana Pranayama	VAC-3	
		Unit 2: Lipid Metabolism Basic structure and physiological of fatty acids, structure and significance of storage and structural lipids, Biosynthesis; FAS and synthesis reactions, regulation: beta oxidation of palmitic acid, activation of fatty acids and oxidation with bioenergetics, regulation	B.Sc. (Prog.) Life Sciences-Semester III	


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October	Practical:	Restriction digestion of lambda DNA with <i>EcoRI</i> and <i>HindIII</i> (Demonstration)	B.Sc. (Prog.) Life Sciences-Semester V	
		- Surya Namaskara - Pranayama	VAC-3	
	Theory:	Unit 5: Health Definition and Concept of health. Indicators of Metabolic Health Unit 7: Social Health problems Deleterious effects of addiction-related social health problems: Smoking, Alcoholism, and Drug Dependence	GE III	
		Unit 3: Carbohydrate Metabolism *Gluconeogenesis *Glycogenolysis *Glycogenesis Unit 4: Oxidative Phosphorylation *Redox systems: Review of mitochondrial respiratory chains: *Electron carriers *Sites of ATP production Oxidative Phosphorylation Chemiosmotic theory/hypothesis Mitochondrial Shuttle systems *Assignment and Test	B.Sc. (Hons.) Zoology-Sem III	
		Unit 2: Patanjali's Yoga Sutra and Chakras *Chakras (Psychic centres) *Patanjali's Yogasutra: A summary Unit 1: Yoga, Asana, Pranayama and Dhyana *Significance of Asana *Effect of Pranayama *Importance of Dhyana *History of Yoga *Assignment and test (Assignment- History of Yoga)	VAC-3	
		Unit 5: Oxidative Phosphorylation Review of Electron Transport Chain: basics of electron transfer reactions, universal electron acceptors without detailed structure	B.Sc. (Prog.) Life Sciences-Semester III	 प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

Ishti Hande

November	Practical	- Genomic DNA isolation from <i>E.coli</i> - Plasmid DNA isolation (pUC18/19) from <i>E.coli</i> - Project report on Animal Cell Culture/ visit to a biotechnology laboratory or industry.	B.Sc. (Prog.) Life Sciences- Semester V	
		- Selected Asanas - Concentration on Bhramadhy - Project work/report-Effect of everyday concentration on breath for 15 minutes)	VAC III	
	Theory	Unit 6: Nutritional Deficiencies Disorders Symptoms and Prevention of the following: Protein Energy Malnutrition (Kwashiorkar and Marasmus), Vitamin Deficiency (A,D, B1,B3, B12,C), Mineral deficiency (Iron, Iodine, Calcium, Selenium, Zinc) Lifestyle-related diseases: Causes, Symptoms and complications of hypertension, diabetes mellitus and obesity, role of dietary and lifestyle modifications for the prevention of these diseases. Eating Disorders: Complications and Management of Anorexia nervosa and Bulimia nervosa.	GE III	
		Unit 5: Liver as a metabolic hub *Inter-connection of glucose-6-phosphate, pyruvate and acetyl CoA *Fates of Amino Acids, Fatty acids and glucose in liver cells Cascade of metabolic events in fasting and starvation *Revision		
		Unit 2: Patanjali's Yoga Sutra and Chakras *First Sutra *Second Sutra *Revision	VAC III	
		Unit 5: Oxidative Phosphorylation Electron flow through complexes, chemiosmotic theory, basics of ATP synthesis	B.Sc. (Prog.) Life Sciences- Semester III	प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

Ishti Anand

		- Construction of circular and liner restriction map from the data provided. - Preparation of competent cells and their transformation by CaCl_2 method. Calculation of transformation efficiency from the data/plate provided.	B.Sc. (Prog.) Life Sciences-Semester V	
	Practical:	Unit 5: Health Definition and Concept of health. Indicators of Metabolic Health Unit 7: Social Health problems Deleterious effects of addiction-related social health problems: Smoking, Alcoholism, and Drug Dependence	GE III	
		- Relaxation exercises for eyes (7 steps) and neck (4 steps) - Revision/ mock test	VAC III	

Ishti Khanna

V. B. K.

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
ODD SEMESTER
(AUGUST 2023- DECEMBER 2023)

Faculty Name: Dr. Amarjeet Singh

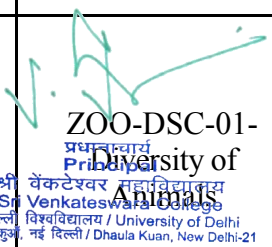
Department: Zoology

Semester: I/III/V (Odd)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
AUGUST 2023	THEORY (1 PERIOD)	Unit IV: Cnidaria and Ctenophora Introduction to metazoan; General characteristics and classification	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	THEORY (1 PERIOD)	Unit V: Cell division Cell cycle and its regulation	BSc (H) Zoology, Sem I	ZOO-DSC-2: Biology of Cell: Structure and Function
	THEORY (1 PERIOD)	Unit I: Introduction Introduction to five kingdom classificationsystem; General characters of kingdom Animalia and basis of its classification (with special reference to coelom)	BSc (P) Life Sciences, Sem I (Both Section A and Section B)	ZOO-DSC-01- Diversity of Animals
	PRACTICAL (4 PERIODS)	1. Study of whole mount of Euglena, Amoeba, Noctiluca, Paramecium, Binary fission in Paramecium, Conjugation in Paramecium	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Protista, Porifera, Cnidaria. Study of museum specimens: <i>Amoeba</i> , <i>Euglena</i> , <i>Paramecium</i> , <i>Sycon</i> , <i>Euplectella</i> , <i>Obelia</i> , <i>Physalia</i> , <i>Aurelia</i> , <i>Metridium</i> .	BSc (P) Life Sciences, Sem I (Batch I and Batch III)	ZOO-DSC-01- Diversity of Animals
SEPT. 2023	THEORY (1 PERIOD)	Unit IV: Cnidaria and Ctenophora Polymorphism in Cnidaria, Corals and coral reefs	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	THEORY (1 PERIOD)	Unit V: Cell division Mitosis, Meiosis Unit VI: Introduction to cell signalling Cell signalling through G-protein coupled receptor (G-PCR) and role of secondary messenger: cAMP and protein kinase A	BSc (H) Zoology, Sem I	ZOO-DSC-2: Biology of Cell: Structure and Function

Amarjeet Singh

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	THEORY (1 PERIOD)	Unit I: Introduction Concept of taxonomic hierarchy (up to species level), significance of binomial nomenclature Unit II: Protista to pseudocoelomates Characteristics of acoelomates and pseudocoelomates, Locomotory organelles and locomotion in protozoa, Canal system in porifera, Polymorphism in Cnidaria (Hydrozoa)	BSc (P) Life Sciences, Sem I (Both Section A and Section B)	ZOO-DSC-01- Diversity of Animals
	PRACTICAL (4 PERIODS)	2. Examination of pond water collected from different places to observe diversity in Protista 3. Study of <i>Sycon</i> , <i>Hyalonema</i> , <i>Euplectella</i> , <i>Spongilla</i> , T.S. of <i>Sycon</i> , L.S. of <i>Sycon</i> 4. Specimen/slide of anyone Ctenophore.	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	PRACTICAL (4 PERIODS)	Study of General Characteristics and Classification of Platyhelminthes and Nematelminthes. Study of larval stages of <i>Taenia solium</i> , Male and female <i>Ascaris lumbricoides</i> . General Characteristics and Classification up to classes of Annelida. Study of museum specimens: <i>Aphrodite</i> , <i>Nereis</i> , <i>Chaetopterus</i> , <i>Pheretima</i> , <i>Hirudinaria</i> . Study of following specimens, general characteristics and classification: <i>Balanoglossus</i> , <i>Amphioxus</i> and <i>Herdmania</i>	BSc (P) Life Sciences, Sem I (Batch I and Batch III)	ZOO-DSC-01- Diversity of Animals
OCTOBER 2023	THEORY (1 PERIOD)	Unit V: Platyhelminthes and Nematelminthes General characteristics and classification; Parasitic adaptations of Helminthes	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	THEORY (1 PERIOD)	Unit III: Cytoskeleton Structure and functions: Microtubules, Microfilaments, and Intermediate filaments Unit IV: Nucleus Structure of Nucleus, Nuclear envelope	BSc (H) Zoology, Sem I	ZOO-DSC-2: Biology of Cell: Structure and Function
	THEORY (1 PERIOD)	Unit II: Protista to Pseudocoelomates Life cycle of <i>Taenia solium</i> and its parasitic adaptations, Life Cycle of <i>Ascaris lumbricoides</i> and its parasitic adaptations Unit III: Coelomates General features of coelomates, Metamerism in Annelida	BSc (P) Life Sciences, Sem I (Both Section A and Section B)	ZOO-DSC-01- Diversity of Animals 

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Assignment and Internal Assessment Test, October, 2023				
	PRACTICAL (4 PERIODS)	5. Study of <i>Obelia</i> , <i>Physalia</i> , <i>Millepora</i> , <i>Aurelia</i> , <i>Tubipora</i> , <i>Corallium</i> , <i>Alcyonium</i> , <i>Gorgonia</i> , <i>Metridium/Adamsia</i> , <i>Pennatula</i> , <i>Fungia</i> , <i>Meandrina</i> , <i>Madrepora</i> 6. To submit a project report on corals and coral reefs 7. Study of Adult <i>Fasciola hepatica</i> , <i>Taenia solium</i> and their life stages (Slides/microphotographs)	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Arthropoda. Study of museum specimens: <i>Palaemon</i> , <i>Cancer</i> , <i>Limulus</i> , <i>Palaemon</i> , <i>Scolopendra</i> . Study of following specimens, general characteristics and classification upto order: <i>Petromyzon</i> , <i>Pristis</i> , <i>Exocoetus</i> , <i>Hippocampus</i> ZOO VISIT FOR PROJECT WORK	BSc (P) Life Sciences, Sem I (Batch I and Batch III)	ZOO-DSC-01- Diversity of Animals
NOV. 2023	THEORY (1 PERIOD)	Unit V: Platyhelminthes and Nemathelminthes Life cycle of <i>Taenia solium</i> and <i>Ascaris lumbricoides</i>	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	THEORY (1 PERIOD)	Unit IV: Nucleus Nuclear pore complex, Transport of molecules across nuclear membrane, nucleosome and nucleolus, chromatin, euchromatin and heterochromatin	BSc (H) Zoology, Sem I	ZOO-DSC-2: Biology of Cell: Structure and Function
	THEORY (1 PERIOD)	Unit III: Coelomates Vision in Arthropoda, Metamorphosis in insects, Torsion and detorsion in Gastropoda, Pearl formation, Water-vascular system in Asteroidea	BSc (P) Life Sciences, Sem I (Both Section A and Section B)	ZOO-DSC-01- Diversity of Animals
	PRACTICAL (4 PERIODS)	8. Study of Adult <i>Ascaris lumbricoides</i> and its life stages (slides/microphotographs) 9. Examination of soil samples collected from different places to observe diversity in nematodes	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates

Amrinder Singh

	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Mollusca, Echinodermata. Study of museum specimens: <i>Chiton</i> , <i>Dentalium</i> , <i>Pila</i> , <i>Unio</i> , <i>Octopus</i> , <i>Pentaceros</i> , <i>Echinus</i> , <i>Cucumaria</i> , <i>Antedon</i> Study of following specimens, general characteristics and classification upto order: <i>Hyla</i> , <i>Salamander</i> , <i>Ichthyophis</i> , <i>Naja</i> , <i>Viper</i> , <i>Hydrophis</i> , <i>Chamaeleon</i> , <i>Uromastix</i> , <i>Milvus</i> , <i>Anas</i> , <i>Psittacula</i> , <i>Loris</i> , <i>Pteropus</i> , <i>Sorex</i>	BSc (P) Life Sciences, Sem I (Batch I and Batch III)	ZOO-DSC-01- Diversity of Animals
December 2023	THEORY (1 PERIOD)	REVISION AND DISPLAY OF INTERNAL ASSESSMENT MARKS	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non-Chordata I: Protists to Pseudocoelomates
	THEORY (1 PERIOD)	REVISION AND DISPLAY OF INTERNAL ASSESSMENT MARKS	BSc (H) Zoology, Sem I	ZOO-DSC-2: Biology of Cell: Structure and Function
	THEORY (1 PERIOD)	REVISION AND DISPLAY OF INTERNAL ASSESSMENT MARKS	BSc (P) Life Sciences, Sem I (Both Section A and Section B)	ZOO-DSC-01- Diversity of Animals
	PRACTICAL (4 PERIODS)	REVISION AND MOCK TEST	BSc (H) Zoology, Sem I	ZOO-DSC-1: Non- Chordata I: Protists to Pseudocoelomates
	PRACTICAL (4 PERIODS)	REVISION AND MOCK TEST	BSc (P) Life Sciences, Sem I (Batch I and Batch III)	ZOO-DSC-01- Diversity of Animals

Amajyoti Singh



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Odd Semester 2023 (August-December)

Name of the Faculty: Dr. C.Sreenivasa Reddy

Department: Zoology

Semester: I, III, V

Course:

B.Sc. (Hons.) Zoology-Semester III: Biochemistry: Metabolic Processes (DSC)

B.Sc. (Prog.) Life Sciences-Semester V: Animal Biotechnology (DSE)

B.Sc. (Hons.) Zoology-Semester I: Biology of Cell(DSC)

B.Sc. (Prog.) Life Sciences-Semester III Bio chemistry Practicals(DSC)

Month		Topics	Course	Paper Code/Name
August	Theory	UNIT-1: Metabolism of Carbohydrates Basic structure and physiological significance of mono-saccharides, disaccharides	B.Sc. (Prog.) Life Sciences- Semester III (Section-A)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		UNIT-1: Metabolism of Carbohydrates Basic structure and physiological significance of mono-saccharides, disaccharides	B.Sc. (Prog.) Life Sciences- Semester III (Section –B)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		Unit3: Genetically Modified Organisms Production of cloned and transgenic animals: Nuclear Transplantation (cloning of dolly as an example),	B.Sc. (Prog.) Life Sciences-Semester V	LS DSE 3/Animal Biotechnology
	Practical	1. Microscopy: Compound microscope,Phase contrast microscope,Electron microscope,DIC microscope. 2. Principle and types of cell fixation and staining .Cell fractionation.	B.Sc. (Hons.) Zoology-Semester I	(DSC-2)/(Biology of cell:Structure and function
		1. Qualitative tests to identify functional groups of carbohydrates, amino acids and lipids.2. Estimation of total protein in given solutions by Lowry's method	B.Sc. (Prog.) Life Sciences-Semester III	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism

C. Sreenivasa Reddy

September	Theory	UNIT-1: Metabolism of Carbohydrates Homo and hetero-polysaccharides. Glycolysis: Preparatory and Payoff phases, regulation, fates of pyruvate, Pentose phosphate pathway: oxidative and non-oxidative Phases;	B.Sc. (Prog.) Life Sciences-Semester III (Section-A)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		UNIT-1: Metabolism of Carbohydrates Homo and hetero-polysaccharides. Glycolysis: Preparatory and Payoff phases, regulation, fates of pyruvate, Pentose phosphate pathway: oxidative and non-oxidative Phases	B.Sc. (Prog.) Life Sciences-Semester III (Section-B)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		Unit3: Genetically Modified Organisms Retroviral Method, DNA microinjection. Applications of transgenic animals: Production of pharmaceuticals,	B.Sc. (Prog.) Life Sciences-Semester V	LS DSE 3/Animal Biotechnology
	Practical :	3. To Study Prokaryotic cells by Grams staining and eukaryotic cells by hematoxyline /methylene blue. 4. To study the effect of hypotonic ,isotonicand hypertonic solutions on cell permeability.	B.Sc. (Hons.) Zoology-Semester I	(DSC-2)/(Biology of cell:Structure and function
		3. Study effect of temperature, pH, and inhibitor on enzymatic activity of salivary amylase. 4. Biological oxidation of goat liver.	B.Sc. (Prog.) Life Sciences-Semester III	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
October	Theory:	UNIT-1: Metabolism of Carbohydrates Gluconeogenesis: Bypass reactions, regulation and reciprocal coordination of glycolysis and gluconeogenesis; Glycogen Metabolism: Glycogenolysis, Glycogenesis and its coordinated regulation Kreb's Cycle (formation of Acetyl CoA, reactions of cycle, regulation)	B.Sc. (Prog.) Life Sciences-Semester III (Section-A)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		UNIT-1: Metabolism of Carbohydrates Gluconeogenesis: Bypass reactions, regulation and reciprocal coordination of glycolysis and gluconeogenesis; Glycogen Metabolism: Glycogenolysis, Glycogenesis and its coordinated regulation Kreb's Cycle (formation of Acetyl CoA, reactions of cycle, regulation)	B.Sc. (Prog.) Life Sciences-Semester III (Section-B)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism

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November		Unit3: Genetically Modified Organisms Production of transgenic plants: Agrobacterium mediated transformation.	B.Sc. (Prog.) Life Sciences-Semester V	LS DSE 3/Animal Biotechnology
	Practical	5. Preparation of temporary slide of squashed and stained onion root tip to study various stages of mitosis. 6. Study the effect of colchicines on mitosis at 24hrs and 48 hrs.	B.Sc. (Hons.) Zoology-Semester I	(DSC-2)/(Biology of cell:Structure and function.
		5. Identification of normal and abnormal constituents of urine. 6. To study the enzymatic activity of Lipase	B.Sc. (Prog.) Life Sciences-Semester III	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
	Theory	UNIT- 4: Enzyme Enzymes and their classification, Introduction (basics of classification, properties and functions), Mechanism of action (understanding of basic concepts, Induced Fit Theory)	B.Sc. (Prog.) Life Sciences-Semester III (Section-A)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		UNIT- 3: Protein metabolism Structure, classification and properties of amino acids, basics of protein structure; Transamination, Deamination, Glutamine formation, Glucose alanine cycle and Urea Cycle	B.Sc. (Prog.) Life Sciences-Semester III (Section-B)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		Unit3: Genetically Modified Organisms Applications of transgenic plants: insect resistant plants, and edible vaccines and golden rice as examples.	B.Sc. (Prog.) Life Sciences-Semester V	LS DSE 3/Animal Biotechnology
	Practical	7. Meiosis stages by permanent slides. 8. Barr body stained mount preparation. 9. Cytochemical demonstration of DNA, Mucopolysaccharides and Proteins	B.Sc. (Hons.) Zoology-Semester I	(DSC-2)/(Biology of cell:Structure and function
		7. Dry Lab: To trace the labelled 'C' atoms of Acetyl-CoA till they evolve as CO ₂ in the TCA cycle through models.	B.Sc. (Prog.) Life Sciences-Semester III	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism

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December	Theory	Revision and test	B.Sc. (Prog.) Life Sciences-Semester III (Section-A)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		Revision and test	B.Sc. (Prog.) Life Sciences-Semester III (Section-B)	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism
		Revision and test	B.Sc. (Prog.) Life Sciences-Semester V	LS DSE 3/Animal Biotechnology
	Practical	Revision exercises and practical test	B.Sc. (Hons.) Zoology-Semester I	(DSC-2)/(Biology of cell:Structure and function
		Revision exercises and practical test	B.Sc. (Prog.) Life Sciences-Semester III	Zoo-LS-DSC-09/ Biochemistry: Basic concepts of metabolism

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SEMESTER WISE TEACHING PLAN (AUGUST 2023- DECEMBER 2023)
SRI VENKATESWARA COLLEGE

Faculty Name: Dr Sukrat Sinha, Department: Zoology; Semester: III (Odd Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
AUGUST	THEORY	UNIT- 1- NUCLEIC ACID Salient features of DNA and types of RNA, Watson and Crick model of DNA	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
		UNIT- 1- Concept and scope of Biotechnology	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
	PRACTICAL	1. Study of Polytene chromosomes from Chironomous/ Drosophila larvae. 2. Preparation of liquid culture medium (LB) and raise culture of E. coli. 3. Preparation of solid culture medium (LB) and growth of E. coli by spreading and streaking.	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
		3. Restriction digestion of lambda DNA with EcoRI and HindIII (Demonstration). 4. Construction of circular and linear restriction map from the data provided	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
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SEPTEMBER	THEORY	Unit 2: DNA Replication DNA replication in prokaryotes and eukaryotes – replication machinery and mechanisms, semi-conservative, bidirectional and semi-discontinuous replication, Replication of circular and linear double stranded DNA, Replication of telomeres.	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
		UNIT- 1- Concept and scope of Biotechnology	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
	PRACTICAL	- Estimation of growth kinetics of E coli by turbidity method - Demonstration of Antibiotic Sensitivity/resistance of E coli to antibiotic pressure and interpretation of results	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
		Preparation of competent cells and their transformation by CaCl ₂ method. Calculation of transformation efficiency from the data/plate provided.	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
OCTOBER				
	THEORY	Unit 6: Gene Regulation Transcription regulation in prokaryotes: Principles of transcriptional regulation with examples from lac operon and trp operon; Overview of transcription regulation in eukaryotes: Activators, repressors, enhancers, silencer elements; Gene silencing and Genetic imprinting. MID SEM EXAM	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI) प्रधानाचार्य श्री वेङ्कटेश्वर सह्याय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi ब्लॉक-ए, ई-दिवान, छात्रावास, नए दिल्ली-110021

		Unit4: Applications of Biotechnology Meta-genomics: an introduction, Molecular diagnosis of genetic diseases (Cystic fibrosis, Sickle cell anaemia) MID SEM EXAM	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
	PRACTICAL	To understand working of the lac operon in the presence/absence of lactose and/or glucose by using simulations. Study and interpretation of electron micrographs/ photograph showing: DNA replication, Transcription, Split genes.	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
		To study following techniques through photographs: Southern Blotting (Demonstration) Western Blotting. DNA Sequencing (Sanger's Method). PCR (demonstrations). DNA fingerprinting and case studies (photographs only to study crime, or paternity cases). Project report on Animal Cell Culture/visit to a biotechnology laboratory or industry	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
NOVEMBER				
	THEORY	Unit 7: DNA Repair Mechanisms Pyrimidine dimerization and mismatch repair. Unit 8: Regulatory RNAs Ribo-switches; RNA interference: miRNA and siRNA.	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology  Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Unit4: Applications of Biotechnology Recombinant DNA in medicines: Recombinant insulin and human growth hormone, Gene therapy	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
	PRACTICAL	Quantitative estimation of Salmon sperm/calf thymus DNA using colorimeter (Diphenylamine reagent)	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
DECEMBER		Genomic DNA isolation from E. coli. Plasmid DNA isolation (pUC 18/19) from E. coli.	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
	THEORY	ASSIGNMENT ASSESSMENT	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
	THEORY	ASSIGNMENT ASSESSMENT	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology
	PRACTICAL	REVISION AND TEST	B. Sc. (H) ZOOLOGY SEMESTER III	ZH Core XI Molecular Biology (CC-XI)
	PRACTICAL	REVISION AND TEST	B.Sc Life Sciences SEMESTER III	LS DSE Animal Biotechnology

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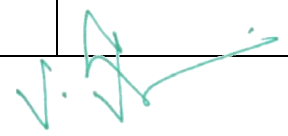
SRI VENKATESWARA COLLEGE (DU), NEW DELHI
SEMESTER WISE TEACHING PLAN
AUGUST - DECEMBER, 2023
(ODD SEMESTER)

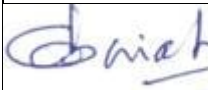
Name of the Faculty : Dr. OBAIAH JAMAKALA

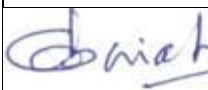
Department : Zoology

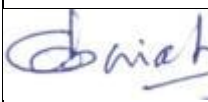
Semester : Odd (I/III/V)

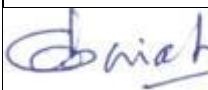
Month		Topics	Course	Paper Code/Name
August, 2023	Theory	Unit - I: Introduction to Non-chordates General characteristics of non-chordates Basis of classification	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Practical	Study of whole mount of Euglena, Amoeba, Noctiluca, Paramecium, Binary fission in Paramecium, Conjugation in Paramecium.	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Practical	Study of life tables and plotting of survivorship curves of different types from hypothetical/ real data	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC - 3: Concepts of Ecology
	Practical	To understand the principle and working of ecological instruments such as Anemometer, Hygrometer, Luxmeter, Rain gauge, Turbidity meter, pH meter, Soil thermometer, Min Max thermometer	B.Sc. (H) Biological Science Semester III	BS-DSC 303: Functional Ecology
September, 2023	Theory	Unit II: Protista General characteristics of Protista Classification of Protista Life cycle of <i>Plasmodium vivax</i>	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Practical	Examination of pond water collected from different places to observe diversity in Protista Study of <i>Sycon</i> , <i>Hyalonema</i> , <i>Euplectella</i> , <i>Spongilla</i> , T.S. of <i>Sycon</i> , L.S. of <i>Sycon</i> Specimen/slide of any one Ctenophore.	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates


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	Theory	Unit - 1: Introduction to Personality Development and Communication Need for Communication Process of Communication Written and Verbal Communication Visual communication	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Communication Process with suitable diagram Basic Models of Communication	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Determination of population density in a natural or a hypothetical community by quadrat method and calculation of Shannon-Weiner diversity index. Study of an aquatic ecosystem: Phytoplankton and zooplankton Measurement of temperature, turbidity/penetration of light, determination of pH	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC - 3: Concepts of Ecology
	Practical	To study biotic interactions using specimens/ photographs/ permanent slides of Parasitic angiosperms, Saprophytic angiosperms, root nodules, velamen roots, lichens corals To study plant-microbe interactions by preparing temporary stained mounts of VAM fungi / mycorrhizal roots/ root nodules. Mark recapture method for determining population density of animals	B.Sc. (H) Biological Science Semester III	BS-DSC 303: Functional Ecology
October, 2023	Theory	Unit II: Protista Locomotion in Protista Reproduction in Protista Unit III: Porifera Introduction to Parazoa Internal Assessment Test	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Practical	Study of <i>Obelia</i> , <i>Physalia</i> , <i>Millepora</i> , <i>Aurelia</i> , <i>Tubipora</i> , <i>Corallium</i> , <i>Alcyonium</i> , <i>Gorgonia</i> , <i>Metridium/Adamsia</i> , <i>Pennatula</i> , <i>Fungia</i> , <i>Meandrina</i> , <i>Madrepora</i>	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates

		To submit a project report on corals and coral reefs Study of Adult <i>Fasciola hepatica</i> , <i>Taenia solium</i> and their life stages (Slides/microphotographs)		
	Theory:	Unit - 1: Signs, Signals and Symbols Silence as a Mode of Communication Inter-cultural, Intra-cultural, Cross-cultural and International communication, Communication through Questionnaires Electronic Communication. Business Letter Writing Unit - 2: Business Cases and Presentations Letters within the Organizations Letters from Top Management Circulars and Memos Business Presentations to Customers and other stakeholders, presenting a Positive Image through Verbal and Non-verbal Cues Preparing and Delivering the Presentations, Use of Audio-visual Aids, Report Writing. Internal Assessment Test	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Electronic Communication with suitable examples Block layout business letter Modified block layout business letter Semi - block layout business letter	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Study of an aquatic ecosystem: Dissolved oxygen content (Winkler's method) Free carbon dioxide and Alkalinity	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC - 3: Concepts of Ecology
	Practical	To determine a minimal quadrat area for sampling To determine density, frequency and abundance of herbaceous vegetation by quadrat method	B.Sc. (H) Biological Science Semester III	BS-DSC 303: Functional Ecology प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

November, 2023	Theory	Unit III: Porifera General characteristics of Porifera Classification of Porifera Canal system in sponges.	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Practical	Study of Adult <i>Ascaris lumbricoides</i> and its life stages (slides/microphotographs) Examination of soil samples collected from different places to observe diversity in nematodes	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Theory	Unit – 3: Barriers to Communication, Improving Communication Skills, Preparation of Promotional Material, Non-verbal communication, Body language, Postures and gestures, Value of time, Organizational body language, Importance of Listening, Emotional Intelligence. Working individually and in a team, Leadership skills, Leadership Lessons, Team work and Team building, Feedback, Feed forward Interpersonal skills – Delegation, Humour, Trust, Expectations, Values, Status, Compatibility and their role in building team – work Conflict Management – Types of conflicts, how to cope with conflict. Unit – 4 Negotiation Skills, Types of Negotiation, Negotiation Strategies, Selling skills – Selling to customers, Selling to Superiors, Selling to peer groups, team mates and subordinates	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Simplified layout business letter Barriers to Communication Types of conflicts Types of Negotiation Negotiation Strategies	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Study of ten endemic animals of India with slides/pictures/videos. Report on a visit to a National Zoological Park, New Delhi Revision and Mock Test	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC - 3: Concepts of Ecology
	Practical	To estimate dissolved oxygen content of a given water sample using Winkler's method Plotting of survivorship curves from	B.Sc. (H) Biological Science Semester III	BS-DSC 303: Functional Ecology  प्रधानाचार्य श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुशी, नई दिल्ली / Dhola Kuan, New Delhi-21

		hypothetical life table data. Student assessments Revision and Mock Test		
December, 2023	Theory	Revision and display of Internal Assessment Marks Student assessments	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Practical	Project Report Revision and Mock Test	B.Sc., (Hons.) Zoology - UGCF Semester I	DSC – 1: Non Chordata – Protists to Pseudocoelomates
	Theory	Unit – 4 Selling skills –Conceptual selling, Strategic selling, Selling skills – Body language. Student Assessments Revision and display of Internal Assessment Marks	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication
	Practical	Revision and Mock Test Student Assessments	B.Sc., (Hons.) Zoology - UGCF Semester I	SEC: Personality Development and Communication


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Odd Semester 2023 (August-December)

Name of the Faculty: Dr. Mohita Bhagat

Department: Zoology

Semester: III, V

Month		Topics	Course	Paper Code/Name
August	Theory	Unit 3: Transcription Machinery and mechanism of transcription in prokaryotes and eukaryotes- RNA Polymerases	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		Unit 2: Hypothalamic -Pituitary System Hypothalamus, structure of hypothalamus and functions of important hypothalamic nuclei, neuroendocrine regulation of endocrine glands and feedback mechanism. Pituitary Gland, structure of pituitary and its hormones. Secretion, transportation, storage and functions of hormones.	B.Sc. (Hons.) Biological Sciences-Sem V	Endocrinology
	Practical	- Study of polytene chromosomes from Drosophila larvae - Preparation of liquid culture medium (LB) and raise culture of E coli. - Preparation of solid culture medium (LB) and growth of E coli by spreading and streaking	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		Qualitative tests to identify functional groups of carbohydrates.	B.Sc. (Prog.) Life Sciences- Sem III	Biochemistry: Basic Concepts of Metabolism (Zoo-LS-DSC-9)

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September	Theory	Unit 3: Transcription Transcription Unit, Transcription factors, Synthesis of rRNA Unit 5: Post Transcriptional Modification and Processing of Eukaryotic RNA Split genes, Concept of introns and exons, Splicing mechanism, alternative splicing, exon shuffling, RNA editing	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		Unit 2: Hypothalamic Pituitary System Hyothalamo- Hypophyseal axis, Pineal gland, secretions and their functions in biological rhythms and reproduction Unit 4: Adrenal gland and its hormones Adrenal gland, structure of adrenal gland, synthesis of hormones of the adrenal cortex and medulla, biological action of glucocorticoids, mineralocorticoids, adrenaline and nor adrenaline on carbohydrate and protein metabolism	B.Sc. (Hons.) Biological Sciences-Sem V	Endocrinology
	Practical:	• Estimation of growth kinetics of E coli by turbidity method • Demonstration of Antibiotic Sensitivity/resistance of E coli to antibiotic pressure and interpretation of results	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		• Qualitative tests to identify functional groups of amino acids and lipids. • Estimation of total protein in given solutions by Lowry's method	B.Sc. (Prog.) Life Sciences-Sem III	Biochemistry: Basic Concepts of Metabolism (Zoo-LS-DSC-9)

October	Theory:	Unit 4: Translation Genetic code, Degeneracy of the genetic code and Wobble hypothesis, Process of protein synthesis in prokaryotes, Ribosome structure, fidelity of protein synthesis, aminoacyl-tRNA synthetases and charging of tRNA, Protein involved in initiation, elongation and termination of polypeptide chains, Inhibitors of protein synthesis, Difference between prokaryotic and eukaryotic translation	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		Unit 4: Adrenal gland and its hormones Role of adrenal hormones on cardiovascular system, osmoregulation and stress, Hyperaldosteronism, Cushing's syndrome, pheochromocytoma	B.Sc. (Hons.) Biological Sciences-V	Endocrinology
	Practical	- To understand working of the lac operon in the presence/absence of lactose and glucose - Study and interpretation of electron micrograph/photograph showing DNA replication, Transcription and Split genes.	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		- Study the effect of temperature, pH, and inhibitor on enzymatic activity of salivary amylase. - Study the enzymatic activity of Lipase - Trace the labeled 'C' atoms of Acetyl-CoA till they evolve as CO₂ in the TCA cycle through models.	B.Sc. (Prog.) Life Sciences-Sem III	Biochemistry: Basic Concepts of Metabolism (Zoo-LS-DSC-9)

November	Theory	Unit 8: Regulatory RNAs Ribo-switches, RNA interference, miRNA and siRNA *Revision *Assignments and Tests	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		Unit 6: Reproductive endocrinology Male reproductive system, hormonal control of testes, Biosynthesis of testosterone, functions of testosterone, Female reproductive system, role of hormones in female ovarian cycle, placental hormones, parturition and lactation * Revision *Assignments and Tests	B.Sc. (Hons.) Biological Sciences-V	Endocrinology
	Practical	Quantitative estimation of Salmon sperm/calf thymus DNA using colorimeter (Diphenylamine reagent)	B.Sc. (Hons.) Zoology-Sem V	Molecular Biology (CC-XI)
		Identification of normal and abnormal constituents of urine	B.Sc. (Prog.) Life Sciences-Sem III	Biochemistry: Basic Concepts of Metabolism (Zoo-LS-DSC-9)


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Name of the Faculty: Dr. Priya

Singh Department: ZOOLOGY

Semester: Even (I/III/V)

Month		Topics	Course	Paper Code/Name
August	Theory:	Unit 2: Evaluation and management of wild life habitat Physical parameters: Topography, geology and water Biological parameters : Food , cover, Forage, browse and cover estimation	B.Sc. (H) Zoology & B.Sc. Life Sciences Semester- III	DSE 4 - Wildlife conservation and management
		Unit 1 Introduction to chordates Gen. Characteristics and classification	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Unit 3 : Introduction to Animal Life forms Introduction to animal diversity, Binomial classification, Whittaker's five kingdom class	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
	Practical	Study of following specimens: Balanoglossus, Amphioxus, Petromyzon, Pristis, Hippocampus, Labeo	B.Sc. (H) Zoology Semester- III	Diversity of chordates
		Study of following specimens: Euglena, Paramecium, Sycon, Tubipora, Taenia Solium	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
September, 2023	Theory:	Unit 2: Evaluation and management of wild life habitat Standard evaluation Procedures : RS and GIS	B.Sc. (H) Zoology & B.Sc. Life Sciences Semester- III	DSE 4 - Wildlife conservation and management
		Unit 2 : Protochordata Unit 3 Origin of Chordates Unit 4 Aganatha	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Unit 3 ICZN rules, Gen Char. of chordates and non-chordates	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
	Practical:	Sections of balanoglossus, amphioxus and spicules of herdmania. Study of petromyzon and mixine	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates

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		Study of Ascaris, hirudanaria, Peripatus	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
		1. To detect adulteration in (a) Ghee (b) Sugar (c) Tea Leaves (d) Turmeric. 2. Study of nutrition labelling of any 5 popular packaged foods.	GE-ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
October, 2023	Theory:	Unit 5 :Wildlife health and Rehabilitation Care of injured and diseased animals, Quarantine.	B.Sc. (H) Zoology & Life Sciences Semester- III	DSE 4 - Wildlife conservation and management
		Unit 5 Pisces Unit 6 Amphibian Unit 7 Reptilia	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Unit 4 Study of General Characteristics and classification of Protista, porifera, cnidarian, Platyhelminthes.	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
	Practical:	Study of Piscean, avian and reptilian specimens & key of poisonous and non-poisonous snakes	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Study of Scolopendra, julus, cancer, daphnia, apis, pila, dentalium, octopus, asterias.	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
		1. Estimation of calcium in food by titrimetry. 2. Ascorbic acid estimation in food by titrimetry.	GE-ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
November, 2023	Theory:	Unit 5 :Wildlife health and Rehabilitation Common disease of wild animals, zoonosis (ebolla and salmonella) , Rabies, Foot and Mouth Diseases, Mycobacterium TB	B.Sc. (H) Zoology & Life Sciences Semester- III	DSE 4 - Wildlife conservation and management
		Unit 8 Aves Unit 9 Mammalia	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Unit 4 Study of General Characteristics and classification of aschelminthes, annelida, arthropoda.	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1

	Practical:	Study of Avian specimens & types of beaks and claws	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Nervous system of Cockroach, Salivary apparatus and Ovary Stusy of LS and T.S of sycon	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
		1. Measurement of anthropometric indicators of health (BMI, Waist to hip ratio, Skin fold test). 2. Plan the diet chart of any three different age groups using RDA values (infants, preschool children, school children, adolescents, adults and elderly). 3. An exercise based on 24-hour food recall of students for quantification and analysis of the macronutrients' and micronutrients' uptake based on the current RDA values (with focus on nutritional status and risk factors).	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
December, 2023	Theory:	Unit 6 : Protected areas and management Project tiger conservation and management challenges in tiger reserve, Human –wildlife conflict, Ecotourism	B.Sc. (H) Zoology & B.Sc. Life Sciences Semester- III	DSE 4 - Wildlife conservation and management
		Unit 10 Zoogeography	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Unit 4 Study of General Characteristics and classification of, mollusc & Echinodermata	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
	Practicals	Study of Mammalian specimens	B.Sc. (H) Zoology Semester- III	DSC 7 - Diversity of chordates
		Crustacean Larvae Faunal Composition of Pond water sample	B.Sc. (H) Biological Sciences Semester- I	Diversity of Life forms 1
		Revision work and test	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH



SEMESTER WISE TEACHING PLAN (AUGUST 2023- DECEMBER 2023)
SRI VENKATESWARA COLLEGE

Faculty Name: Dr. Anjali S. Nawani , Department: Zoology; Semester: III (Odd Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
AUGUST	THEORY (2 PERIODS)	Unit 4: Introduction to Chronobiology Historical developments in chronobiology, Biological oscillation: the concept of Average, amplitude, phase and period.	B. Sc. (H) ZOOLOGY SEMESTER V	DSE-I/ ANIMAL BEHAVIOUR AND CHRONOBIOLOGY
	THEORY (1 PERIOD)	UNIT- 2 Blood Structure and functions of haemoglobin; Blood clotting system, Fibrinolytic system.	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	NO CLASSES	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	NO CLASSES	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	NO CLASSES	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Protista, Porifera, Cnidaria. Study of museum specimens: Amoeba, Euglena, Paramecium, Sycon, Euplectella, Obelia, Physalia, Aurelia, Metridium.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY


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SEPTEMBER	THEORY (2 PERIODS)	Unit 4: Introduction to Chronobiology: Adaptive significance of biological clocks Unit 5: Biological Rhythm Characteristics of biological rhythms; Short-and Long-term rhythms;	B. Sc. (H) ZOOLOGY SEMESTER V	DSE-I/ ANIMAL BEHAVIOUR AND CHRONOBIOLOGY
	THEORY (1 PERIOD)	UNIT- 3: Physiology of Heart Structure of heart; Coronary circulation; Origin and conduction of cardiac impulses;	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit I: Tissues Types of Tissues; Structure and Function of Epithelial, Connective, Muscular and Nervous tissues.	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	Preparation of temporary mount of neurons	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1. To detect adulteration in (a) Ghee (b) Sugar (c) Tea Leaves (d) Turmeric. 2. Study of nutrition labelling of any 5 popular packaged foods.	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
	PRACTICAL (4 PERIODS)	STUDY OF GENERAL CHARACTERISTICS AND CLASSIFICATION OF Platyhelminthes AND Nematelminthes. STUDY OF larval stage of Taenia solium, Male and female Ascaris lumbricoides. General Characteristics and Classification up to classes OF Annelida. Study of museum specimens: Aphrodite, Nereis, Chaetopterus, Pheretima, Hirudinaria.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY


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OCTOBER	THEORY (2 PERIODS)	Unit 5: Biological Rhythm: Circadian rhythms; Tidal rhythms and Lunar rhythms; Concept of synchronization and masking; Photic and non- photic zeitgebers; MID-TERM TEST	B. Sc. (H) ZOOLOGY SEMESTER V	DSE-I/ ANIMAL BEHAVIOUR AND CHRONOBIOLOGY
	THEORY (1 PERIOD)	UNIT- 3: Physiology of Heart Cardiac cycle. MID-TERM TEST	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Propagation of nerve impulse (myelinated and non-myelinated nerve fibre); MID-TERM TEST	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1) Preparation of haemin and haemochromogen crystals. 2) Haemoglobin estimation using Sahli's haemoglobinometer. 3) Determination of ABO Blood group.	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1. Estimation of calcium in food by titrimetry. 2. Ascorbic acid estimation in food by titrimetry.	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Arthropoda. Study of museum specimens: Palaemon, Cancer, Limulus, Palamnaeus, Scolopendra. ZOO VISIT FOR PROJECT WORK	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY
	THEORY (2 PERIODS)	UNIT 1: INTRODUCTION TO ANIMAL BEHAVIOUR Tools, techniques and methods used in studying animal behaviour UNIT 5: Circannual rhythms; Photoperiod and regulation of	B. Sc. (H) ZOOLOGY SEMESTER V 	DSE-I/ ANIMAL BEHAVIOUR AND CHRONOBIOLOGY  प्रधानाचार्य श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

NOVEMBER		seasonal reproduction of vertebrates; Role of melatonin.		
	THEORY (1 PERIOD)	UNIT- 3: Physiology of Heart Cardiac output and its regulation; nervous and chemical regulation of heart rate. ASSIGNMENT: PPT	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit V: Cardiovascular System Structure of heart, Cardiac cycle, Composition of blood ASSIGNMENT: PPT	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1) Recording of blood pressure using a Sphygmomanometer. 2) Examination and detailed study of permanent histological sections of mammalian: Kidney, Pancreas, Testis and Ovary. 3) Preparation of temporary mount of blood cells (blood film preparation).	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	1. Measurement of anthropometric indicators of health (BMI, Waist to hip ratio, Skin fold test). 2. Plan the diet chart of any three different age groups using RDA values (infants, preschool children, school children, adolescents, adults and elderly). 3. An exercise based on 24-hour food recall of students for quantification and analysis of the macronutrients' and micronutrients' uptake based on the current RDA values (with focus on nutritional status and risk factors).	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH


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	PRACTICAL (4 PERIODS)	General Characteristics and Classification up to classes: Mollusca, Echinodermata. Study of museum specimens: Chiton, Dentalium, Pila, Unio, Octopus, Pentaceros, Echinus, Cucumaria, Antedon.	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY
DECEMBER	THEORY (2 PERIODS)	Unit 6: Biological Clocks Relevance of biological clocks; Chronopharmacology, Chronomedicine, Chronotherapy ASSIGNMENT: PPT	B. Sc. (H) ZOOLOGY SEMESTER V	DSE-I/ ANIMAL BEHAVIOUR AND CHRONOBIOLOGY
	THEORY (1 PERIOD)	UNIT- I Physiology of Digestion Overview of gastrointestinal tract and its associated glands; digestion; Absorption of carbohydrates, lipids, proteins; Hormonal control of secretion of enzymes in gastrointestinal tract.	B. Sc. (H) ZOOLOGY SEMESTER III	ZOO-DSC IX; HUMAN PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
	THEORY (1 PERIOD)	Unit III: Digestion and Absorption of Food Structure and function of digestive system; Digestion and absorption of carbohydrates, fats and proteins.	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	Examination and detailed study of permanent histological sections of mammalian Stomach, Duodenum, Liver, Lung REVISION AND TEST	GE- ZOOLOGY (SEMESTER I)	GE-1 HUMAN PHYSIOLOGY
	PRACTICAL (4 PERIODS)	REVISION AND TEST PROJECT WORK	GE- ZOOLOGY (SEMESTER III)	GE- FOOD NUTRITION AND HEALTH
	PRACTICAL (4 PERIODS)	REVISION AND TEST	B. Sc. LIFE SCIENCES SEMESTER I	ANIMAL DIVERSITY

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**SEMESTER WISE TEACHING PLAN (2023-2024)****SRI VENKATESWARA COLLEGE****August-December, 2023****Name of the Faculty: Dr. Sumit Raj****Department: Zoology****Semester: I, III, V (Odd)**

Month		Topics	Course	Paper Code/Name
AUGUST	Theory: (2 period)	Types of gene mutations, Mutagens: Physical and Chemical,	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Theory: (2 period)	Structure of Mitochondria, Semiautonomous nature, Endosymbiotic hypothesis, Respiratory chain,	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
	Theory: (1 period)	Unit 4: Enzymes and their Classification, Introduction	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process
	Theory: (1 period)	Unit 1: Introduction to Medical Diagnostics	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
	Practicals (1x4 period)	ABO blood group typing.	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
	Practicals (2x4 periods)	Estimation of total protein in given solutions by Lowry's method. Dry Lab: To trace the labelled 'C' atoms of Acetyl-CoA till they evolve as CO ₂ in the TCA cycle through models.	B. Sc. (H) Zoology 2nd year Sem III	DSC-8/Biochemistry: Metabolic Process
SEPTEMBER	Theory: (4 periods)	Molecular basis of spontaneous and induced mutations, Chromosomal aberrations: Variations in number and structure. Detection of mutations in Drosophila: CLB method, attached X method,	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Theory: (4 periods)	Chemiosmotic hypothesis, ATP Synthesis Structure and Function: Endoplasmic Reticulum(ER), Golgi Apparatus Signal hypothesis, Vesicular transport from ER to Golgi Apparatus, Protein Sorting and transport from Golgi apparatus	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
	Theory: (1 period)	Unit 4: Mechanism of Action - Induced Fit Model	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process
	Theory (4 Period)	Unit 1: Medical Diagnostics Importance Unit 2: Medical Diagnostics of Body Fluids: Erythrocyte Sedimentary Rate (E.S.R), Unit 2: Medical Diagnostics of Body Fluids: Packed Cell Volume (P.C.V.), Unit 2: Medical Diagnostics of Body Fluids: Analysis of urine, sputum	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics

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	Theory (3 Period)	UNIT- I Fundamentals of Emotional Intelligence Nature and Significance • Models of emotional intelligence: Ability, Trait and Mixed • Building blocks of emotional intelligence: self-awareness, self-management, social awareness, and relationship management	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
	Practicals: (3x4 Period)	Estimation of haemoglobin content using Sahli's haemoglobinometer. Analysis of urine for abnormal constituents. Total leucocytes count from blood.	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
	Practicals: (1x4 Period)	Detection of SGOT and SGPT in serum/ tissue.	B. Sc. (H) Zoology 2nd year Sem III	DSC-8/Biochemistry: Metabolic Process
	Practicals: (3x2 Period)	Mindfulness Conditioned relaxation response Boundary setting	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
OCTOBER	Theory: (4 Period)	Basis of sex determination: Genetic and environmental; Sex determination in Drosophila and Man; Mechanism of dosage compensation.	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Theory: (3 Period)	Coated Vesicles, Lysosomes, Peroxisomes Coated Vesicles, Lysosomes, Peroxisomes Prokaryotic and Eukaryotic cells; Various models of plasma membrane structures	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
	Theory: (4 Period)	Unit 5: ETC- Electron Transport Reactions, Universal Electron Acceptors Unit 5: Chemiosmotic theory, basics of ATP synthesis Unit 2: Lipid Metabolism: Structure and Function of Fatty Acids, Test	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process
	Theory (6 Period)	Unit 2: Medical Diagnostics of Body Fluids: faeces and semen(sperm count) Unit 3: metastasis, FNAC. Unit 3:Diagnosis and detection of types of tumors (Benign/Malignant) Unit 3:Hypertension (Primary and secondary) Unit 4: Methods to diagnose and isolate infectious agents of diseases like Tuberculosis Unit 4: Methods to diagnose and isolate infectious agents of diseases like Hepatitis	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
	Theory (4 Period)	UNIT- II Personal Competence: • Self Awareness: Observing and recognizing one's own feelings, Knowing one's strengths and areas of development. • Self Management: Managing emotions, anxiety, fear, and anger. UNIT- III Social Competence • Social Awareness: Others' Perspectives, Empathy and Compassion • Relationship Management: Effective communication, Collaboration, Teamwork, and Conflict management	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
	Practicals (4x4 Period)	Measurement of blood pressure under normal and stress condition. Estimation of blood glucose/ cholesterol by kit. Determination of bleeding time/clotting time Detecting defects of colour vision by Ishihara Charts.	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics

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	Practicals (2x4 Period)	Estimation of GST and GSH in serum/ tissue. To study the enzymatic activity of Lipase.	B. Sc. (H) Zoology 2nd year Sem III	DSC-8/Biochemistry: Metabolic Process
	Practicals (4x2 Period)	Display of empathy-I Display of empathy-i Effective communication -I Effective communication - II	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
	Assignment	Describe the structure and function of mitochondria	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
		Describe the structure and mechanism of electron transport chain	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process
NOVEMBER	Theory (2 periods)	Mechanism of dosage compensation. Internal Assessment Test and Assignment)	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
	Theory (3 periods)	Transport Across membranes: Active and Passive Transport, facilitated transport Cell-Cell junctions, Structure and Functions: Tight Junctions, Structure and Functions: Tight Junctions, adherens junctions, gap junctions	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
	Theory (2 periods)	Unit 2: Lipid Metabolism: Structure and Function of storage and structural lipids Unit 2: Lipid Biosynthesis, regulation, Beta-Oxidation of Palmitic Acid	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process
	Theory (3 periods)	Unit 4: Methods to diagnose and isolate infectious agents of diseases like AIDS. Unit 5: Diagnostic Medical Imaging: X-Ray of Bone fracture Unit 5: Diagnostic Medical Imaging: PET	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
	Theory (3 periods)	UNIT- IV Emotional Intelligence: Measurement and Development Measures of emotional intelligence Strategies to develop and enhance emotional intelligence	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
	Practicals: (2x4 Period)	Interpretation of ECG. Medical Imaging techniques: X-Ray of bone fracture, MRI, CT scan.	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
	Practicals: (2x4 Period)	Study of biological oxidation (SDH) [goat liver]. To perform the Acid and Alkaline phosphatase assay from serum/ tissue.	B. Sc. (H) Zoology 2nd year Sem III	DSC-8/Biochemistry: Metabolic Process
	Practicals: (3x2 Period)	Teamwork Conflict resolution Revision	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
	Mid Term Test	Internal Assessment	B. Sc. (H) Zoology 3 rd year Sem V	CC-XII/Principles of Genetics
		Internal Assessment	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
		Internal Assessment	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process
		Internal Assessment	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
		Internal Assessment	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence
DECEMBER	Theory: (1 Period)	Revision	B. Sc. (H) Zoology 1st year Sem I	DSC-I/Biology of Cell
	Theory: (2 Period)	Unit 2: Activation of Fatty Acids and Oxidation with bioenergetics, regulation Unit 2: Activation of Fatty Acids and Oxidation with bioenergetics, regulation	B. Sc. (P) Life Sciences 2nd Year, Sem III	DSC-9/Biochemistry: Metabolic Process

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S R

	Practicals:	Revision : All Experiments	B. Sc. (P) Life Sciences 3rd Year, Sem V	SEC/Medical Diagnostics
		Revision	B. Sc. (H) Zoology 2nd year Sem III	DSC-8/Biochemistry: Metabolic Process
		Revision	B.A./B.Sc. 1st Year Sem I	VAC/Emotional Intelligence

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SEMESTER WISE TEACHING PLAN (2023- 2024)

SRI VENKATESWARA COLLEGE

Faculty Name: Dr. Anandha Rao Ravula, Department: Zoology; Semester: III (Odd Semester)

Month		Topics	Course	Paper Code/Name
AUGUST	Theory	Syllabus overview. Scope of studying the course. Unit 2: Molecular Techniques in Gene Manipulation Cloning vectors: Plasmids, Cosmids, Phagemids, Lambda Bacteriophage, M13, BAC, YAC, MAC and Expression vectors (characteristics)	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)
	Practicals	Qualitative tests to identify functional groups of carbohydrates.	B.Sc. Life Sciences, Semester-III	Biochemistry; Basic Concepts of Metabolism

R. Anandha Rao

V. A.

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SEPTEMBER	Theory	Unit 2: Molecular Techniques in Gene Manipulation. Restriction enzymes: Overview., Nomenclature, detailed study of Type II; DNA modification enzymes: Alkaline phosphatase, Terminal transferase, Reverse transcriptase, T4 DNA kinase, ligases	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)
	Practicals:	Qualitative tests to identify functional groups of amino acids and lipids. Estimation of total protein in given solutions by Lowry's method	B.Sc. (Hons) Zoology, Semester-III	Biochemistry; Basic Concepts of Metabolism
OCTOBER	Theory	Unit 2: Molecular Techniques in Gene Manipulation. CRISPR Cas-9 (as genome editing tool); Transformation techniques; Calcium chloride and electroporation method; Construction of genomic and cDNA libraries and screening by colony and plaque	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)

R. Arundha Rani

V. A.

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		hybridization; cDNA library screening by immunological methods.		
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	Assignment	Transformation techniques; Calcium chloride and electroporation method; Construction of genomic and cDNA libraries and screening by colony and plaque hybridization	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)
	Mid-Term Exam	The entire topics covered so far.	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)
	Practicals	Study the effect of temperature, pH, and inhibitor on enzymatic activity of salivary amylase. Study the enzymatic activity of Lipase. Trace the labeled 'C' atoms of Acetyl-CoA	B.Sc. Life Sciences, Semester-III	Biochemistry; Basic Concepts of Metabolism

R. Anandha Raju

V. A.

		till they evolve as CO ₂ in the TCA cycle through models.		
NOVEMBER	Theory	Unit 2: Molecular Techniques in Gene Manipulation. Southern, Northern, and Western blotting; DNA sequencing: Sanger and NGS (illumine) methods, Polymerase Chain Reaction (RT-PCR, real-time PCR), and DNA microarray	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)
	Practicals:	Biological oxidation of goat liver.	B.Sc. Life Sciences, Semester-III	Biochemistry; Basic Concepts of Metabolism
DECEMBER	Theory:	• Revision.	B.Sc. Life Sciences, Semester V	Animal Bio-Technology (DSE-1)
	Practicals:	Identification of normal and abnormal constituents of urine	B.Sc. Life Sciences, Semester-III	Biochemistry; Basic Concepts of Metabolism

R. Anandha Rao


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SRI VENKATESWARA COLLEGE

**EVEN SEMESTER
2023-2024**

TEACHING PLANS

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
Semester II/IV/VI
(2023-24)

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
		Unit II: Cloning vectors for prokaryotes and eukaryotes: Cloning vectors based on E. coli plasmids, pBR322, pUC8, pGEM3Z. Cloning vectors based on M13 and λ bacteriophage.	B Sc (H) Biochemistry III Year Semester VI	C-13: Genetic Engineering and Biotechnology
January	Theory	Unit I: Structure of DNA and genome organization: Watson and Crick model of DNA, various forms of DNA.	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Unit II: Enzyme kinetics: Relationship between initial velocity and substrate concentration, equilibrium constant, steady state kinetics, mono-substrate reactions.	B Sc (H) Biochemistry I Year Semester II	DSC-4 Enzymes
	Practical	Exercise1: To hydrolyze DNA and separate nucleotide bases by paper chromatography	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Exercise1: To assay the activity of salivary amylase.	B. Sc (H) Biochemistry I Year Semester II	DSC-5: Metabolism of carbohydrates
		Exercise 1: Determination of absorption maxima.	B. Sc, I Year Semester II	GE-2: Techniques in Biochemistry

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
Semester II/IV/VI
(2023-24)

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
February	Theory	In vitro packaging. Vectors for yeast, Ti-plasmid, and retroviral vectors, high capacity vectors BAC and YAC. Unit III: Introduction of DNA in cells, selection for recombinants and clone identification: Uptake of DNA by cells. Selection and identification for transformed cells, insertional inactivation, blue-white selection.	B Sc (H) Biochemistry III Year Semester VI	C-13: Genetic Engineering and Biotechnology
		Unit I: Structure of DNA and genome organization: Supercoiling of DNA, linking number, Topoisomereses, Topoisomerase inhibitors and their clinical importance.	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
	Practical	Unit II: Derivation of Michaelis-Menten equation; other plots like Lineweaver-Burk plot, Eadie-Hofstee and Hanes plot. Determination of Km Vmax and Kcat, specificity constant. Bisubstrate reactions (sequential-ordered and random, ping pong reactions).	B Sc (H) Biochemistry I Year Semester II	DSC-4 Enzymes
		Exercise 2: To plot ultraviolet absorption spectrum of DNA Exercise 3: Determination of DNA conc by A260nm	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Exercise 2: Estimation of glucose in serum using ortho toluidine method. Exercise 3: Estimation of glucose in serum using GOD-POD method.	B. Sc (H) Biochemistry I Year Semester II	DSC-5: Metabolism of carbohydrates
		Exercise 2: Calculation of molar extinction coefficient. Exercise 3: Separation and identification of amino acids by TLC	B. Sc, I Year Semester II	GE-2: Techniques in Biochemistry


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(2023-24)

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
March	Theory	Unit III: Chemical and physical methods of DNA introduction into cells. The problem of selection, direct selection, marker rescue. Identification of recombinant phages, cDNA and Genomic libraries, identification of a clone from a gene library, colony and plaque hybridization probing.	B Sc (H) Biochemistry III Year Semester VI	C-13: Genetic Engineering and Biotechnology
		Unit I: Structure of DNA and genome organization: Definition of a gene, organization of genes in viruses, bacteria and eukaryotes, concept of split genes, introns, exons, satellite DNA, highly repetitive DNA.	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Unit II: Reversible inhibition (competitive, uncompetitive, non-competitive and mixed) and irreversible inhibition. Structural analogs (allopurinol, methotrexate). Mechanism based inhibitors (β -lactam antibiotics)	B Sc (H) Biochemistry I Year Semester II	DSC-4 Enzymes
	Practical	Exercise 4: DNA estimation by Diphenylamine method	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Exercise4: Estimation of G6P using G6PDH. Exercise 4: Preparation of cell free extract from E coli culture.	B. Sc (H) Biochemistry I Year Semester II B. Sc, I Year Semester II	DSC-5: Metabolism of carbohydrates GE-2: Techniques in Biochemistry


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SEMESTER WISE TEACHING PLAN
Semester II/IV/VI
(2023-24)

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
April	Theory	Southern and Northern hybridization, methods based on detection of the translation product of the cloned gene. Unit IV: Expression of cloned genes :Vectors for expression of foreign genes in <i>E. coli</i> , cassettes and gene fusions. Hybrid promoters: trc, tac, λ pL and T7 promoter.	B Sc (H) Biochemistry III Year Semester VI	C-13: Genetic Engineering and Biotechnology
		Unit III: Recombination and transposition of DNA: Homologous recombination enzymes in homologous recombination, site specific recombination, recombinases.	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Unit IV: Enzymes as reagents (glucose oxidase, cholesterol oxidase); Marker enzymes in diagnostics (SGPT, SGOT, creatine kinase, alkaline and acid phosphatases)	B Sc (H) Biochemistry I Year Semester II	DSC-4 Enzymes
	Practical	Exercise 5: Determination of the melting temperature of DNA Exercise 6: Isolation of chromosomal DNA from <i>E coli</i> cells	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Exercise 5: Sugar fermentation by microorganisms. Exercise 6: Continuous assay if lactate dehydrogenase.	B. Sc (H) Biochemistry I Year Semester II	DSC-5: Metabolism of carbohydrates
		Exercise 5: Separation of molecules by gel filtration chromatography. Exercise 6: Demonstration of PAGE and Agarose gel electrophoresis.	B. Sc, I Year Semester II	GE-2: Techniques in Biochemistry


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Semester II/IV/VI
(2023-24)

Name of the Faculty: Dr Meenakshi Kuhar

Department: Biochemistry

Month		Topics	Course	Paper Code/Name
May	Theory	Unit IV: Challenges in producing recombinant protein in <i>E. coli</i> . Production of recombinant protein by eukaryotic cells. Fusion tags such as, poly-histidine, glutathione, maltose binding protein..	B Sc (H) Biochemistry III Year Semester VI	C-13: Genetic Engineering and Biotechnology
		Unit III: Recombination and transposition of DNA: Transposition, DNA transposition by cut and paste and replicative mechanism.	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
	Practical	Unit IV: Enzyme linked immunoassay; Enzyme therapy (streptokinase); Enzymes in research. Immobilized enzymes.	B Sc (H) Biochemistry I Year Semester II	DSC-4 Enzymes
		Mock Practical	B. Sc (H) Biochemistry II Year Semester IV	DSC-12: Gene Organization Replication and Repair
		Mock Practical	B. Sc (H) Biochemistry I Year Semester II	DSC-5: Metabolism of carbohydrates
		Mock Practical	B. Sc, I Year Semester II	GE-2: Techniques in Biochemistry

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Name of the Faculty: Dr. Anju Kaicker

Department: Biochemistry

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Historical perspectives of immunity, Innate immune mechanisms	TBCH	Immunology
		Historical perspectives of immunity, Innate immune mechanisms	TBS	Immunobiology
		Overview of hormones and signaling mechanisms	SBCH	Hormone Biochemistry
	Practicals	Purification of antibodies by affinity chromatography	PGDMB	Immunology II
		Double immunodiffusion and single radial immunodiffusion	TBS	Immunobiology
		BMR & Nutritive value of food	SBCH	Nutritional biochemistry
	Tutorials			
FEBRUARY	Theory:	Cells &organs of the immune system Complement pathways (classical, alternate, MBL) Biological consequences of complement activation, regulation of the pathway	TBCH	Immunology
		Cells &organs of the immune system Complement pathways (classical, alternate, MBL)	TBS	Immunobiology
		Hypothalamus and the pituitary hormones, Hypophyseal portal system	SBCH	Hormone Biochemistry


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	Practicals:	Sandwich ELISA Indirect ELISA Dot ELISA Immunoelectrophoresis, Rocket IEP, Sandwich & Indirect ELISA Anthropometric measurements, Estimation of iron in serum	PGDMB TBS SBCH	Immunology I Immunobiology Nutritional Biochemistry
	Tutorials:			



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	<u>Assignment:</u>			
MARCH	Theory:	Major Histocompatibility Complex. Endogenous & Exogenous pathways for antigen processing, T cell development	TBCH	Immunology
		Biological consequences of complement activation, regulation of the pathway Vaccines	TBS	Immunobiology
		Growth hormone, Direct & Indirect effect, Acromegaly, gigantism	SBCH	Hormone Biochemistry
	Practicals:	Conjugation of antibody and enzyme, Dot ELISA	PGDMB	Immunology I
		Active & Passive agglutination, Isolation of PBMCs	TBS	Immunobiology
		Estimation of Vitamin E, Measurement of oxidative stress (TBARS, catalase activity)	SBCH	Nutritional Biochemistry
	Tutorials:			
	<u>Test</u>			
APRIL	Theory:	TCR diversity, Generation of cellular immunity, Role of NK cells in immunity	TBCH	Immunology

MAY		Hypersensitivity (type I, II,III, IV) Transplantation	TBS	Immunobiology
		Thyroid hormone synthesis and functions, Hypo and Hyper thyroidism, Parathyroid gland and its function	SBCH	Hormone Biochemistry
	Practicals:	Purification of serum proteins by ion exchange, Digestion of IgG and separation of digested fragments	PGDMB	Immunology I
		PBMC isolation, Survey of plant defenses : cuticle, trichomes, thorns, prickles	TBS	Immunobiology
MAY		Nutrient-Nutrient Interaction, Food as medicine, Food supplements	SBCH	Nutritional Biochemistry
	Theory	Vaccines, Doubt clearing classes	TBCH	Immunology
		Transplantation, Hypersensitivity	TBS	Immunobiology
MAY		Vit D synthesis and its role in Calcium homeostasis, revision classes	SBCH	Hormone Biochemistry
	Practicals	Revision exercises and final practical examination	PGDMB	Immunology I
		Characterization of disease symptoms caused by bacterial.viral, fungal infection (in plants)	TBS	Immunobiology
		Drug- Nutrient interactions, Case studies	SBCH	Nutritional Biochemistry



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Academic year 2023-2024

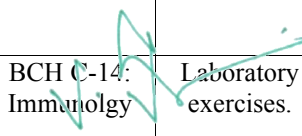
Name of the Faculty: Dr.Nandita Narayanasamy **Department:** BIOCHEMISTRY

Semester : II/IV/VI

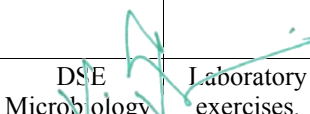
Month		Topics	Course	Paper Code/Name	Mode of teaching
Jan 2022	Theory	Basic understanding of infection cycle, nosocomial infections, emerging and re-emerging infections, pathogenic agents of biological warfare, Source, reservoir and transmission of pathogens, reproduction number, LD50,	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	DSE: Molecular basis of infectious disease	Chalk and talk, ppts and GCR
		Defining nutrition, role of nutrients.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional Biochemistry	Chalk and talk, ppts and GCR
		Introduction to hormones;	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSC: 11 Hormone Biochemistry	Chalk and talk, ppts and GCR
	Practicals	Introduction to immunology practicals, DID,	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	BCH C-14: Immunology	Laboratory exercises.
		Preparation of Media, methods of sterilization	B.Sc. BIOLOGICAL Sc (Hons.) III Year, Semester VI	DSE Microbiology	Laboratory exercises.
		Introduction to Enzymology practicals. Determination of enzyme activity of acid phosphatase.	B.Sc. BIOCHEMISTRY (Hons.) IYear, Semester II	DSC: 4 Enzymes	Laboratory exercises.
February	Theory	Unit Overview of structure, viral virulence factors and host pathogen interactions, Viral pathogenesis, Viral genetics , Anti viral therapy	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	DSE: Molecular basis of infectious disease	Chalk and talk, ppts and GCR
		Food sources of carbohydrates, Review functions of carbohydrates. Factors affecting Digestion, absorption and utilization. Glycemic index and glycemic load. Dietary fiber and role of fibre in health. Role of Gut microbiome in maintaining health. Role of pre and probiotics in nutritive health	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional Biochemistry	Chalk and talk, ppts and GCR


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		Physiology and action of Aldosterone; the Renin Angiotensin System. Physiology and Biochemical actions of Cortisol; Role of POMC and CRH in cortisol synthesis; Adrenal medullary hormones: epinephrine and norepinephrine. The Fight or flight response; Dual receptor hypothesis. General adaptation syndrome: acute and chronic stress response. Pathophysiology – Addison's disease, Conn's syndrome, Cushing syndrome.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSC:11 Hormone Biochemistry	Chalk and talk, ppts and GCR
	Practicals:	SRID, Isolation of PBMNC, immuno-electrophoresis and Agglutination test to determine blood group and Antibody titer	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	BCH C-14: Immunology	Laboratory exercises.
		Culturing of bacteria, storage of bacteria, spread plate method, streak plate method. bacterial growth curve, staining by methylene blue.	B.Sc. BIOLOGICAL Sc (Hons.) III Year, Semester VI	DSE Microbiology	Laboratory exercises.
		Specific activity, progress curve and pH optima of acid phosphatase	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	DSC:4 Enzymes	Laboratory exercises.
March	Theory	AIDS (including opportunistic infections) and Influenza: history, causative agent, pathogenesis, diagnostics, drugs, prevention/precautions; overview of other viral diseases including Hepatitis A/B/E, Dengue, Polio, Rabies, SARS	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	DSE: Molecular basis of infectious disease	Chalk and talk, ppts and GCR
		Essential Fatty Acids; Functions of EFA, RDA, – excess and deficiency of EFA. Dietary implications of fats and oils, Combination ratios of n6 and n3, MUFA, PUFA and SFA Factors affecting Digestion, absorption and utilization. Importance of the following: a) Omega – fatty acids. Omega 3/ omega 6 ratio b) Phospholipids c) Cholesterol in the body d) Mono, Polyunsaturated and Saturated Fatty Acids.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional Biochemistry	Chalk and talk, ppts and GCR
		Hormones of the Pancreas: structure, synthesis, regulation of release, incretins, physiology and biochemical actions of insulin and glucagon. Role of these hormones in blood glucose homeostasis; Pathophysiology - diabetes type I and type II. GIT hormones: Secretin, gastrin and incretins.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSC: 11 Hormone Biochemistry	Chalk and talk, ppts and GCR
	Practicals	Isolation of IgG from serum, Dot blot	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	BCH C-14: Immunology	Laboratory exercises.


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	TEST	Gram staining, CFU of a Bacteria, antibiotic sensitivity.	B.Sc. BIOLOGICAL Sc (Hons.) III Year, Semester VI	DSE Microbiology	Laboratory exercises.
		Temperature effect and calculation of activation energy of acid phosphatase. Partial purification of acid Phosphatase by ammonium sulphate fractionation	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	DSC:4 Enzymes	Laboratory exercises.
		Introduction to infection Biology and Virology, Pathogenesis of HIV, Influenzas', Rabies, Polio, Hepatitis, Dengue and SARS	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	DSE: Molecular basis of infectious disease	
		Carbohydrate and Fats as nutrients	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional Biochemistry	
		Adrenal and Pancreatic hormones	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSC: 11 Hormone Biochemistry	
April	Theory	Detailed study of Malaria: history, causative agents, vectors, life cycle, Host parasite interactions, diagnostics, drugs, vaccine development, prevention/precautions. Other diseases including Kala Azar, Amoebiasis, Giardiasis	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	DSE: Molecular basis of infectious disease	Chalk and talk, ppts and GCR
		Calcium, Iron and Copper Distribution in the body digestion, Absorption, Utilization, Transport, Excretion, Balance, Deficiency, Toxicity, Sources, RDA. Iodine, Fluoride, Mg, Cu, Zn, Se, Manganese, Chromium, Molybdenum Distribution in the human body, Physiology, Function, deficiency, Toxicity and Sources	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional Biochemistry	Chalk and talk, ppts and GCR
		Male and female sex hormones. Interplay of hormones during ovarian and uterine phases of menstrual cycle; Placental hormones; role of hormones during parturition and lactation. Hormone based Contraceptives.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSC: 11 Hormone Biochemistry	Chalk and talk, ppts and GCR
	Practicals:	Evaluation and value added experiments	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	BCH C-14: Immunology	Laboratory exercises.
		Evaluation and value added experiments	B.Sc. BIOLOGICAL Sc (Hons.) III Year, Semester VI	DSE Microbiology	Laboratory exercises.


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		Determination of K_m , K_i and V_{max} of acid phosphatase. Immobilization of an enzyme by Na Alginate	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	DSC:4 Enzymes	Laboratory exercises.
May	Theory	Amoebiasis, Giardiasis	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	DSE: Molecular basis of infectious disease	Chalk and talk, ppts and GCR
		Trace minerals Distribution in the human body, Physiology, Function, deficiency, Toxicity and Sources	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional Biochemistry	Chalk and talk, ppts and GCR
		Hormonal regulation of lactation. Hormone based Contraceptives.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSC: 11 Hormone Biochemistry	Chalk and talk, ppts and GCR
	Practicals:	Revision exercises Viva Voce	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	BCH C-14: Immunology	Laboratory exercises.
		Revision exercises Viva Voce.	B.Sc. BIOLOGICAL Sc (Hons.) III Year, Semester VI	DSE Microbiology	Laboratory exercises.
		Revision exercises Viva Voce	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	DSC:4 Enzymes	Laboratory exercises.



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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE
EVEN SEMESTER

Name of the Faculty: Dr. VANDANA MALHOTRA

Department: BIOCHEMISTRY

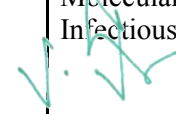
B.Sc (Hons) Biochemistry

PG Diploma Molecular Biology and Biochemical Technology

Semester: II/IV/VI

Teaching Mode: Offline Mode

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	UNIT II: Strategies for management of infectious diseases Role of drugs, vaccines, hygiene and sanitation in prevention, transmission control and treatment of infectious diseases	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE 4 Molecular Basis of Infectious Diseases
		UNIT II: DNA Replication of DNA The chemistry of DNA synthesis, DNA polymerase, the replication fork, enzymes and proteins in DNA replication, E coli DNA polymerases, stages of replication: initiation, elongation, origin of replication, relationship between replication and cell division, replication in eukaryotes, end replication problem, telomerases. Comparison of replication in prokaryotes and eukaryotes. Inhibitors of DNA replication and applications in medicine.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C-9: Gene Organization, Replication and Repair
	Practical	• Gram Staining	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		• Estimation of Urea	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C10 Metabolism of Amino acids and Nucleotides
		Preparation for media and LB agar plates for Transformation	PG Diploma in Molecular and Biochemical technology SEM-II	RDT-II
	Assignments & Quiz	On Relevant Topics		
FEBRUARY	Theory	Unit III: Diseases caused by bacteria Classification of bacterial pathogens based on structure and nutritional requirements; Overview of bacterial virulence factors and host pathogen interactions; detailed study of tuberculosis: History, causative agent, molecular basis of host specificity, infection and pathogenicity, diagnostics, therapeutics and vaccines, drug resistance and implications on public health. Other bacterial diseases - virulence factors, host	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE 4 Molecular Basis of Infectious Diseases


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		pathogen interaction, symptoms, diagnosis, vaccines and drugs against - Typhoid, Diphtheria, Pertussis, Tetanus, Botulism Cholera, Anthrax and Pneumonia		
		UNIT II. DNA Replication Contd.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C-9: Gene Organization, Replication and Repair
	Practical	- Acid Fast Staining - WIDAL Test for Typhoid	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		- Transformation of competent <i>E. coli</i> cells with plasmid DNA - Calculation of Transformation efficiency	PG Diploma in Molecular and Biochemical technology SEM-II	RDT-II
		- Estimation of Uric Acid - Estimation of Creatinine - Estimation of SGOT & SGPT	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C10 Metabolism of Amino acids and Nucleotides
	Assignments	On Relevant Topics		
March	Theory	Unit III. Diseases caused by bacteria (Contd.)	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE 4 Molecular Basis of Infectious Diseases
		Unit II. DNA Replication (Contd.) Unit 4. Mutations and Repair Importance of mutations in evolution of species, Types of mutations, DNA damage by hydrolysis, alkylation, oxidation and radiation. Mutations caused by base analogs and intercalating agents. Ames test. Replication errors and their repair, mismatch repair system. Repair of DNA damage-direct reversal of DNA damage, base excision repair, nucleotide excision repair, translesion DNA synthesis. DNA repair diseases.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C-9: Gene Organization, Replication and Repair
	Practical	- To prepare temporary mount of fungi and identify through staining - Isolation and enumeration of bacteriophages (PFU) from water/sewage sample - Permanent slides M. tuberculosis, Leishmania and P. falciparum	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		PCR and Primer Designing	PG Diploma in Molecular and Biochemical technology SEM -II	RDT-II

		- Glutamate Dehydrogenase assay - ATCase Kinetics	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C10 Metabolism of Amino acids and Nucleotides
Mid-term Class Tests and Assignment Submission				
April	Theory	Unit III. Diseases caused by bacteria (Contd.)	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		UNIT VI: Diseases caused by fungi Fungal diseases such as Candidiasis, Sporotrichosis, Aspergillosis and Ring worm: general disease characteristics, medical importance, pathogenesis, diagnosis, and treatment		
	Practical	Unit 4. Contd.	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C-9: Gene Organization, Replication and Repair
		Research and presentation on current trends in infectious diseases	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		- Phage Titration - Religation of digested DNA after gel extraction	PG Diploma in Molecular and Biochemical technology SEM -II	RDT-II
		Case Studies and Presentations	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C10 Metabolism of Amino acids and Nucleotides
May	Theory	UNIT VI: Diseases caused by fungi (Contd.)	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		Unit 4. Mutations (Contd.)	B.Sc. BIOCHEMISTRY (Hons.) II Year, Sem IV	CBCS: BCH C-9: Gene Organization, Replication and Repair
	Practical	Research and presentation on current trends in infectious diseases	B.Sc. BIOCHEMISTRY (Hons.) III Year, Sem VI	CBCS: BCH DSE4 Molecular Basis of Infectious Diseases
		Revision and Mock Test	PG Diploma in Molecular and Biochemical technology SEM -II	RDT-II


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		Revision and Mock Test	B.Sc. BIOCHEMISTRY Hons.) II Year, Sem IV	CBCS: BCH C10 Metabolism of Amino acids and Nucleotides
Final Exams				



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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN AY 2023-24 (Even SEM)

Name of the Faculty: Lieut. (Dr.) Kameshwar Sharma YVR, Assistant Professor (AL-12)

Department: Biochemistry

Semester: II/IV/VI (Even Semester)

Month	Paper (Theory/Practical)	Topics	Course	Paper Code/Name
JANUARY	<u>Theory</u>			
		➤ Overview of Bioinformatics and its applications in biology. ➤ Databases & types of biological databases. ➤ Structure and Sequence Databases with examples.	<u>PGDBT</u>	<u>PGDMB 201 (Biochemical Techniques – II)</u>
		➤ Personality Development ➤ Leadership skills	<u>NCC II (VAC)</u>	<u>National Cadet Corps (NCC- II)</u>
		➤ Bioenergetics ➤ Introduction to Carbohydrate Metabolism	<u>SBS (Sem – IV)</u>	<u>SBS C 10 (Metabolism and Integration)</u>
		➤ Introduction to Microscopy ➤ Fluorescence Microscopy	<u>TBCH (Sem- VI)</u>	<u>TBCH DSE – 6 (Advanced Methodologies)</u>
	<u>Practical</u>			
		• Introduction to Bioinformatics • J mol/Pymol and Java	<u>PGDBT</u>	<u>PGDMB 201 (Biochemical Techniques – II)</u>
		• Drill • Weapon Training	<u>NCC II (VAC)</u>	<u>National Cadet Corps (NCC- II)</u>
		• Estimation of Random Blood Glucose (GOD-POD) • Estimation of O-GTT	<u>SBS (Sem – IV)</u>	<u>SBS C 10 (Metabolism and Integration)</u>
		• SDS-PAGE • Western Blot	<u>TBCH (Sem- VI)</u>	<u>TBCH DSE – 6 (Advanced Methodologies)</u>
FEBRUARY	<u>Theory</u>			
		Bioinformatics Sequence alignment & phylogeny ✓ Similarity, identity and homology. ✓ Concept of Alignment – local and global alignment, pairwise and multiple sequence alignments, ✓ amino acid substitution matrices	<u>PGDBT</u>	<u>PGDMB 201 (Biochemical Techniques – II)</u>


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		(PAM and BLOSUM), BLAST and CLUSTALW, ✓ Definition of phylogeny and its importance, ✓ Methods of Phylogenetic tree generation, Phylip		
		✓ Leadership Skills ✓ Social Service and Community Development ✓ Disaster Management	<u>NCC II (VAC)</u>	<u>National Cadet Corps (NCC-II)</u>
		Carbohydrate Metabolism ✓ Carbohydrates metabolism – ✓ Glycolysis, alcoholic and lactic acid fermentation, ✓ Pasteur Effect, ✓ gluconeogenesis, Cori cycle, glucose-alanine cycle, ✓ futile cycle.TCA cycle, ✓ HMP shunt ✓ glycogen metabolism.	<u>SBS (Sem – IV)</u>	<u>SBS C 10 (Metabolism and Integration)</u>
		✓ Scanning Electron Microscopy ✓ Transmission Electron Microscopy ✓ Confocal Microscopy	<u>TBCH (Sem-VI)</u>	<u>TBCH DSE – 6 (Advanced Methodologies)</u>
	<u>Practical</u>			
		✓ Primary sequence analyses (Protparam) and Secondary structure prediction (GOR, nn Predict). ✓ Tertiary structure prediction (SWISSMODEL). ✓ Protein structure evaluation - Ramachandran map (PROCHECK)	<u>PGDBT</u>	<u>PGDMB 201 (Biochemical Techniques – II)</u>
		✓ Drill ✓ FC & BC	<u>NCC II (VAC)</u>	<u>National Cadet Corps (NCC-II)</u>
		✓ Estimation of SGOT and SGPT ✓ Estimation of Urea and Uric Acid	<u>SBS (Sem – IV)</u>	<u>SBS C 10 (Metabolism and Integration)</u>
		✓ Southern Hybridization ✓ Labelling DNA with Biotinylated probes	<u>TBCH (Sem-VI)</u>	<u>TBCH DSE – 6 (Advanced Methodologies)</u>
<u>MARCH</u>	<u>Theory</u>			प्रधानाचार्य Principal
		Genomics	<u>PGDBT</u>	<u>PGDMB 201</u>

		✓ Introduction to genomics, comparative and functional genomics, ✓ gene structure in prokaryotes and eukaryotes, ✓ Genome annotation, gene prediction approaches and tools Protein sequence, structure prediction and analysis ✓ Protein Structure - Primary, Secondary and Tertiary structure, ✓ Protein structure prediction methods: Homology modeling, ✓ Fold recognition and ab-initio methods, ✓ Ramachandran plot.		<u>(Biochemical Techniques – II)</u>
		✓ NCC – Outlines and Benefits ✓ NCC- Structure and Organization ✓ NCC- Lateral Entries	<u>NCC II (VAC)</u>	<u>National Cadet Corps (NCC- II)</u>
		✓ Metabolic Integration ✓ Metabolic Network	<u>SBS (Sem – IV)</u>	<u>SBS C 10 (Metabolism and Integration)</u>
		✓ Cell Culture Techniques ✓ Immunohistochemistry ✓ Immunofluorescence ✓ Flow Cytometry, FACS, TUNNEL assay, Non-invasive soft tissue	<u>TBCH (Sem- VI)</u>	<u>TBCH DSE – 6 (Advanced Methodologies)</u>
	<u>Practical</u>			
		✓ BLAST suite of tools for pairwise alignment ✓ Multiple sequence alignment (CLUSTALW/TCoffee) and construction of guide trees ✓ Gene prediction using GENSCAN/GLIMMER	<u>PGDBT</u>	<u>PGDMB 201 (Biochemical Techniques – II)</u>
		✓ Drill ✓ Map Reading ✓ ITP	<u>NCC II (VAC)</u>	<u>National Cadet Corps (NCC- II)</u>
		✓ Estimation of TG, HDL, LDL and Cholesterol ✓ Estimation of Serum Creatinine	<u>SBS (Sem – IV)</u>	<u>SBS C 10 (Metabolism and Integration)</u>
		✓ EMSA ✓ Protein Pull down assay ✓ Virtual Lab Microarray and 2 D- DIGE	<u>TBCH (Sem- VI)</u>	<u>TBCH DSE – 6 (Advanced Methodologies)</u>

<u>APRIL</u>	<u>Theory</u>			
			<u>PGDBT</u>	<u>PGDMB 201</u> <u>(Biochemical</u> <u>Techniques –</u> <u>II)</u>
		➤ Revision of Classes and completion of spillover syllabus	<u>NCC II</u> <u>(VAC)</u>	<u>National Cadet</u> <u>Corps (NCC-</u> <u>II)</u>
		➤ Exam Preparation	<u>SBS</u> <u>(Sem –</u> <u>IV)</u>	<u>SBS C 10</u> <u>(Metabolism</u> <u>and</u> <u>Integration)</u>
			<u>TBCH</u> <u>(Sem-</u> <u>VI)</u>	<u>TBCH DSE – 6</u> <u>(Advanced</u> <u>Methodologies)</u>
	<u>Practical</u>			
			<u>PGDBT</u>	<u>PGDMB 201</u> <u>(Biochemical</u> <u>Techniques –</u> <u>II)</u>
		➤ Revision of Classes and completion of spillover syllabus	<u>NCC II</u> <u>(VAC)</u>	<u>National Cadet</u> <u>Corps (NCC-</u> <u>II)</u>
		➤ Mock- Practical Exam	<u>SBS</u> <u>(Sem –</u> <u>IV)</u>	<u>SBS C 10</u> <u>(Metabolism</u> <u>and</u> <u>Integration)</u>
		➤ Final Practical Preparation (File etc.,)	<u>TBCH</u> <u>(Sem-</u> <u>VI)</u>	<u>TBCH DSE – 6</u> <u>(Advanced</u> <u>Methodologies)</u>



Lieut. (Dr.) KAMESHWAR SHARMA YVR
Assistant Professor (AL-12)
Department of Biochemistry

(Dated: 29th February, 2024)



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SEMESTER WISE TEACHING PLAN 2023-24
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. NIMISHA SINHA
Department: BIOCHEMISTRY

Even Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	UNIT I: The basic principle of gene cloning No of hours: 10 Restriction and modification systems, restriction endonucleases and other enzymes used in manipulating DNA molecules.	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS Genetic Engineering and Biotechnology
		Unit 1 Defining nutrition, role of nutrients. Unit of energy, Food energy, SDA. Energy expenditure and its components	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	DSE Nutritional biochemistry
		Unit 1 Introduction to metabolism, autotrophs, heterotrophs, Gibbs free energy	B.Sc. BIOCHEMISTRY (Hons.) I Year, Semester II	C4 Metabolism of carbohydrates
	Practical	□ Isolation of Plasmid DNA	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS: BCH C- Genetic Engg, and Biotechnology
		1. Paper chromatography for identification of bases	B.Sc. BIOCHEMISTRY (Hons.) II Year, Semester IV	CBCS:BCH C-10: Gene Organization Replication and Repair
		1. Preparation of competent cells	PG Diploma Semester II	PGDMB Recombinant DNA technology
	Assignments	Related to the topics covered so far.		
FEBRUARY	Theory	Unit 1 Ligation of DNA molecules. DNA ligase, sticky ends, blunt ends, linkers and adapters, homopolymer tailing, Synthetic oligonucleotides	B.Sc. BIOCHEMISTRY (Hons.) III Year, Semester VI	CBCS Genetic Engineering and Biotechnology

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		Energy Balance, Recommended Nutrient Intakes (RNI) and Recommended Dietary Allowances for different age group	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	DSE Nutritional biochemistry	
		Glycogen breakdown and glycogen synthesis	B.Sc. BIOCHEMISTRY Hons.) I Year, Semester II	C4 Metabolism of carbohydrates	
	Practical	□ Restriction enzyme digestion of plasmid DNA and size estimation of fragments.	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS: BCH C-Genetic Engg, and Biotechnology	
		▪ Absorption spectrum of DNA ▪ Estimation of DNA using absorbance at 260 nm	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS:BCH C-Gene organisation replication and repair	
		• Transformation and calculation of transformation efficiency	PG Diploma, Semester II	PGDMB Recombinant DNA technology	
	Assignments	Related to the topics covered			
MARCH	Theory	UNIT V: Polymerase chain reaction and DNA sequencing No of hours: 10 Fundamentals of polymerase chain reaction, Types of PCR; hot start, multiplex, reverse transcriptase PCR and Nested PCR, quantitative PCR, Primer, designing for PCR. Cloning PCR products. DNA sequencing by Sanger's method including Automated Sanger's DNA sequencing. Introduction to Next Generation Sequencing.	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS Genetic Engineering and Biotechnology	
		Unit 2 Functions of proteins in the body. RDA for different age groups. Essential and Nonessential amino acids. Complete and incomplete protein, Amino Acid Interactions: Antagonism, Toxicity, Imbalance, Amino acid complementation and Supplementation in foods. Protein quality determinants NPU, Biological Value, PDCAAS, Nitrogen balance. PEM: Marasmus and Kwashiorkor.	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	DSE Nutritional biochemistry	
		Unit 3 Regulation of Glycogen synthesis and breakdown. Glycogen storage diseases	B.Sc. BIOCHEMISTRY Hons I Year Semester II	Metabolism of carbohydrates	
Midterm exam and assignment submission					



APRIL	Practical	☐ Designing of primers for any selected genes. ☐ Demonstration of PCR technique.	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS: BCH C-Genetic Engg, and Biotechnology	
		☐ DPA test for DNA estimation	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS:BCH C-9 Gene organisation replication and repair	
		☐ PCR and primer designing	PG Diploma Semester II	Recombinant DNA technology	
	Theory	UNIT VI: Applications of genetic engineering in Biotechnology No of hours: 12 Site-directed mutagenesis, Protein engineering (T4-lysozyme), yeast two hybrid systems, Production of recombinant pharmaceuticals such as insulin, human growth hormone, factor VIII. Recombinant vaccines. Gene therapy (SCID), concerns	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS Genetic Engineering and Biotechnology	
		Unit 4 Vitamin A, D, E, K and dietary sources, RDA, Role of Vitamin A in Visual cycle and overview of other functions. Role of Vitamin K in Gamma carboxylation (blood clotting). Role of Vitamin E as an antioxidant. Role of Vitamin D in maintenance of bone physiology and overview of other functions. Vitamin C- Dietary sources, RDA, role in collagen synthesis..	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	DSE Nutritional biochemistry	
		Unit 4 Citric acid cycle and its regulation. Overview of citric acid cycle, synthesis of acetyl Coenzyme A, Regulation of Pyruvate Dehydrogenase complex, enzymes of citric acid cycle, regulation of citric acid cycle, inhibitors, anaplerotic reactions, amphibolic nature.	B.Sc. BIOCHEMISTRY Hons.) I Year, Semester II	Metabolism of carbohydrates	
	Practical	☐ Preparation of competent cells by calcium chloride method ☐ Transformation of E coli cells with plasmid DNA ☐ Blue white selection ☐ Repeat any previous experiment	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS: BCH C-Genetic Engg, and Biotechnology	
		☐ Determination of melting temperature of DNA ☐ Isolation of genomic DNA from bacterial cells	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS:BCH C-9 Gene organisation replication and repair	
		☐ Phage titration ☐ Religation of digested DNA after gel extraction	PG Diploma Semester II	Recombinant DNA technology	

May	Theory	Unit 6 Applications in agriculture – Bt cotton, glyphosate herbicide resistant crops, ethical concerns	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS Genetic Engineering and Biotechnology	
		Unit 4 The B Complex vitamins- Dietary sources, RDA. Functions and role in metabolism, Role of Vitamin B12 and Folate in Haematopoiesis and Neurology. Biochemical basis for deficiency symptoms, Hypervitaminosis	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	DSE Nutritional biochemistry	
		Unit 4 Diseases associated with metabolic irregularities. Overview of Starve feed cycle	B.Sc. BIOCHEMISTRY Hons.) I Year, Semester II	Metabolism of carbohydrates	
	Practical	Revision and mock test	B.Sc. BIOCHEMISTRY Hons.) III Year, Semester VI	CBCS: BCH C- Genetic Engg, and Biotechnology	
		Revision and mock test	B.Sc. BIOCHEMISTRY Hons.) II Year, Semester IV	CBCS:BCH C-9 Gene organisation replication and repair	
		Revision and mock test	PG Diploma Semester II	Recombinant DNA technology	



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr Ravindra Varma Polisetty

Department: Biochemistry

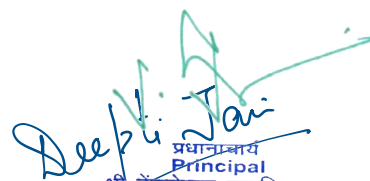
Semester: II / IV / VI

Month		Topics	Course	Paper Code/Name
January	Theory	Preparation of sample, different methods of cell lysis	B.Sc. (H) Biochemistry Sem II	BCH-GE-2: Techniques In Biochemistry
		De novo synthesis of purine and pyrimidine nucleotides, regulation and salvage pathways	B.Sc. (H) Biochemistry Sem IV	BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides
		Protein-Protein Interaction: Immunoprecipitation, Co-Immunoprecipitation (Co-IP)	B.Sc. (H) Biochemistry Sem VI	BCH DSE-6: Advanced methodologies
	Practical	1. Estimation of serum urea.	B.Sc. (H) Biochemistry Sem IV	BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides
		1. Western Blotting	B.Sc. (H) Biochemistry Sem VI	BCH DSE-6: Advanced methodologies
		1. Estimation of Random Blood Glucose – Glucose Oxidase- Peroxidase method	B.Sc. (H) Biological Science Sem IV	BS DSC-401 Metabolism and Integration
February	Theory	Salting out, dialysis. Principle and the factors affecting centrifugation Svedberg coefficient, types of rotors,	B.Sc. (H) Biochemistry Sem II	BCH-GE-2: Techniques In Biochemistry
		Digestion of nucleic acids, degradation of purine and pyrimidine nucleotides, Inhibitors of nucleotide metabolism.	B.Sc. (H) Biochemistry Sem IV	BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides
		Pull down assays, Yeast two hybrid, Protein fragment complementation assay, Western blotting, Far western blotting	B.Sc. (H) Biochemistry Sem VI	BCH DSE-6: Advanced methodologies

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	Practical	1. Assay of serum transaminase – SGOT and SGPT 2. Estimation of serum uric acid. 3. Estimation of serum creatinine. 1. Western Blotting 2. Estimation of Oral Glucose tolerance test (O-GTT).	B.Sc. (H) Biochemistry Sem IV B.Sc. (H) Biochemistry Sem VI B.Sc. (H) Biological Science Sem IV	BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides BCH DSE-6: Advanced methodologies BS DSC-401 Metabolism and Integration
March	Theory	Applications of differential and density gradient centrifugation. Principle of electrophoresis, various types of electrophoresis: Polyacrylamide gel (native) Lesch Nyhan Syndrome, Gout and SCID (Adenosine deaminase deficiency), Biosynthesis of deoxyribonucleotides and its regulation, conversion to triphosphates, biosynthesis of coenzyme nucleotides Protein microarrays, ELISA. Protein Separation: Isoelectric focusing, 2D protein gel electrophoresis, 2D-DIGE, Pulse field Electrophoresis; Structural Analysis: Mass Spectrometry, MS/MS, LC/MS.	B.Sc. (H) Biochemistry Sem II B.Sc. (H) Biochemistry Sem IV B.Sc. (H) Biochemistry Sem VI	BCH-GE-2: Techniques In Biochemistry BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides BCH DSE-6: Advanced methodologies
	Practical	5. Glutamate Dehydrogenase Assay 6. Aspartate Transcarbamylase kinetics 2. Southern hybridization 3. Determination of Lipid Profile: Total Cholesterol (TC), High Density Lipoproteins (HDL) and Triglycerides (TAG).	B.Sc. (H) Biochemistry Sem IV B.Sc. (H) Biochemistry Sem VI B.Sc. (H) Biological Science Sem IV	BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides BCH DSE-6: Advanced methodologies BS DSC-401 Metabolism and Integration
	Assignment			
	Mid-Term Test	Questions from the topics		

April	Theory	SDS PAGE., Agarose gel Biosynthesis of non- essential amino acids and its regulation, Disorders of amino acids metabolism, phenylketonuria, alkaptonuria, maple syrup urine disease, methyl malonic acidemia (MMA), homocystinuria, and Hartnup's disease Chromatin immunoprecipitation (ChIP), ChIP on ChIP. Gene expression analysis: Reporter assays - example luciferase assay	B.Sc. (H) Biochemistry Sem II B.Sc. (H) Biochemistry Sem IV B.Sc. (H) Biochemistry Sem VI	BCH-GE-2: Techniques In Biochemistry BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides BCH DSE-6: Advanced methodologies
	Practical	7. Case studies on SCID, Gout and Lesch Nyhan Syndrome. 3. Labeling DNA with biotinylated primers using PCR 4. EMSA (virtual lab) 5. Protein Pull down assay 4. Estimation of SGPT and SGOT in serum/plasma sample. 5. Estimation of creatinine in serum/plasma sample. 6. Estimation of Blood Urea. 7. Estimation of serum uric acid	B.Sc. (H) Biochemistry Sem IV B.Sc. (H) Biochemistry Sem VI B.Sc. (H) Biological Science Sem IV	BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides BCH DSE-6: Advanced methodologies BS DSC-401 Metabolism and Integration
May	Theory	Staining procedures for protein and nucleic acids Precursor Functions of Amino Acids: Biosynthesis of creatine and creatinine, polyamines (putrescine, spermine, spermidine), catecholamines (dopamine, epinephrine, norepinephrine) and neurotransmitters (serotonin, GABA) DNA Microarrays, RNA seq.	B.Sc. (H) Biochemistry Sem II B.Sc. (H) Biochemistry Sem IV	BCH-GE-2: Techniques In Biochemistry BCH-DSC-10 : Metabolism Of Amino Acid And Nucleotides BCH DSE-6: Advanced methodologies
	Practical	6. Virtual lab on Microarray profiling or 2D-DIGE	B.Sc. (H) Biochemistry Sem VI	BCH DSE-6: Advanced methodologies


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr. Sarika Yadav

Department: Biochemistry

Semester: II, IV, VI

Month		Topics	Course	Paper Code/Name
Jan	Theory	General characteristics of enzymes; nature of enzymes - Ribozymes. apoenzyme, holoenzyme, Cofactor and prosthetic group.	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-104: Enzymes
	Theory	Role of essential and non-essential amino acids in growth and development	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-10: METABOLISM OF AMINO ACID AND NUCLEOTIDES
	Theory	Antigens, carriers, adjuvants and haptens, factors responsible for immunogenicity, B and T cell epitopes.	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
	Practical	Assay of salivary amylase	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-105: Metabolism of Carbohydrates
	Practical	Glucose tolerance test	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-11: Hormones: Biochemistry and Function
	Practical	Assays based on precipitation reactions - Ouchterlony double immunodiffusion (DID)	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
Feb	Theory	Classification and nomenclature of enzymes. Types of Enzyme assays - discontinuous, continuous, coupled assays; Enzyme activity, specific activity, units to express enzyme activity. Features of enzyme catalysis, factors affecting the rate of enzymatic reactions, activation energy and transition state theory. Catalysis, reaction rates. Catalytic power and specificity of enzymes, Fischer's lock and key hypothesis, Koshland's induced fit hypothesis.	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-104: Enzymes

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Theory	Transamination, role of pyridoxal phosphate, Glucose-alanine cycle, Krebs bicycle, urea cycle, its regulation and inherited defects of urea cycle,	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-10: METABOLISM OF AMINO ACID AND NUCLEOTIDES
Theory	Structure, classes and subclasses of immunoglobulins (Ig, Ig fold), effector functions of antibody, antigenic determinants on Ig, Ig super family. Monoclonal antibodies production and applications. Dreyer-Bennett hypothesis, multigene organization of Ig locus	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
Practical	Estimation of blood glucose in serum using ortho toluidine method; Estimation of blood glucose in serum using GOD-POD method (Glucose oxidase-Peroxidase)	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-105: Metabolism of Carbohydrates

	Practical	Glucose tolerance test (repeat), Estimation of serum Ca ²⁺ ; Estimation of serum electrolytes.	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-11: Hormones: Biochemistry and Function
	Practical	Mancini radial immunodiffusion (SRID); Isolation of lymphocytes from blood / spleen	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
March	Theory	Metal activated enzymes and metalloenzymes; General features - proximity and orientation, Strain and distortion, acid-base and covalent catalysis (chymotrypsin).	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-104: Enzymes
	Theory	Catabolic pathways of individual amino acids, Glucogenic and ketogenic amino acids. Metabolism of one carbon unit, Disorders of amino acids metabolism, phenylketonuria, alkaptonuria, maple syrup urine disease	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-10: METABOLISM OF AMINO ACID AND NUCLEOTIDES
	Theory	mechanism of V region DNA rearrangement, mechanisms of antibody diversity. Antigen independent phase of B cell maturation and selection, humoral response – T-dependent and T-independent response, anatomical distribution of B cell populations	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
	Practical	Estimation of G-6 P by G6PDH	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-105: Metabolism of Carbohydrates
	Practical	Determining the thyroid profile by estimating T4 and TSH under normal and pathophysiological conditions; Estimation of estrogen during different days of the menstrual cycle.	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-11: Hormones: Biochemistry and Function

		Presentation Assignments on GI Tract hormones and Adipokines;		
	Practical	Purification of immunoglobulins from serum; Assays based on agglutination reactions - Blood typing (active) & passive agglutination.	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
	Assignment			
	Mid-Semester Examination			
April	Theory	Coenzymes (TPP, NAD, pyridoxal phosphate) in enzyme catalyzed reactions; Control of activities of single enzymes and metabolic pathways, feedback inhibition, allosteric modulation (aspartate transcarbamoylase), regulation by covalent modification (glycogen phosphorylase), Zymogen (chymotrypsinogen).	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-104: Enzymes
	Theory	Methyl malonic acidemia (MMA), homocystinuria, and Hartnup's disease, Precursor Functions of Amino Acids: Biosynthesis of creatine and creatinine, polyamines (putrescine, spermine, spermidine), catecholamines (dopamine, epinephrine, norepinephrine) and neurotransmitters (serotonin, GABA)	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-10: METABOLISM OF AMINO ACID AND NUCLEOTIDES
	Theory	Gell and Coombs classification, IgE mediated (Type I) hypersensitivity, antibody mediated cytotoxic (Type II) hypersensitivity, immune complex mediated (type III) hypersensitivity and delayed type (Type IV) hypersensitivity	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
	Practical	Sugar fermentation by microorganisms; Continuous assay of Lactate Dehydrogenase	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-105: Metabolism of Carbohydrates
	Practical	HCG based pregnancy test. Case studies: Diabetes Insipidus, Acromegaly and dwarfism, Diabetes Mellitus, Rickets, Osteoporosis, Cushing syndrome	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-11: Hormones: Biochemistry and Function
	Practical	Enzyme linked immunosorbent assay (ELISA) & DOT ELISA	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
May	Theory	Isoenzymes - properties and physiological significance (lactate dehydrogenase)	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-104: Enzymes
	Theory	Integration of metabolic pathways (carbohydrate, lipid and amino acid metabolic pathways), tissue specific metabolism (brain, muscle, and liver).	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-10: METABOLISM OF AMINO ACID AND NUCLEOTIDES

Theory	Self-tolerance and possible mechanisms of induction of autoimmunity, Organ specific and systemic autoimmune diseases	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology
Practical	Revision and evaluation	B.Sc. (H) Biochemistry Sem- II	BCH-DSC-105: Metabolism of Carbohydrates
Practical	Revision and evaluation	B.Sc. (H) Biochemistry Sem- IV	BCH-DSC-11: Hormones: Biochemistry and Function
Practical	Revision and evaluation	B.Sc. (H) Biochemistry Sem- VI	BCH C-14: Immunology



Signature of the teacher



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SRI VENKATESWARA COLLEGE
SEMERSTER WISE TEACHING PLAN
Semester II/ IV/VI
(2023-24)

Name of the Faculty: Sidhartha Taritla

Department: Biochemistry

Month		Topics	Course	Paper code /Name
January	Theory	Introduction to Cell biology	FBCH	Basic Concepts of Cell Biology Dsc-203
		-----	GE IV	Biochemical correlation of Disease GE-8
		Introduction to Microbiology	TBS	Microbiology (DSE-8)
		-----	PG Diploma	RDT II PGD MB 202
	Practical	Differentiate prokaryotic and eukaryotic cells. Visualisation of animal cell, plant cell, bacterial cells by light microscope	FBCH	Basic Concepts of Cell Biology Dsc-203
		Theory on Plasmids Preparation of reagents for plasmid preparation	TBCH	Genetic Engineering and Biotechnology (BCH C-13)
		Preparation of LB broth and LB Agar media	TBS	Microbiology (DSE-8)
February	Theory	Histochemical Staining Techniques. Difference between prokaryotes and eukaryotes, Plant and animal cell	FBCH	Basic Concepts of Cell Biology Dsc-203
		Introduction to inherited Metabolic diseases. Alkaptonuria, Phenylketonuria	GE IV	Biochemical correlation of Disease GE-8
		History of development of microbiology as a discipline, Spontaneous generation versus biogenesis, contributions of Anton von Leeuwenhoek, Joseph Lister, Paul Ehrlich, Richard Petri, Charles Chamberland, Edward Jenner, Louis Pasteur, Robert Koch, Martinus W. Beijerinck, Sergei Winogradsky, Alexander Fleming, Elie Metchnikoff and Emil von Behring.	TBS	Microbiology (DSE-8)
		DNA transformation in yeast: methods of gene transfer to yeast YIp, YEp, YCp, YRp, shuttle vectors), optimization of protein expression.	PG Diploma	RDT II PGD MB 202
	Practical	Visualisation of animal cell, plant cell, bacterial cells by light microscope. Study of mitosis and identification of different stages of mitosis in onion root tips	FBCH	Concepts Of Cell Biology Dsc-203

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		Isolation of Plasmid from <i>E.coli</i> DH5 α	TBCH	Genetic Engineering and Biotechnology (BCH C-13)
		Restriction Digestion of pUC18 using ECORI and BamHI		
		Streaking, subculturing of <i>E.coli</i> DH5 α and <i>E.coli</i> DH5 α pPROEX	TBS	Microbiology (DSE-8)
		Bacterial Growth curve		
March	Theory	Structural features of RER, SER, Golgi apparatus Cell division : Mitosis and Meiosis	FBCH	Basic Concepts of Cell Biology Dsc-203
		Glycogen storage diseases (Von Gierke disease, Cori disease); Lipid storage diseases: Gaucher's disease; SCID. Overview of the endocrine disorders: Cushing's disease, Diabetes insipidus.	GE IV	Biochemical correlation of Disease GE-8
		Difference between prokaryotic and eukaryotic microorganisms. General characteristics of different groups: Acellular microorganisms (Viruses, Viroids, Prions) and Cellular microorganisms (Bacteria, Archaea, Algae, Fungi and Protozoa) with emphasis on distribution, occurrence and morphology. Cell-wall: Composition and detailed structure of Gram positive and Gram negative cell walls, mechanism of Gram's staining. Cell Membrane: Structure, function and chemical composition of bacterial and archaeal cell membranes.	TBS	Microbiology (DSE-8)
		Gene transfer to animal cells: chemical transfection, lipofection, electroporation, gene-gun, microinjection, transient and stable transformation, optimization of protein synthesis, use of reporter genes. Characterization of cloned DNA: Restriction mapping, DNA sequencing (dideoxy chain termination, chemical degradation, pyrosequencing, shotgun sequencing and contig assembly).	PG Diploma	RDT II PGD MB 202
	Practical	Study of Meiosis and identification of different stages of meiosis in grasshopper testis. Micrographs of different cell components.	FBCH	Basic Concepts of Cell Biology Dsc-203

		Preparation of competent of <i>E.coli</i> DH5 α Transformation of <i>E.coli</i> DH5 α with pUC18 plasmid	TBCH	Genetic Engineering and Biotechnology (BCH C-13)
		Staining of <i>E.coli</i> DH5 α by methylene blue Gram staining of bacteria	TBS	Microbiology (DSE-8)
April	Theory	Structural features of lysosome, peroxisome and chloroplast Pinocytosis and phagocytosis	FBCH	Basic Concepts of Cell Biology Dsc-203
		Concepts in immune recognition-self and non-self-discrimination, organ specific autoimmune diseases- Hashimoto's thyroiditis, Graves' disease, Myasthenia Gravis, Diabetes Melitus-I,	GE IV	Biochemical correlation of Disease GE-8
		Pathogenicity of Microorganisms and Antimicrobial Chemotherapy Pathogenesis types Antibiotics, Types and mechanism of action	TBS	Microbiology (DSE-8)
		Modification of cloned DNA: Site directed mutagenesis (cassette mutagenesis, primer extension method, overlap extension method, megaprimer method), selection against parental phenotype. Protein engineering Applications of recombinant DNA technology: Transgenic animals, Transgenic plants, Gene therapy, Pharmaceutical products.	PG Diploma	RDT II PGD MB 202
	Practical	Cells as experimental models: Study life cycle of model organism- <i>Drosophila</i> / <i>zebrafish</i> / <i>nematode</i> .	FBCH	Basic Concepts of Cell Biology Dsc-203
		Selection of transformed <i>E.coli</i> DH5 α by blue-white screening Amplification of a DNA fragment by PCR.	TBCH	Genetic Engineering and Biotechnology (BCH C-13)
		To prepare temporary mount of algae (<i>spirogyra</i>)/fungi (<i>penicillium</i>). Study of different shapes of bacteria, fungi, algae, protozoa using permanent slides/pictographs.	TBS	Microbiology (DSE-8)
May	Theory	Extracellular matrix and Cell Junctions Cell matrix proteins. Cell-matrix interactions and cell-cell interactions. Adherens junctions, tight junctions, gap junctions, desmosomes, hemidesmosomes, focal adhesions and	FBCH	Basic Concepts of Cell Biology Dsc-203

		plasmodesmata		
		Systemic diseases: Systemic lupus erythematosus (SLE), Rheumatoid arthritis.	GE IV	Biochemical correlation of Disease GE-8
		Anti-viral, anti-fungal, anti-protozoan drugs and their mechanism of action	TBS	Microbiology (DSE-8)
		Genomics: organization of genomes, organization of nuclear DNA, mapping and sequencing genomes. Analysis of the transcriptome: RNA expression level profiling with microarrays, MPSS, SAGE, ESTs, loss of function - Knock out ,knock down, antisense RNA and RNAi,	PG Diploma	RDT II PGD MB 202
	Practical	Cytochemical staining of any one biomolecule (Protein/ Polysaccharide/ RNA)	FBCH	Basic Concepts of Cell Biology Dsc-203
		Mock Practical and Continuous Assessment	TBCH	Genetic Engineering and Biotechnology (BCH C-13)
		Mock Practical and Continuous Assessment	TBS	Microbiology (DSE-8)



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

2023-24 Even Semester

Name of the Faculty: Dr Lakshay Malhotra

Department: Biochemistry

Semester: II, IV, and VI

Month	Theory/ Practical	Topics	Course	Paper code/Name
JANUARY	Theory	1. Light Microscopy	FBCH	BCH-DSC-6
		1. Radioactive and Non-radioactive labeling: DNA	TBCH	BCH DSE-6
		1. Antigens and haptens	TBS	BS C-13
		1. The response of T cells to antigens: T cell receptor	PGD	PGD MB 203
	Practical	1. Glucose tolerance test	SBCH	BCH-DSC-11
FEBRUARY	Theory	1. Double immunodiffusion	TBS	PGD MB 203
		2. single radial immunodiffusion		
		1. Classification of Chromatographic techniques	FBCH	GE-2
		2. Principle and applications: Paper		
		3. Principle and applications: thin layer chromatography		
		1. Phase contrast microscopy	FBCH	BCH-DSC-6
		2. Inverted Microscope		
		1. Radioactive and Non-radioactive labeling: Proteins, Whole cells, Fluorescent labeling. DNA, Proteins	TBCH	BCH DSE-6
		1. Factors that dictate immunogenicity, B and T cell epitopes.		
		2. Structure and distribution of classes and subclasses of immunoglobulins (Ig), Ig fold, effector functions of antibody, antigenic determinants on Ig and Ig super family.	TBS	BS C-13
		3. Monoclonal antibodies; Immunological methods- Antigen-antibody interactions.		
	Practical	1. T cell accessory membrane molecules	PGD	PGD MB 203
		2. Thymic selection of T cell repertoire		
		3. Organization and rearrangement of TCR genes		
		1. Glucose tolerance test (repeat)	SBCH	BCH-DSC-11
		2. Estimation of serum Ca ²⁺ ; Estimation of serum electrolytes		
		1. Glucose tolerance test		
		2. Widal Test	SBCH	BCH GE-8

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		1. Immuno-electrophoresis 2. Rocket IEP 3. Sandwich & Indirect ELISA	PGD	PGD MB 203
MARCH	Theory	1. Principle and applications: molecular sieve 2. Principle and applications: ion exchange 3. Principle and applications: affinity chromatography 4. Introduction to the electromagnetic spectrum	FBCH	GE-2
		1. Nucleus, nuclear envelope, nuclear pore complex, and export of biomolecules 2. Mitochondria 3. Endocytosis	FBCH	BCH-DSC-6
		1. Radioactive and Non-radioactive labeling: bacteria, living cells; Metabolic labeling, Pulse chase analysis	TBCH	BCH DSE-6
		1. Secondary lymphoid organs and tissues. B cell maturation and generation of antibody diversity. 2. Humoral immune response against T-dependent and T-independent antigens. 3. Histocompatibility antigens – structure and function, T cell maturation and differentiation – Positive and Negative selection of thymocytes	TBS	BS C-13
		1. Cell mediated immune response : generation of cytotoxic cells, CTL mediated cytotoxicity, response of NK cells 2. Vaccines : active and passive immunization, attenuated & inactivated vaccines, new approaches to vaccine development	PGD	PGD MB 203
	Practical	1. March-Determining the thyroid profile by estimating T4 and TSH under normal and pathophysiological conditions 2. Estimation of estrogen during different days of the menstrual cycle.	SBCH	BCH-DSC-11
APRIL	Theory	1. Determination of Blood lipid profile: Triglyceride, Cholesterol 2. Measurement of Blood Pressure	SBCH	BCH-GE-8
		1. Active & Passive agglutination 2. Isolation of PBMCs	PGD	PGD MB 203
		1. Principle and working of UV-visible spectrophotometer, single & double beam spectrophotometer 2. Beer's & Lambert's law 3. Application of UV-visible spectrophotometer in biology	FBCH	GE-2
		1. Introduction to cytoskeletal proteins, structure, assembly and function of microtubule, Microfilament and intermediate filament	FBCH	 BCH-DSC-6 प्रधानाचार्य Principal

		- Hybridization methods: Southern blotting, Northern blotting, In situ hybridization, Colony hybridization. - Binding of nucleic acids with protein: DNA pull down assays, Electrophoretic Mobility Shift Assay (EMSA)	TBCH	BCH DSE-6
		Antigen Presentation by the exogenous and endogenous pathways, Activation of T cells and cell mediated immunity; Role of NK cells and Antibody dependent cellular cytotoxicity.	TBS	BS C-13
		- Transplantation immunology: types of grafts, tissue typing, immunological basis of graft rejection, immunosuppressive therapy - Cancer and the immune system: oncogenes, tumor antigens and induction of immune response, immunotherapy for tumors	PGD	PGD MB 203
	Practical	- HCG based pregnancy test. - Case studies	SBCH	BCH-DSC-11
		- Anthropometric measurements: BMI, Waist/Hip ratio, Mid arm muscle area (MAMA), Mid arm area (MAA) - Permanent slides of Malarial Parasite/Leishmania - Case Studies related to autoimmune diseases, lifestyle disorders and hormone disbalance	SBCH	BCH-GE-8
		- PBMC isolation, Survey of plant defenses: cuticle, trichomes, - thorns, prickles	PGD	PGD MB 203
May	Theory	Vaccines	TBS	BS C-13
	Practical	Revision	SBCH	BCH-DSC-11
		Characterization of disease symptoms caused by bacterial, viral, fungal infection (in plants)	PGD	PGD MB 203

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr Garima Singh
Department: Biochemistry

Month		Topics	Course	Paper Code/Name
January	Theory	Heterologous protein expression of cloned DNA in <i>E.coli</i> .	PGD II Sem	PGD MB 202/ RECOMBINANT DNA TECHNOLOGY - II
	Theory	Centrifugation	PGD II Sem	PGD MB 201/ BIOPHYSICAL TECHNIQUES - II
	Theory	Treatment of waste water (Municipal treatment plant) and sewage	B.Sc. Biological Sc. VI Sem	DSE-8/ MICROBIOLOGY
	Practical	Differentiate prokaryotic and eukaryotic cells. Visualisation of animal cell, plant cell, bacterial cells by light microscope	B.Sc. (H) Biochemistry II Sem	Cell Biology
	Practical	Orientation and Introduction	Sem IV	SEC: Basic Forensic Sciences
	Practical	Orientation and Introduction	Sem IV	VAC: Sports for life
February	Theory	Gene transfer to plants: Biolistics, protoplast mediated, electroporation, Agrobacterium mediated transfer (Ti plasmid, disarmed vectors, cointegrate vectors, binary vectors), virus-mediated transfer (CaMV), in planta transformation, signals for optimization of protein synthesis.	PGD II Sem	PGD MB 202/ RECOMBINANT DNA TECHNOLOGY – II
	Theory	Centrifugation	PGD II Sem	PGD MB 201/ BIOPHYSICAL TECHNIQUES - II
	Theory	Treatment of waste water (Municipal treatment plant), sewage bioremediation and biodegradation.	B.Sc. Biological Sc. VI Sem	DSE-8/ MICROBIOLOGY

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		Importance of microbiology in food and industries.		
	Practical	Visualisation of animal cell, plant cell, bacterial cells by light microscope. Study of mitosis and identification of different stages of mitosis in onion root tips	B.Sc. (H) Biochemistry II Sem	Cell Biology
	Practical	Basic Forensic - Introduction, need, scope and Significance of forensic science, History, laws and basic principles of forensic science. Branches of forensic science. Organizational set up of forensic science laboratories. Practical Exercise • Understanding a crime using case studies.	Sem IV	SEC: Basic Forensic Sciences
	Practical	Rules and Techniques Practical: Marking of the court/field Outdoor adventure activity Skills learning in sports Group games/relays Participation in intramural competitions	Sem IV	VAC: Sports for life
March	Theory	Polymerase Chain Reaction and its applications: components of the PCR, importance of primer designing, various thermostable enzymes vs Taq polymerase. RAPD etc	PGD II Sem	PGD MB 202/ RECOMBINANT DNA TECHNOLOGY - II
	Theory	Fundamentals of fermentation technology	PGD II Sem	PGD MB 201/ BIOPHYSICAL TECHNIQUES - II
	Theory	Basic design of fermenter, continuous and discontinuous cultures. Preparation of fermented food products like yoghurt, curd and cheese.	B.Sc. Biological Sc. VI Sem	DSE-8/ MICROBIOLOGY
	Practical	Study of Meiosis and identification of different stages of meiosis in grasshopper testis. Micrographs of different cell components.	B.Sc. (H) Biochemistry II Sem	Cell Biology



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	Practical	Crime scene investigation- Definition, Identification, Mapping, and preservation of a crime scene, Classification in a crime scene. Precautions to ensure credibility of a crime scene. Investigative strategies and eye witness report. Practical exercises: • Drawing a crime scene. • Drawing and mapping a crime scene of an unusual case (fire, blast, water) • Case studies in different indoor and outdoor primary and secondary crime scenes • Documenting and reconstructing a crime scene. • Virtual exercise / field trip to a crime scene	Sem IV	SEC: Basic Forensic Sciences
	Practical	Component of Fitness Practical: Skills learning and participation in sports Group games/ relays/ minor games Participation in intramural competition	Sem IV	VAC: Sports for life
April	Theory	DNA markers: VNTRs and DNA fingerprinting, SNPs, RFLPs. Applications of recombinant DNA technology: Transgenic animals, Transgenic plants, Gene therapy, pharmaceutical products.	PGD II Sem	PGD MB 202/ RECOMBINANT DNA TECHNOLOGY - II
	Theory	Fundamentals of fermentation technology: Batch, fed batch and continuous cultures.	PGD II Sem	PGD MB 201/ BIOPHYSICAL TECHNIQUES - II
	Theory	Preparation of alcoholic beverages like wine and beer.	B.Sc. Biological Sc. VI Sem	DSE-8/ MICROBIOLOGY
	Practical	Cells as experimental models: Study life cycle of model organism- Drosophila/ zebrafish/ nematode.	B.Sc. (H) Biochemistry II Sem	Cell Biology

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	Practical	Forensic evidences- Definition of a forensic evidence. Classification based on legal and forensic value Understanding chain of custody. Collection, Preservation, Packaging, and Labeling of chemical, physical evidence and biological evidence (blood, semen and other biological fluids, hair, fibers and fabrics, pollen) for forensic investigation. Practical exercises: • Collection and preservation of a fresh and dried body fluid sample • Collection of tissues post mortem. • Collection of a trace evidence like hair, fiber and pollen from crime scene and during autopsy • Collection and preservation of a soil sample from crime scene and during autopsy	Sem IV	SEC: Basic Forensic Sciences
	Practical	Benefits of sports and physical activity Practical: Effect of exercise on the body Organizing of a sports competition Balanced Diet	Sem IV	VAC: Sports for life
May	Theory	Safety of recombinant DNA technology and ethical issues (Patenting): Restriction and regulation for the release of Bt crops.	PGD II Sem	PGD MB 202/ RECOMBINANT DNA TECHNOLOGY - II
	Theory	Fundamentals of fermentation technology: stirred tank reactors and airlift fermentors, downstream processing	PGD II Sem	PGD MB 201/ BIOPHYSICAL TECHNIQUES - II
	Theory	Single cell proteins	B.Sc. Biological Sc. VI Sem	DSE-8/ MICROBIOLOGY
	Practical	Cytochemical staining of any one biomolecule (Protein/ Polysaccharide/ RNA)	B.Sc. (H) Biochemistry II Sem	Cell Biology
	Practical	• Collection of a hand or foot print, tyre-print, fingerprint • Collection and preservation of evidence for chemical/ballistic analysis.	Sem IV	SEC: Basic Forensic Sciences
	Practical	Sports in Contemporary Times Practical: Skills learning and participation in sports Participation in intramural competition	Sem IV	VAC: Sports for life

Signature of the teacher

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**SEMESTER WISE TEACHING
PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester**

Name of the faculty: Dr. Priyanka Jawa

Department: Biochemistry

Semester: Even 2024

Month		Topics	Course	Paper Code/Name
March	Theory	1. Blotting Techniques like Southern blot and factors affecting DNA transfer, Northern blot, Western blot, colony and plaque lift, dot blot.	PG Diploma in Molecular and Biochemical Technology	PGD MB 201 Biophysical Techniques II
	Practical	1. Western blotting after protein run on SDS-PAGE. 2. Standardization of immunoblotting protocol for different concentration of proteins resolved on SDS-PAGE.	PG Diploma in Molecular and Biochemical Technology	PGD MB 201 Biophysical Techniques II
April	Theory	1. Additional methods to identify associated proteins : Yeast two-hybrid system, FRET, PCA, Mass spectrometry library based methods like surface displays, Protein microarrays	PG Diploma in Molecular and Biochemical Technology	PGD MB 201 Biophysical Techniques II
	Practical	1. Native PAGE 2. Southern blotting of DNA samples electrophoresed on an agarose gel.	PG Diploma in Molecular and Biochemical Technology	PGD MB 201 Biophysical Techniques II
May	Theory	1. Proteomics : Atomic view of proteins, hierarchial nature of protein architecture, protein folding, protein structure prediction, homology models, threading/fold recognition, Ab-initi modelsproteins as drug targets, phylogenetic	PG Diploma in Molecular and Biochemical Technology	PGD MB 201 Biophysical Techniques II

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		analysis.		
	Practical	1. Isoelectric focussing of proteins and two dimensional gel electrophoresis.	PG Diploma in Molecular and Biochemical Technology	PGD MB 201 Biophysical Techniques II
March	Theory	1. Methods of isolation of pure culture, study of mean growth rate constant, generation time. 2. Influence of environmental factors on microbial growth like temperature, oxygen concentration, pressure and radiation.	B.Sc. (H) Biological Sciences VI Sem	BSH DSE-8 Microbiology
April	Theory	1. Sterilization, disinfection and antibiotics. 2. Use of physical methods (heat, low temperature, filtration and radiation) in microbial control.	B.Sc. (H) Biological Sciences VI Sem	BSH DSE-8 Microbiology
May	Theory	1. Use of chemical agents (phenolics, halogens, heavy metals, sterilizing gases) in microbial control.	B.Sc. (H) Biological Sciences VI Sem	BSH DSE-8 Microbiology
March	Theory	1. Diseases caused by viruses : HIV and COVID. 2. Diseases caused by bacteria : Tuberculosis 3. Protozoan infection : Malaria	IV Sem	GE-8
April	Theory	1. Parasitic infection : Kala Azar 2. Concept of Nutrition and Balanced diet. 3. Protein-energy malnutrition : Kwashiorkor and Marasmus 4. Vitamin deficiency diseases : Beri-beri, Scurvy, Pellagra.	IV Sem	GE-8
May	Theory	1. Nutritional deficiency : Anemia, Night blindness, Rickets 2. Lifestyle based disease: Artherosclerosis and	IV Sem	GE-8


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		Diabetes Mellitus II		
March	Practical	1. Study the following medically important organisms like mosquito, cockroach as transmission vectors for infectious disease. 2. Case study of a disease (Nutritional, infectious and lifestyle) and corroborating it with public health data.	II Sem	SEC
April	Practical	1. Field visit for understanding the health programs like asha worker interviews/ Sulabh International Museum of toilets/ Water treatment plant. 2. Determination of portability of water using pH, BOD, COD and MPN of water sample from different sources.	II Sem	SEC
May	Practical	1. Collection of AQI data from different areas and correlating with health indices in that area. 2. Field visit to nearby healthcare centre to collect some data on rate of a particular disease over past few years or months.	II Sem	SEC



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr Usha Yadav

Department: Biochemistry

Semester: Winter (II/IV)

Month		Topics	Course	Paper Code/Name
January	Theory	Cytokines : properties, function of IL -1 to IL-5, IL-10, IL-12, IFNs, TNFs, cytokine receptors and signal transduction mediated by them, cytokine related diseases	PGDMB Sem II	Immunology
	Theory	Introduction, Lipid metabolism- Mobilization of Triglycerides, metabolism of glycerol	SBS Sem IV	Metabolism and Integration
	Practical	Assay to determine activity and specific activity of an enzyme.	FBCH-Sem II	Enzymes
	Practical	Introduction to the course	PGDMB Sem II	Immunology
	Practical	Orientation of the course	VAC-4 Sem-IV	Sports for Life
February	Theory	The complement system: classical & alternate pathway, Lectin pathway, regulation of the pathway, biological consequences of complement activation. Hypersensitivity reactions : type I, II, III and IV	PGDMB Sem II	Immunology
	Theory	β -oxidation of saturated, monounsaturated and poly-unsaturated fatty acids, even and odd chain fatty acids. Ketogenesis and significance. Biosynthesis of C-16 palmitic acid	SBS Sem IV	Metabolism and Integration
	Practical	Progress curve for an enzyme. Effect of pH on enzyme activity	FBCH-Sem II	Enzymes
	Practical	Purification of IgG by ion exchange chromatography. Dot ELISA Linking of enzyme to antibodies using one step glutaraldehyde method	PGDMB Sem II	Immunology
	Practical	Rules and Techniques: Marking of the court/ field Skills learning in sports Group Games Participation in Intramural competitions	VAC-4 Sem-IV	Sports for Life

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March	Theory	Immune response to infectious diseases: immune response to bacterial, viral, protozoan and helminth infections	PGDMB Sem II	Immunology
	Theory	Brief overview of cholesterol metabolism and lipoprotein cycle. Transamination and deamination, Urea cycle, glucogenic and ketogenic amino acids, secondary metabolites from amino acids	SBS Sem IV	Metabolism and Integration
	Practical	Effect of temperature on enzyme activity. Partial purification of an enzyme using Ammonium sulfate fractionation	FBCH-Sem II	Enzymes
	Practical	Determination of antibody titre by indirect ELISA Measurement of antigens by Direct and Competitive ELISA	PGDMB Sem II	Immunology
	Practical	Components of Fitness: Skills learning and Participation in sports Group games/Relays Participation in Intramural competitions	VAC-4 Sem-IV	Sports for Life
April	Theory	Genomics and the challenge of infectious diseases. Autoimmunity: organ specific and systemic autoimmune diseases.	PGDMB Sem II	Immunology
	Theory	Nucleotide Metabolism- De novo and Salvage pathways and degradation. Inborn errors of metabolism - Phenylketonuria, Alkaptonuria, Maple syrup, Lesch Nyhan syndrome.	SBS Sem IV	Metabolism and Integration
	Practical	Determination of Km and Vmax of an enzyme using Lineweaver-Burk plot. Calculation of inhibitory constant (Ki) for an enzyme.	FBCH-Sem II	Enzymes
	Practical	Digestion of antibodies with pepsin and preparation of F(ab) ₂ fragment using Sephadex G-100 chromatography. Purification of antibodies from serum using salt fractionation and gel filtration Quantitative estimation of haemolytic complement activity in serum	PGDMB Sem II	Immunology
	Practical	Benefits of sports and physical activity: Skills learning and participation in sports Group Games/Relays Participation in Intramural competitions	VAC-4 Sem-IV	Sports for Life
May	Theory	Regulation of the immune response: antigen & antibody mediated regulation, Jerne's theory	PGDMB Sem II	Immunology
	Theory	Starve feed cycle: Metabolic shifts in absorptive, post absorptive, fasting and starvation states	SBS Sem IV	Metabolism and Integration
	Practical	Immobilization of enzyme using calcium alginate beads.	FBCH-Sem II	Enzymes

	Practical	Complement fixation test	PGDMB Sem II	Immunology
	Practical	Sports in Contemporary Times: Honours and Awards associated with sports and sportspersons	VAC-4 Sem-IV	Sports for Life



Signature of the teacher



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE (2023-24 Even)

Name of the Faculty: Prof. Shukla Saluja

Department: Botany

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	Plant identification, Classification (types), Nomenclature; Biosystematics, Phylogeny,	B.Sc. Botany (Sem: II)	DSC 6: Plant Systematics
		Introduction: Basic concepts, interrelationships between the living world and the environment.	B.Sc. Botany (Sem: IV)	DSC 11: Ecology and conservation
	Practicals	Ex.1: Study of vegetative and floral characters terminology for families description. Ex.2: Study of vegetative and floral characters for family-Ranunculaceae (description). Ex.3: Study of vegetative and floral characters for family-Solanaceae(description).	B.Sc. Botany (Sem: II)	DSC 6: Plant Systematics
		<i>Rhizopus</i> & <i>Mucor</i> . Study of asexual stage from temporary mounts and sexual stage through permanent slides. Preparation of Murashige and Skoogs Media, Demonstration of <i>in vitro</i> sterilization and inoculation methods using leaf and nodal explants, Study of in vitro micropropagation, construction of restriction maps of linear and circular DNA from the data provided.	B.Sc. Botany (Sem: IV) B.Sc. Botany (Sem: VI)	DSC 11: Mycology CC-14: Plant Biotechnology
	Tutorials	-----		
FEB	Theory:	Major contributions of Theophrastus, Bauhin, Tournefort, Parasara, Charaka, Linnaeus, Adanson, de Candolle, Bessey, Hutchinson, Takhtajan, Bremer and MW Chase.	B.Sc. Botany (Sem: II)	DSC 6: Plant Systematics
		Resources in Plant Identification:Literature (Flora, Manuals, Icones, Monographs, Revisions, Journals, e-resources – definitions and examples); Herbaria and botanical gardens (Importance and examples) Water – Importance, states of water in the environment; atmospheric moisture; water table Abiotic interactions – abiotic factors and plant adaptations, variations in light, temperature and wind conditions.	B.Sc. Botany (Sem: IV)	DSC 11: Ecology and conservation

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	Practicals:	Ex.4: Study of vegetative and floral characters for family-Solanaceae (description). Ex.5: Study of vegetative and floral characters for family-Lamiaceae (description). Ex.6: Study of vegetative and floral characters for family-Liliaceae (description). Ex.7: Study of vegetative and floral characters for family-Umbeliferae (description). <i>Saccharomyces</i> : Study of vegetative cell and budding from temporary mounts. <i>Penicillium</i> : Study of asexual stage from temporary mounts and sexual stage from permanent slides. <i>Peziza</i> : Study of sexual stage from temporary preparation of V.S of ascocarp Study of in vitro organogenesis and in vitro embryogenesis, study of anther, endosperm and embryo culture, study of artificial seeds, isolation of protoplasts, study of methods of gene transfer – Agrobacterium tumefaciens mediated gene transfer, electroporation, microinjection, microprojectile bombardment.	B.Sc. Botany (Sem: II)	DSC 6: Plant Systematics
			B.Sc. Botany (Sem: IV)	DSC 11: Mycology
			B.Sc. Botany (Sem: VI)	CC-14: Plant Biotechnology
	Assignment	Assignment topics will be distributed according to the syllabi		
MAR	Theory:	Botanical Nomenclature - Principles and rules (ICN); Ranks and names; principle of priority and its limitations; concept of type; author citation, valid publication, rejection of names; nomenclature of hybrids. Biotic interactions – definitions; types of positive and negative biotic interactions	B.Sc. Botany (Sem: II) B.Sc. Botany (Sem: IV)	DSC 6: Plant Systematics DSC 11: Ecology and conservation



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	Practicals:	Ex.8: Study of vegetative and floral characters for family-Poaceae (description). Ex.9: Study of vegetative and floral characters for family-Malvaceae (description). Ex.10: Study of vegetative and floral characters for family-Solanaceae (description). <i>Alternaria solani</i>: Study of symptoms of early blight of Potato. Study of asexual stages through temporary mounts. <i>Puccinia gramintritici</i>: Herbarium specimens of Black stem rust of wheat and barberry leaves; sections / mounts of spores (Uredospores and Teleutospores) on wheat. Permanent slides showing spore stages on both the hosts. <i>Agaricus</i>: Specimens of button stage and mature basidiocarp; V.S of gills of <i>Agaricus</i>. Study of steps of genetic engineering for production of Bt cotton, Golden rice, Flavr Savr tomato through photographs, isolation of plasmid DNA, Restriction digestion	B.Sc. Botany (Sem: II) B.Sc. Botany (Sem: IV) B.Sc. Botany (Sem: VI)	DSC 6: Plant Systematics DSC 11: Mycology CC-14: Plant Biotechnology
	Tutorials:	-----		
	Theory:	Systems of classification – Taxonomic hierarchy (morphological, biological and evolutionary); Classification systems of Bentham and Hooker (upto series), Engler and Prantl (upto sub-classes) and Angiosperm Phylogeny Group (APG) classification (major clades). Ecosystems – types, components, trophic organisation; Food chains and Food webs; Ecological pyramids; models of energy flow; Production and productivity; a brief outline of Biogeochemical cycles (Carbon and Nitrogen).	B.Sc. Botany (Sem: II) B.Sc. Botany (Sem: IV)	DSC 6: Plant Systematics DSC 11: Ecology and conservation
	Practicals:	Ex.10: Study of vegetative and floral characters for family-Euphorbuaceae (description). Ex.11: Study of vegetative and floral characters for family-Asteraceae (description). Ex.11: Study of vegetative and floral characters for family-Apocynaceae (description). Revision of Practicals Study of Phaneroplasmodium of <i>Physarum</i> and sporangia of <i>Stemonitis</i>. <i>Albugo candida</i>: Study of symptoms of white rust on <i>Brassica</i> sp.; Asexual stage study through section / temporary mounts. Sexual structures through temporary mounts / permanent slides. Lichens: Study of different types of lichens - Crustose, Foliose and Fruticose. Study of Internal structure of thallus; Apothecium through permanent slides. gel electrophoresis of plasmid DNA, Calculate the percentage similarity between different cultivars of a species using RAPD profile. Construct a dendrogram and interpret results	Botany (Sem: II) B.Sc. Botany (Sem: IV) B.Sc. Botany (Sem: VI)	DSC 6: Plant Systematics DSC 11: Mycology CC-14: Plant Biotechnology
	Tutorials:	-----		
	Test	Practical test will be conducted and evaluated as per the date sheet		

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Name of the Faculty: Dr. Sunita Yadav
Semester : II/IV/VI 2023-24

Department: Botany

Month		Topics	Course	Paper Code/Name
January	Theory	Introduction to paper and discussion about the paper Unit-2 Enzymes: historical background, nomenclature and classification, structure, mechanism of activation (activation energy, lock and key, induced fit), factors affecting enzyme activity, Km, significance	B.Sc. (H) Botany Semester VI	Plant metabolism
		Introduction to paper Unit 1: Plant water relation: Water potential and its components, intercellular water transport	B.Sc. (H) Biological Sciences Semester IV	Plant physiology
		Introduction to paper Unit 3: Dermal tissue system; trichomes and its two types with examples, stomata classification	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function
	Practicals	- To study the effect of substrate concentration on the activity of enzyme urease. - To study the effect of pH on the activity of enzyme catalase. - Chemical separation of photosynthetic pigments.	B.Sc. (H) Botany Semester VI	Plant metabolism
		To determine osmotic potential of plant cell sap by plasmolytic method	B.Sc. (H) Biological Sciences Semester IV	Plant physiology
		- To study organization of apical meristem of root, shoot, vascular cambium - To study distribution and types of parenchyma, collenchyma and sclerenchyma	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function
	Tutorials	-----		

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February	Theory:	Unit-2: Enzymes: Enzyme inhibition, isozymes and multienzyme complexes, role of regulatory enzymes, covalent modification, allosteric regulation Unit-5 carbon oxidation: historical background, glycolysis, regulation, fermentation, OPPP, PDH, NADH shuttle, Krebs cycle Unit-1: Short distance transport, aquaporins, pathway of water movement, root pressure, guttation, transpiration and its significance, factors affecting transpiration, stomatal movements Unit 3: structure of dicot and monocot leaf, Kranz anatomy, initiation and development of leaf, leaf lamina, leaf venation and vascular differentiation in leaf, cuticle, epicuticular wax Unit 2: Organisation of shoot apex- apical cell theory, histogen theory, tunica corpus theory, Newman's theory, cyto-histological zonation theory	B.Sc. (H) Botany Semester VI B.Sc. (H) Biological Sciences Semester IV B.Sc.(H) Botany Semester IV	Plant metabolism Plant physiology Developmental Biology of Angiosperms: Form, Structure and Function
	Practicals:	- Experimental demonstration of Hill reaction. - To study the Blackman's law of limiting factors. - To compare the rate of respiration in different parts of a plant (at least 3 parts). - To study the effect of two environmental factors (light and wind) on transpiration by excised twig - To calculate stomatal index and stomatal frequency of two surfaces of leaves of mesophyte and xerophytes - To calculate the area of open stoma and percentage of leaf area open through stoma in a mesophyte and xerophyte - To study epidermal system, cell types, stomata and trichomes - To prepare temporary whole mounts to study organization of monocot and dicot root - To prepare temporary whole mounts to study organization of monocot and dicot stem - To prepare temporary whole mounts to study secondary growth in root and stem	B.Sc. (H) Botany Semester VI B.Sc. (H) Biological Sciences Semester IV B.Sc.(H) Botany Semester IV	Plant metabolism Plant physiology Developmental Biology of Angiosperms: Form, Structure and Function
	Tutorials:	-----		
	Theory:	Unit-5 carbon oxidation: Mitochondrial ETC, oxidative phosphorylation, CN resistant respiration, factors affecting respiration Unit-6 ATP synthesis: Substrate level and oxidative and photophosphorylation, mechanism of ATP synthesis, chemiosmotic hypothesis, role of uncouplers, Boyer's conformation model Unit 1: Ascent of sap, cohesion-tension theory, antitranspirants Unit3: Discovery, basic structure, bioassays, physiological roles, commercial applications of auxins Unit 2: Types of vascular bundles, structure of monocot and dicot stem, shoot chimeras Unit 4: Organisation of root apex- Apical cell theory, histogen theory, Korper-kappe theory	B.Sc. (H) Botany Semester VI B.Sc. (H) Biological Sciences Semester IV B.Sc.(H) Botany Semester IV	Plant metabolism Plant physiology Developmental Biology of Angiosperms: Form, Structure and Function
March	Theory:			

	Practicals:	- To study the activity of nitrate reductase in leaves of two different plant sources - To demonstrate the activity of lipase in germinating oilseeds - To demonstrate mobilization of lipids during germination	B.Sc. (H) Botany Semester VI	Plant metabolism
		- To determine the water potential by weight method - To study the effect of pH on anthocyanin pigments - To demonstrate suction due to transpiration	B.Sc. (H) Biological Sciences Semester IV	Plant physiology
		- To study abnormal secondary growth in <i>Bignonia</i>, <i>Salvadora</i>, <i>Leptadenia</i> - To study organization of isobilateral and dorsiventral leaf and Kranz anatomy - To study the types and features of different kinds of wood	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function
	Tutorials:	-----		
	Assignment :	Given to all students for respective papers		
April	Theory:	Unit-7 Lipid metabolism: synthesis and breakdown beta-oxidation, glyoxylate cycle, gluconeogenesis, alpha-oxidation	B.Sc. (H) Botany Semester VI	Plant metabolism
		Unit3: Discovery, basic structure, bioassays, physiological roles, commercial applications of cytokinins, gibberellins, ABA, Ethylene, mode of action, Brief introduction to Brassinosteroids, jasmonic acid	B.Sc. (H) Biological Sciences Semester IV	Plant physiology
		Unit 4: structure and function of root apex- quiescent centre, root cap, structure of monocot and dicot root, endodermis, exodermis and origin of lateral root	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function
		Unit 5: structure, function and seasonal activity of cambium, secondary growth in root and stem, cambial variations: included phloem and phloem wedges		
	Practicals:	- To demonstrate fluorescence by isolated chlorophyll pigments - To demonstrate absorption spectrum of photosynthetic pigments - To demonstrate respiratory quotient	B.Sc. (H) Botany Semester VI	Plant metabolism
		- To demonstrate bolting - To demonstrate effect of auxins on rooting - To study the role of ethylene in fruit ripening	B.Sc. (H) Biological Sciences Semester IV	Plant physiology
		- To study adaptive anatomy in xerophytes and hydrophytes through temporary mounts/permanent slides - To study secretory tissues- cavities, lithocysts, laticifers - Preparation of permanent slides - To prepare temporary mounts to study xylem and phloem elements	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function
	Tutorials:	-----		प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21
	Test	Conducted for all papers		



SEMESTER WISE TEACHING PLAN (2024)
SRI VENKATESWARA COLLEGE
Name of the Faculty: Dr. Navneet Kumar
Department: Botany
Semesters: Even Semester (Jan-May, 2024)

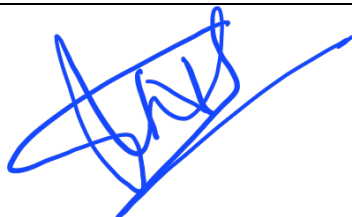
Month		Topics	Course	Paper Name
January	Theory	Introduction and scope of microbes in industry and environment	DSE Sem IV	Industrial and Environmental Microbiology
		- Introduction; - nutrient media	B.Sc.(P.) Life Sciences, Sem VI	DSE: Economic Botany and Biotechnology
		Scope of microbes in industry and environment	B.Sc (H) Botany, DSE Sem VI	DSE: Industrial and Environmental Microbiology
	Practicals	To study mitosis in <i>Allium cepa</i> through smear preparation of anthers	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		Familiarization with basic equipment in tissue culture. Study of economically important plants - Black pepper, Clove and Tea through specimens and sections.	B.Sc.(P.) Life Sciences Sem VI	DSE: Economic Botany and Biotechnology
		Principles and functioning of instruments: autoclave, laminar air flow, incubators, types of fermenters.	DSE Sem IV	Industrial and Environmental Microbiology
	Tutorials:			
February	Theory	- Solid-state and liquid-state (stationary and submerged) fermentations; - Batch and continuous Fermentations; - Components of a typical bioreactor, - Types of bioreactors: laboratory, pilot scale and production fermenters;	DSE Sem IV	Industrial and Environmental Microbiology
		- aseptic and culture conditions; - developmental pathways: Direct and indirect	B.Sc.(P.) Life Sciences, DSE Sem VI	DSE: Economic Botany and Biotechnology
		- Solid-state and liquid-state (stationary and submerged) fermentations; - Batch and continuous Fermentations; - Components of a typical bioreactor, - Types of bioreactors: laboratory, pilot scale and production fermenters	B.Sc (H) Botany, DSE Sem VI	DSE: Industrial and Environmental Microbiology
	Practicals	- To study mitosis in <i>Allium cepa</i> through squash preparation of root tips. - ABO blood group testing using kits To study chromosomal aberrations: Reciprocal translocation through squash preparations of <i>Rhoeo</i> anthers: Complex translocation ring, quadrivalents, lagging	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology

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		chromosomes, dicentric/inversion bridge through permanent slides.		
		Study of economically important plants: Wheat, Gram, Soybean through specimens, sections.	B.Sc.(P.) Life Sciences Sem VI	DSE: Economic Botany and Plant Biotechnology
		- Preparation of different culture media (Nutrient medium/ Luria Bertani medium/Potato dextrose medium/Czapek Dox medium). - Hydrolysis of casein and starch by microorganisms. - Serial dilution method for isolation of microorganisms from water and soil and study of aero-microflora.	DSE Sem IV	Industrial and Environmental Microbiology
	Tutorial:			
March	Theory	- Constantly stirred tank fermenter, - Tower fermenter - Fixed bed and fluidized bed bioreactors - Air-lift fermenter.	DSE Sem IV	Industrial and Environmental Microbiology
		- embryogenesis; - single cell and protoplast culture.	B.Sc.(P.) Life Sciences, DSE Sem VI	DSE: Economic Botany and Biotechnology
		- Constantly stirred tank fermenter, - tower fermenter, - fixed bed and fluidized bed bioreactors and - air-lift fermenter	B.Sc (H) Botany, DSE Sem VI	DSE: Industrial and Environmental Microbiology
	Practicals	Human Genetics Study of autosomal & sex-linked dominant & recessive inheritance through pedigree analyses. - To study the syndromes (Down's, Klinefelter's, and Turner's) through karyotypes - To study incomplete dominance and deviations of Mendelian dihybrid ratio (12:3:1, 9:3:4, 9:7, 15:1, 13:3) through seed samples.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		Microchemical tests for Wheat, Gram, Soybean, Black pepper, Clove, Tea, Cotton and Groundnut	B.Sc.(P.) Life Sciences Sem VI	DSE: Economic Botany and Biotechnology
		- Alcohol production by yeast using sugar/ jaggery. - To determine the BOD of sewage water. - To qualitatively check the enzyme activity	DSE Sem IV	Industrial and Environmental Microbiology

		(phosphatase/amylase/cellulase) in soil samples.		
	Tutorial			
April	Theory	- Water pollution: various sources and control measures; - Role of microbes in sewage and domestic wastewater treatment systems	DSE Sem IV	Industrial and Environmental Microbiology
		General account with special reference to Gram and soybean	B.Sc.(P.) Life Sciences, DSE Sem VI	DSE: Economic Botany and Biotechnology
		- Distribution of microbes in air, soil and water; - Isolation of microorganisms from soil, air and water.	B.Sc (H) Botany, DSE Sem VI	DSE: Industrial and Environmental Microbiology
	Practicals	- To prepare LB medium, inoculate and maintain (spread plate, streak plate, pour plate & serial dilution methods) <i>E. coli</i> cultures. - To isolate genomic DNA from cauliflower and <i>E.coli</i>. Visualise using agarose gel electrophoresis	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		Study through photographs: Anther culture, somatic embryogenesis, endosperm and embryo culture; micropropagation	B.Sc.(P.) Life Sciences Sem VI	DSE: Economic Botany and Biotechnology
		- To determine the microbial activity in soil by Triphenyltetrazolium chloride (TTC) assay or by measuring the CO₂ evolution. - Determination of coliforms in water samples using eosin methylene blue (EMB) medium. - Water pollution: various sources and control measures	DSE Sem IV	Industrial and Environmental Microbiology
	Tutorial			
May	Theory	Distribution and isolation of microorganisms from soil, air and water.	DSE Sem IV	Industrial and Environmental Microbiology
		General account with special reference to Gram and soybean	B.Sc.(P.) Life Sciences, DSE Sem VI	DSE: Economic Botany and Biotechnology
		Role of microbes in sewage and domestic waste water treatment systems.	B.Sc (H) Botany, DSE Sem VI	DSE: Industrial and Environmental Microbiology
	Practicals	To estimate DNA by diphenylamine method.	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology

		• Molecular techniques-PCR, Blotting Techniques, AGE and PAGE	B.Sc.(P.) Life Sciences Sem VI	DSE: Economic Botany and Biotechnology
		• Visit to any educational institute/ industry and a report to be submitted	DSE Sem IV	Industrial and Environmental Microbiology
	Tutorial			




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SEMESTER WISE TEACHING PLAN (2024)

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Madhu Raina

Department: Botany

Semesters: II and IV (Jan-May, 2024)

Month		Topics	Course	Paper Name
January	Theory	DNA structure and replication : Characteristic features of DNA - Semi-conservative replication experiments.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		Introduction to fundamental concepts in Ecology: Inter-relation between the living world and abiotic environment. - Fundamental concepts: Abiotic and biotic components	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		Gymnosperms: Position of Gymnosperms in five kingdom classification. General characteristics, Outline classification and economic importance. - Morphology, structure and reproduction of <i>Pinus</i>	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Practicals	To study mitosis in <i>Allium cepa</i> through smear preparation of anthers	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
	Tutorials:	•		
February	Theory	- DNA replication in <i>E. coli</i> Structure & Function of the gene: Classical and molecular concept of gene - Benzer's cis-trans complementation analyses - Map of rII locus in phage - Central Dogma	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Levels of ecological organization: species, population, community, ecosystems, biomes. Plant Communities: Characters; Ecotone and edge effect	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		- Morphology, structure and reproduction <i>Ginkgo</i>. - Evolutionary tendencies in Gymnosperms- a comparative study	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Practicals	- To study mitosis in <i>Allium cepa</i> through squash preparation of root tips. - ABO blood group testing using kits To study chromosomal aberrations: Reciprocal translocation through squash preparations of <i>Rhoeo</i> anthers: Complex translocation ring, quadrivalents, lagging chromosomes, dicentric/inversion bridge through permanent slides.	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology

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		- Principle and operation of instruments used to measure microclimatic variables: Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter. - Determination of minimal quadrat size and number for the study of herbaceous vegetation in the college campus, by species area curve method (species to be listed).	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		<i>Cycas</i>: T.S (temporary mount) leaf, specimen: male cone and megasporophyll; T.S. corolloid root (temporary mount), T.S. microsporophyll, L.S. ovule (permanent slides).	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Tutorial:			
March	Theory	Variation in chromosome number and structure: Haploidy, polyploidy, autopolyploidy (examples: banana, watermelon), allopolyploidy (ancestry of wheat) and aneuploidy (Down's, Turner's and Klinefelter's syndromes) - Deletion; Duplication (Bar eye in <i>Drosophila</i>); Inversion (paracentric and pericentric)	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Succession; Processes and types (autogenic, allogenic, autotrophic, heterotrophic, primary and secondary) Ecosystem: Structure; niche and habitats; Food chains and food webs	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		Plant taxonomy: Angiosperm systematics: Fundamental concept of Plant Taxonomy (Identification, nomenclature, classification) - Taxonomic resources - Herbarium- functions and important herbaria of India and world	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Practicals	Human Genetics Study of autosomal & sex-linked dominant & recessive inheritance through pedigree analyses. - To study the syndromes (Down's, Klinefelter's, and Turner's) through karyotypes - To study incomplete dominance and	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology

		deviations of Mendelian dihybrid ratio (12:3:1, 9:3:4, 9:7, 15:1, 13:3) through seed samples.		
		- Determination of pH and detection of carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency from atleast two soil samples by rapid field tests - Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law. - Study of ecological adaptations of hydrophytes and xerophytes (four each). - Study of ecological speciation (allopatric and sympatric) with the help of examples.	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		<i>Pinus</i>: Study of morphology, dwarf and long shoots, male and female cone, T.S. needle (temporary mount), L.S. male and female cone (permanent slides).	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Tutorial			
April	Theory	- Translocation (<i>Rhoeo</i>, <i>Oenothera</i>; Robertsonian translocation, Familial Down Syndrome and cancer). Regulation of gene expression: Prokaryotes Inducible and repressible systems, negative and positive control of lactose operon and tryptophan operon. Eukaryotes - Transcriptional gene silencing - Role of chromatin, DNA methylation, histone modifications; cis-acting elements (promoters & enhancers/silencers), trans-acting factors.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Ecological pyramids production and productivity; energy flow (single channel and Y-shaped) - Trophic organization - Biogeochemical cycling; Cycling of nitrogen and Phosphorous	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		- Botanical gardens, Flora, monographs and keys (Single-access and multi-access) Classification: Historical background of plant classification; Artificial (Linnaeus), Natural (Bentham and Hooker)	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Practicals	To prepare LB medium, inoculate and maintain (spread plate, streak plate, pour plate & serial dilution methods) <i>E. coli</i>	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology

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		cultures. • To isolate genomic DNA from cauliflower and E.coli. Visualise using agarose gel electrophoresis		
		• Study of biotic interactions of the following: Stem parasite (Cuscuta), Root parasite (Orobanchae), Epiphytes (Orchids), Predation (Insectivorous plants). • Study of ecological speciation (allopatric and sympatric) with the help of examples. • Study phylogenetic relationships among taxa with the help of exercises.	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		• Study the characteristic features of <i>any one</i> member of the family: (a) Malvaceae (b) Fabaceae/Lamiaceae (c) Euphorbiaceae (d) Asteraceae (e) Liliaceae	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Tutorial			
May	Theory	• Post-transcriptional gene regulation (RNA interference/ PTGS), role of small RNAs, Epigenetics.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		• Phytogeography: Phytogeographical regions of India; Endemism (definition, factors and types).	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		• Phylogenetic system of classification; APG system.	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Practicals	• To estimate DNA by diphenylamine method.	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		• Construct phylogenetic tree using MEGA and interpret evolutionary relationships.	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		• Mounting of a properly dried and pressed specimen of any wild plant with herbarium label (to be submitted on the herbarium sheet with appropriate label)	B.Sc.(Hons.) Biological Science Sem II	Diversity of Life Forms-II
	Tutorial			

Madhu Rao
V. A.

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SEMESTER WISE TEACHING PLAN
(Jan-May 2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Manoj Thakur

Department: BOTANY

Semester: II/IV/VI

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Month		Topics	Course	Paper Code/Name
Jan	Theory	Microbial world, Growth, and nutrition of microbes with reference to nutritional media.	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		Mendels Principles of inheritance, Chromosomal theory of inheritance.	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		DNA fingerprinting in plants, Genetic Engineering Techniques: Gene cloning vectors (pUC 18, pBR322, BAC, YAC)	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Practicals	Study of Viruses: Electron micrographs / Models - T-Bacteriophage and TMV; specimens/digital resources/ Line drawings of Lytic and Lysogenic Cycle	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		To study mitosis in Allium cepa through squash preparation of root tips. To study meiosis in Allium cepa through smear preparation of anthers	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Study of economically important plants: Wheat, Gram, Soybean	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Tutorials:			
Feb	Theory	Recombination (conjugation, transformation, and transduction	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		Extra chromosomal	B.Sc. (P) Life	Genetics and

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		inheritance (Chloroplast inheritance, Variegation in Four O'Clock plant; Mitochondrial inheritance, Petite mutants in yeast, Maternal effects (shell coiling in snails), Classical and Molecular concept of gene Benzer's experiment and fine map of RII locus in phage, Central Dogma	Sciences Sem II	Molecular Biology
		Construction of genomic and C-DNA libraries; screening for gene of interest by DNA probe hybridisation, complementation	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Practicals	Gram staining to differentiate between Gram-positive and Gram-negative bacteria.	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		To study incomplete dominance and deviations of Mendelian dihybrid ratio through seed samples. Human genetics: a) Study of autosomal and sex -linked dominant & recessive inheritance through pedigree analysis b) ABO blood group testing using kits c) To study syndromes (Down, Klenifelter and Turner	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Study through photographs: Anther culture, somatic embryogenesis.	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Tutorials:			
March	Theory	Discovery, general characteristics; Types - Archaeobacteria, Eubacteria, Wall less forms (Mycoplasma, Phytoplasma and Spheroplasts); Cell structure; Nutritional types; Reproduction - vegetative, asexual.	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction


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		Incomplete dominance, codominance, multiple allelism; lethal alleles (dominant and recessive lethals); deviations of Mendelian dihybrid ratios Polygenic inheritance, Numericals based on above.	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Ti plasmid, Insertion of genes into plant tissues, Agrobacterium mediated, electroporation, microprojectile bombardment. Selection of recombinants by selectable marker and reporter genes (GUS, luciferase, GFP)	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Practicals	Histochemical staining to observe Arbuscular Mycorrhizal Fungi (AMF) colonization in Roots. Study of Bacteria: Electron micrographs of bacteria; Types of Bacteria from temporary/permanent slides. Endospore, Binary fission, Conjugation, Root nodule through specimens/digital resources. 3. Study of Plant Growth Promoting Rhizobacteria (PGPR) through specimens/digital resources (at least three).	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		To study chromosomal aberrations: reciprocal translocation through squash preparation of Rheo anthers. Complex translocation ring, quadrivalents, Lagging chromosomes, dicentric /inversion bridge through permanent slides. Estimation of DNA by diphenylamine method.	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Study through photographs: Endosperm, and Embryo	B.Sc. (P) Life Sciences	Economic Botany and

		Culture; Micropropagation	Sem VI	Biotechnology
	Tutorials:			
April	Theory	General account of bacterial diseases of plants (Citrus canker, Angular leaf spots of cotton). Economic importance of viruses with reference to vaccine production, role in research, medicine and diagnostics and agriculture. Economic importance of bacteria with reference to their role in agriculture and industry (fermentation and medicine).	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		Linkage, and Crossing over, recombination frequency, two factor crosses, Sex Linkages, Eye colour in <i>Drosophila</i> , colourblindness and haemophilia in humans	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Applications: Bt cotton, Round up ready soybean, Golden rice, Flavr-Savr tomato, edible vaccines, industrial enzyme production, Bioreactors	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Practicals	Study of Rhizobium from root nodules of a leguminous plant. Isolation of Anabaena from Azolla leaves. Histochemical staining to observe Arbuscular Mycorrhizal Fungi (AMF) colonization in roots. Study of bacterial diseases (Citrus canker, Angular leaf spots of cotton) and viral diseases of plants (mosaic and vein clearing disease) through specimens/digital resources	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		To prepare LB medium, inoculate and maintain E. coli cultures. To isolate genomic DNA from cauliflower and E. coli. Visualize using agarose gel	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology


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		electrophoresis. To estimate		
		Study of economically important plants: Black pepper, Clove Tea, Cotton, Groundnut through specimens, sections and micro chemical tests	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
May	Theory	Conduct of Internal examination for the internal assessment	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		Inducible and repressible, negative and positive control of lactose and tryptophan operon, Transcriptional gene silencing, Role of chromatin, DNA methylation, histone modifications, cis acting elements, trans acting factors, Post transcriptional gene regulation, role of small RNAs and epigenetics.	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Conduct of Internal examination for the internal assessment	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology
	Practicals	Conduct of Mock test for internal assessment and Final practical examination	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
		Conduct of Mock test for internal assessment and Final practical examination	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Conduct of Mock test for internal assessment and Final practical examination	B.Sc. (P) Life Sciences Sem VI	Economic Botany and Biotechnology

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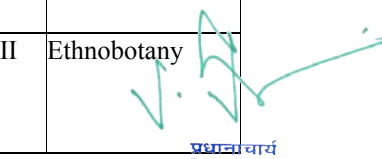
SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Muthabathula Prajna

Department: Botany

Semester : II/IV/VI

Month		Topics	Course	Paper
JANUARY	Theory	Mendel's principles of inheritance	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		Small molecule databases - Introduction	B.Sc. (H.) Botany Sem VI	Bioinformatics
		Introduction, Concept of Ethnobotany	GE II Sem II	Ethnobotany
	Practicals	Mitosis (Introduction)	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		Ecology and Evolution practicals Introduction	B.Sc. (P.) Life Sciences Sem IV	Ecology and Evolution
	Tutorials			
FEBRUARY	Theory:	- Chromosomal theory of inheritance - Incomplete dominance and codominance. - Multiple allelism; Lethal alleles (dominant and recessive lethals); - Deviations of mendelian Dihybrid ratio (Epistatic Interactions - dominant, recessive, duplicate dominant, duplicate recessive, duplicate gene interactions, dominant- recessive); - Polygenic inheritance; Numericals based on above. - extra chromosomal inheritance (chloroplast inheritance) variegation In 4 o'clock plant; mitochondrial inheritance: petite mutants in yeast); maternal effect (shell coiling in snails).	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Small molecules databases - Metabolic pathway database (KEGG)	B.Sc. (H.) Botany Sem VI	Bioinformatics
		- Unit 1: Introduction of Ethnobotany and Basic Taxonomy - Role of Ethnobotany in modern medicine Medico-Ethnobotanical	GE II Sem II	Ethnobotany


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	Practicals:	- To study mitosis in <i>Allium Cepa</i> through squash preparation of root tips. - To study mitosis in <i>Allium Cepa</i> through smear preparation of anthers - To study chromosomal aberrations: reciprocal translocation through squash preparations of <i>Rhoeo</i> anthers. Complex translocation ring, quadrivalents, lagging chromosomes, dicentric/inversion bridge through permanent slides.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Principle and operation of instruments used to measure microclimatic variables; soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/ hygrometer, rain guage and lux meter. - Determination of pH and detection of carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency from atleast two soil samples by rapid field tests. - Determination of minimal quadrat size and number for the study of herbaceous vegetation in the college campus by species area curve method (species to be listed). - Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkier's frequency distribution law.	B.Sc. (P.) Life Sciences Sem IV	Ecology and Evolution
		- Collection, Identification and preparation of herbarium of three ethnobotanically important plants with appropriate references. - Preparation of crude extract of ethnobotanically important plants with appropriate references.	GE II Sem II	Ethnobotany
	Tutorials:			
MARCH	Theory:	- Discovery: Linkage and crossing over; Recombination frequency; two factor crosses; sex linkage map of rII locus in phage; Central dogma. - History: Mutation types with examples (spontaneous and induced; somatic and germinal; biochemical mutations) Types of mutations (point mutations (base mutations); transitions and transversion; deletion and frameshift mutations; misense and nonsense mutations)	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology


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	- Data retrieval systems of NCBI - Role of Bioinformatics in Functional Genomics - Levels of protein structure	B.Sc. (H.) Botany Sem VI	Bioinformatics
	- Significance of following plants in ethnobotanical practices (along with habitat and morphology): a. <i>Azadirachta indica</i>, b) <i>Ocimum sanctum</i>, c) <i>Vitex negundo</i>, d) <i>Gloriosa superba</i>, e) <i>Tribulus terrestris</i>, f) <i>Pongamia pinnata</i> g) <i>Cassia auriculata</i> h) <i>Indigofera tinctoria</i> - Unit 3	GE II Sem II	Ethnobotany
Practicals:	- Human Genetics - Study of autosomal & sex-linked dominant & recessive inheritance through pedigree analyses. ABO blood group testing using kits, - To study the syndromes (Down's, Klinefelter's, and Turner's) through karyotypes - To study incomplete dominance and deviations of Mendelian dihybrid ratio (12:3:1, 9:3:4, 9:7, 15:1, 13:3) through seed samples.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
	- Study of ecological adaptations of hydrophytes and xerophytes - Study of biotic interactions of the following: stem parasite (<i>cuscuta</i>), Root parasite (<i>Orobancha</i>), Epiphytes (Orchids), Predation (Insectivorous Plants)	B.Sc. (P.) Life Sciences Sem IV	Ecology and Evolution
	- Preparation of crude extract of ethnobotanically important plants with appropriate references. - Project-work documentation, literature survey and collection of information on ethnobotanically useful plants from traditional healers	GE II Sem II	Ethnobotany
Tutorials:			

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APRIL	Theory:	- Molecular basis of mutations; Mutagens-physical (UV and X-rays), chemical mutagens (base analogs, deaminating, alkylating and intercalating agents and transposons. - Genetic code - Structure and types of RNA; Transcription and Translation in prokaryotes; Transcription, RNA Processing in Eukaryotes.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Protein structure prediction and modelling - Gene prediction methods and tools	B.Sc. (H.) Botany Sem VI	Bioinformatics
		- Unit 4 - Ethnobotany and legal aspects, Ethnobotany as a tool to protect interests of ethnic groups, sharing of wealth concept with few examples from India, Biopiracy, IPR and Traditional knowledge; databases and Knowledge resource;	GE II Sem II	Ethnobotany
	Practicals:	- To prepare LB medium, inoculate and maintain (spread plate, streak plate, pour plate & serial dilution methods) <i>E. coli</i> cultures. - To isolate genomic DNA from cauliflower and <i>E. coli</i>. Visualise using agarose gel electrophoresis	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Study of Ecological speciation (allopatric and sympatric) with the help of examples. - Study of phylogenetic relationships among taxa with the help of exercises.	B.Sc. (P.) Life Sciences Sem IV	Ecology and Evolution
		Project-work documentation, literature survey and collection of information on ethnobotanically useful plants from traditional healers	GE II Sem II	Ethnobotany
MAY	Tutorials:			
	Theory:	Translation in Eukaryotes.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
		Gene prediction methods and tools	B.Sc. (H.) Botany Sem VI	Bioinformatics
		Case studies of traditional medicines leading to development of modern pharmaceutical products (use of <i>Trichopus zeylanicus</i> by Kani tribe and <i>Artemisia</i> sp. For malaria cure)	GE II Sem II	Ethnobotany


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M. Prajapati

Practicals:	To estimate DNA by diphenylamine method.	B.Sc. (P.) Life Sciences Sem II	Genetics and Molecular Biology
	Construct phylogenetic tree using MEGA and interpret evolutionary relationships.	B.Sc. (P.) Life Sciences Sem IV	Ecology and Evolution
	Project-work documentation, literature survey and collection of information on ethnobotanically useful plants from traditional healers.	GE II Sem II	Ethnobotany

M. Prajapati



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SEMESTER WISE TEACHING PLAN (2022-2023)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Aditi Kothari Chhajjer
Semester : II/IV/VI

Aditi K. Chhajjer

Department: Botany

Month		Topics	Course	Paper
JANUARY	Theory	- Origin of Cultivated Plants - Vavilov-centres of origin - Primary centre, secondary centre	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Introduction to Intellectual Property - Copyrights Introduction, works protected under copyright law, infringement, transfer of copyright.	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		- Unit 1: Introduction and Origin of Cultivated Plants: Importance of Plant Resources; - Vavilov's concept for the Origin of cultivated plants; Centres of Origin (Primary and Secondary); Centres of diversity, - Harlan's concept of gene pools; Plant Genetic Resources and their conservation. - Unit 2: Cereals Wheats (Origin, Evolution of Wheats (tetra- & hexaploid), Morphology, Production, and Economic Importance of Hexaploid Wheat);	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Practicals	- Study of economically important plants: Wheat, Gram, Soybean through specimens and sections. - Microchemical tests of wheat, gram and soybean	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Copyright infringement - Plagiarism check - Introduction to IPR e-diary	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		- Cereals: Wheat (habit sketch, L.S/T.S. grain, W.M. starch grains, microchemical tests), - Rice (habit sketch, study of paddy and grain, W.M. starch grains, microchemical tests). - Millets - Pearl Millet, Finger Millet and Pseudocereals - Amaranth, Quinoa (specimens/digital resources and grains) - Legumes: Chickpea, Pigeonpea (habit, fruit, seed structure, micro-chemical tests).	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Tutorials			

V. B.

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FEBRUARY	Theory:	- Importance of Cereals - Wheat- Botanical name Family, Evolution, Habit and Economic Uses - Beverages- Introduction, Tea – morphology, processing and uses	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Trade Marks Introduction, How to obtain, Different types of marks — Collective marks, certification marks, service marks, Trade names, etc. Differences from Designs. - Geographical Indications Definition, rules for registration, prevention of illegal exploitation, importance to India.	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		- Rice (Origin-Monophyletic and Polyphyletic, Production, Morphology, Comparison between indica and japonica Rice, Parboiling, Economic Importance); Other cereals: Maize, Barley, Oats, Millets (jowar, bajra, ragi) and Pseudocereal - Unit 3: Legumes General account (Nutritive Value of Pulses, Protein Malnutrition, Lathyrism, Favism, Ecological Importance); Chick pea and Pigeon pea (Production, Morphology and Economic Importance); Other Legumes: Lentil, Cluster Bean, Lathyrus, Beans, Pea, Cowpea, Fodder legumes and Green manure crops - Unit 6: Beverages : Types of Beverages (Alcoholic and Non-Alcoholic) with examples; Tea and coffee (Morphology, Chemistry, Processing and Economic Importance)	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Practicals:	Study of economically important plants: Black pepper, Clove Tea, Cotton, Groundnut through specimens, sections and micro	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Trademark Search - Patent search - Industrial designs	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		- Sugars and Starches: Sugarcane (habit sketch, products and by-products, Cane juice microchemical tests); - Potato (habit sketch, tuber morphology, T.S. tuber to show localization of starch grains, W.M. starch grains, microchemical test - Spices: Clove, Black pepper (habit and sections-L.S./T.S.), Saffron, Fennel (specimen/digital resources) - Beverages: Tea (plant specimen, tea leaves), Coffee (plant specimen, beans)	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany


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	Tutorials:			
MARCH	Theory:	• <i>Agrobacterium</i> mediated genetic transformation • Electroporation • Micro-projectile bombardment • Selectable marker and reporter genes- GUS , Luciferase, GFP • Applications- Bt cotton, Round up ready soybean, Golden Rice, Flavr Savr tomato, edible vaccine	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		• Patents Historical Perspective, Basic and associated right, WIPO, PCT system, Traditional Knowledge, Patents and Healthcare — balancing promoting innovation with public health, Software patents and their importance for India • Industrial Designs Definition, How to obtain, features, International design registration.	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		• Unit 4: Sugars and Starches Sugarcane (Morphology, Ratooning, Nobilization, Products and By-products); Potato (Morphology, Tuber Anatomy, Seed Tubers vs True Potato Seeds and Economic uses). • Unit 5: Spices, Condiments & Flavours \- General Account (Spices, Condiments, Culinary Herbs and Essences, with examples), • Importance of Spices, Clove (Morphology, Anatomy of part used and Economic Importance) and Black Pepper (Morphology, Anatomy of part used and Economic Importance). • Other examples: Ginger, Turmeric, Cinnamon, Saffron, Cardamom, Chillies & Pepper, Fennel, Coriander, Cumin, Vanilla, Nutmeg. • Unit 7: Fibres and Fibre-yielding plants- Classification of Fibres based upon their Origin (surface fibres, bast fibres, and leaf fibres, with examples); Jute (morphology, extraction and economic importance), Cotton (Gossypium species, morphology, processing and economic importance) Comparison between Jute and Cotton fibers. Other examples: Flax, Hemp and Coconut	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Practicals:	• Study through photographs: Endosperm, and Embryo Culture; Micropropagation	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology


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		- Geographical Indicators i) food (Basmati rice, Tirupati laddu, etc.) ii) handlooms (kota saree, banarse, etc.) iii) industry (mysore agarbatti, feni, champagne, etc.) iv) Natural resources (Makrana marble, etc.)	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		- Spices: Clove, Black pepper (habit and sections-L.S./T.S.), Saffron, Fennel (specimen/digital resources) - Beverages: Tea (plant specimen, tea leaves), Coffee (plant specimen, beans) - Fibres: Jute (specimens/digital resources of Corchorus capsularis and C. olitorius, T.S. stem, test for cellulose and lignin on section of stem and fibre). Cotton (specimen, W.M. seed to show lint and fuzz; W.M. fibre and test for cellulose)	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Tutorials:			
APRIL	Theory:	- Androgenesis, Gynogenesis - Embryo and endosperm culture - Secondary metabolite production - Germplasm conservation	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Layout design of integrated circuits Circuit Boards, Integrated Chips, Importance for electronic industry. - Protection of Plant Varieties, Information technology related IPR	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights

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	- Unit 8: Oil-Yielding Plants - Fatty Oils and Essential Oils, Comparison between Fatty Oils and Essential Oils; Fatty Oils (Classification with examples, keeping quality), Groundnut (Morphology and Economic Importance); Essential Oils (General characteristics, Methods of Extraction and Economic Importance, with examples). - Other examples: Rapeseed & Mustard (canola), Coconut, Olive, Castor, Cottonseed, Sesame, Soybean, Linseed. - Unit 9: Medicinal and Drug-Yielding Plants Brief Account of Therapeutic Drugs with Examples; Morphology, Chemical Constituents, Economic Importance of Cinchona, Rauwolfia, Digitalis - Unit 10: Fumigatory & Masticatory Tobacco (Morphology, species - Nicotiana tabacum & N. rustica), Processing, Products, Economic Importance and Health Hazards), Cannabis, Papaver (Morphology, Chemical constituents, Economic importance) - Unit 11: Rubber Para Rubber - Hevea brasiliensis (Morphology, Tapping of latex, Processing, Products and Economic Importance	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
Practicals:	PCR, Blotting Techniques, AGE and PAGE	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
	- Biopiracy - Industrial Designs	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
	- Drug-Yielding plants: Habit - Fever Bark Tree, Poppy, Foxglove and Cannabis (Specimens/ Photographs) - Tobacco: Nicotiana tabacum and N. rustica (specimens/photographs), Tobacco Products - Rubber: Para Rubber-Habit, Tapping of latex (Specimen/photograph), Rubber Products - Petro-crops: Saccharum officinarum, Jatropha sp.	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
Tutorials:			

MAY	Theory:	Revision	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Protection of Plant Varieties, Information technology related IPR	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		- Unit 12: Fruits & Nuts Tropical & Temperate; Citrus, Mango, Banana, Apple, Pineapple, Papaya; Nuts: Cashew, Walnut, Almond & Pistachio. - Unit 13: Vegetables Common examples of root crops, leafy vegetables (herbage), fruit seed vegetables.	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Practicals:	Revision and Mock Test	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Revision and Mock Test	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights
		Revision and Mock Test	B.Sc. (H.) Botany Sem II	Plant Resources and Economic Botany
	Tutorials:			

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sachin Kumar

Department: Botany

Semester: Even sem. (II, IV and VI)

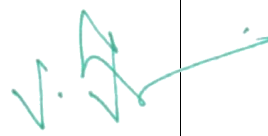
Sachin Kumar.

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Unit 6: Structural Bioinformatics in Drug Discovery.	B.Sc(H) Botany Sem-VI	BHDS4/Bioinformatics
		Unit 1: Overview of defense mechanisms in plants.	B.Sc(H) Biological Science Sem-VI	BS C-13/Immunobiology
		Unit 2: Introduction- Ecological factors.	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
		Unit 1: History of cell biology, cell theory.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Practicals:	1. Nucleotide and protein databases.	B.Sc(H) Botany Sem-VI	BHDS4/Bioinformatics
		Ecology and Evolution practical's- Introduction	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
		1. Estimation of cell size by micrometry. 2. To study plasmolysis and deplasmolysis in a cell. 3. Study the effect of organic solvent on membrane permeability.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Tutorials:			
FEBRUARY	Theory:	Unit 6: Computer aided Drug Design (structure-based and ligand-based approaches), Quantitative structure-activity relationship (QSAR) techniques in Drug Design.	B.Sc(H) Botany Sem-VI	BHDS4/Bioinformatics
		Unit 2: Pre-existing structural defenses (first line of defense) - surface structures (waxy coat, cuticle, epidermal layer, hydathodes, thorns, sclereids), mineral crystals (idioblasts,) and cell wall. Biochemical defenses- secondary metabolites (terpenoids, glycosides, phenolics and alkaloids).	B.Sc(H) Biological Science Sem-VI	BS C-13/Immunobiology


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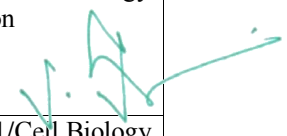
	Unit 2: Soil: Origin, formation, composition, soil profile. Water: States of water in the environment, precipitation types; Light, Temperature (Thermal stratification in water bodies and atmosphere) and Wind.	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
	Unit 1: Structure and functions of membrane, models of membrane structure. Transport across membranes (with examples): simple diffusion, facilitated diffusion, active transport (Na ⁺ /K ⁺ pumps, Co-transport, proton pumps) and passive transport. Phagocytosis, pinocytosis, exocytosis.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
Practicals:	2. Literature retrieval from Pubmed. 3. Sequence retrieval (protein and gene) from NCBI (Molecular file formats - FASTA, GenBank, GenPept). 4. Structure download (protein and DNA) from PDB (Textual file format- PDB and mmCIF). 5. Molecular viewer by visualization software (Ras Mol/ J mol/Swiss 3D Viewer/Pymol).	B.Sc(H) Botany Sem-VI	BHDS4/Bioinformatics
	1. Principle and operation of instruments used to measure microclimatic variables: Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter. 2. Determination of pH and detection of carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency from atleast two soil samples by rapid field tests. 3. Determination of minimal quadrat size and number for the study of herbaceous vegetation in the college campus, by species area curve method (species to be listed). 4. Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law.	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution

		1. Estimation of cell size by micrometry. 2. To study plasmolysis and deplasmolysis in a cell. 3. Study the effect of organic solvent on membrane permeability. 4. Demonstrate the phenomenon of protoplasmic streaming.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Tutorials:			
MARCH	Theory:	Unit 6: Microbial genome applications, Crop improvement. Unit 3: Generation of data-Sequencing (NGS, WGS), Protein sequencing.	B.Sc(H) Botany Sem-VI	BHDS4/Bioinformatics
		Unit 2: Innate Immunity in Plants- Pattern triggered immunity (PTI). Unit 4: Factors causing plant stress- abiotic and biotic. Abiotic- strategies and mechanisms, Physiological and cellular responses to drought stress, salinity stress, temperature stress (freezing and heat). Biotic- Classification of biotic stresses, major pests and diseases of economically important crops, interaction in host-pathogen systems.	B.Sc(H) Biological Science Sem-VI	BS C-13/Immunobiology
		Unit 2: Ecological amplitude; Leibig's law of minimum; Shelford law of tolerance. Unit 3: Population Characteristics (dispersion, natality, mortality, survivorship curve, age pyramids); growth rates (density-dependent/independent).	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
		Unit 3: Structure and organization of microfilaments. Structure and organization of intermediate filaments, microtubules, their functions in plants and animals.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Practicals:	6. Translate a nucleotide sequence and select the correct reading frame of the polypeptide from the output sequences (such as, Translate tool of Expasy). 7. Predict the structure of protein from its amino acid sequence. (Phyre 2/ Modweb/ CPH model/ Swiss Model). 8. BLAST suite of tools for pairwise alignment.	B.Sc(H) Botany Sem-VI	BHDS4/Bioinformatics


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	5. Study of ecological adaptations of hydrophytes and xerophytes (four each). 6. Study of biotic interactions of the following: Stem parasite (<i>Cuscuta</i>), Root parasite (<i>Orobanchae</i>), Epiphytes (Orchids), Predation (Insectivorous plants).	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
	5. Study of ultrastructure of a cell (Plasma membrane, Nucleus, Nuclear Pore Complex, Chloroplast, Mitochondrion, Golgi bodies, Endoplasmic reticulum, Lysosomes) through electron micrographs. 6. Study of cytoskeletal structures through photographs.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Tutorials:		

APRIL	Theory:	Unit 3: Mass spectrometry, Microarray. Sequence submission tools (BankIt, Sequin, Webin), Sequence file format (flat file, FASTA, GCG, EMBL, Clustal, Phylip, Swiss-Prot).	B.Sc(H) Botany Sem- VI	BHDS4/Bioinformatics
		Unit 4: Flor's gene for gene concept, R gene mediated resistance, effector triggered immunity (ETI), receptor-elicitor model, Cytological protection and induced resistance. Concept of signal transduction and other host-defense mechanisms. Heatshock proteins, Basic ROS cycle and adaptation during stress. Systemic Acquired Resistance (SAR), Phytoalexins, Jasmonic acid, MAPKS, SROS, HPL, systemins.	B.Sc(H) Biological Science Sem-VI	BS C-13/Immunobiology
		Unit 3: Interactions: mutualism, symbiosis, commensalism, competition, parasitism, predation, ammensalism, antibiosis. Unit 6: Origin and history of life; Macro and microevolution; Phylogeny and the tree of life. Unit 7: Lamarckism and Neo-Lamarckism; Darwinism – selection (natural and artificial).	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution

		Unit 4: Cell wall organization (Primary and secondary cell wall), components of cell wall. Extracellular Matrix and Cell junctions, adhesive junctions, gap junctions and tight junctions, plasmodesmata. Function of cell wall.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Practicals:	9. Sequence homology and Gene annotation. 10. Construction of phylogenetic tree (PHYLIP/ MEGA/ Clustal omega). 11. Gene prediction using GENSCAN and GLIMMER.	B.Sc(H) Botany Sem- VI	BHDS4/Bioinformatics
		7. Study of ecological speciation (allopatric and sympatric) with the help of examples. 8. Study phylogenetic relationships among taxa with the help of exercises.	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
		7. Study of different stages of mitosis by temporary preparation of onion root tips. 8. Study of different stages of meiosis by temporary permanent slides. 9. Staining and visualisation of mitochondria by Janus green stain.	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Tutorials:			
MAY	Theory:	Unit 3: Data retrieval systems of NCBI. Revision.	B.Sc(H) Botany Sem- VI	BHDS4/Bioinformatics
		Unit 4: Mechanism of production and scavenging of NO. Revision.	B.Sc(H) Biological Science Sem-VI	BS C-13/Immunobiology
		Unit 7: Neo-Darwinism; Species concept and modes of speciation.	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
		Unit 2: Ultrastructural organization and functions of Chloroplast. Revision	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Practicals:	Revision and test	B.Sc(H) Botany Sem- VI	BHDS4/Bioinformatics
		9. Construct phylogenetic tree using MEGA and interpret evolutionary relationships. Revision and test	B.Sc(P) Life Sciences Sem-IV	LS-BOT-DSC-04/Ecology and Evolution
		Revision and test	B.Sc(H) Biological Science Sem-II	BS-DSC-201/Cell Biology
	Tutorials:			
				 Principal श्री. वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

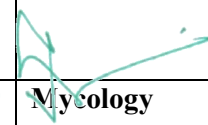
Sachin Kumar.



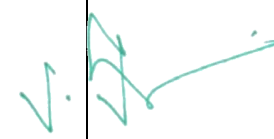
SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Shantanu Mandal
IV/VI 2023-24 (January to May) 2024

Department: Botany
Semester: Even Semester

Month		Topics	Course	Paper Code/Name
January	Theory	Unit 3: Systematics - An Interdisciplinary Science ❖ Relevance of palynology, three examples from each with emphasis on application in resolving taxonomic problems.	B.Sc. (H) Botany Semester II	Plant Systematics
		Unit 1: Introduction ❖ General characteristics; Thallus organization; Cell wall composition; Nutrition; Heterokaryosis and Parasexuality; Classification - Webster and Weber (2007) and Introduction to Phylogenetic system of classification.	B.Sc. (H) Botany Semester IV	Mycology
		Unit 5: Applications of Biotechnology ❖ Engineering plants to overcome abiotic (drought and salt stress) and biotic stress.	B.Sc. (H) Botany Semester VI	Plant Biotechnology
	Practicals	❖ Ranunculaceae- <i>Delphinium</i> ❖ Brassicaceae- <i>Brassica</i> , <i>Alyssum</i> / <i>Iberis</i>	B.Sc. (H) Botany Semester II	Plant Systematics
		❖ <i>Rhizopus</i> & <i>Mucor</i> : Study of asexual stage from temporary mounts and sexual stage through permanent slides.	B.Sc. (H) Botany Semester IV	Mycology
		❖ Study of Viruses: Electron micrographs / Models - T-Bacteriophage and TMV; specimens/digital resources/ Line drawings of Lytic and Lysogenic Cycle	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
	Tutorials	-----		
February		Unit 3: Systematics - An Interdisciplinary Science ❖ Relevance of cytology, phytochemistry and molecular data (cp.DNA, mt.DNA, nuclear DNA, PCR amplification, sequence data analysis); three examples from each with emphasis on application in resolving taxonomic problems –	B.Sc. (H) Botany Semester II	Plant Systematics
		Unit 2: Chytridiomycota ❖ General characteristics; Life cycle of <i>Synchytrium</i> , <i>Allomyces</i> Unit 3: Zygomycota ❖ General characteristics; Distribution; Thallus organization; Classification; Life cycle of	B.Sc. (H) Botany Semester IV  प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21	Mycology

		<i>Rhizopus & Mucor.</i> Unit 4: Ascomycota ❖ General characteristics; Distribution; Classification, Life cycles of <i>Saccharomyces</i>, <i>Penicillium</i>, <i>Alternaria</i>, <i>Neurospora</i> and <i>Peziza</i>.		
		Unit 5: Applications of Biotechnology ❖ Pest resistant (Bt-cotton) and herbicide resistant plants (RoundUp Ready soybean) ❖ Transgenic crops with improved quality traits (FlavrSavr tomato. Golden rice); Improved horticultural varieties (Moondust carnations).	B.Sc. (H) Botany Semester VI	Plant Biotechnology
	Practicals	❖ Solanaceae- <i>Solanum nigrum</i> and <i>Withania somnifera</i> ❖ Lamiaceae- <i>Salvia</i> and <i>Ocimum</i> ❖ Liliaceae- <i>Lilium</i> and <i>Allium</i> ❖ Umbelliferae- <i>Coriandrum</i>	B.Sc. (H) Botany Semester II	Plant Systematics
		❖ <i>Saccharomyces</i>: Study of vegetative cell and budding from temporary mounts. ❖ <i>Penicillium</i>: Study of asexual stage from temporary mounts and sexual stage from permanent slides. ❖ <i>Peziza</i>: Study of sexual stage from temporary preparation of V.S of ascocarp.	B.Sc. (H) Botany Semester IV	Mycology
		❖ Gram staining to differentiate between Gram-positive and Gram-negative bacteria.	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
	Tutorials	-----		
March	Theory	Unit 6: Approaches in Systematics ❖ Terms and concepts (primitive and advanced, homology and analogy, parallelism and convergence, monophyly, paraphyly, polyphyly, clades and grades). Phenetics – ❖ Principles, Methodology, Characters; Selection of OTUs, Character weighing and Coding; Cluster analysis; Phenogram. Cladistics – ❖ Principles, Methodology, Characters; Selection of OTUs, Character weighing and Coding; Cluster analysis; Cladogram	B.Sc. (H) Botany Semester II	Plant Systematics
		Unit 5: Basidiomycota ❖ General characteristics; Distribution; Classification, Life cycle of <i>Puccinia graministritici</i>, <i>Agaricus</i>; Bioluminescence, Fairy Rings, Mushroom cultivation.	B.Sc. (H) Botany Semester IV	Mycology


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		Unit 6: Oomycota ❖ General characteristic (with emphasis on difference with fungi); Distribution; Classification, Life cycle of <i>Albugo</i>.		
		Unit 5: Applications of Biotechnology ❖ Role of transgenics in bioremediation (Superbug). Unit 6 ❖ Molecular farming (Plants as bioreactors) for edible vaccines, antibodies, polymers, biodegradable plastics (PHA),	B.Sc. (H) Botany Semester VI	Plant Biotechnology
	Practicals	❖ Poaceae- <i>Triticum/ Hordeum/ Avena/ Poa</i> ❖ Malvaceae- <i>Abutilon/ Hibiscus/ Sida</i> ❖ Solanaceae- <i>Solanum nigrum, Withania somnifera</i> (Revision)	B.Sc. (H) Botany Semester II	Plant Systematics
		❖ <i>Alternaria solani</i>: Study of symptoms of early blight of Potato. Study of asexual stages through temporary mounts. ❖ <i>Puccinia gramintritici</i>: Herbarium specimens of Black stem rust of wheat and barberry leaves; sections / mounts of spores (Uredospores and Teleutospores) on wheat. Permanent slides showing spore stages on both the hosts. ❖ <i>Agaricus</i>: Specimens of button stage and mature basidiocarp; V.S of gills of <i>Agaricus</i>.	B.Sc. (H) Botany Semester IV	Mycology
		❖ Histochemical staining to observe Arbuscular Mycorrhizal Fungi (AMF) colonization in Roots. ❖ Study of Bacteria: Electron micrographs of bacteria; Types of Bacteria from temporary/permanent slides. ❖ Endospore, Binary fission, Conjugation, Root nodule through specimens/digital resources. ❖ Study of Plant Growth Promoting Rhizobacteria (PGPR) through specimens/digital resources (at least three).	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
April	Theory	Unit 7: Evolution of Angiosperms Weeks: ❖ Concept of a primitive flower (Euanthial theory and Pseudanthial theory); Basal Living Angiosperms; Herbaceous origin; Coevolution of angiosperms with animals.	B.Sc. (H) Botany Semester II	Plant Systematics
		Unit 8: Symbiotic associations ❖ Lichen - Distribution; General characteristics; Growth forms and range of thalli; Economic	B.Sc. (H) Botany Semester IV	Mycology

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		importance of lichens. Mycorrhiza - Ectomycorrhiza, Endomycorrhiza and their significance. Unit 9: Applied Mycology ❖ Application of fungi in Food Industry- Fermentation, Organic acids, Enzymes, Mycoproteins; Introduction to Plant Pathology, Nematophagous fungi, Entomogenous fungi, Mycoparasites, Mycoremediation, Medical mycology and Mycotoxins.		
		Unit 6 ❖ Molecular farming (Plants as bioreactors) biomass utilization and industrial enzymes) (- amylase, phytase, lignocelluloses degrading enzymes); Biosafety concerns.	B.Sc. (H) Botany Semester VI	Plant Biotechnology
	Practicals	❖ Euphorbiaceae- Euphorbia hirta/ E. milli, Jatropha ❖ Asteraceae- Sonchus/ Launaea, Veronia/ Ageratum, Euphorbia/ Tridax ❖ Apocynaceae- Catharanthus roseus/ Cascabela thevetia/ Tabernaemontana sp. ❖ Revision of Practical	B.Sc. (H) Botany Semester II	Plant Systematics
		❖ Study of Phanerochaete of <i>Physarum</i> and sporangia of <i>Stemonitis</i>. ❖ <i>Albugo candida</i>: Study of symptoms of white rust on <i>Brassica</i> sp.; Asexual stage study through section / temporary mounts. Sexual structures through temporary mounts / permanent slides. ❖ Lichens: Study of different types of lichens - Crustose, Foliose and Fruticose. Study of Internal structure of thallus; Apothecium through permanent slides.	B.Sc. (H) Botany Semester IV	Mycology
		❖ Study of Rhizobium from root nodules of a leguminous plant. ❖ Isolation of Anabaena from Azolla leaves. ❖ Histochemical staining to observe Arbuscular Mycorrhizal Fungi (AMF) colonization in roots. ❖ Study of bacterial diseases (Citrus canker, Angular leaf spots of cotton) and viral diseases of plants (mosaic and vein clearing disease) through specimens/digital resources	B.Sc. (Hons.) Botany Sem II	Microbiology and Plant Microbe interaction
	Tutorials	-----		
May	Theory	Unit 6: Approaches in Systematics ❖ Cladistics - Principles, Methodology, Characters; Selection of EUs, Character weighing and Coding; Cluster analysis; Cladogram	B.Sc. (H) Botany Semester II	Plant Systematics Principal Dr. Venkateswara College University of Delhi Block: 20A, 1st Floor / Dhaura Kuan, New Delhi-21

		❖ Revision and solving previous years question paper		
		Unit 7: Myxomycota ❖ General characterises (with emphasis on difference fungi); Distribution; Types of plasmodia; Types of fruiting bodies; Life cycle of <i>Stemonitis</i> . ❖ Revision and solving previous years question paper	B.Sc. (H) Botany Semester IV	Mycology
		❖ Revision and solving previous years question paper	B.Sc. (H) Botany Semester VI	Plant Biotechnology
	Practicals	- Practical file submission and correction - Practical mock test	B.Sc. (H) Botany Semester II	Plant Systematics
		- Practical file submission and correction - Practical mock test	B.Sc. (H) Botany Semester IV	Mycology
		- Practical file submission and correction - Practical mock test	B.Sc. (H) Botany Semester VI	Plant Biotechnology
	Tutorials	-----		

Shantanu Mandal


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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. K. Prasad

Department: Botany

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	Viruses: Discovery	FBH DSC-IV Sem II	Microbiology and plant microbe interactions
		Similarity, identity and homology.	TBH DSE-IV Sem VI	Bioinformatics
	Practical's	Nucleotide and protein databases	TBH DSE-IV Sem VI	Bioinformatics
		To study mitosis in Allium cepa through squash preparation of root tips.	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		To study meiosis in Allium cepa through smear preparation of anthers		
		Principle and operation of instruments used to measure microclimatic variables: Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer /hygrometer, rain gauge and lux meter.	SBH DSC-II Sem IV	Ecology and Conservation
-	SEC Sem II	Green Belt development for smart cities		
Feb	Theory	Classification (Baltimore); General structure with special reference to viroids and prions, DNA and RNA viruses	FBH DSC-IV Sem II	Microbiology and plant microbe interactions
		General account and mechanism of replication, lytic and lysogenic cycle		
		Alignment – local and global alignment, pairwise and multiple sequence alignments, alignment algorithms.	TBH DSE-IV Sem VI	Bioinformatics
		Methods of Alignment (Dot matrix, Dynamic Programming, BLAST and FASTA)		
	Practical's	Literature retrieval from Pubmed	TBH DSE-IV Sem VI	Bioinformatics
Sequence retrieval (protein and gene) from NCBI (Molecular file formats - FASTA, GenBank, GenPept)				
Structure download (protein and DNA) from PDB (Textual file format- PDB and mmCIF)				

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		Molecular viewer by visualization software (Ras Mol/ J mol/Swiss 3D Viewer/Pymol)		
		To study incomplete dominance and deviations of Mendelian dihybrid ratio through seed samples. Human genetics: a) Study of autosomal and sex -linked dominant & recessive inheritance through pedigree analysis b) ABO blood group testing using kits c) To study syndromes (Down, Klenifelter and Turner)	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Determination of pH and detection of carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency from atleast two soil samples by rapid field tests. Determination of pH & dissolved oxygen from polluted and unpolluted water samples. Determination of soil organic carbon and organic matter of different soil samples by Walkley & Black rapid titration method.	SBH DSC-II Sem IV	Ecology and Conservation
		Vegetation sampling and IVI calculation	SEC Sem II	Green Belt development for smart cities
March	Theory	General account of viral diseases of plants (mosaic and vein clearing disease)	FBH DSC-IV Sem II	Microbiology and plant microbe interactions
		Scoring Matrices/ Amino acid substitution matrices (PAM and BLOSUM), and CLUSTALW.	TBH DSE-IV Sem VI	Bioinformatics
	Practicals	Translate a nucleotide sequence and select the correct reading frame of the polypeptide from the output sequences (such as, Translate tool of Expasy) Predict the structure of protein from its amino acid sequence. (Phyre 2/ Modweb/ CPH model/ Swiss Model) BLAST suite of tools for pairwise alignment.	TBH DSE-IV Sem VI	Bioinformatics
		To study chromosomal aberrations: reciprocal translocation through squash preparation of Rheo anthers. Complex translocation ring,	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology

		quadrivalents, Lagging chromosomes, dicentric /inversion bridge through permanent slides. Estimation of DNA by diphenylamine method.		
		Study of ecological adaptations of hydrophytes and xerophytes (four each). Study of biotic interactions of the following: Stem parasite (Cuscuta), Root parasite (Orobancha), Epiphytes, Predation (Insectivorous plants). Determination of minimal quadrat size and number for the study of herbaceous vegetation in the college campus, by species area curve method (species to be listed).	SBH DSC-II Sem IV	Ecology and Conservation
		Measuring Tree Basal Area, Height and Canopy Cover to estimate green cover of an area Understanding of Instruments for measuring microclimatic variables viz., light, wind, temperature, humidity and precipitation Estimation of Total Carbon stock of an area.	SEC Sem II	Green Belt development for smart cities
April	Theory	Plant-Microbe interactions: General account of Plant-microbe interactions; Plant growth promoting rhizobacteria (PGPR); Mechanism of nitrogen fixation by Cyanobacteria and Rhizobia; Types of mycorrhizal association with plants	FBH DSC-IV Sem II	Microbiology and plant microbe interactions
		Molecular Phylogeny, Construction of phylogenetic tree, dendrograms	TBH DSE-IV Sem VI	Bioinformatics
	Practical's	Sequence homology and Gene annotation. Construction of phylogenetic tree (PHYLIP/ MEGA/ Clustal omega). Gene prediction using GENSCAN and GLIMMER.	TBH DSE-IV Sem VI	Bioinformatics

		To prepare LB medium, inoculate and maintain E. coli cultures. To isolate genomic DNA from cauliflower and E. coli. Visualize using agarose gel electrophoresis. To estimate	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology
		Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law. Quantitative analysis of herbaceous vegetation for density and abundance in the college campus. Species distribution pattern based on A/F ratio (regular, random, clumped). Field visit to familiarize students with ecology/conservation of different sites.	SBH DSC-II Sem IV	Ecology and Conservation
		Understanding methods for selection of plants according to pollutant load of both air and water (includes field survey) Assessing air pollution tolerance of plant species using APTI (Air pollution tolerance index). Use Open Source Softwares for mapping the GPS points and generating a cover map. Measurement of Dissolved Oxygen (DO) from treated wastewater.	SEC Sem II	Green Belt development for smart cities
May	Theory	Ectomycorrhiza and Endomycorrhiza and their effects on plant growth	FBH DSC-IV Sem II	Microbiology and plant microbe interactions
		Methods of construction of phylogenetic trees maximum parsimony, maximum likelihood and distance methods.	TBH DSE-IV Sem VI	Bioinformatics
	Practicals	Conduct of Mock test and final practical examination	TBH DSE-VI Sem VI	Bioinformatics
		Conduct of Mock test for internal assessment and Final practical examination	B.Sc. (P) Life Sciences Sem II	Genetics and Molecular Biology

		Conduct of Mock test and final practical examination	SBH DSC-IV Sem IV	Ecology and Conservation
		Measurement of BOD and TDS from tank and treated pond. Determination of total dissolved and suspended solids in water. Conduct of Mock test and final practical examination	SEC Semester II	Green Belt development for smart cities



Teacher's Signature

Teacher in charge



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SEMESTER WISE TEACHING PLAN (2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Pamil Tayal

Department: Botany

Pamil Tayal

Semester : II/IV/VI

Month			Topics	Course	Paper Code/Name
January		Theory	Introduction to Plant Tissue Culture, Historical Perspective, composition of media, nutrient and hormone requirements, role of vitamins and hormones, plasticity and totipotency, Introduction to recombinant DNA technology, Restriction endonucleases and its types, Restriction mapping of circular and linear DNA, biological role	B.Sc. (H) Botany (VI)	Plant Biotechnology
			Introduction: nutrient media, aseptic and culture conditions	B.Sc. Life Science (VI)	Economic Botany and Biotechnology
		Practical	Preparation of Murashige and Skoogs Media, Demonstration of <i>in vitro</i> sterilization and inoculation methods using leaf and nodal explants, Study of <i>in vitro</i> micropropagation, construction of restriction maps of linear and circular DNA from the data provided.	B.Sc. (H) Botany (VI)	Plant Biotechnology
			Familiarization with basic equipments in tissue culture. Study of economically important plants – Wheat	B.Sc. (H) Life Science (VI)	Economic Botany and Biotechnology
			Cereals: Wheat habit sketch, LS. TS. of grain, WM starch grains, microchemical tests; Rice- habit sketch, study of paddy and grains, WM starch grains, microchemical tests; Millets – Pearl millet, finger millet and pseudocereals – Amaranthus, Quinoa – specimens/digital resources and grains.	B.Sc. (H) Botany (II)	Plant Resources and Economic Botany
			Legumes – Chickpea, pigeon pea -habit, fruit, seed structure and microchemical tests.		


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		Tutorials		
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February	Theory:	Organogenesis, embryogenesis – somatic and zygotic, Protoplast isolation, culture and fusion, tissue culture applications, micropropagation, androgenesis, virus elimination, secondary metabolite production, haploids, triploids and cybrids, applications of restriction enzymes, plasmids – pUC18 and pUC 19	B.Sc. (H) Botany (VI)	Plant Biotechnology
		Developmental pathways, direct and indirect organogenesis and embryogenesis.	B.Sc. Life Science (VI)	Economic Botany and Biotechnology
	Practical:	Study of in vitro organogenesis and in vitro embryogenesis, study of anther, endosperm and embryo culture, study of artificial seeds, isolation of protoplasts, study of methods of gene transfer – Agrobacterium tumefaciens mediated gene transfer, electroporation, microinjection, microprojectile bombardment.	B.Sc. (H) Botany (VI)	Plant Biotechnology
		Study of Agarose Gel Electrophoresis (AGE), PCR and PAGE; Study of economically important plants – Gram, soybean, tea, coffee	B.Sc. (H) Life Science (VI)	Economic Botany and Biotechnology
		Sugar and starches – sugarcane habit sketch, products and by products, cane juice – microchemical tests; potato - habit sketch, tuber morphology, TS tuber to show localization of starch grains, WM starch grains, microchemical tests. Spices- clove, black pepper -habit and section LS/TS, saffron, fennel - specimen/digital resources. Beverages – Tea Plant specimen, tea leaves, coffee -plant specimen, beans. Fibres -jute specimen, digital resources of Corchorus capsularis and C. olitorius, TS stem, test for cellulose and lignin on section of stem and fibre. Cotton specimen WM seed to show lint	B.Sc. (H) Botany (II)	Plant Resources and Economic Botany



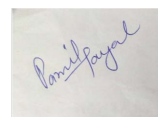
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		and fuzz, WM fibre and test for cellulose.		
	Assignment:	Assignment topics will be distributed according to the syllabi		

March	Theory:	Cryopreservation and germplasm conservation, cloning vectors, pBR322, Ti Plasmid, BAC, Lambda Phage, M13 phagemids, cosmids, shuttle vectors, eukaryotic vectors, YAC and PAC, gene cloning, Recombinant DNA, Bacterial transformation and selection of recombinant clones, PCR, RT-PCR mediated gene cloning, gene construct, construction of genomic and c DNA libraries	B.Sc. (H) Botany (VI)	Plant Biotechnology
		Single cell and protoplast culture, applications of micropropagation, androgenesis, gynogenesis, embryo and endosperm culture	B.Sc. Life Science (VI)	Economic Botany and Biotechnology
	Practical:	Study of steps of genetic engineering for production of Bt cotton, Golden rice, Flavr Savr tomato through photographs, isolation of plasmid DNA, Restriction digestion.	B.Sc. (H) Botany (VI)	Plant Biotechnology
		Study of blotting techniques- southern, northern and western. Study of economically important plants – Black pepper, clove, groundnut Study through photographs – anther culture, somatic embryogenesis, endosperm culture. Oil Yielding Plant – Fatty oils- groundnut, habit specimen, fruit, seeds, microchemical tests, Coconut- habit, photograph, fruit, TS nut, Mustard – Habit specimen, fruit, seeds, Essential Oils- Habit sketch of rose, Jasmine, Vetiver, Sandalwood and eucalyptus - specimen/photograph. Drug-yielding plants-Habit, Fever bark tree, poppy, foxglove and Cannabis - specimens/photographs. Tobacco -Nicotiana tabacum and N rustica specimen, photographs, tobacco products.	B.Sc. (H) Life Science (VI) B.Sc. (H) Botany (II)	Economic Botany and Biotechnology Plant Resources and Economic Botany
	Tutorials:			 प्रधानाचार्य Principal श्री. वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

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April and May	Theory:	Genetic selection, complementation, colony hybridization, probe-oligonucleotide heterologs, methods of gene transfer – Agrobacterium tumefaciens mediated gene transfer, electroporation, microinjection, microprojectile bombardment, selection of transgenics- selectable and reporter marker luciferase, GUS, GFP, DNA fingerprinting by RAPD and RFLP	B.Sc. (H) Botany (VI)	Plant Biotechnology
		Secondary metabolite production, germplasm conservation, Tea, its cultivation and processing, economic uses	B.Sc. Life Science (VI)	Economic Botany and Biotechnology
	Practical:	gel electrophoresis of plasmid DNA, Calculate the percentage similarity between different cultivars of a species using RAPD profile. Construct a dendrogram and interpret results.	B.Sc. (H) Botany (VI)	Plant Biotechnology
		Study through photographs -embryo culture, micropropagation, Microchemical test of economically important crop plants.	B.Sc. Life Science (VI)	Economic Botany and Biotechnology
		Rubber – Para rubber-habit, tapping of latex specimen/ photograph, rubber products. Petro-crops -Sachharum officinarum, Jatropha sp.	B.Sc. (H) Botany (II)	Plant Resources and Economic Botany
	Practical Test:	Practical test will be conducted and evaluated as per the date sheet		




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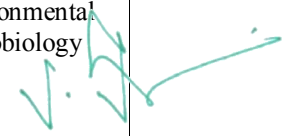
SEMESTER WISE TEACHING PLAN (2023-2024) **SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Guduru Krishna Kumar

Department: Botany

Semester : II/IV/VI

Month		Topics	Course	Paper
JANUARY	Theory	- Spices-General account - Clove-Taxonomy, morphology and uses	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		- Institutes of microbial research - Microorganisms involved in production of industrial products - Microorganisms generally regarded as safe (GRAS)	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		- Microorganisms involved in production of industrial products - Microorganisms generally regarded as safe (GRAS)	B.Sc.(H.) DSE Sem IV	Industrial and Environmental Microbiology
	Practicals	- Familiarization with basic equipment in tissue culture. - Study of economically important plants - Black pepper, Clove and Tea through specimens and sections.	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		- Principles and functioning of instruments in microbiology laboratory (autoclave, laminar air flow, incubators, types of fermenters) - Preparation of different culture media (Nutrient medium/ Luria Bertani medium/Potato dextrose medium/Czapek Dox medium)	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
	Tutorials			
FEBRUARY	Theory:	- Black pepper- Taxonomy, morphology and uses - Oils and Fats-General account	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Microbial media, - Fermentation conditions - Downstream processing and uses - Filtration, centrifugation, cell disruption, solvent extraction, precipitation, ultrafiltration, lyophilization and spray drying	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		- Downstream processing and uses - Filtration, centrifugation, cell disruption, solvent extraction, precipitation, ultrafiltration, lyophilization and spray drying	B.Sc.(H.) DSE Sem IV	Industrial and Environmental Microbiology


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		- Mitochondria- ultrastructural organization and functions - Chloroplast- ultrastructural organization and functions - Nucleus- ultrastructural organization and functions	B.Sc.(H.) Biological Sciences Sem IV	Cell Biology
		- Ayurveda and Indian food cultures - Nutrition and lifestyle transition over the years - Regional food traditions of India	Value Addition Course Sem IV	Ayurveda and Nutrition
	Practicals:	Study of economically important plants: Wheat, Gram, Soybean through specimens, sections.	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Hydrolysis of casein / starch by microorganisms - Alcohol production by yeast using sugar/ jaggery	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		Visit local market and classify the available food items according to Sattvic, Rajasi and Tamasic foods	Value Addition Course Sem IV	Ayurveda and Nutrition
	Tutorials:			

MARCH	Theory:	- Groundnut- Taxonomy, morphology and uses - Fibre Yielding Plants-General description	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		Production of industrially important products-enzyme (amylase), organic acid (citric acid), alcohol (ethanol) and antibiotic (penicillin)	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		Production of industrially important products-enzyme (amylase), organic acid (citric acid), alcohol (ethanol) and antibiotic (penicillin)	B.Sc.(H.) DSE Sem IV	Industrial and Environmental Microbiology
		- Marker enzymes - Transport mechanisms in mitochondria and chloroplast - Transport via nuclear pore complex	B.Sc.(H.) Biological Sciences Sem IV	Cell Biology
		- Understanding rich sources of nutrients - Concepts of Dosha and assessment - Ayurvedic principles of food habits and factors determining quality of food	Value Addition Course Sem IV	Ayurveda and Nutrition
	Practicals:	Microchemical tests for Wheat, Gram, Soybean, Black pepper, Clove, Tea, Cotton and Groundnut	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		Serial dilution method for isolation of microorganisms from water and soil and study of aeromicroflora.	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology

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APRIL		- Conduct a survey of 10-15 households - To visit available e-resources regard to Ayurveda and Nutrition	Value Addition Course Sem IV	Ayurveda and Nutrition
	Tutorials:			
	Theory:	- Cotton- Taxonomy, morphology and uses - Introduction to Biotechnology	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		- Overview of enzymes used for industrial applications - Methods of immobilization, advantages and applications of immobilization	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		- Applications of industrially important enzymes-protease, lipase and penicillin acylase - Methods of immobilization and its advantages	B.Sc.(H.) DSE Sem IV	Industrial and Environmental Microbiology
		- Endoplasmic reticulum-ultrastructural organization and functions - Golgi apparatus-ultrastructural organization and functions - Lysosomes-ultrastructural organization and functions - Tonoplast-ultrastructural organization and functions - Glyoxysomes-ultrastructural organization and functions - Peroxisomes-ultrastructural organization and functions	B.Sc.(H.) Biological Sciences Sem IV	Cell Biology
		- FSSAI regulations on Ayurvedic Aahar - Principles of Diet-Aharavidhi vidhan, Sattvic, Rajasi, Tamasic foods - Incomplete food (Viruddha Ahara), Pathya, Apathya, Viprita Ahaar	Value Addition Course Sem IV	Ayurveda and Nutrition
	Practicals:	Study through photographs: Anther culture, somatic embryogenesis, endosperm and embryo culture; micropropagation	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		- Determination of BOD, COD, TDS and TOC of water samples - Determination of coliforms in water samples using eosin methylene blue (EMB) medium - A visit to Yakurti probiotic industry to see an industrial fermenter, and other downstream	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		Audio-visual presentations	Value Addition Course Sem IV	Ayurveda and Nutrition
May	Tutorials:			
	Theory:	- Introduction to Biotechnology - Biotechnological Applications	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology

		- Large scale applications of immobilized enzymes-glucose, isomerase and penicillin acylase - Microorganisms as indicators of water quality-coliforms and fecal coliforms	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		Microorganisms as indicators of water quality-coliforms and fecal coliforms	B.Sc.(H.) DSE Sem IV	Industrial and Environmental Microbiology
		- Overview of cell cycle - Regulation-various checkpoints and the role of cyclins and Cdk - Overview of mitosis and meiosis and their significance	B.Sc.(H.) Biological Sciences Sem IV	Cell Biology
		- Lifestyle Management with Dincharya and Ritucharya - Applications of Ayurvedic diets to stress linked food behaviour	Value Addition Course Sem IV	Ayurveda and Nutrition
	Practicals:	Molecular techniques-PCR, Blotting Techniques, AGE and PAGE	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Biotechnology
		A visit to educational institute/industry to see an industrial fermenter, and other downstream processing operations and a report to be submitted	B.Sc.(H.) Botany Sem VI	Industrial and Environmental Microbiology
		Project Report	Value Addition Course Sem IV	Ayurveda and Nutrition

Q. Bisha Kesh...

V. B.

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Department: Botany

Amrita Singh

V. A. 

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February	Theory:	Unit 1: Introduction Ecosystem degradation, Magnitude/ Scale of degradation (National and Global Scenario); influence of climate change in Ecosystem degradation (extreme and erratic natural events) Unit 2: Factors of environmental degradation Factors responsible for degradation of soil, water, air and loss of biodiversity; natural and anthropogenic-forest fires, landslides, floods, deforestation, overgrazing, soil erosion, mining, landfills, etc. Unit 2: Tissue organisation in stem Organization of shoot apex -Apical cell theory, Histogen theory, Tunica Corpus theory, Neuman's Theory of Continuing Meristematic Residue, Cyto-Histological Zonation Theory; Unit 1: Introduction to Bioinformatics role of supercomputers in biology. Aims and scope, branches of bioinformatics - Genomics, Transcriptomics, Proteomics, Metabolomics, Systems Biology and Functional Biology	GE-IV B.Sc.(H) Botany Semester IV B.Sc.(H) Botany Semester VI	Environmental Monitoring and Ecosystem Restoration Plant physiology Developmental Biology of Angiosperms: Form, Structure and Function Bioinformatics
	Practicals	- Study of ecological adaptations of hydrophytes and xerophytes (four each). - Study of biotic interactions of the following: Stem parasite (Cuscuta), Root parasite (Orobancha), Epiphytes (Orchids), Predation (Insectivorous plants). - Determination of minimal quadrat size and number for the study of herbaceous vegetation in the college campus, by species area curve method (species to be listed). - Analyze the soil and water samples from polluted and unpolluted sites for their pH - Analyze carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency by rapid field tests in soil samples from degraded and healthy sites. - Determine the organic matter in soil samples by Walkley and Black's rapid titration method. - Determine the dissolved oxygen of water samples of polluted and nonpolluted sites by Winkler's method. - To study epidermal system, cell types, stomata and trichomes - To prepare temporary whole mounts to study organization of monocot and dicot root - To prepare temporary whole mounts to study organization of monocot and dicot stem - To prepare temporary whole mounts to study secondary growth in root and stem	B.Sc. Life Sciences Semester IV GE-IV B.Sc.(H) Botany Semester IV	Ecology and Evolution Environmental Monitoring and Ecosystem Restoration Developmental Biology of Angiosperms  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

March	Theory	Unit 3: Ecosystem Restoration Definition; UN decade on Ecosystem Restoration; Bradshaw's Concept: Restoration, Rehabilitation and Reclamation (replacement); Role of Sustainable Development Goals (SDGs)., REDD+, Joint Forest Management; Relevance for people, nature and climate. Unit 4: Environment Monitoring Indicators of land degradation: Soil- alkalinity, salinity, organic carbon and soil health; Unit 2: Tissue organisation in stem Types of vascular bundles; Structure of dicot and monocot stem; Shoot Chimeras Unit 7: Adaptive and Defensive Systems Anatomical adaptations of xerophytes and hydrophytes.; Aderustation and incrustation; Unit 1: Applications and Limitations of bioinformatics. Unit 2: Biological databases Introduction to biological databases - Primary, secondary and composite databases. NCBI - Resources and tools (BLAST), EMBL, DDBJ databases.	GE-IV B.Sc.(H) Botany Semester IV B.Sc.(H) Botany Semester VI	Environmental Monitoring and Ecosystem Restoration Developmental Biology of Angiosperms: Form, Structure and Function Bioinformatics
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	Practicals	- Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law. - Study of ecological speciation (allopatric and sympatric) with the help of examples.	B.Sc. Life Sciences Semester IV	Ecology and Evolution
		- Determine the BOD and COD content of water samples of polluted and nonpolluted sites. - To collect, collate and analyze Air Quality Index (AQI) data, Water Quality data of various locations from DPCC/CPCB website collected from real-time monitoring stations.	GE-IV	Environmental Monitoring and Ecosystem Restoration
		- To study abnormal secondary growth in <i>Bignonia</i>, <i>Salvadora</i>, <i>Leptadenia</i> - To study organization of isobilateral and dorsiventral leaf and Kranz anatomy - To study the types and features of different kinds of wood	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function



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	Assignment :	Given to all students for respective papers		
April	Theory:	Unit 4: Environment Monitoring Water- pH, Hardness, BOD, COD and Heavy metals content; Air- PM 10, PM 2.5, SO₂, NO_x, ozone), Air Quality Index (AQI); Bioindicators/ Biomonitors (plants, animals and microbes). Unit 5: Role of Plants and Microbes in Ecosystem Restoration Brief account of remediation technologies: bioremediation, phytoremediation (phytoextraction, rhizofiltration, phytovolatilization, phytostabilization etc); Role of associations of Grasses-AMF, Legumes-Rhizobium in restoring degraded land/ mined out areas; Role of macrophytes in wetland restoration; Role of green spaces including parklands and avenue plantations in amelioration of air quality. Unit 8: Secretory System Hydathodes, cavities, lenticels and laticifers. Unit 9: Application of Plant Anatomy Applications in systematics, plant development, physiology, forensics and pharmacognosy. Dendrochronology and dendroclimatology. Unit 2: Biological databases Nucleic acid databases (GenBank, NDB), protein databases (PIR, Swiss-Prot, TrEMBL, PDB)	GE-IV B.Sc.(H) Botany Semester IV B.Sc.(H) Botany Semester VI	Environmental Monitoring and Ecosystem Restoration Developmental Biology of Angiosperms: Form, Structure and Function Bioinformatics

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Practicals:	- Study phylogenetic relationships among taxa with the help of exercises. - Construct phylogenetic tree using MEGA and interpret evolutionary relationships.	B.Sc. Life Sciences Semester IV	Ecology and Evolution
	- Study of bioindicators (plant, animal and microbes). - Field visit to degraded ecosystem/ natural ecosystem/restored ecosystem	GE-IV	Environmental Monitoring and Ecosystem Restoration
	- To study adaptive anatomy in xerophytes and hydrophytes through temporary mounts/permanent slides - To study secretory tissues- cavities, lithocysts, laticifers - Preparation of permanent slides - To prepare temporary mounts to study xylem and phloem elements	B.Sc.(H) Botany Semester IV	Developmental Biology of Angiosperms: Form, Structure and Function
Tutorials:	-----		
Test	Conducted for all papers		

Amrita Singh

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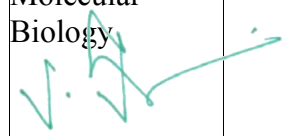


SEMESTER WISE TEACHING PLAN (2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Shweta Sharma
Semester: II / IV / VI

Department: Botany

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	- DNA Structure and Replication - Discovery of DNA	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		Ecological factors Introduction	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		- Introduction - Origin of cultivated plants	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		Introduction of IPR	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights (IPR)
	Practical's	Mitosis (Introduction)	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology


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		•		
	Tutorials			
FEBRUARY	Theory:	• Watson and Crick model of DNA • Structure semiconservative replication • Meselson and Stahl experiment • DNA replication mechanism in <i>E. coli</i> (semi discontinuous mode and Y fork) • Introduction Linkage, crossing over and chromosome mapping	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		• Soil: Origin, formation, composition, soil profile. • Water: States of water in the environment, precipitation types; • Light, Temperature (Thermal stratification in water bodies and atmosphere) and Wind; • Ecological amplitude; Leibig's law of minimum; Shelford law of tolerance.	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		• Concept of center of origin Importance with reference to Vavilov's work	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		• Economic importance of plant IPR in India and world • Genesis and Scope • Important example • IPR and WTO (TRIPS and VIPO)	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights (IPR)
	Practical's	• To study mitosis in <i>Allium Cepa</i> through squash preparation of root tips. • To study mitosis in <i>Allium Cepa</i> through smear preparation of anthers • To study chromosomal aberrations: • reciprocal translocation through squash preparations of <i>Rhoeo</i> anthers. • Complex translocation ring, quadrivalents, lagging chromosomes, dicentric/inversion bridge through permanent slides.	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology


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		• Principle and operation of instruments used to measure microclimatic variables: • Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter. • Determination of minimal quadrat size and number for the study of herbaceous vegetation in the college campus, by species area curve method (species to be listed).	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		• . (i) Definition and types of yoga: yoga, Karma yoga, Gyana yoga, Bhakti yoga, Laya yoga, Raja yoga, Hatha yoga, Mantra • (ii) Ashtanga Yoga: • Yam- Ahinsa, Satya, Asteya, Brahmacharya, Aparigraha. • Niyam- Saucha, Santosha, Tapa, Swadhyaya, Ishwarpranidhana • Asana, • Pranayama- (the types of Pranayama: Puraka, rechak & Kumbhaka), • Pratyahara, Dharana, Dhyana & Samadhi etc.	SEC IV	Yoga in practice

MARCH	Theory	• Mutations: History • Mutation types with examples spontaneous and induced • somatic and germinal • biochemical mutations • point mutations (base substitutions) • transition and transversion • deletion and frameshift mutations • Missense and nonsense mutations • Molecular basis of mutation; Mutagens - physical UV and X-rays, • Chemical mutagens • Base analogues, deaminating, alkylating and intercalating agents • Transposons • Gene expression • Genetic code • Structure and types of RNA •	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		• Population Ecology • Population Characteristics (dispersion, natality, mortality, survivorship curve, age pyramids); • growth rates (density-dependent/independent); Interactions: mutualism, symbiosis, commensalism, competition, parasitism, predation, ammensalism, antibiosis	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		• Cereals • Wheat • Origin • Morphology • Uses	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		• Protection of Traditional Knowledge • Objectives • Concepts of TKDL • Holders • Issues concerning • Bioprospecting and Biopiracy • Alternative ways protectability • Need for a sun geris regime • TK of international areana • WTO, National level • Traditinoal Knowledge Digital Library	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights (IPR)


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	Practical's	• Human Genetics • Study of autosomal & sex-linked dominant & recessive inheritance through pedigree analyses. • ABO blood group testing using kits, • To study the syndromes (Down's, Klinefelter's, and Turner's) through karyotypes • To study incomplete dominance and deviations of Mendelian dihybrid ratio (12:3:1, 9:3:4, 9:7, 15:1, 13:3) through seed samples.	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		• Determination of pH and detection of carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency from atleast two soil samples by rapid field tests • Quantitative analysis of herbaceous vegetation in the college campus for frequency and comparison with Raunkiaer's frequency distribution law.. • Study of ecological adaptations of hydrophytes and xerophytes (four each). • Study of ecological speciation (allopatric and sympatric) with the help of examples.	B.Sc.(P.) Life Sciences Sem Iv	Ecology and Evolution
	•	• Shat Chakra,s: Mooladhara, Swadhishtana, Manipur, Anahata, Vishudha, Aagya, Sahasrara- (Sahasradhara chakra). • Asana,s and their advantages:- (i) Asana in standing position: Surya Namaskara, Tadasana, • Padahastasana, Garudasana, Natarajasana, • Cakrasana	SEC IV	Yoga in practice  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

APRIL	Theory	- Haploidy, polyploidy, autopolyploidy (examples: banana, watermelon), allopolyploid (ancestry of wheat) and aneuploidy - Downs Turners and Klinefelters syndromes Deletion, - Duplication (Bar eye in Drosophila - Inversion (paracentric and pericentric; - Translocation(<i>Rhoeo</i>, <i>Oenothera</i>; Robertsonian translocation, Familial Down syndrome and cancer .	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Introduction to Evolution - Origin and history of life - Macro and Microevolution - Phylogeny and the tree of life - Evolution of Species - Lamarkism and Neo Lamarkism	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		- Legumes - General account - Special reference to gram	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Information Technology related IPR rights - Computer software and intellectual property - Database and Data protection - Protection of semiconductor chips - Domain name Protection	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights (IPR)
	Practical's	- To prepare LB medium, inoculate and maintain (spread plate, streak plate, pour plate & serial dilution methods) <i>E. coli</i> cultures. - To isolate genomic DNA from cauliflower and <i>E.coli</i>. Visualise using agarose gel electrophoresis	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology

		- Study of biotic interactions of the following: Stem parasite (Cuscuta), Root parasite (Orobanchae), Epiphytes (Orchids), Predation (Insectivorous plants). - Study of ecological speciation (allopatric and sympatric) with the help of examples. - Study phylogenetic relationships among taxa with the help of exercises.	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		- Asana in sitting position: Padmasana, Vajrasana, Siddhasana, Bhadrasana, Gomukhasana, Shashankasana, Mandukasana, Kukkutasana. - Asana in stomach side position: Dhanurasana, Bhujangasana, Mayurasana, Marjarasana, Makrasana.	SEC IV	Yoga in practice
May		- Transcription and Translation in Prokaryotes - Transcription - RNA processing and Translation in Eukaryotes	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		- Darwinism – selection (natural and artificial , - Neo Darwinism Species concept and modes of speciation	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		Special reference to soybean	B.Sc.(P.) Life Sciences Sem VI	Economic Botany and Plant Biotechnology
		- Biotechnology and IPR - Patenting Biotech Inventions	B.Sc.(P.) Life Sciences Sem VI	Intellectual Property Rights (IPR)

	Practical's	To estimate DNA by diphenylamine method.	B.Sc.(P.) Life Sciences Sem II	Genetics and Molecular Biology
		Construct phylogenetic tree using MEGA and interpret evolutionary relationships.	B.Sc.(P.) Life Sciences Sem IV	Ecology and Evolution
		Asana in backbone side position: Uttanapadasana, Naukasana, Sarvangasana, Sheershasana, Savasana etc. (v) Practice of pranayama- Purak, Rechak and Kumbhaka	SEC IV	Yoga in practice

Shweta



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TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Vibha Saxena

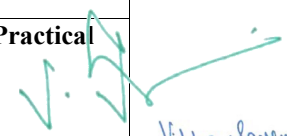
Department: Chemistry

Semester : II/IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	General properties of elements of 3d series with special reference to electronic configuration, variable valency, colour,	BSc(P) Life science III year	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
	Practicals	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical
	Tutorials	NA	NA	NA
FEBRUARY	Theory:	Brief discussion with examples of types of ligands, denticity and concept of chelate. IUPAC system of nomenclature of coordination compounds (mononuclear and	BSc(P) Life science III year	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
	Practicals:	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the understanding of the chemistry of different	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical

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	<u>Assignment :</u>	Organometallic Chemistry & Bio-inorganic Chemistry Assignment	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
MARCH	Theory:	Bonding in coordination compounds Valence Bond Theory (VBT): Salient features of theory, concept of inner and outer orbital complexes of	BSc(P) Life science III year	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
	Practicals:	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical
	Tutorials:	NA	NA	NA
	<u>Test</u>	Chemistry of d-block elements, Quantum chemistry and spectroscopy	BSc(P) Life science III year	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
APRIL	Theory:	Crystal Field Theory Splitting of d orbitals in octahedral symmetry. Crystal field effects for weak and strong fields. Crystal field stabilization energy (CFSE), concept of pairing energy. Factors	BSc(P) Life science III year	DSE1: Chemistry of d-block elements, Quantum chemistry and spectroscopy
	Practicals:	Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. Emphasis should be given to the understanding of the chemistry of different	B.Sc(H) Chemistry III year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY – IV Organometallic Chemistry & Bio-inorganic Chemistry
		Semi-micro qualitative analysis of mixture of two cations and two anions	BSc(P) Life science II year	Chemistry Practical


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**SEMESTER WISE TEACHING
PLAN**
Academic year 2023-2024
(even semester)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Prof. Sanjay Kumar

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	QBASIC programs for Chemistry problems Example: plotting van der Waals Isotherms (Simple Problem, available in general text books) Unit-2: Chemical Kinetics: Order and molecularity of a reaction, rate laws in terms of the advancement of a reaction, differential and integrated form of rate expressions up to second order reactions, experimental methods for determination of rate laws.	B.Sc. (H) CHEMISTRY Semester VI B.Sc. (H) CHEMISTRY Semester IV	DSE 3: Applications of Computer in Chemistry DSC 12: Electrochemical Cells, Chemical Kinetics and Catalysis
	Practical	Computer programs using QBASIC based on numerical methods: 1. Simple QBASIC programs for introducing concept 2. Roots of equations: (e.g. volume of gas using van der Waals equation and comparison with ideal gas, pH of a weak acid). Computer programs using QBASIC based on numerical methods: 1. Simple QBASIC programs for introducing concept 2. Roots of equations: (e.g. volume of gas using van der Waals equation and comparison with ideal gas, pH of a weak acid).	B.Sc. (H) CHEMISTRY Semester VI (Batch 1) B.Sc. (H) CHEMISTRY Semester VI (Batch 2)	DSE 3: Applications of Computer in Chemistry DSE 3: Applications of Computer in Chemistry
		1.Determination of heat capacity or water equivalent of a calorimeter using different volumes of water. 2.Determination of enthalpy of neutralization of hydrochloric acid and sodium hydroxide.	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials

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FEBRUARY	Theory:	QBASIC programs for Chemistry problems – Observe whether van der Waal gas equation is valid at temperatures lower than critical temperature where we require to solve a cubic equation Unit-2: Chemical Kinetics: Kinetics of complex reactions (integrated rate expressions up to first order only): (i) Opposing reactions (ii) parallel reactions and (iii) consecutive reactions and their differential rate equations (steady-state approximation in reaction mechanisms) (iv) chain reactions. Temperature dependence of reaction rates.	B.Sc. (H) CHEMISTRY Semester VI B.Sc. (H) CHEMISTRY Semester IV	DSE 3: Applications of Computer in Chemistry DSC 12: Electrochemical Cells, Chemical Kinetics and Catalysis
	Practical:	3. Numerical differentiation (e.g., change in pressure for small change in volume of a van der Waals gas, potentiometric titrations). 3. Numerical integration (e.g. entropy/ enthalpy change from heat capacity data). 4. Probability distributions (gas kinetic theory) and mean values. 5. Mean, standard deviation and Least square curve fitting method for linear equation. 6. Matrix operations: addition, multiplication and transpose 3. Numerical differentiation (e.g., change in pressure for small change in volume of a van der Waals gas, potentiometric titrations). 3. Numerical integration (e.g. entropy/ enthalpy change from heat capacity data). 4. Probability distributions (gas kinetic theory) and mean values. 5. Mean, standard deviation and Least square curve fitting method for linear equation. 6. Matrix operations: addition, multiplication and transpose 1.Determination of enthalpy of neutralization of acetic acid and sodium hydroxide, and also enthalpy of ionization of acetic acid. 2.Determination of integral enthalpy of solution of different salts(endothermic and exothermic)	B.Sc. (H) CHEMISTRY Semester VI (Batch 1) B.Sc. (H) CHEMISTRY Semester VI (Batch 2) B.Sc.(H) Biological Sciences Semester II	DSE 3: Applications of Computer in Chemistry DSE 3: Applications of Computer in Chemistry Chemical Energetics, Ionic Equilibrium, Nanomaterials

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MARCH	Theory:	QBASIC programs for Chemistry problems : calculation of area under the curves Complicated Problem, not available in general text books.	B.Sc. (H) CHEMISTRY Semester VI	DSE 3: Applications of Computer in Chemistry
		Unit-2: Chemical Kinetics: Arrhenius equation; activation energy. Collision theory of reaction rates, Lindemann mechanism, qualitative treatment of the theory of absolute reaction rates, introduction to electrode kinetics (qualitative aspects only). Unit-3: Catalysis: Types of catalyst, specificity and selectivity, mechanisms of catalyzed reactions at solid surfaces. Enzyme catalysis. Michaelis-Menten mechanism, acid-base catalysis.	B.Sc. (H) CHEMISTRY Semester IV	DSC 12: Electrochemical Cells, Chemical Kinetics and Catalysis

	Practicals:	7. Graphic programs related to Chemistry problems. e.g. van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves, concentration-time graph, pH metric titration curve, conductometric titration curves, Lambert Beer's law graph, s, p, d orbital shapes, radial distribution curves, particle in one dimensional box.	B.Sc. (H) CHEMISTRY Semester VI	DSE 3: Applications of Computer in Chemistry
		7. Graphic programs related to Chemistry problems. e.g. van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves, concentration-time graph, pH metric titration curve, conductometric titration curves, Lambert Beer's law graph, s, p, d orbital shapes, radial distribution curves, particle in one dimensional box.	B.Sc. (H) CHEMISTRY Semester VI (Batch 2)	DSE 3: Applications of Computer in Chemistry
		3. Preparation of buffer solutions: (i) acetic acid and sodium acetate (ii) ammonium hydroxide and ammonium chloride 4. Determination of their pH of different buffer solutions (acidic and basic) and comparison of their values with theoretical values. 5. pHmetric titration of (i) strong acid vs strong base	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials

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APRIL	Theory:	QBASIC programs for Chemistry problems : Complicated Problem, not available in general text books. Unit-3: Catalysis: Enzyme catalysis. Michaelis-Menten mechanism, acid-base catalysis. Unit-1: Electrochemical Cells Liquid junction potential; determination of activity coefficients and transference numbers. Qualitative discussion of potentiometric titrations (acid-base, redox, precipitation). Structure of electric double layer (qualitative aspects only).	B.Sc. (H) CHEMISTRY Semester VI B.Sc. (H) CHEMISTRY Semester IV	DSE 3: Applications of Computer in Chemistry DSC 12: Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals:	Computer Software like Scilab and Excel, etc for data handling and manipulation. 2. Simple exercises using molecular visualization software. Computer Software like Scilab and Excel, etc for data handling and manipulation. 2. Simple exercises using molecular visualization software. 5. pHmetric titration of (ii) weak acid vs strong base. Synthesis of pure ZnO and Cu doped ZnO nanoparticles by precipitation method and its characterization using UV-Vis spectroscopy. Preparation of magnetic nanoparticles of Fe₃O₄ using green tea leaves extract. XRD pattern of nanomaterials and estimation of particle size.	B.Sc. (H) CHEMISTRY Semester VI (Batch 1) B.Sc. (H) CHEMISTRY Semester VI (Batch 1) B.Sc.(H) Biological Sciences Semester II	DSE 3: Applications of Computer in Chemistry DSE 3: Applications of Computer in Chemistry Chemical Energetics, Ionic Equilibrium, Nanomaterials
	Assignment and test	Internal assessment test for the mentioned theory papers conducted as per will be scheduled by the college. Assignment given to students to be submitted during a stipulated time.		
MAY	Theory:	REVISION AND PREVIOUS YEARS QUESTION PAPERS DISCUSSION REVISION AND QUESTION PAPERS DISCUSSION	B.Sc. (H) CHEMISTRY Semester VI B.Sc. (H) CHEMISTRY Semester IV	DSE 3: Applications of Computer in Chemistry DSC 12: Electrochemical Cells, Chemical Kinetics and Catalysis


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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sharda Pasricha **Department:** CHEMISTRY

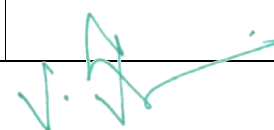
Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory	Organic Spectroscopy General principles Introduction to absorption and emission spectroscopy. UV Spectroscopy: Types of electronic transitions, $\lambda_{\max}$, Chromophores and Auxochromes, Bathochromic and Hypsochromic shifts, Intensity of absorption; Application of Woodward Rules for calculation of $\lambda_{\max}$ for the following systems: α,β -unsaturated aldehydes, ketones, carboxylic acids and esters; Conjugated dienes: alicyclic, homoannular and heteroannular; Extended conjugated systems (aldehydes, ketones and dienes); distinction between cis and trans isomers. (6 lectures).	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V

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	Practical	Qualitative analysis of unknown organic compounds containing monofunctional groups (carbohydrates, aryl halides, aromatic hydrocarbons) 1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters) 1. Acetylation of any one of the following compounds: amines (aniline, <i>o</i>-, <i>m</i>-, <i>p</i>- toluidines and <i>o</i>-, <i>m</i>-, <i>p</i>- anisidine) and phenols (β-naphthol, salicylic acid) by any one method: i. Using conventional method ii. Using green approach	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI B.Sc. CHEMISTRY (Hons.) IInd Year, Semester IV B.Sc. CHEMISTRY (Hons.) Ist Year, Semester II	CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V CHEMISTRY PRACTICAL –CC-XI LAB: Organic Chemistry IV CHEMISTRY PRACTICAL –CC-V LAB: Organic Chemistry II
February	Theory:	Dyes Classification, Colour and constitution; Mordant and Vat Dyes; Chemistry of dyeing; Synthesis and applications of: Azo dyes – Methyl orange; Triphenyl methane dyes Malachite green and Rosaniline ; Phthalein Dyes – Phenolphthalein; Natural dyes – structure elucidation and synthesis of Alizarin and Indigotin; Edible Dyes with examples.(6lectures) IR Spectroscopy: Fundamental and non-fundamental molecular vibrations; IR absorption. Effect of H-bonding, conjugation, resonance and ring size on IR absorptions; Fingerprint region and its significance. IR absorption positions of O, N and S containing functional groups; application in functional group analysis. (8 Lectures)	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

	Practical:	Qualitative analysis of unknown organic compounds containing monofunctional groups (nitro compounds, amines and amides) and simple bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols etc. 1. Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters) 1. Benzoylation of one of the following amines (aniline, o-, m-, p-toluidines and o, m-, p-anisidine) or one of the following phenols (β-naphthol, resorcinol, p-cresol) by Schotten-Baumann reaction. 2. Bromination of acetanilide/aniline/phenol by any one of the following: a) Green method b) Conventional method 3. Nitration of Nitrobenzene/chlorobenzene/phenols.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI B.Sc. CHEMISTRY (Hons.) IInd Year, Semester IV B.Sc. CHEMISTRY (Hons.) Ist Year, Semester II	CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III CHEMISTRY PRACTICAL –CC-V LAB: Organic Chemistry II
March	Theory:	NMR Spectroscopy Basic principles of Proton Magnetic Resonance, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant; Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple compounds. Applications of IR, UV and NMR for identification of simple organic molecules. (10 lectures)	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V



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	Practical:	Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons, aryl halides, carbohydrates, nitro compounds, amines, amides and simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY PRACTICAL –CC-XIV LAB: Organic Chemistry V
		1.Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols , carbonyl compounds and esters)	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-IX LAB: Organic Chemistry III
		1.Oxidation of benzyl alcohol to benzoic acid 2.Estimation of the given sample of phenol/amine by: a)Acetylation b) Bromate-Bromide method	B.Sc. CHEMISTRY (Hons.) I Year, Semester II	CHEMISTRY PRACTICAL –CC-V LAB: Organic Chemistry II
April	Theory:	NMR Spectroscopy Basic principles of Proton Magnetic Resonance, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant; Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple compounds. Applications of IR, UV and NMR for identification of simple organic molecules. (02 lectures) Pharmaceutical Compounds Antimalarials - Chloroquine (with synthesis); An elementary treatment of Antibiotics and detailed study of chloramphenicol(08Lectures) Internal Exam .	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI B.Sc. CHEMISTRY - C XIV: ORGANIC CHEMISTRY V	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V  प्रधानाचार्य Principal



SEMESTER WISE TEACHING PLAN
2023-24 even sem
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Shefali Shukla

Department: Chemistry

Semester: II/IV/VI

Month		Topic	Course	Paper
January	Theory	Methods of preparation and properties of Alkyl halides	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
	Practicals:	Acetylation of amines and phenol	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
		Benzoylation of amines and phenol	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
		Estimation of sugars by using Fehling solution.	B. Sc. (H) Chemistry II Yr, Semester IV	(DSC-11): Carbohydrates, Lipids and Heterocyclic Compounds
	Tutorials:	NA	NA	NA
February	Theory:	Properties of Alkyl halides Concept of Aromaticity and anti-aromaticity; Electrophilic aromatic substitution: halogenation, nitration, sulphonation Directing effects of groups in electrophilic substitution	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
	Practicals:	Bromination of acetanilide/aniline/phenol by any one of the following: (a) Green method b) Conventional method Nitration of nitrobenzene	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
		Functional group tests for amine, nitro and amides Systematic qualitative analysis of the given organic compounds containing monofunctional groups (known and unknown)	B. Sc. (H) Chemistry II Yr, Semester IV	(DSC-11): Carbohydrates, Lipids and Heterocyclic Compounds
		Synthesis of urea formaldehyde resin and test the solubility Preparation of Methyl orange.	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry
		Benzoylation of amines and phenol Alkaline hydrolysis of amide	GE-II	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY
	Tutorials:	NA	NA	NA
March	Theory:	Preparation (including preparation	B. Sc. (H)	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES

		from diazonium salts) and properties of aryl halides Alcohols: Relative reactivity of 1°, 2°, 3° alcohols and reactions	Chemistry I Yr, Semester II	ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
	Practicals:	Functional group tests for alcohols, phenols, carboxylic acids, phenols, carbonyl compounds, esters	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
		Qualitative analysis of unknown organic compounds containing monofunctional groups (Including Derivative preparation)- Unknown compounds	B. Sc. (H) Chemistry II Yr, Semester IV	(DSC-11): Carbohydrates, Lipids and Heterocyclic Compounds
		Preparation of Starch-PVA Film. Synthesis of 4-methyl-7-hydroxycoumarin by condensation of resorcinol with ethyl acetoacetate.	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry
		Oxime of aldehydes and ketones Pending work of previous experiment Repeat of previous Expt (on student demand)	GE-II	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY
	Tutorials:	NA	NA	NA
	Assignment	Assignment -1	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
	Test 1	Internal assessment examination	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
April	Theory:	Phenols: Preparation, acidity and factors affecting it. Reactions	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
	Practicals:	Oxidation of benzyl alcohol to benzoic acid Estimation of the given sample of phenol/amine by Iodoform reaction	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
		Systematic qualitative analysis of organic compounds possessing monofunctional groups (Including Derivative preparation)	B. Sc. (H) Chemistry II Yr, Semester IV	(DSC-11): Carbohydrates, Lipids and Heterocyclic Compounds
		Synthesis of 4-methyl-7-hydroxycoumarin by condensation of resorcinol with ethyl acetoacetate (Method 2: repeat)	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry

		Synthesis of paracetamol		
		Benzoin condensation using Thiamine Hydrochloride as a catalyst Identification of functional group for monofunctional organic compounds. 2,4-Dinitrophenylhydrazone of aldehydes and ketones	GE-II	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY
	Tutorials:	NA	NA	NA
May	Theory	Ethers and Epoxides: Acid and Base catalyzed cleavage reactions.	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
	Practical	Haloform reaction of ethanol	B. Sc. (H) Chemistry I Yr, Semester II	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
		Determination of saponification value of the given oil.	B. Sc. (H) Chemistry II Yr, Semester IV	(DSC-11): Carbohydrates, Lipids and Heterocyclic Compounds
		Repeat Practical (As per student demand)	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry
		Aldol condensation using green method.	GE-II	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY

Shyami
06/4/24

V. A.

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SEMESTER WISE TEACHING PLAN (2023-24) Even Semester

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. RAMANAIAH SEELLA
Semester: II/IV/IV

Department: CHEMISTRY

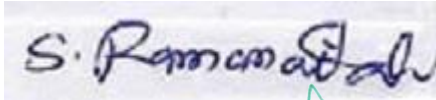
Month		Topics	Course	Paper Code/Name
January	Theory:	Qualitative and Quantitative Aspects of Analysis: Sampling, evaluation of analytical data Qualitative and Quantitative Aspects of Analysis: Sampling, evaluation of analytical data.	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-3 Analytical Methods in Chemistry TCH : DSE-3 Analytical Methods in Chemistry
		Basic Computer System Hardware and Software; Input devices, Storage devices, Output devices, Central Processing Unit (Control Unit and Arithmetic Logic Unit); Basic Computer System Hardware and Software; Input devices, Storage devices, Output devices, Central Processing Unit (Control Unit and Arithmetic Logic Unit);	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry TCH: DSE-4 Applications of Computers in Chemistry
	Practicals:	1) Preparation of Colloidal Sol of Starch	B.Sc. (P) Life Sciences Semester IV (Batch-B)	SLS DSE: Chemistry of Colloids and Adsorption
		1) Paper Chromatographic separation of CO^{2+} and NO^{2+} 2) Separation and identification of the amino acids present in the given mixture by paper chromatography, reporting the R_f Values	B.Sc. (H) Chemistry, III Year, Semester VI	TCH : DSE-3 Analytical Methods in Chemistry
		-----	B.A, B.Com, B.Sc. (P) Life Sciences, B.Sc (H) Semester I	VALUE ADDITION COURSES (VACs) UNDER UGCF- 2022 Fit India Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College विश्वविद्यालय / University of Delhi धौला कुआँ / Dhaula Kuan, New Delhi-21

February	Theory:	Qualitative and Quantitative Aspects of Analysis: errors, accuracy and precision, methods of their expression Qualitative and Quantitative Aspects of Analysis: errors, accuracy and precision, methods of their expression	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-3 Analytical Methods in Chemistry TCH : DSE-3 Analytical Methods in Chemistry
		Basic Computer System: Number system (Binary, Octal and Hexadecimal Operating system); Computer Codes (BCD and ASCII); Numeric/String Constants and variables. Basic Computer System: Number system (Binary, Octal and Hexadecimal Operating system); Computer Codes (BCD and ASCII); Numeric/String Constants and variables.	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry TCH: DSE-4 Applications of Computers in Chemistry
	Practicals:	Preparation of Colloidal Sol of ii). Ferric Chloride iii) Aluminum hydroxide iv) Antimony Sulphide	B.Sc. (P) Life Sciences Semester IV (Batch-B)	SLS DSE: Chemistry of Colloids and Adsorption
		i) To separate a mixture of Ni^{+2} and Fe^{2+} complexation with DMG extracting the Ni^{+2} DMG complex in Chloroform, and determine its concentration by spectrophotometry. Analysis of Soil i) Determination of P^H of soil ii) Total Soluble Salt	B.Sc. (H) Chemistry, III Year, Semester VI	TCH : DSE-3 Analytical Methods in Chemistry
	Practicals:	UNIT- I Participation in Physical Activity • Fit India Protocol, Physical Activity, Health and Fitness • Indicators of Fitness Practical/Practice • Aerobic Work Out/ Physical Activity (Walking) • Yoga • Asanas (Lying, Sitting and Standing positions) and Pranayama • Cardiovascular Testing by 12min/9 min Cooper Run/Walk test Unit-II Health Related Fitness and their components Muscular strength and Endurance. Body composition and flexibility. Practical/Practice. Flexibility Training: Back Saver sir and Reach test. Muscular strength Training: Curl ups/standing broad jump/vertical Jump/Plyometric. Endurance Training 1 mile RockPort test or 12/9 minute cooper run/walk test. Ideal Body weight, Body Mass Index (BMI) Waist-Hip ratio, Weight-Height Ratio	B. Sc. (H) and B. Sc. (P)-I-Year, Semester-II	VALUE ADDITION COURSES (VACs) UNDER UGCF-2022- Fit India  प्रधानाचार्य Principal

March	Theory:	Qualitative and Quantitative Aspects of Analysis: Normal law of distribution of indeterminate errors, Statistical test of data Qualitative and Quantitative Aspects of Analysis: Normal law of distribution of indeterminate errors, Statistical test of data	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-3 Analytical Methods in Chemistry TCH : DSE-3 Analytical Methods in Chemistry
		Basic Computer System: Operating Systems (DOS, WINDOWS and Linux); Software languages Basic Computer System: Operating Systems (DOS, WINDOWS and Linux); Software languages	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry TCH: DSE-4 Applications of Computers in Chemistry
	Practicals:	2) To verify the Freundlich's Adsorption Isotherms. 3) Study the Adsorption of HAc on Charcoal and prove the validity Langmuir's adsorption isotherms 4) Study the Adsorption of Oxalic acid on Charcoal and prove the validity of Langmuir's adsorption isotherms	B.Sc. (P) Life Sciences Semester IV (Batch-B)	SLS DSE: Chemistry of Colloids and Adsorption
		iii) Estimation of Calcium, magnesium iv) Qualitative detection of nitrate, phosphate	B.Sc. (H) Chemistry, III Year, Semester VI	TCH : DSE-3 Analytical Methods in Chemistry
		UNIT- III Nutrition and Fitness • Healthy Eating Plate • Balanced Diet • Caloric Content of Food Practical/Practice • Preparing Daily Diet and Calorie Chart • Aerobic Work Out/ Physical Activity (Walking) • Assessment of Physical Activity with the Calorie intake. • Asanas for digestive system excretory system	B. Sc. (H) and B. Sc. (P)-I-Year, Semester-II	VALUE ADDITION COURSES (VACs) UNDER UGC-2022- Fit India
	Assignment:	Given	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) & (Batch-B)	TCH : DSE-3 Analytical Methods in Chemistry प्रधानाचार्य Principal श्री. वेण्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

		Given	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) & (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry TCH: DSE-4 Applications of Computers in Chemistry
April	Theory:	Qualitative and Quantitative Aspects of Analysis: F, Q and t test, rejection of data, and confidence intervals Qualitative and Quantitative Aspects of Analysis: F, Q and t test, rejection of data, and confidence intervals	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-3 Analytical Methods in Chemistry TCH : DSE-3 Analytical Methods in Chemistry
		Basic Computer System: Machine language, Assembly Languages; QBASIC, FORTRAN and C++; Compiled versus interpreted languages Basic Computer System: Machine language, Assembly Languages; QBASIC, FORTRAN and C++; Compiled versus interpreted languages	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry TCH: DSE-4 Applications of Computers in Chemistry
	Practicals:	5) To find out the precipitation values of Antimony Sulphide sol by using monovalent, bivalent and trivalent cations 6) To verify the Schulze-Hardy law.	B.Sc. (P) Life Sciences Semester IV (Batch-B)	SLS DSE: Chemistry of Colloids and Adsorption
		Spectrophotometry: 1. Verification of Lambert-Beer's law and determination of concentration of colored species (Potassium Permanganate, Potassium Dichromate/CuSO ₄)	B.Sc. (H) Chemistry, III Year, Semester VI	TCH : DSE-3 Analytical Methods in Chemistry
		UNIT- IV Sports Physiology and Psychology • Depression, Anxiety and Stress Scale (DASS) • Rosenberg Self Esteem Scale Practical/Practice • Skills learning and Participation in sports • Group Games/ Relays/ Minor Games • Meditative Asanas and Pranayama • Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results • Data of at least 10 persons to be collected on DASS and self-esteem scale	B. Sc. (H) and B. Sc. (P)-I-Year, Semester-II	VALUE ADDITION COURSES (Vacs) UNDER UGCF-2022- Fit India 

	Test:	Conducted	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) & (Batch-B)	TCH : DSE-3 Analytical Methods in Chemistry
		Conducted	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A) & (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry
May	Theory:	Unit IV Chromatography: Classification, principle and efficiency of the technique, Mechanism of separation: Adsorption, partition & ion-exchange	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A)	TCH: DSE-3 Analytical Methods in Chemistry
		Unit IV Chromatography: Classification, principle and efficiency of the technique, Mechanism of separation: Adsorption, partition & ion-exchange	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH : DSE-3 Analytical Methods in Chemistry
		Basic Computer System: Debugging Software Products (Office, chemsketch, scilab, matlab and hyperchem), internet application	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-A)	TCH: DSE-4 Applications of Computers in Chemistry
		Basic Computer System: Debugging Software Products (Office, chemsketch, scilab, matlab and hyperchem), internet application	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	TCH: DSE-4 Applications of Computers in Chemistry
	Practicals:	Revision	B.Sc. (P) Life Sciences Semester IV (Batch-B)	SLS DSE: Chemistry of Colloids and Adsorption
		Verification of Lambert-Beer's law and determination of concentration of colored species (Potassium Permanganate, Potassium Dichromate/CuSO ₄)	B.Sc. (H) Chemistry, III Year, Semester VI	TCH : DSE-3 Analytical Methods in Chemistry



Signature of the teacher

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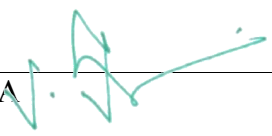
SEMESTER WISE TEACHING PLAN

Name of the Faculty: **HARSHVARDHAN MEENA**

Department: Chemistry

Semester: II / IV/VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	1. Qualitative and quantitative aspects of analysis: Sampling, evaluation of analytical data, errors, accuracy and precision, methods of their expression. Normal law of distribution of indeterminate errors, statistical test of data; F, Q and t test, rejection of data, and confidence intervals. 2. Definition and classification of	B.Sc. (Hons.) Chemistry III Year B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV
	Practicals	1. Separation of mixtures by paper chromatography and reporting the R _f values: (i) Co ²⁺ and	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry
		1. Separation of mixtures by paper chromatography and reporting the R _f values: (i) Co ²⁺ and Ni ²⁺ . 2. Separation of mixtures by paper	B.Sc. (P) Life Science III year (Batch I) B.Sc. (P) Life Science III year	CHEMISTRY LAB Chemistry Lab
		(A) Argentometry (i) By Mohr's method	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Tutorials	NA	NA	NA


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FEB	Theory:	1.Optical methods of analysis Origin of spectra, interaction of radiation with matter, fundamental laws of	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry
	Practicals:	2. Solvent Extractions (i) To separate a mixture of Ni^{2+} & Fe^{3+} by complexation with DMG and extracting	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY PRACTICAL - DSE LAB: NOVEL INORGANIC SOLIDS
		3.Preparation of tetraammine copper (II) sulphate	B.Sc. (P) Life Science III year	CHEMISTRY LAB
		1.Estimation of Fe (II) with $\text{K}_2\text{Cr}_2\text{O}_7$ using N- phenyl anthranillic acid as internal indicator	B.Sc.(H) Chemistry I year	Chemistry Lab
		2. (ii) By Vohlard's method and (iii) By Fajan's method	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism



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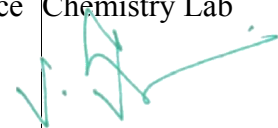
MAR	Theory:	1. Thermal methods of analysis: Theory of thermogravimetry (TG) and basic principle of instrumentation of thermal analyser. Techniques for quantitative estimation of Ca and Mg from their mixture. 2. Structures of mononuclear and binuclear carbonyls of Cr, Mn, Fe, Co and Ni using VBT. π-acceptor behaviour of CO (MO diagram of CO to be discussed), synergic effect and use of IR data to explain extent of back bonding.	B.Sc. (Hons.) Chemistry III Year B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV
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	Practicals:	3. Analysis of soil: (i) Determination of pH of soil. (ii) Total soluble salt (iii) Estimation of	B.Sc. (Hons.) Chemistry III Year CHEMISTRY-DSE 4: Analytical methods in chemistry
		4. Preparation of potassium trioxalatoferrate (III) trihydrate	B.Sc. (P) Life Science III year Chemistry Lab
		(ii) Estimation of total hardness of water samples (B) Complexometric Titrations: (i) Complexometric estimation of Mg^{2+}/Zn^{2+} using EDTA	B. Sc. (H)-Chemistry, II-Year, Semester-IV DSC-10: Coordination Chemistry and Reaction Mechanism
		2. Estimation of Fe (II) with $K_2Cr_2O_7$ using diphenylamine	B.Sc. (H) Chemistry I year Chemistry Lab
	<u>Assignment :</u>	CHEMISTRY-DSE 4: Analytical methods in	B.Sc. (Hons.) Chemistry CHEMISTRY-DSE 4: Analytical methods in
APRIL	Theory:	1. Electroanalytical methods Classification of electroanalytical methods, basic principle of pH metric, potentiometric and conductometric titrations. Techniques used for the determination of equivalence points. Techniques used for the determination of pKa values. 2. Zeise's salt: Preparation and	B.Sc. (Hons.) Chemistry III Year CHEMISTRY-DSE 4: Analytical methods in chemistry CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV

	Practicals:	4. Ion exchange: (i) Determination of exchange capacity of cation exchange resins	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry
		6. Systematic qualitative analysis of organic compounds	B.Sc. (P) Life Science III year	Chemistry Lab
		3. Estimation of Fe (II) with $K_2Cr_2O_7$ using external indicator 4. . Estimation of Cu (II) using hypo solution 5. 5. Estimation of $K_2Cr_2O_7$ using hypo solution	B.Sc.(H) Chemistry I year	Chemistry Lab
		(iii) Estimation of Ca^{2+} in solution by substitution method iv) Estimation of Ca/Mg in drugs or biological samples.	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Test	CHEMISTRY-DSE 4: Analytical methods in chemistry	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry
MAY	Theory:	Separation techniques Solvent extraction: Classification, principle and efficiency of the technique.	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry
	Practicals:	5. Spectrophotometry (i) Verification of Lambert-Beer's law and determination of concentration of a	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY-DSE 4: Analytical methods in chemistry
		7. Identification of simple organic compound containing functional groups by IR spectroscopy	B.Sc. (P) Life Science III year	Chemistry Lab


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		6.Estimation of antimony in tartaremetic iodimetrically.	B.Sc.(H) Chemistry I year	Chemistry Lab
		7. Estimation of iodine content in iodized salt.	B.Sc.(H) Chemistry I year	Chemistry Lab
		(C) Properties of Complexes Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions (e.g. bidentate ligands like acetylacetone, dimethyl glyoxime, glycine) by substitution method	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism

Harshvardhan Meena

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Rekha Yadav

Department: Chemistry

SEMESTER: II/IV/VI

Month		Topics	Course	Paper Code/Name
JAN	Theory	Chemical Thermodynamics: Intensive and extensive variables; state and path functions; isolated, closed and open systems. Mathematical treatment - Exact and inexact differential, Partial derivatives, Euler's reciprocity rule, cyclic rule.	B.Sc. (Hons.) Chemistry SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Theory	Rules of oxidation/reduction of ions based on half-cell potentials, Chemical cells, reversible and irreversible cells with examples.	B.Sc. (Hons.) Chemistry SEM-IV	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	(a) Determination of heat capacity of a calorimeter for different volumes using (i) change of enthalpy data of a known system (method of back calculation of heat capacity of calorimeter from known enthalpy of solution of sulphuric acid or enthalpy of neutralization), and (ii) heat gained equal to heat lost by cold water and hot water respectively	B.Sc. (H) Chem SEM-II (Two Batches)	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Practicals	Perform the following potentiometric titrations: 1. Strong acid vs. strong base	B.Sc. (H) Chem SEM-IV (Two Batches)	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	(i) Preparation of colloidal sol of Starch	B.Sc. (P) Life Sciences SEM-IV	DSE-Chemistry of Colloids and Adsorption
FEB	Theory	First law: Concept of heat, Q, work, W, internal energy, U, and statement of first law; enthalpy, H, relation between heat capacities, Joule Thompson Porous Plug experiment, Nature of Joule Thompson coefficient	B.Sc. (Hons.) Chemistry SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications

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	Theory	Electromotive force of a cell and its measurement, Nernst equation; Standard electrode (reduction) potential and its application to different kinds of half-cells.	B.Sc. (Hons.) Chemistry SEM-IV	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	b) Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide. (c) Determination of the enthalpy of ionization of ethanoic acid. (d) Determination of integral enthalpy (endothermic and exothermic) solution of salts.	B.Sc. (H) Chem SEM-II (Two Batches)	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications

	Practicals	Perform the following potentiometric titrations: 2.Weak acid vs. strong base 3.Dibasic acid vs. strong base 4.Mixture of strong and weak acid vs strong base	B.Sc. (H) Chem SEM-IV (Two Batches)	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	Preparation of colloidal sol of (ii) Ferric hydroxide (iii) Aluminium Hydroxide (iv) Antimony Sulphate	B.Sc. (P) Life Sciences SEM-IV	DSE-Chemistry of Colloids and Adsorption
MARCH	Theory	Calculations of Q, W, ΔU and ΔH for reversible, irreversible and free expansion of gases (ideal and van der Waals) under isothermal and adiabatic conditions. Thermochemistry: Enthalpy of reactions: standard states; enthalpy of neutralization, enthalpy of hydration, enthalpy of formation and enthalpy of combustion and its applications, bond dissociation energy and bond enthalpy; effect of temperature (Kirchhoff's equations) on enthalpy of reactions. Second Law: Concept of entropy; statement of the second law of thermodynamics, Carnot cycle. ASSIGNMENT GIVEN	B.Sc. (Hons.) Chemistry SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Theory	Standard electrode (reduction) potential and its application to different kinds of half-cells. ASSIGNMENT GIVEN	B.Sc. (Hons.) Chemistry SEM-IV	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	(e) Determination of integral enthalpy (endothermic and exothermic) solution of salts. (f) Determination of basicity of a diprotic acid by the thermochemical method in terms of the changes of temperatures observed in the graph of temperature versus time for different additions of a base. Also calculate the enthalpy of neutralization of the first step	B.Sc. (H) Chem SEM-II (Two Batches)	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications

	Practicals	(Study the kinetics of the following reactions) Determination of enthalpy of hydration of salt. 1. Acid hydrolysis of methyl acetate with hydrochloric acid. 2. Saponification of ethyl acetate	B.Sc. (H) Chem SEM-IV (Two Batches)	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	2. To verify the Freundlich's Adsorption isotherms. 3. Study the adsorption of HAc on charcoal and prove the validity of Langmuir's adsorption isotherms. 4. Study the adsorption of Oxalic acid on charcoal and prove the validity of Langmuir's adsorption isotherms.	B.Sc. (P) Life Sciences SEM-IV	DSE-Chemistry of Colloids and Adsorption
APRIL	Theory	INTERNAL ASSESSMENT EXAM TAKEN Calculation of entropy change for reversible and irreversible processes (for ideal gases). Free Energy Functions: Gibbs and Helmholtz energy; variation of S, G, A with T, V, P; Free energy change and spontaneity (for ideal gases). Relation between Joule-Thomson coefficient and other thermodynamic parameters; inversion temperature; Gibbs-Helmholtz equation; Maxwell relations; thermodynamic equation of state. Third Law: Statement of third law, unattainability of absolute zero, calculation of absolute entropy of molecules, concept of residual entropy, calculation of absolute entropy of solid, liquid and gases.	B.Sc. (Hons.) Chemistry SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Theory	INTERNAL ASSESSMENT EXAM TAKEN Application of EMF measurements in determining (i) free energy, enthalpy and entropy of a cell reaction, (ii) equilibrium constants, and (iii) pH values, using hydrogen, quinone-hydroquinone, glass and SbO/Sb ₂ O ₃ electrodes.	B.Sc. (Hons.) Chemistry SEM-IV	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	e) Determination of enthalpy of hydration of salt. f) Determination of basicity of a diprotic acid by the thermochemical method in terms of the changes of temperatures observed in the graph of temperature versus time for different additions of a base. Also calculate the enthalpy of neutralization of the first step	B.Sc. (H) Chem SEM-II (Two Batches)	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Practicals	Study the kinetics of the following reactions 1. Iodide-persulphate reaction by Initial rate method 2. Saponification of ethyl acetate	B.Sc. (H) Chem SEM-IV (Two Batches)	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	5. To find out the precipitation values of Antimony sulphate sol by using monovalent, bivalent trivalent cations. 6. To verify the Schulze-Hardy law.	B.Sc. (P) Life Sciences SEM-IV	DSE-Chemistry of Colloids and Adsorption
MAY	Theory	Systems of Variable Composition: Partial molar quantities, dependence of thermodynamic parameters on composition; Gibbs Duhem equation, chemical potential of ideal mixtures, Change in thermodynamic functions on mixing of ideal gases.	B.Sc. (Hons.) Chemistry SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications

	Theory	Concentration cells with and without transference	B.Sc. (Hons.) Chemistry SEM-IV	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	Determination of enthalpy of hydration of salt.	B.Sc. (H) Chem SEM-II (Two Batches)	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Practicals	Revision	B.Sc. (H) Chem SEM-IV (Two Batches)	DSC-12, Physical Chemistry-IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	Revision	B.Sc. (P) Life Sciences SEM-IV	DSE-Chemistry of Colloids and Adsorption

Rekha Yadav

Dr. Rekha Yadav

V. B.

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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. PRAGYA GAHLOT
Semester: II/IV/VI

Department: CHEMISTRY

Month		Topics	Course	Paper
January	Theory	Programming Language – QBASIC; Commands: INPUT and PRINT Commands; GOTO, If, ELSEIF, THEN and END IF Commands; Simple programs using above mentioned commands.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI (Section A and B)	DSE: Applications of computers in Chemistry
	Practicals	Small programs for mathematical computations in BASIC language. Roots of equations: (e.g. volume of gas using van der Waals equation and comparison with ideal gas, pH of a weak acid).	B.Sc. (Hons.) Chemistry III year, Semester VI	Lab Chemistry- DSE: Applications of Computers in Chemistry
		Preparation: Benzoylation of Aniline and phenols.	B. Sc. (P)-Life Science, II-Year, Semester-IV	DSC10: Chemistry- 04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
February	Theory:	FOR and NEXT Commands; Library Functions (ABS, ASC, CHR\$, EXP,INT, LOG, RND, SQR, TAB and trigonometric Functions), DIM, READ, DATA, REM, RESTORE, DEF, FNR, GOSUB, RETURN Matrix addition and multiplication,	B. Sc. CHEMISTRY (Hons.) III Year, Semester VI (Section A and B)	DSE: Applications of computers in Chemistry
	Practicals:	Probability distributions (gas kinetic theory) and mean values. Matrix operations.	B.Sc. (Hons.) Chemistry III year, Semester VI	Lab Chemistry- DSE: Applications of Computers in Chemistry

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श्री वेंकटेश्वर महाविद्यालय
Sri Venkateswara College
दिल्ली विश्वविद्यालय / University of Delhi
धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_Theory and demonstration.	B. Sc Prog. Life Sciences Semester IV	DSC10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		Unit 1: Introduction to Spreadsheets: Spreadsheets: Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets, Unit 3: Word Processing: Introduction: Creating and saving your document, displaying different views, working with styles and character formatting, working with paragraph formatting techniques using indents, tabs, alignment, spacing, bullets and numbering and creating borders; Page setup and sections: Setting page margins, orientation.	B. A./B. Sc./ B. Com SEC IV	Basic IT tools
March	Theory:	QBASIC programs for Chemistry problems - Example: plotting van der Waal Isotherms (Simple Problem, available in general text books) and observe whether van der Waal gas equation is valid at temperatures lower than critical temperature where we require to solve a cubic equation and calculation of area under the curves (Complicated Problem, not available in general text books).	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI (Section A and B)	DSE: Applications of computers in Chemistry
	Practicals:	Numerical differentiation (e.g., change in pressure for small change in volume of a van der Waals gas, potentiometric titrations). 3. Numerical integration (e.g. entropy/enthalpy change from heat capacity data).	B.Sc. (Hons.) Chemistry III year, Semester VI	Lab Chemistry-DSE: Applications of Computers in Chemistry
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_Known and unknown compound experiments	B. Sc Prog. Life Sciences Semester IV	DSC10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles

		Unit 1: Introduction to Spreadsheets: working with multiple worksheets and multiple workbooks, controlling worksheet views, naming cells using name box, name create and name define; Exchanging data using clipboard, object linking and embedding. Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae; Implementing file level security and protecting data within the worksheet; Unit 3: Word Processing : headers and footers, end notes and foot notes, creating section breaks and page borders; Working with tables: Creating tables, modifying table layout and design, sorting, inserting graphics in a table, table math, converting text to table and vice versa; Create newspaper columns, indexes and table of contents	B. A./B. Sc./ B. Com SEC IV	Basic IT tools
	<u>Assignment</u>		B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	DSE: Applications of computers in Chemistry
	<u>Test</u>		B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	DSE: Applications of computers in Chemistry
April	Theory	Solution of quadratic equation, polynomial equations (formula, iteration and Newton – Raphson methods, binary bisection and Regula Falsi); Numerical differential, Numerical integration (Trapezoidal rule), Simultaneous equations, Statistical Analysis	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI (Section A and B)	DSE: Applications of computers in Chemistry
	Practical	Basic Computer system (in brief) -Hardware and Software; Input devices, Storage devices, Output devices, Central Processing Unit (Control Unit and Arithmetic Logic Unit); Number system (Binary, Octal and Hexadecimal Operating System); Computer Codes (BCD and ASCII); Numeric/String constants and variables. Operating Systems (DOS, WINDOWS, and Linux); Software languages: Low level and High Level languages (Machine language, Assembly language;	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	Lab Chemistry- DSE: Applications of Computers in Chemistry



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		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides) _ unknown compound experiments	B. Sc Prog. Life Sciences Semester IV	DSC10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		Unit 2: Data Analysis in Spreadsheets: Consolidating worksheets and workbooks using formulae and data consolidate command; Choosing a chart type, understanding data points and data series, editing and formatting chart elements, and creating sparkline graphics, Analysing data using pivot tables: Creating, formatting and modifying a pivot table, sorting, filtering and grouping items, creating calculated field and calculated item, creating pivot table charts, producing a report with pivot tables. Introduction to recording and execution of macros.	B. A./B. Sc./ B. Com SEC IV	Basic IT tools
	<u>Assignment :</u>	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	DSE: Applications of computers in Chemistry	
May	Theory	Chemistry Programs based on the keywords and functions learned. Solving of previous year papers. Revision	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI (Section A and B)	DSE: Applications of computers in Chemistry
	Practical	Practice Programs in BASIC Revision Mock Test	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	Lab Chemistry- DSE: Applications of Computers in Chemistry
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_ unknown compound experiments	B. Sc Prog. Life Sciences Semester IV	DSC10: Chemistry-04-Chemistry of Carboxylic Acids & their

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		Unit 4: Databases: Introduction to Database Development: Database Terminology, Objects, Creating Tables, working with fields, understanding Data types, Changing table design, Assigning Field Properties, Setting Primary Keys, using field validation and record validation rules, Indexing, working with multiple tables, Relationships & Integrity Rules, Join Properties, Record manipulation, Sorting & Filtering; Select data with queries: Creating Query by design & by wizard (Select, Make Table, Append, Delete, Cross Tab, Update, Parameterized Query, Find Duplicate and Find Unmatched), Creating multi table queries, creating & working with table joins. Using operators & expressions: Working with Data on Forms: Working with Reports	B. A./B. Sc./ B. Com SEC IV	Basic IT tools
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Dr. Pragya Gahlot



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**SEMESTER WISE
TEACHING PLAN-2023-2024
EVEN SEMESTER**

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Rangarajan T. M.

Department: Chemistry

Semester: II/IV/VI

Month		Topic	Course	Paper
January	Theory:	Classification and nomenclature of heterocyclic compounds (containing only one hetero atom). Structure, aromaticity in 5-membered and 6-membered rings containing one heteroatom;	B. Sc. (H)-Chemistry, II-Year, Semester-IV	UPC- 2172012402 (DSC-11, Organic Chemistry-IV)- Carbohydrates, Lipids and Heterocyclic Compounds
	Theory:	Reactions: Nucleophilic addition, nucleophilic addition-elimination reaction including reaction with HCN	B. Sc. (H)-I-Year, Semester-II_GE_Chemistry	UPC- 2174001204 CHEMISTRY- GE-5 Course Title: Chemistry of Oxygen containing Functional Groups and their Applications to Biology
	Practicals:	Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons, aryl halides, carbohydrates, nitro compounds, amines, amides and simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols. Theory and demonstration.	B. Sc. (H)-Chemistry, III-Year, Semester-VI-Batch-II	UPC- 32171602 CHEMISTRY - CXIV: ORGANIC CHEMISTRY – V: Spectroscopy and Applied Organic Chemistry
	Practicals:	Detection of extra elements (Known) Detection of extra elements (Unknown) Preparation of tetraamminecopper (II) sulphate complex and measurement of their conductivity:	B. Sc. (P)-Life Science, III-Year, Semester-VI	UPC- 42177926 CHEMISTRY –DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Practicals:	Preparation: Benzoylation of Aniline and phenols.	B. Sc. (P)-Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Tutorials:			प्रधानाचार्य Principal

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February	Theory:	Basicity and relative reactivity towards electrophilic substitution reactions (amongst five membered and six membered rings. General methods of synthesis for: furan, thiophene, pyrrole (Paal-Knorr synthesis, Hantzsch synthesis), pyridine (Hantzsch synthesis), indole (Fischer Indole synthesis), quinoline (Skraup synthesis, Friedlander's synthesis, Knorr quinoline synthesis, Doebner-Miller synthesis) Properties: Physical properties, discussion on the following reaction (with mechanism) for furan, pyrrole, thiophene, pyridine, indole and quinoline: Electrophilic substitution- nitration, sulphonation, halogenation, formylation, acylation, mercuration and carboxylation. Oxidation, reduction, addition, reactions showing acidic /basic character, reaction with diazonium salts, ring opening, ring expansion and nucleophilic substitution reaction wherever applicable should be discussed.	B. Sc. (H)-Chemistry, II-Year, Semester-IV	UPC- 2172012402 (DSC-11, Organic Chemistry-IV)- Carbohydrates, Lipids and Heterocyclic Compounds
	Theory:	addition-elimination reaction including reaction with HCN, ROH, NaHSO ₃ , NH ₂ -G derivatives. Iodoform test, Aldol condensation and its biological application,	B. Sc. (H)-I-Year, Semester-II_GE_Chemistry	UPC- 2174001204 CHEMISTRY- GE-5 Course Title: Chemistry of Oxygen containing Functional Groups and their Applications to Biology
	Practicals:	Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons, aryl halides, carbohydrates, nitro compounds, amines, amides and simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols. Known compound experiments	B. Sc. (H)-Chemistry, III-Year, Semester-VI-Batch-II	UPC- 32171602 CHEMISTRY - CXIV: ORGANIC CHEMISTRY – V: Spectroscopy and Applied Organic Chemistry



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	Practicals:	Preparation of potassium trioxalatoferate (III) trihydrate complex and measurement of their conductivity: Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation)_Known compound experiments	B. Sc. (P)-III-Year, Semester-VI	UPC- 42177926 CHEMISTRY –DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_Theory and demonstration.	B. Sc. (P)-Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Tutorials:			
March	Theory:	Monosaccharides: Constitution and absolute configuration of glucose and fructose, epimers and anomers, mutarotation, determination of ring size of glucose and fructose, Haworth projection and conformational structures; Interconversion of aldoses and ketoses;	B. Sc. (H)-Chemistry, II-Year, Semester-IV	UPC- 2172012402 (DSC-11, Organic Chemistry-IV)-Carbohydrates, Lipids and Heterocyclic Compounds
	Theory:	Cannizzaro's reaction, Wittig reaction, Benzoin condensation, Clemmensen reduction, Wolff Kishner reduction	B. Sc. (H)-I-Year, Semester-II_GE_Chemistry	UPC- 2174001204 CHEMISTRY- GE-5 Course Title: Chemistry of Oxygen containing Functional Groups and their Applications to Biology
	Practicals:	Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons, aryl halides, carbohydrates, nitro compounds, amines, amides and simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols._Unknown compound experiments	B. Sc. (H)-Chemistry, III-Year, Semester-VI-Batch-II	UPC- 32171602 CHEMISTRY - CXIV: ORGANIC CHEMISTRY – V: Spectroscopy and Applied Organic Chemistry

		Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation)_Unknown compound experiments	B. Sc. (P)-Life Science, III-Year, Semester-VI	UPC- 42177926 CHEMISTRY –DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_Known and unknown compound experiments	B. Sc. (P)-Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Tutorials:			
	Assignment			
April	Theory:	Killiani Fischer synthesis and Ruff degradation; Linkage between monosaccharides: Comparative study of the structure of disaccharides (sucrose, maltose, lactose) and polysaccharides (starch, cellulose and glycogen) excluding their structure elucidation. Reactions of disaccharides reducing property, hydrolysis, methylation and acetylation. Lipids: Introduction to lipids, classification. Oils and fats:	B. Sc. (H)-Chemistry, II-Year, Semester-IV	UPC- 2172012402 (DSC-11, Organic Chemistry-IV)-Carbohydrates, Lipids and Heterocyclic Compounds
	Theory:	Meerwein-Ponndorf Verley reduction, enzyme-catalyzed additions to α, β -unsaturated carbonyl compounds.	B. Sc. (H)-I-Year, Semester-II_GE_Chemistry	UPC- 2174001204 CHEMISTRY- GE-5 Course Title: Chemistry of Oxygen containing Functional Groups and their Applications to Biology
	Practicals:	Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons, aryl halides, carbohydrates, nitro compounds, amines, amides and simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols. _Unknown	B. Sc. (H)-Chemistry, III-Year, Semester-VI-Batch-II	UPC- 32171602 CHEMISTRY - CXIV: ORGANIC CHEMISTRY – V: Spectroscopy and Applied Organic Chemistry

		compound experiments		
		Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation)_ Unknown compound experiments	B. Sc. (P)-III-Year, Semester-VI	UPC- 42177926 CHEMISTRY –DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_ unknown compound experiments	B. Sc. (P)-Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Tutorials:	NA	NA	NA
	Test			
May	Theory:	Common fatty acids present in oils and fats, Omega-3&6 fatty acids, trans fats, hydrogenation, hydrolysis, acid value, saponification value, iodine number. Biological importance of triglycerides, phospholipids, glycolipids, and steroids (cholesterol).	B. Sc. (H)-Chemistry, II-Year, Semester-IV	UPC- 2172012402 (DSC-11, Organic Chemistry-IV)- Carbohydrates, Lipids and Heterocyclic Compounds
	Theory:	Hell-Volhard Zelinsky reaction, acidity of carboxylic acids, effect of substitution on acid strength, Claisen condensation and its biological applications, decarboxylation in biological systems,	B. Sc. (H)-I-Year, Semester-II_GE_Chemistry	UPC- 2174001204 CHEMISTRY- GE-5 Course Title: Chemistry of Oxygen containing Functional Groups and their Applications to Biology
	Practicals:	Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons, aryl halides, carbohydrates, nitro compounds, amines, amides and simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols._ Unknown compound experiments	B. Sc. (H)-Chemistry, III-Year, Semester-VI-Batch-II	UPC- 32171602 CHEMISTRY - CXIV: ORGANIC CHEMISTRY – V: Spectroscopy and Applied Organic Chemistry
		Systematic qualitative analysis of organic compounds possessing	B. Sc. (P)-III-Year, Semester-VI	UPC- 42177926 CHEMISTRY –DSE-12 Course Title: Organometallics, Principal

		monofunctional groups: amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation)_ Unknown compound experiments		Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides)_ unknown compound experiments	B. Sc. (P)-Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry-04-Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles

Signature of the teacher

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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. T.Vasanth

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	Chief modes of occurrence of metals based on standard electrode potentials. Methods of purification of metals: Electrolytic process Van Arkel-De Boer process	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
	Theory	Elements in Biological System: Classification of elements in biological system, Geochemical effect on the distribution of metals, Metal ions present in biological systems with special reference to Na ⁺ , K ⁺	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
	Practicals	Redox Titrations (i) Estimation of Fe(II) with K ₂ Cr ₂ O ₇ using diphenylamine as internal indicator. (ii) Estimation of Fe(II) with K ₂ Cr ₂ O ₇ using N-phenyl anthranilic acid as internal indicator.	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		1. Preparation of standard solutions. 2. Estimation of Sodium carbonate using HCl by acid base titration. 3. Estimation of carbonate and hydroxide present together in a mixture.	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System

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		1. . Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO_3^{2-}, NO_2^-, S^{2-}, SO_3^{2-}, SO_4^{2-}, $\text{S}_2\text{O}_3^{2-}$, CH_3COO^-, F^-, Cl^-, Br^-, I^-, NO_3^-, BO_3^{3-}, $\text{C}_2\text{O}_4^{2-}$, PO_4^{3-}, NH_4^+, K^+, Pb^{2+}, Cu^{2+}, Cd^{2+}, Bi^{3+}, Sn^{2+}, Sb^{3+}, Fe^{3+}, Al^{3+}, Cr^{3+}, Zn^{2+}, Mn^{2+}, Co^{2+}, Ni^{2+}, Ba^{2+}, Sr^{2+}, Ca^{2+}, Mg^{2+}	B.Sc. (Hons.) Chemistry III Year	C C XIII: Inorganic Chemistry IV
		Complexometric Titrations: (i) Complexometric estimation of Mg^{2+}/Zn^{2+} using EDTA (ii) Estimation of total hardness of water samples	B.Sc. (Hons.) Chemistry II Year	DSC-10: Inorganic Chemistry - IV Coordination Chemistry and Reaction Mechanism
February	Theory:	Ellingham diagrams for reduction of metal oxides using carbon and carbon monoxide as reducing agent. Electrolytic Reduction, Hydrometallurgy with reference to cyanide process for silver and gold. Van Arkel-De Boer process, Zone refining. Brief discussion of metals and alloys used in ancient and medieval India	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
	Theory:	Metal ions present in biological systems with special reference to Na^+, K^+, Ca^{2+}, Mg^{2+}, Fe^{2+}, Cu^{2+} and Zn^{2+}, Sodium / K-pump	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System



	Practicals:	Estimation of Fe(II) with $K_2Cr_2O_7$ using external indicator. Iodo/Iodimetric Titrations (i) Estimation of Cu(II) using sodium thiosulphate solution (Iodometrically).	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		Estimation of carbonate and bicarbonate present together in a mixture. 5. Estimation of free alkali present in different soaps/detergents 6. Estimation of oxalic acid using $KMnO_4$ by redox titration.	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
		1. Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO_3^{2-} , NO_2^- , S_2^- , SO_3^{2-} , SO_4^{2-} , $S_2O_3^{2-}$, CH_3COO^- , F^- , Cl^- , Br^- , I^- , NO_3^- , BO_3^{3-} , $C_2O_4^{2-}$, PO_4^{3-} , NH_4^+ , K^+ , Pb^{2+} , Cu^{2+} , Cd^{2+} , Bi^{3+} , Sn^{2+} , Sb^{3+} , Fe^{3+} , Al^{3+} , Cr^{3+} , Zn^{2+} , Mn^{2+} , Co^{2+} , Ni^{2+} , Ba^{2+} , Sr^{2+} , Ca^{2+} , Mg^{2+} 2. Mixtures should preferably contain one interfering anion, or insoluble component ($BaSO_4$, $SrSO_4$, $PbSO_4$, CaF_2 or Al_2O_3) or combination of anions e.g. CO_3^{2-} and SO_3^{2-} , NO_2^- and NO_3^- , Cl^- and Br^- , Cl^- and I^- , Br^- and I^- , NO_3^- and Br^- , NO_3^- and I^- . Spot tests	B.Sc. (Hons.) Chemistry III Year	C XIII: Inorganic Chemistry IV

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		(iii) Estimation of Ca^{2+} in solution by substitution method (iv) Estimation of Ca/Mg in drugs or biological samples	B.Sc. (Hons.) Chemistry II Year	DSC-10: Inorganic Chemistry - IV Coordination Chemistry and Reaction Mechanism
March	Theory:	Chemistry of s- Block Elements General characteristics: melting point, flame colouration, reducing nature, diagonal relationships and anomalous behavior of first member of each group. Reactions of alkali and alkaline earth metals with oxygen, hydrogen, nitrogen and water	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		Excess and deficiency of some trace metals, Toxicity of metal ions (Hg, Pb, Cd and As), reasons for toxicity,	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
	Practicals:	(iii) Estimation of antimony in tartaremetic iodimetrically. (iv) Estimation of Iodine content in iodized salt.	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		7. Estimation of Mohr's salt using KMnO_4 by redox titration. 8. Determination of dissolved oxygen in water.	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System

		Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO_3^{2-} , NO_2^- , S_2^- , SO_3^{2-} , SO_4^{2-} , $\text{S}_2\text{O}_3^{2-}$, CH_3COO^- , F^- , Cl^- , Br^- , I^- , NO_3^- , BO_3^{3-} , $\text{C}_2\text{O}_4^{2-}$, PO_4^{3-} , NH_4^+ , K^+ , Pb^{2+} , Cu^{2+} , Cd^{2+} ,	B.Sc. (Hons.) Chemistry III Year	C XIII: Inorganic Chemistry IV
		(A) Argentometry Estimation of Cl^- (i) By Mohr's method (ii) By Vohland's method and (iii) By Fajan's method	B.Sc. (Hons.) Chemistry II Year	DSC-10: Inorganic Chemistry - IV Coordination Chemistry and Reaction Mechanism
	<u>Assignment:</u>	Metallurgy S-block elements	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		Elements in biological system	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological system
	<u>Test</u>	Metallurgy S-block elements	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		Elements in biological system	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological system

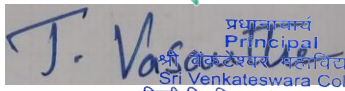
April	Theory	Common features such as ease of formation, thermal stability, energetics of dissolution, and solubility of the following alkali and alkaline earth metal compounds: hydrides, oxides, peroxides, superoxides, carbonates, nitrates, sulphates.	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		Fe^{2+} , Cu^{2+} and Zn^{2+} , Sodium / K-pump, Role of Ca^{2+} (blood clotting and structural), Role of Mg^{2+} in chlorophyll and energy production	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
	Practical	Redox titrations : Estimation of Fe(II) with $\text{K}_2\text{Cr}_2\text{O}_7$ using N-phenyl anthranilic acid as internal indicator. (iii) Estimation of Fe(II) with $\text{K}_2\text{Cr}_2\text{O}_7$ using external indicator	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		9. Estimation of Fe (II) ions by titrating it with $\text{K}_2\text{Cr}_2\text{O}_7$ using internal and external indicators. 10. Estimation of Cu (II) ions iodometrically using $\text{Na}_2\text{S}_2\text{O}_3$	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System



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		Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO_3^{2-}, NO_2^-, S^{2-}, SO_3^{2-}, SO_4^{2-}, $\text{S}_2\text{O}_3^{2-}$, CH_3COO^-, F^-, Cl^-, Br^-, I^-, NO_3^-, BO_3^{3-}, $\text{C}_2\text{O}_4^{2-}$, PO_4^{3-}, NH_4^+, K^+, Pb^{2+}, Cu^{2+}, Cd^{2+}, Bi^{3+}, Sn^{2+}, Sb^{3+}, Fe^{3+}, Al^{3+}, Cr^{3+}, Zn^{2+}, Mn^{2+}, Co^{2+}, Ni^{2+}, Ba^{2+}, Sr^{2+}, Ca^{2+}, Mg^{2+} 2. Mixtures should preferably contain one interfering anion, or insoluble component (BaSO_4, SrSO_4, PbSO_4, CaF_2 or Al_2O_3) or combination of anions e.g. CO_3^{2-} and SO_3^{2-}, NO_2^- and NO_3^-, Cl^- and Br^-, Cl^- and I^-, Br^- and I^-, NO_3^- and Br^-, NO_3^- and I^-. Spot tests	B.Sc. (Hons.) Chemistry III Year	C XIII: Inorganic Chemistry IV
		Properties of Complexes Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions e.g. bidentate ligands like acetylacetonate by substitution method.	B.Sc. (Hons.) Chemistry II Year	DSC-10: Inorganic Chemistry - IV Coordination Chemistry and Reaction Mechanism
May	Theory	Complex formation tendency of s-block elements; structure of the following complexes: crown ethers and cryptates of Group I; basic beryllium acetate, beryllium nitrate, EDTA complexes of calcium and magnesium. Solutions of alkali metals in liquid ammonia and their properties	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements

		Excess and deficiency of some trace metals, Toxicity of metal ions (Hg, Pb, Cd and As), reasons for toxicity	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
	Practical	Iodo/Iodimetric Titrations (i) Estimation of Cu(II) using sodium thiosulphate solution (Iodometrically). (ii) Estimation of K ₂ Cr ₂ O ₇ using sodium thiosulphate solution (Iodometrically).	B.Sc. (Hons.) Chemistry I Year	DSC-4 Inorganic Chemistry -II Chemistry of s and p-Block Elements
		11. Paper Chromatographic separation of mixture of metal ions a. Cu ²⁺ , Cd ²⁺ b. Ni ²⁺ , Co ²⁺ .	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
		Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO ₃ ²⁻ , NO ₂ ⁻ , S ²⁻ , SO ₃ ²⁻ , SO ₄ ²⁻ , S ₂ O ₃ ²⁻ , CH ₃ COO ⁻ , F ⁻ , Cl ⁻ , Br ⁻ ,	B.Sc. (Hons.) Chemistry III Year	C XIII: Inorganic Chemistry IV
		Properties of Complexes Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions dimethyl glyoxime, glycine by substitution method.	B.Sc. (Hons.) Chemistry II Year	DSC-10: Inorganic Chemistry - IV Coordination Chemistry and Reaction Mechanism



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Signature of the Teacher



SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty. Dr. Ramavath Janraj Naik

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper
January	Theory	Unit-1: Coordination Chemistry Werner's Coordination theory, simple problems based on this theory IUPAC nomenclature of coordination compounds. isomerism in coordination compounds (coordination numbers 4 and 6). Valence bond theory and its application to complexes of coordination numbers 4 and 6.	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Theory	Bioinorganic Chemistry: Metal ions present in biological systems, classification of elements according to their action in biological system. Geochemical effect on the distribution of metals. Sodium / K-pump, carbonic anhydrase and carboxypeptidase.	B. Sc. (H)-Chemistry, III-Year, Semester-VI	CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV Course Title: Organometallic Chemistry & Bio-inorganic Chemistry
	Practicals	(A) Argentometry (i) By Mohr's method	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	1. Redox Titrations (i) Estimation of Fe(II) with $K_2Cr_2O_7$ using diphenylamine as internal indicator. (ii) Estimation of Fe(II) with $K_2Cr_2O_7$ using N-phenyl anthranilic acid as internal indicator.	B. Sc. (H)-Chemistry, I-Year, Semester-II	DSC-4: CHEMISTRY OF S- AND P-BLOCK ELEMENTS

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	Practicals	1. Preparation of standard solutions. 2. Estimation of Sodium carbonate using HCl by acid base titration. 3. Estimation of carbonate and hydroxide present together in a mixture.	B. Sc. (P) -I Year, Semester-II (Batch-2)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	1. Preparation of standard solutions. 2. Estimation of Sodium carbonate using HCl by acid base titration. 3. Estimation of carbonate and hydroxide present together in a mixture.	B. Sc. (P) -I Year, Semester-II (Batch-3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	Detection of extra elements (Known) Detection of extra elements (Unknown) Preparation of tetraamminecopper (II) sulphate complex and measurement of their conductivity	B. Sc. (P)- Life Science, III- Year, Semester-VI	CHEMISTRY – DSE-12 Course Title: Organometallics ,Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
February	Theory:	Crystal field measurement of Δ_o . Calculation of CFSE in weak and strong fields, concept of pairing energies, factors affecting the magnitude of Δ_o . Octahedral vs. tetrahedral coordination, tetragonal distortions from octahedral geometry	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Theory	Excess and deficiency of some trace metals. Toxicity of metal ions (Hg, Pb, Cd and As), reasons for toxicity, Use of chelating agents in medicine, Cisplatin as an anti-cancer drug. Iron and its application in bio-systems, Haemoglobin, Myoglobin; Storage and transfer of iron.	B. Sc. (H)- Chemistry, III-Year, Semester-VI	CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV Course Title: Organometallic Chemistry & Bio-inorganic Chemistry
	Practicals	(ii) By Vohlard's method and (iii) By Fajan's method	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism

	Practicals	(iii) Estimation of Fe(II) with $K_2Cr_2O_7$ using external indicator	B. Sc. (H)- Chemistry, I-Year, Semester-II	DSC-4: CHEMISTRY OF S- AND P- BLOCK ELEMENTS
	Practicals	4. Estimation of carbonate and bicarbonate present together in a mixture. 5. Estimation of free alkali present in different soaps/detergents 6. Estimation of oxalic acid using $KMnO_4$ by redox titration.	B. Sc. (P) -I Year, Semester-II (Batch-2)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	4. Estimation of carbonate and bicarbonate present together in a mixture. 5. Estimation of free alkali present in different soaps/detergents 6. Estimation of oxalic acid using $KMnO_4$ by redox titration.	B. Sc. (P) -I Year, Semester-II (Batch-3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	Preparation of potassium trioxalatoferate (III) trihydrate complex and measurement of their conductivity: Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo- hydrocarbons and carbohydrates (Including Derivative preparation)_Known compound experiments	B. Sc. (P)- Life Science, III- Year, Semester-VI	CHEMISTRY – DSE-12 Course Title: Organometallics , Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
March	Theory:	Jahn-Teller theorem, square planar geometry. Qualitative aspect of Ligand field and MO Theory (for octahedral -donor, - acceptor and - donor complexes)		

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	Theory	Catalysis by Organometallic Compounds General principles of catalysis, properties of catalysts, homogeneous and heterogeneous catalysis (catalytic steps, examples and industrial applications), deactivation and regeneration of catalysts, catalytic poison, promoter.	B. Sc. (H)-Chemistry, III-Year, Semester-VI	CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV Course Title: Organometallic Chemistry & Bio-inorganic Chemistry
	Practicals	(ii) Estimation of total hardness of water samples (B) Complexometric Titrations: (i) Complexometric estimation of Mg^{2+}/Zn^{2+} using EDTA	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	2. Iodo/Iodimetric Titrations (i) Estimation of Cu(II) using sodium thiosulphate solution (Iodometrically).	B. Sc. (H)-Chemistry, I-Year, Semester-II	DSC-4: CHEMISTRY OF S- AND P-BLOCK ELEMENTS
	Practicals	7. Estimation of Mohr's salt using $KMnO_4$ by redox reaction 8. Determination of dissolved oxygen in water.	B. Sc. (P) -I Year, Semester-II (Batch-2)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	7. Estimation of Mohr's salt using $KMnO_4$ by redox reaction 8. Determination of dissolved oxygen in water.	B. Sc. (P) -I Year, Semester-II (Batch-3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation) Unknown compound experiments	B. Sc. (P)-Life Science, III-Year, Semester-VI	CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and IR Spectroscopy

	<u>Assignment</u>	Assignment is given for SCH and TCH students		
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April	Theory	Unit-2: Stability of complexes and Inorganic Reaction Mechanism: Brief discussion of thermodynamic and kinetic stability, Factors affecting stability of complexes, such as chelate effect, macrocyclic effect, resonance effect etc., trends in step wise formation constant, interpretation of lability and inertness based on VBT and CFT. Introduction to inorganic reaction mechanisms, concept of reaction pathways, transition state, intermediate and activated complex. Substitution reactions in square planar complexes,	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Theory	Study of the following industrial processes and their mechanism: 1. Alkene hydrogenation (Wilkinson's Catalyst) 2. Synthetic gasoline (Fischer Tropsch reaction) 3. Polymerisation of ethene using Ziegler-Natta catalyst Ferrocene: Preparation, physical properties and reactions (acetylation, alkylation, metallation, Mannich Condensation).	B. Sc. (H)-Chemistry, III-Year, Semester-VI	CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV Course Title: Organometallic Chemistry & Bio-inorganic Chemistry
	Practical	(iii) Estimation of Ca^{2+} in solution by substitution method iv) Estimation of Ca/Mg in drugs or biological samples.	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	(ii) Estimation of $\text{K}_2\text{Cr}_2\text{O}_7$ using sodium thiosulphate solution (Iodometrically). (iii) Estimation of antimony in tartaremetic iodimetrically.	B. Sc. (H)-Chemistry, I-Year, Semester-II	DSC-4: CHEMISTRY OF S- AND P-BLOCK ELEMENTS
	Practicals	9. Estimation of Fe (II) ions by titrating it with $\text{K}_2\text{Cr}_2\text{O}_7$ using internal and external indicators. 10. Estimation of Cu (II) ions iodometrically using $\text{Na}_2\text{S}_2\text{O}_3$	B. Sc. (P) -I Year, Semester-II (Batch-2)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System

	Practicals	9. Estimation of Fe (II) ions by titrating it with K ₂ Cr ₂ O ₇ using internal and external indicators. 10. Estimation of Cu (II) ions iodometrically using Na ₂ S ₂ O ₃	B. Sc. (P) -I Year, Semester-II (Batch-3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo hydrocarbons and carbohydrates (Including Derivative preparation) Unknown compound experiments	B. Sc. (P) -III Year, Semester -VI	CHEMISTRY -DSE -12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Test			
May	Theory	Factors affecting the rate of Substitution reactions in square planar complexes- such as charge effect, solvent effect and Trans-effect (Theories of trans-effect).	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Theory	Structure and aromaticity. Comparison of aromaticity and reactivity with that of benzene	B. Sc. (H)- Chemistry, III-Year, Semester-VI	CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV Course Title: Organometallic Chemistry & Bio-inorganic Chemistry
	Practical	(C) Properties of Complexes Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions (e.g. bidentate ligands like acetylacetone, dimethyl glyoxime, glycine) by substitution method	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism

	Practicals	(iv) Estimation of Iodine content in iodized salt.	B. Sc. (H)- Chemistry, I-Year, Semester-II	DSC-4: CHEMISTRY OF S- AND P- BLOCK ELEMENTS
	Practicals	11. Paper Chromatographic separation of mixture of metal ions a. Cu^{2+} , Cd^{2+} b. Ni^{2+} , Co^{2+} . 12. Any suitable experiment (other than the listed ones) based upon neutralisation/redox reactions.	B. Sc. (P) -I Year, Semester-II (Batch-2)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	11. Paper Chromatographic separation of mixture of metal ions a. Cu^{2+} , Cd^{2+} b. Ni^{2+} , Co^{2+} . 12. Any suitable experiment (other than the listed ones) based upon neutralisation/redox reactions.	B. Sc. (P) -I Year, Semester-II (Batch-3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo- hydrocarbons and carbohydrates (Including Derivative preparation) _Unknown compound experiments	B. Sc. (P) -III-year, Semester -VI	CHEMISTRY -DSE -12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy

R. Jaiswal

Signature of the Teacher

V. A. K.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Ravindra Kumar Upadhyay

Department: CHEMISTRY

Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory	Organic Spectroscopy General principles Introduction to absorption and emission spectroscopy. UV Spectroscopy: Types of electronic transitions, $\lambda_{\max}$, Chromophores and Auxochromes, Bathochromic and Hypsochromic shifts, Intensity of absorption; Application of Woodward Rules for calculation of $\lambda_{\max}$ for the following systems: α, β -unsaturated aldehydes, ketones, carboxylic acids and esters; Conjugated dienes: alicyclic, homoannular and heteroannular; Extended conjugated systems (aldehydes, ketones and dienes); distinction between cis and trans isomers.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V


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	Practical	1. Acetylation of amines and phenol Benzoylation of amines and phenol	B.Sc. CHEMISTRY (Hons.) I Year, Semester I	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES
February	Theory:	IR Spectroscopy: Fundamental and non-fundamental molecular vibrations; IR absorption. Effect of H-bonding, conjugation, resonance and ring size on IR absorptions; Fingerprint region and its significance. IR absorption positions of O, N and S containing functional groups; application in functional group analysis. Alcohols: structure and classification of alcohols, Reaction, acidic basic character of alcohols, esterification	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI GE-II	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	Practical:	1. Bromination of acetanilide/aniline/phenol by anyone of the following: (a) Green method b) Conventional method Nitration of nitrobenzene 2. Benzoylation of amines and phenol Alkaline hydrolysis of amide 3. Preparation: Benzoylation of Aniline and phenol. Acetylation	B. Sc. (H) Chemistry I Yr, Semester II GE-II B. Sc. (P)- Life Science, II- Year, Semester-IV	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY UPC2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
March	Theory:	NMR Spectroscopy Basic principles of Proton Magnetic Resonance, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant; Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple compounds. Applications of IR, UV and NMR for identification of simple organic molecules. Alcohols: Oxidation of alcohols, Oppeneauer oxidation, Biological oxidation reaction	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI GE -2	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुर्जी, नई दिल्ली / Dhola Kurji, New Delhi-21

	Practical:	1. Functional group tests for alcohols, phenols, carboxylic acids, phenols, carbonyl compounds, esters 2. Oxime of aldehydes and ketones Pending work of previous experiment Repeat of previous Expt (on student demand) 3. Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides).	B. Sc. (H) Chemistry I Yr, Semester II GE-II B. Sc. (P)- Life Science, II-Year, Semester-IV	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY UPC2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
April	Theory:	NMR Spectroscopy Basic principles of Proton Magnetic Resonance, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant; Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple compounds. Applications of IR, UV and NMR for identification of simple organic molecules.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V

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		Phenols: Acidity of phenols, factor affecting the acidity of phenols, electrophilic substitution reactions	GE-2	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY
		Assignment 1	CHEMISTRY - C XIV: ORGANIC CHEMISTRYV	CHEMISTRY - C XIV: ORGANIC CHEMISTRYV
		Assignment 2	GE-2	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY
		Internal Exam	B.Sc. CHEMISTRY - CXIV: ORGANIC CHEMISTRY V	CHEMISTRY - C XIV: ORGANIC CHEMISTRYV
		Internal Exam	GE-2	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY



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	Practical	Oxidation of benzyl alcohol to benzoic acid Estimation of the given sample of phenol/amine by Iodoform reaction Benzoin condensation using Thiamine Hydrochloride as a catalyst Identification of functional group for monofunctional organic compounds. 2,4-Dinitrophenylhydrazone of aldehydes and ketones Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides).	B. Sc. (H) Chemistry I Yr, Semester II GE-2 B. Sc. (P)- Life Science, II-Year, Semester-IV	DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY UPC2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
May	Theory	Dyes	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - C XIV: ORGANIC CHEMISTRY V
	Practicals	Phenols Haloform reaction of ethanol Aldol condensation using green method.	GE -2 B. Sc. (H) Chemistry I Yr, Semester II GE-II	GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY DSC-5: HALOALKANES, ARENES, HALOARENES, ALCOHOLS, PHENOLS, ETHERS AND EPOXIDES GENERIC ELECTIVES -13: – CHEMISTRY OF OXYGEN CONTAINING FUNCTIONAL GROUPS AND THEIR APPLICATIONS TO BIOLOGY

		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides).	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
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*Ravindra
upadhyay*

Dr. Ravindra Kumar Upadhyay

V. B.

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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Vinita Kapoor

Department: Chemistry

Month		Topics	Course	Paper Code/Name
JAN	Practicals	(a) Determination of heat capacity of a calorimeter for different volumes using (i) change of enthalpy data of a known system (method of back calculation of heat capacity of calorimeter from known enthalpy of solution of sulphuric acid or enthalpy of neutralization), and (ii) heat gained equal to heat lost by cold water and hot water respectively	BSc (H) Chem. Semester II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Practicals	Perform the following potentiometric titrations: 1.Strong acid vs. strong base	BSc (H) Chem. Semester IV	DSC - Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	(i) Paper chromatographic separation of Co^{2+} and Ni^{2+} . (ii) Separation and identification of the amino acids present in the given mixture by paper chromatography. Reporting the R_f values.	BSc (H) Chem. Semester VI	DSE-Analytical Methods in Chemistry
	Practicals	1. Detection of extra elements (Known) 2. Detection of extra elements (Unknown) 3. Preparation of tetraamminecopper (II) sulphate complex and measurement of their conductivity	BSc(P) Life Sci. Semester VI	DSE- Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Theory	Chemical Thermodynamics: Intensive and extensive variables; state and path functions; isolated, closed and open systems. Mathematical treatment - Exact and inexact differential, Partial derivatives, Euler's reciprocity rule, cyclic rule.	B.Sc. (Hons.) Chemistry sem II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Theory	Syntax and use of the following QBASIC commands-SCREEN, VIEW. Simple programs using above mentioned commands.	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
Month		Topics	Course	Paper Code/Name
FEB	Practicals	b) Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide. (c) Determination of the enthalpy of ionization of ethanoic acid. (d) Determination of integral enthalpy (endothermic and exothermic) solution of salts.	BSc (H) Chem. Semester II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications

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	Practicals	Perform the following potentiometric titrations: 2.Weak acid vs. strong base 3.Dibasic acid vs. strong base 4.Mixture of strong and weak acid vs strong base	BSc (H) Chem. Semester IV	DSC - Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	(i) To separate a mixture of Ni^{2+} & Fe^{2+} by complexation with DMG and extracting the Ni^{2+} -DMG complex in chloroform, and determine its concentration by spectrophotometry. Analysis of soil: (i) Determination of pH of soil. (ii) Total soluble salt	BSc (H) Chem. Semester VI	DSE-Analytical Methods in Chemistry
	Practicals	Preparation of potassium trioxalatoferrate (III) trihydrate complex and measurement of their Conductivity. Systematic qualitative analysis of organic compounds possessing monofunctional groups amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation)_Known compound experiments	BSc(P) Life Sci. Semester VI	DSE- Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Theory	First law: Concept of heat, Q, work, W, internal energy, U, and statement of first law; enthalpy, H, relation between heat capacities, Joule Thompson Porous Plug experiment, Nature of Joule Thompson coefficient	B.Sc. (Hons.) Chemistry sem II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Theory	Syntax and use of the following QBASIC commands-SCREEN, VIEW, WINDOW, LINE, CIRCLE, LOCATE, PSET. Simple programs using above mentioned commands.	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
Month		Topics	Course	Paper Code/Name
MARCH	Practicals	(e) Determination of integral enthalpy (endothermic and exothermic) solution of salts. (f) Determination of basicity of a diprotic acid by the thermochemical method in terms of the changes of temperatures observed in the graph of temperature versus time for different additions of a base. Also calculate the enthalpy of neutralization of the first step	BSc (H) Chem. Semester II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Practicals	Study the kinetics of the following reactions 1.Acid hydrolysis of methyl acetate with hydrochloric acid.	BSc (H) Chem. Semester IV	DSC - Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	(iii) Estimation of calcium, magnesium (iv) Qualitative detection of nitrate, phosphate	BSc (H) Chem. Semester VI	DSE-Analytical Methods in Chemistry

	Practicals	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo-hydrocarbons and carbohydrates (Including Derivative preparation)_Unknown compound experiments	BSc(P) Life Sci. Semester VI	DSE- Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Theory	Calculations of Q, W, ΔU and ΔH for reversible, irreversible and free expansion of gases (ideal and van der Waals) under isothermal and adiabatic conditions. Thermochemistry: Enthalpy of reactions: standard states; enthalpy of neutralization, enthalpy of hydration, enthalpy of formation and enthalpy of combustion and its applications, bond dissociation energy and bond enthalpy; effect of temperature (Kirchhoff's equations) on enthalpy of reactions. Second Law: Concept of entropy; statement of the second law of thermodynamics, Carnot cycle. ASSIGNMENT GIVEN	B.Sc. (Hons.) Chemistry sem II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Theory	Graphic programs related to Chemistry problems. e.g. van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves.	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY
Month			Course	Paper Code/Name
APRIL	Practicals	E) Determination of enthalpy of hydration of salt. f) Determination of basicity of a diprotic acid by the thermochemical method in terms of the changes of temperatures observed in the graph of temperature versus time for different additions of a base. Also calculate the enthalpy of neutralization of the first step	BSc (H) Chem. Semester II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Practicals	Study the kinetics of the following reactions 1.Iodide-persulphate reaction by Initial rate method 2.Acid hydrolysis of methyl acetate with hydrochloric acid. 3.Saponification of ethyl acetate by conductometric measurements	BSc (H) Chem. Semester IV	DSC - Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	Spectrophotometry: Verification of Lambert- Beer's law and determination of concentration of a coloured species (Pot. Permanganate, pot. Dichromate/ CuSO ₄)	BSc (H) Chem. Semester VI	DSE-Analytical Methods in Chemistry
	Practicals	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo hydrocarbons and carbohydrates (Including Derivative preparation) _Unknown compound experiments	BSc(P) Life Sci. Semester VI	DSE- Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy

Theory	INTERNAL ASSESSMENT EXAM TAKEN Calculation of entropy change for reversible and irreversible processes (for ideal gases). Free Energy Functions: Gibbs and Helmholtz energy; variation of S, G, A with T, V, P; Free energy change and spontaneity (for ideal gases). Relation between Joule-Thomson coefficient and other thermodynamic parameters; inversion temperature; Gibbs-Helmholtz equation; Maxwell relations; thermodynamic equation of state. Third Law: Statement of third law, unattainability of absolute zero, calculation of absolute entropy of molecules, concept of residual entropy, calculation of absolute entropy of solid, liquid and gases.	B.Sc. (Hons.) Chemistry sem II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
Theory	INTERNAL ASSESSMENT EXAM TAKEN Graphic programs related to Chemistry problems. e.g. van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves, concentration-time graph, pH metric titration curve.	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY

Month		Topics	Course	Paper Code/Name
MAY	Practicals	Determination of enthalpy of hydration of salt.	BSc (H) Chem. Semester II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Practicals	Study the kinetics of the following reactions 1. Iodide-persulphate reaction by Initial rate method 2. Acid hydrolysis of methyl acetate with hydrochloric acid. 3. Saponification of ethyl acetate by conductometric measurements	BSc (H) Chem. Semester IV	DSC - Electrochemical Cells, Chemical Kinetics and Catalysis
	Practicals	Verification of Lambert-Beer's law and determination of concentration of a coloured species (Pot. Permanganate, pot. Dichromate/ CuSO ₄)	BSc (H) Chem. Semester VI	DSE-Analytical Methods in Chemistry

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	Practicals	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo hydrocarbons and carbohydrates (Including Derivative preparation) _ Unknown compound experiments	BSc(P) Life Sci. Semester VI	DSE- Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Theory	Systems of Variable Composition: Partial molar quantities, dependence of thermodynamic parameters on composition; Gibbs Duhem equation, chemical potential of ideal mixtures, Change in thermodynamic functions on mixing of ideal gases.	B.Sc. (Hons.) Chemistry sem II	C IV: PHYSICAL CHEMISTRY – II Chemical Thermodynamics and its Applications
	Theory	Graphic programs related to Chemistry problems. e.g. Maxwell distribution curves, concentration-time graph, pH metric titration curve.	B.Sc. (Hons.) Chemistry sem VI	CHEMISTRY-DSE: APPLICATIONS OF COMPUTERS IN CHEMISTRY

Dr. VINITA KAPOOR

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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty. Dr. K.Murali Mohan Achari

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper
January	Theory	Electronic configuration, atomic and ionic size, metallic/non-metallic character, melting point, ionization enthalpy, electron gain enthalpy, electronegativity	B. Sc. (H)-Chemistry, I-Year, Semester-II	Discipline Specific Core Course -4 (Dsc-4): Chemistry Of S- And P-Block Elements
	Theory	Ionic Bonding: General characteristics of ionic bonding, Lattice Enthalpy and Solvation Enthalpy and their relation to stability and solubility of ionic compounds, Born-Landé equation for calculation of Lattice Enthalpy (no derivation),	B. Sc. (P) -I Year, Semester-II	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	(A) Argentometry (i) By Mohr's method	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	1. Preparation of standard solutions. 2. Estimation of Sodium carbonate using HCl by acid base titration. 3. Estimation of carbonate and hydroxide present together in a mixture.	B. Sc. (P) -I Year, Semester-II (Batch-1,2&3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
February	Theory:	Catenation, Allotropy of C, P, S; inert pair effect, diagonal relationship between B and Si and anomalous behaviour of first member of each group	B. Sc. (H)-Chemistry, I-Year, Semester-II	Discipline Specific Core Course -4 (Dsc-4): Chemistry Of S- And P-Block Elements

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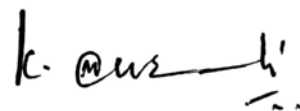
	Theory	Born-Haber cycle and its applications, polarizing power and polarizability, Fajan's rules, ionic character in covalent compounds, bond moment, dipole moment and percentage ionic character	B. Sc. (P) -I Year, Semester-II	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practicals	(ii) By Vohland's method and (iii) By Fajan's method	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	4. Estimation of carbonate and bicarbonate present together in a mixture. 5. Estimation of free alkali present in different soaps/detergents 6. Estimation of oxalic acid using KMnO ₄ by redox titration.	B. Sc. (P) -I Year, Semester-II (Batch-1,2 &3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
March	Theory:	Acidic/basic nature, stability, ionic/covalent nature, oxidation/reduction, hydrolysis, action of heat on the following: Hydrides of Group 13 (only diborane), Group 14, Group 15 (EH ₃ where E = N, P, As, Sb, Bi), Group 16 and Group 17.	B. Sc. (H)- Chemistry, I-Year, Semester-II	Discipline Specific Core Course -4 (Dsc-4): Chemistry Of S- And P-Block Elements
	Theory	Covalent Bonding: Valence Bond Approach, Hybridization and VSEPR Theory with suitable examples, Concept of resonance and resonating structures in various inorganic and organic compounds, Molecular Orbital Approach: Rules for the LCAO method, bonding,	B. Sc. (P) -I Year, Semester-II	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System



	Practicals	(ii) Estimation of total hardness of water samples (B) Complexometric Titrations: (i) Complexometric estimation of Mg^{2+}/Zn^{2+} using EDTA	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	7. Estimation of Mohr's salt using $KMnO_4$ by redox reaction 8. Determination of dissolved oxygen in water.	B. Sc. (P) -I Year, Semester-II (Batch-1,2&3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	<u>Assignment</u>			

April	Theory	Oxoacids of phosphorus, sulphur and chlorine Interhalogen and pseudohalogen compound Clathrate compounds of noble gases, xenon fluorides (MO treatment of XeF_2)	B. Sc. (H)-Chemistry, I-Year, Semester-II	Discipline Specific Core Course -4 (Dsc-4): Chemistry Of S- And P-Block Elements
	Theory	nonbonding and antibonding MOs and their characteristics for s-s, s-p and p-p combinations of atomic orbitals, MO treatment of homonuclear diatomic molecules of 1st and 2nd periods (including idea of s-p mixing) and heteronuclear diatomic molecules such as CO, NO and NO^+	B. Sc. (P) -I Year, Semester-II	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practical	(iii) Estimation of Ca^{2+} in solution by substitution method iv) Estimation of Ca/Mg in drugs or biological samples.	B. Sc. (H)-Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	9. Estimation of Fe (II) ions by titrating it with $K_2Cr_2O_7$ using internal and external indicators. 10. Estimation of Cu (II) ions iodometrically using $Na_2S_2O_3$	B. Sc. (P) -I Year, Semester-II (Batch-1,2&3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	<u>Test</u>			

May	Theory	Brief introduction to Metallic Bonding, Hydrogen Bonding, van der Waals forces	B. Sc. (P) -I Year, Semester-II	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System
	Practical	(C) Properties of Complexes Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions (e.g. bidentate ligands like acetylacetone, dimethyl glyoxime, glycine) by substitution method	B. Sc. (H)- Chemistry, II-Year, Semester-IV	DSC-10: Coordination Chemistry and Reaction Mechanism
	Practicals	11. Paper Chromatographic separation of mixture of metal ions a. Cu^{2+} , Cd^{2+} b. Ni^{2+} , Co^{2+} . 12. Any suitable experiment (other than the listed ones) based upon neutralisation/redox reactions.	B. Sc. (P) -I Year, Semester-II (Batch-1,2 &3)	DSC-5: CHEMISTRY - II Chemical Bonding and Elements in Biological System



Signature of the Teacher



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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Academic year 2023-2024 (Even semester)

Name of the Faculty: Dr. Shikha Gulati

Department: Chemistry

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Definition and classification of organometallic compounds on the basis of bond type. Concept of hapticity of organic ligands. Metal carbonyls: 18 electron rule, electron count of mononuclear, polynuclear and substituted metal carbonyls of 3d series. General methods of preparation (direct combination, reductive carbonylation, thermal and photochemical decomposition) of mono and binuclear carbonyls of 3d series.	B.Sc. (Hons.) Chemistry of III Year	C XIII: INORGANIC CHEMISTRY IV

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Practicals	(i) Paper chromatographic separation of Co^{2+} and Ni^{2+} . (ii) Separation and identification of the amino acids present in the given mixture by paper chromatography. Reporting the R_f values.	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	1. . Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO_3^{2-} , NO_2^- , S^{2-} , SO_3^{2-} , SO_4^{2-} , $\text{S}_2\text{O}_3^{2-}$, CH_3COO^- , F^- , Cl^- , Br^- , I^- , NO_3^- , BO_3^{3-} , $\text{C}_2\text{O}_4^{2-}$, PO_4^{3-} , NH_4^+ , K^+ , Pb^{2+} , Cu^{2+} , Cd^{2+} , Bi^{3+} , Sn^{2+} , Sb^{3+} , Fe^{3+} , Al^{3+} , Cr^{3+} , Zn^{2+} , Mn^{2+} , Co^{2+} , Ni^{2+} , Ba^{2+} , Sr^{2+} , Ca^{2+} , Mg^{2+}	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY - CXIII: INORGANIC CHEMISTRY - IV
	1. Preparation of standard solutions. 2. Estimation of Sodium carbonate using HCl by acid base titration. 3. Estimation of carbonate and hydroxide present together in a mixture.	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System

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FEBRUARY	Theory:	Structures of mononuclear and binuclear carbonyls of Cr, Mn, Fe, Co and Ni using VBT. π-acceptor behaviour of CO (MO diagram of CO to be discussed), synergic effect and use of IR data to explain extent of back bonding. Zeise's salt: Preparation and structure, evidences of synergic effect and comparison of synergic effect with that in carbonyls. Metal Alkyls: Important structural features of methyl lithium (tetramer) and trialkyl aluminium (dimer), concept of multicentre bonding in these compounds. Ferrocene: Preparation and reactions (acetylation, alkylation, metallation, Mannich Condensation). Structure and aromaticity. Comparison of aromaticity and reactivity with that of benzene.	B.Sc. (Hons.) Chemistry and III Year	C XIII: INORGANIC CHEMISTRY IV
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Practicals:	(i) To separate a mixture of Ni^{2+} & Fe^{2+} by complexation with DMG and extracting the Ni^{2+} -DMG complex in chloroform, and determine its concentration by spectrophotometry. Analysis of soil: (i) Determination of pH of soil. (ii) Total soluble salt	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
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	1. Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO₃²⁻, NO₂⁻, S²⁻, SO₃²⁻, SO₄²⁻, S₂O₃²⁻, CH₃COO⁻, F⁻, Cl⁻, Br⁻, I⁻, NO₃⁻, BO₃³⁻, C₂O₄²⁻, PO₄³⁻, NH₄⁺, K⁺, Pb²⁺, Cu²⁺, Cd²⁺, Bi³⁺, Sn²⁺, Sb³⁺, Fe³⁺, Al³⁺, Cr³⁺, Zn²⁺, Mn²⁺, Co²⁺, Ni²⁺, Ba²⁺, Sr²⁺, Ca²⁺, Mg²⁺ 2. Mixtures should preferably contain one interfering anion, or insoluble component (BaSO₄, SrSO₄, PbSO₄, CaF₂ or Al₂O₃) or combination of anions e.g. CO₃²⁻ and SO₃²⁻, NO₂⁻ and NO₃⁻, Cl⁻ and Br⁻, Cl⁻ and I⁻, Br⁻ and I⁻, NO₃⁻ and Br⁻, NO₃⁻ and I⁻. Spot tests	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
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	4. Estimation of carbonate and bicarbonate present together in a mixture. 5. Estimation of free alkali present in different soaps/detergents 6. Estimation of oxalic acid using KMnO_4 by redox titration.	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
Tutorials:	NA	NA	NA



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	<u>Assignment:</u>	Organometallics and Bioinorganic Chemistry	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
MARCH	Theory:	Bioinorganic Chemistry: Metal ions present in biological systems, classification of elements according to their action in biological system. Geochemical effect on the distribution of metals. Sodium / K-pump, carbonic anhydrase and carboxypeptidase. Excess and deficiency of some trace metals. Toxicity of metal ions (Hg, Pb, Cd and As), reasons for toxicity, Use of chelating agents in medicine, Cisplatin as an anti-cancer drug. Iron and its application in bio-systems, Haemoglobin, Myoglobin; Storage and transfer of iron.	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	Practicals:	(iii) Estimation of calcium, magnesium (iv) Qualitative detection of nitrate, phosphate	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
		. Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO ₃ ²⁻ , NO ₂ ⁻ , S ₂ ²⁻ , SO ₃ ²⁻ , SO ₄ ²⁻ , S ₂ O ₃ ²⁻ , CH ₃ COO ⁻ , F ⁻ , Cl ⁻ , Br ⁻ , I ⁻ , NO ₃ ⁻ , BO ₃ ³⁻ , C ₂ O ₄ ²⁻ , PO ₄ ³⁻ , NH ₄ ⁺ , K ⁺ , Pb ²⁺ , Cu ²⁺ , Cd ²⁺ ,	B.Sc. (Hons.) Chemistry III Year	CHEMISTRY – C XIII


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	7. Estimation of Mohr's salt using KMnO_4 by redox titration. 8. Determination of dissolved oxygen in water.	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System
Tutorials:	NA	NA	NA
<u>Test</u>	Organometallics and Bioinorganic Chemistry	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV



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APRIL	Theory:	Catalysis by Organometallic Compounds Study of the following industrial processes and their mechanism: 1. Alkene hydrogenation (Wilkinson's Catalyst) 2. Synthetic gasoline (Fischer Tropsch reaction)	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	Practicals:	Spectrophotometry Verification of Lambert-Beer's law and determination of concentration of a coloured species (CuSO ₄)	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY



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 श्री वेंकटेश्वर महाविद्यालय
 Sri Venkateswara College
 दिल्ली विश्वविद्यालय / University of Delhi
 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	1. Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO₃²⁻, NO₂⁻, S²⁻, SO₃²⁻, SO₄²⁻, S₂O₃²⁻, CH₃COO⁻, F⁻, Cl⁻, Br⁻, I⁻, NO₃⁻, BO₃³⁻, C₂O₄²⁻, PO₄³⁻, NH₄⁺, K⁺, Pb²⁺, Cu²⁺, Cd²⁺, Bi³⁺, Sn²⁺, Sb³⁺, Fe³⁺, Al³⁺, Cr³⁺, Zn²⁺, Mn²⁺, Co²⁺, Ni²⁺, Ba²⁺, Sr²⁺, Ca²⁺, Mg²⁺ 2. Mixtures should preferably contain one interfering anion, or insoluble component (BaSO₄, SrSO₄, PbSO₄, CaF₂ or Al₂O₃) or combination of anions e.g. CO₃²⁻ and SO₃²⁻, NO₂⁻ and NO₃⁻, Cl⁻ and Br⁻, Cl⁻ and I⁻, Br⁻ and I⁻, NO₃⁻ and Br⁻, NO₃⁻ and I⁻. Spot tests	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	9. Estimation of Fe (II) ions by titrating it with K₂Cr₂O₇ using internal and external indicators. 10. Estimation of Cu (II) ions iodometrically using Na₂S₂O₃	B.Sc. (P) Life Sciences I Year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System



MAY

THEORY	3. Polymerisation of ethene using Ziegler-Natta catalyst	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
PRACTICALS	Spectrophotometry Verification of Lambert-Beer's law and determination of concentration of a coloured species (KMnO ₄)	B.Sc. (Hons.) Chemistry III Year	DSE LAB: ANALYTICAL METHODS IN CHEMISTRY
	4. Qualitative semi-micro analysis of mixtures containing 3 anions and 3 cations. The following radicals are suggested: CO ₃ ²⁻ , NO ₂ ⁻ , S ²⁻ , SO ₃ ²⁻ , SO ₄ ²⁻ , S ₂ O ₃ ²⁻ , CH ₃ COO ⁻ , F ⁻ , Cl ⁻ , Br ⁻ , I ⁻ , NO ₃ ⁻ , BO ₃ ³⁻ , C ₂ O ₄ ²⁻ , PO ₄ ³⁻ , NH ₄ ⁺ , K ⁺	B.Sc. (Hons.) Chemistry III Year	C XIII: INORGANIC CHEMISTRY IV
	11. Paper Chromatographic separation of mixture of metal ions a. Cu ²⁺ , Cd ²⁺ b. Ni ²⁺ , Co ²⁺ .	B.Sc.(P) Life Sciences I year	DSC-5 Chemistry-II Chemical Bonding and Elements in Biological System

Signature of the Teacher

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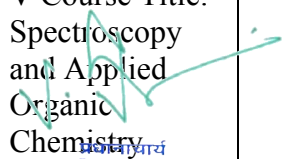
**SEMESTER WISE TEACHING
PLAN 2023-2024 (Even Sem)**

Name of the Faculty: Dr. Chandra Sekhar Tekuri

Department: Chemistry

Semester: IV & VI

Month		Topics	Course	Paper Code/Name
January	Theory	1. Structure elucidation of naphthalene, preparation and properties of naphthalene and anthracene. Preparation and Properties of the following compounds with reference to electrophilic and nucleophilic substitution: furan, pyrrole, thiophene, and pyridine.	B. Sc. (P) Life Sciences III Year, Semester VI	: CHEMISTRY –DSE-12 Course Title: Organometallics , Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Assignment	UV-Vis Spectroscopy	B. Sc. (P) Life Sciences III Year, Semester VI	CHEMISTRY – DSE-12 Course Title: Organometallics , Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Practicals	1. Talcum powder. 2. Shampoo. 3. Enamels	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
		Qualitative analysis of unknown organic compounds containing monofunctional groups: aromatic hydrocarbons and aryl halides.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - CXIV: ORGANIC CHEMISTRY - V Course Title: Spectroscopy and Applied Organic Chemistry


 Dr. Venkateswara
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		1. Preparation and characterization of nanoparticles of gold using tea leaves/silver nanoparticles using plant extracts. 2. Preparation of biodiesel from waste cooking oil and characterization (TLC, pH, solubility, combustion test, density, viscosity, gel formation at low temperature and IR can be provided).	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
February	Theory	2. Preparation: Claisen ester condensation, Keto-enol tautomerism. Reactions: Synthetic uses of ethylacetoacetate (preparation of non-heteromolecules having up to 6 carbons) 3. UV-Visible and infrared spectroscopy and their application to simple organic molecules. Electromagnetic radiations and their properties; double bond equivalence and hydrogen deficiency.	B. Sc. (P) Life Sciences III Year, Semester VI	: CHEMISTRY –DSE-12 Course Title: Organometallics , Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Assignment	UV, IR Spectroscopy	B. Sc. (P) Life Sciences III Year, Semester VI	CHEMISTRY – DSE-12 Course Title: Organometallics , Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Practicals	Face cream. Nail polish and nail polish remover. Hand wash	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes

		Qualitative analysis of unknown organic compounds containing monofunctional groups: carbohydrates, nitro compounds.	B.Sc. CHEMISTRY (Hons.) III Year, Semester VI	CHEMISTRY - CXIV: ORGANIC CHEMISTRY - V Course Title: Spectroscopy and Applied Organic Chemistry
		Benzoin condensation using thiamine hydrochloride as a catalyst instead of cyanide. Mechanochemical solvent free, solid-solid synthesis of azomethine using <i>p</i>-toluidine and <i>o</i>-vanillin/<i>p</i>-vanillin	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
	Assignment	Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons	B. Sc. (P) Life Sciences III Year, Semester VI	CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
March	Theory	4. double bond equivalence and hydrogen deficiency. UV-Visible spectroscopy (electronic spectroscopy): General electronic transitions, $\lambda_{\max}$ & $\epsilon_{\max}$, chromophores & auxochromes, bathochromic & hypsochromic shifts. Application of Woodward rules for calculation of $\lambda_{\max}$ for the following systems: conjugated dienes - alicyclic, homoannular and heteroannular; α,β -unsaturated aldehydes and ketones, charge transfer complex	B. Sc. (P) Life Sciences III Year, Semester VI	: CHEMISTRY –DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Test	Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy	B. Sc. (P) Life Sciences III Year, Semester VI	: CHEMISTRY –DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy

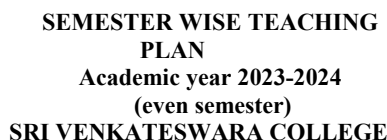
	Practicals	Hand sanitizer Body lotion Soap	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
		Qualitative analysis of unknown organic compounds containing monofunctional groups: amines and amides. simple compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols.	B.Sc. CHEMISTR Y (Hons.) III Year, Semester VI	CHEMISTRY - CXIV: ORGANIC CHEMISTRY - V Course Title: Spectroscopy and Applied Organic Chemistry
		Photoreduction of benzophenone to benzopinacol in the presence of sunlight Photochemical conversion of dimethyl maleate to dimethyl fumarate (<i>cis-trans</i> isomerisation).	B.Sc. CHEMISTR Y (Hons.) II Year, Semester IV	Green Chemistry
April	Theory	6. Infrared (IR) Spectroscopy: Infrared radiation and types of molecular vibrations, significance of functional group & fingerprint region. IR spectra of alkanes, alkenes, aromatic hydrocarbons (effect of conjugation and resonance on IR absorptions)	B. Sc. (P) Life Sciences III Year, Semester VI	CHEMISTRY – DSE-12 Course Title: Organometallics , Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Practicals	Tooth powder Tooth paste	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
		Qualitative analysis of unknown organic compounds containing bifunctional groups, e.g. salicylic acid, cinnamic acid, nitrophenols.	B.Sc. CHEMISTR Y (Hons.) III Year, Semester VI	CHEMISTRY - CXIV: ORGANIC CHEMISTRY - V Course Title: Spectroscopy and Applied Organic Chemistry प्रधानाचार्य Principal श्री. वेंकटेश्वर महाविद्यालय Shri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		Benzil- Benzilic acid rearrangement: Preparation of benzilic acid in solid state under solvent-free condition. Microwave-assisted Knoevenagel reaction using anisaldehyde, ethylcyanoacetate and ammonium formate	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
May	Theory	6. simple alcohols (inter and intramolecular hydrogen bonding and IR absorptions),	B. Sc. (P) Life Sciences III Year, Semester VI	CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Revision	UV, IR Spectroscopy	B. Sc. (P) Life Sciences III Year, Semester VI	CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy

T. Chandra Sekhar

Signature of the Teacher

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Department: CHEMISTRY

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Chemical Energetics: Reviews of laws of thermodynamics, important principles and definitions of thermochemistry, concept of standard state and enthalpies of formation, enthalpy of neutralization, integral and differential enthalpy of solution and dilution, calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data, Statement of third law of thermodynamics and calculation of absolute entropies of substances.	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials
		Unit 1: Colloidal State: Distinction among true solutions, colloids and suspensions, components of Colloids, classification of colloids - lyophilic, lyophobic; Preparation methods and properties of lyophobic solutions.	B.Sc.(P) Life Sciences Semester IV	Chemistry of Colloids and Adsorption
	Practical	Computer programs using QBASIC based on numerical methods: 1. Simple QBASIC programs for introducing concept 2. Roots of equations: (e.g. volume of gas using van der Waals equation and comparison with ideal gas, pH of a weak acid).	B.Sc. (H) CHEMISTRY Semester VI	DSE 3: Applications of Computer in Chemistry
		1.Determination of heat capacity or water equivalent of a calorimeter using different volumes of water. 2.Determination of enthalpy of neutralization of hydrochloric acid and sodium hydroxide.	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials
		Unit 1: Introduction to Spreadsheets: Spreadsheets: Concept of worksheets and workbooks, creating, opening, closing and saving workbooks, moving, copying, inserting, deleting and renaming worksheets,	SEC Sem IV	Basic IT Tools
		Unit 3: Word Processing: Introduction: Creating and saving your document, displaying different views, working with styles and character formatting, working with paragraph formatting techniques using indents, tabs, alignment, spacing, bullets and numbering and creating borders; Page setup and sections: Setting page margins, orientation.		


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FEBRUARY	Theory:	Chemical Energetics: Statement of third law of thermodynamics and calculation of absolute entropies of substances. Ionic Equilibria: Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, Ostwald's Dilution Law, ionization constant, ionic product of water, ionization of weak acids and bases, pH scale, common ion effect, salt hydrolysis- calculation of hydrolysis constant, degree of hydrolysis and pH of different salts. Buffer solutions and their applications to biological systems, Hendersson Hasselbalch equation. Solubility and solubility product of sparingly soluble salts- application of solubility product principle. Unit 1: Colloidal State: Hydrophile-lyophile balance (HLB), multi molecular, macromolecular and associated colloids (micelles formation), Schulze -Hardy law Unit 2: Preparation and Properties of Colloids: Methods of preparation of colloids, Tyndall effect, Brownian movement, coagulation and flocculation; electrophoresis, dialysis.	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials
			B.Sc.(P) Life Sciences Semester IV	Chemistry of Colloids and Adsorption
	Practical:	3. Numerical differentiation (e.g., change in pressure for small change in volume of a van der Waals gas, potentiometric titrations). 3. Numerical integration (e.g. entropy/ enthalpy change from heat capacity data). 4. Probability distributions (gas kinetic theory) and mean values. 5. Mean, standard deviation and Least square curve fitting method for linear equation. 6. Matrix operations: addition, multiplication and transpose 1.Determination of enthalpy of neutralization of acetic acid and sodium hydroxide, and also enthalpy of ionization of acetic acid. 2.Determination of integral enthalpy of solution of different salts(endothermic and exothermic) Unit 1: Introduction to Spreadsheets: working with multiple worksheets and multiple workbooks, controlling worksheet views, naming cells using name box, name create and name define; Exchanging data using clipboard, object linking and embedding. Printing and Protecting worksheets: Adjusting margins, creating headers and footers, setting page breaks, changing orientation, creating portable documents and printing data and formulae; Implementing file level security and protecting data within the worksheet; Unit 3: Word Processing : headers and footers, end notes and foot notes, creating section breaks and page borders; Working with tables: Creating tables, modifying table layout and design, sorting, inserting graphics in a table, table math, converting text to table and vice versa; Create newspaper columns, indexes and table of contents,	B.Sc. (H) CHEMISTRY Semester VI	DSE 3: Applications of Computer in Chemistry
			B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials
			SEC Sem IV	Basic IT Tools
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MARCH	Theory:	Ionic Equilibria: Buffer solutions and their applications to biological systems, Hendersson Hasselbalch equation. Solubility and solubility product of sparingly soluble salts- application of solubility product principle. Nanomaterials of Biological Importance: Overview of nanomaterials, classification, properties, role of size, methods of synthesis, (Chemical methods: chemical reduction, co precipitation, sol-gel, microemulsions, or reverse micelles, solvothermal synthesis, Green of biological methods using bacteria, Fungi, etc), plant based methods using tea leaves, cinnamon bark, etc), characterization techniques (UV-Vis, IR, SEM, TEM, XRD).	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials
		Unit 2: Preparation and Properties of Colloids: Emulsification by surfactants, selection of surfactants as emulsifying agent, colloidal phenomenon of food chemistry, Protein based functional colloids.	B.Sc.(P) Life Sciences Semester IV	Chemistry of Colloids and Adsorption

	Practicals:	7. Graphic programs related to Chemistry problems. e.g. van der Waals isotherm, Compressibility versus pressure curves, Maxwell distribution curves, concentration-time graph, pH metric titration curve, conductometric titration curves, Lambert Beer's law graph, s, p, d orbital shapes, radial distribution curves, particle in one dimensional box.	B.Sc. (H) CHEMISTRY Semester VI	DSE 3: Applications of Computer in Chemistry
		3. Preparation of buffer solutions: (i) acetic acid and sodium acetate (ii) ammonium hydroxide and ammonium chloride 4. Determination of their pH of different buffer solutions (acidic and basic) and comparison of their values with theoretical values. 5. pHmetric titration of (i) strong acid vs strong base	B.Sc.(H) Biological Sciences Semester II	Chemical Energetics, Ionic Equilibrium, Nanomaterials
		Unit 1: Introduction to Spreadsheets: Understanding absolute, relative and mixed referencing in formulas, referencing cells in other worksheets and workbooks, correcting common formula errors, working with inbuilt function categories like mathematical, statistical, text, lookup, information, logical, database, date and time and basic financial functions Unit 3: Word Processing : Spell check your document using inbuilt and custom dictionaries, checking grammar and style , using thesaurus and finding and replacing text; Create bookmarks, captions and cross referencing, adding hyperlinks, adding sources and compiling and bibliography; ; Mail merge: Creating and editing your main document and data source, sorting and filtering merged documents and using merge instructions like ask, fill-in and if-then-else; Linking and embedding to keep things together.	SEC Sem IV	Basic IT Tools


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APRIL	Theory:	Nanomaterials of Biological Importance: DNA and its nanomaterials, biomimetics, optical properties of gold and silver metallic nanoparticles, concept of surface plasmon resonance, carbon nanotubes, inorganic nanowires, (iron oxide and ZnO nanoparticles, polymer based nanostructures, protein-based nanostructures, natural and artificial nanomaterials, bio nanomaterials and bio nanocomposites, bio inorganic nanomaterials, self assembles nanostructures, control of architecture, applications of nanomaterials in drug delivery, tissue engineering, medicine, orthopedics, bio imaging, dental implants and bio sensors. Unit 3: Surface Chemistry: Adsorption, Distinction between adsorption and absorption, Types of Adsorption, Physisorption and chemisorption and their characteristics, factors affecting adsorption of gases on solids - Freundlich and Langmuir adsorption isotherms, Adsorption from solutions. Applications of Adsorption phenomenon in living systems.	B.Sc.(H) Biological Sciences Semester II B.Sc.(P) Life Sciences Semester IV	Chemical Energetics, Ionic Equilibrium, Nanomaterials Chemistry of Colloids and Adsorption
	Practicals:	Computer Software like Scilab and Excel, etc for data handling and manipulation. 2. Simple exercises using molecular visualization software. 5. pHmetric titration of (ii) weak acid vs strong base. Synthesis of pure ZnO and Cu doped ZnO nanoparticles by precipitation method and its characterization using UV-Vis spectroscopy. Preparation of magnetic nanoparticles of Fe₃O₄ using green tea leaves extract. XRD pattern of nanomaterials and estimation of particle size. Unit 2: Data Analysis in Spreadsheets: Consolidating worksheets and workbooks using formulae and data consolidate command; Choosing a chart type, understanding data points and data series, editing and formatting chart elements, and creating sparkline graphics, Analysing data using pivot tables: Creating, formatting and modifying a pivot table, sorting, filtering and grouping items, creating calculated field and calculated item, creating pivot table charts, producing a report with pivot tables. Introduction to recording and execution of macros. Unit 4: Databases: Introduction to Database Development: Database Terminology, Objects, Creating Tables, working with fields, understanding Data types, Changing table design, Assigning Field Properties, Setting Primary Keys, using field validation and record validation rules, Indexing, working with multiple tables, Relationships & Integrity Rules, Join Properties, Record manipulation, Sorting & Filtering; Select data with queries: Creating Query by design & by wizard (Select, Make Table, Append, Delete, Cross Tab, Update, Parameterized Query, Find Duplicate and Find Unmatched), Creating multi table queries, creating & working with table joins. Using operators & expressions: Creating simple &	B.Sc. (H) CHEMISTRY Semester VI B.Sc.(H) Biological Sciences Semester II SEC Sem IV	DSE 3: Applications of Computer in Chemistry Chemical Energetics, Ionic Equilibrium, Nanomaterials Basic IT Tools

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		advance criteria; Working with forms: Creating Basic forms, working with bound, unbound and calculated controls, understanding property sheet, Working with Data on Forms: Changing Layout, creating Sub Forms, creating list box, combo box and option groups; Working with Reports: Creating Basic Reports, Creating Header & Footer, Placing Controls on reports, sorting & grouping, Creating Sub reports.		
	Assignment and test	Internal assessment test for the mentioned theory papers conducted as per will be scheduled by the college. Assignment given to students to by submitted during a stipulated time.		
MAY	Theory:	REVISION AND PREVIOUS YEARS QUESTION PAPERS DISCUSSION REVISION AND QUESTION PAPERS DISCUSSION	B.Sc.(H) Biological Sciences Semester II B.Sc.(P) Life Sciences Semester IV	Chemical Energetics, Ionic Equilibrium, Nanomaterials Chemistry of Colloids and Adsorption

Signature of teacher:



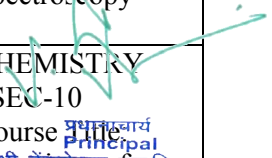

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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Y.Veera Manohara Reddy
Semester: II/IV/VI

Department: CHEMISTRY

Month		Topics	Course	Paper Code/Name
January	Theory:	Preparation: from alkyl halides, Gabriel's Phthalimide synthesis, Hoffmann bromamide reaction.	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Theory	Hair Preparation, structure of hair, classification of hair s	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Practicals:	Acetylation of Aniline and Phenols.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV (Batch-A)	CHEMISTRY - CIX: ORGANIC CHEMISTRY – III
	Practical	Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL – CC-XI LAB: Organic Chemistry IV
	Practical	Detection of extra elements (Known) Detection of extra elements (Unknown) Preparation of tetraamminecopper (II) sulphate complex and measurement of their conductivity:	B. Sc. (P)-Life Science, III-Year, Semester-VI	UPC- 42177926 CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
February	Theory:	Hair dye classification temporary semi permanent demi permanent formulation hair sprays, shampoo	B.Sc. Life sciences, III Year, Semester VI (Batch-B)	CHEMISTRY –SEC-10 Course  Principal Sri Venkateswara College University of Delhi Cosmetics and Perfumes

	Theory	Hoffmann vs Saytzeff elimination, carbylamine test, Hinsberg test, reaction with HNO ₂ , Schotten-Baumann reaction.	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Theory	The twelve principles of the Green Chemistry with their explanation Prevention of waste	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
	Practical	Synthesis of urea formaldehyde resin and test the solubility Preparation of Methyl orange.	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry
		Preparation: Benzoylation of Aniline and phenols	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		Detection of extra elements (Known) Detection of extra elements (Unknown) Preparation of tetraamminecopper (II) sulphate complex and measurement of their conductivity:	B. Sc. (P)- Life Science, III-Year, Semester-VI	UPC- 42177926 CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters)	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-XI LAB: Organic Chemistry IV
March	Theory:	Diazonium salt Preparation: from aromatic amines; Reactions: conversion to benzene, phenol and dyes	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Theory	Types of shampoo conditioner, Colored preparation Nail preparation	B.Sc. Life sciences, III Year, Semester VI (Batch-B)	CHEMISTRY PRACTICAL –CC-XI LAB: Organic Chemistry IV UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles

				Perfumes
	Theory	Green metrics to assess greenness of a reaction: environmental impact factor, atom economy and calculation of atom economy. Green solvents-supercritical fluids, water as a solvent for organic reactions, ionic liquids, solvent less reactions, solvents obtained from renewable sources.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
	Practicals	Preparation of Starch-PVA Film. Synthesis of 4-methyl-7-hydroxycoumarin by condensation of resorcinol with ethyl acetoacetate	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry
		Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides).	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		Preparation of potassium trioxalatoferrate (III) trihydrate complex and measurement of their conductivity: Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo hydrocarbons and carbohydrates (Including Derivative preparation)_Known compound experiments	B. Sc. (P)- Life Science, III-Year, Semester-VI	UPC- 42177926 CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters) 2. Saponification value of an oil. 3. Iodine value of an oil	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-XI LAB: Organic Chemistry IV
	Assignment:	Reactions: Electrophilic substitution (case aniline): nitration, bromination, sulphonation; basicity of amines. Diazonium salts	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
	Test	Class test-I	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives,

				Amines and Heterocycles
	Assignment	Compact powder, Talcum powder.	B.Sc. Life sciences, III Year, Semester VI (Batch-B)	CHEMISTRY – SEC-10 Course Title: Chemistry of Cosmetics and Perfumes
	Test:	Class test-I	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Test:	Class Test	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
	Assignment :	Written Assignment questions to solve	B.Sc, II Year, Semester IV	GE-IV Green Chemistry
April	Theory:	Structure of nail, Nail lacquers, Nail polish remover Lipsticks	B.Sc. Life sciences, III Year, Semester VI (Batch-B)	CHEMISTRY –SEC-10 Course Title: Chemistry of Cosmetics and Perfumes
		Introduction, classification, structure, nomenclature and uses. Preparation and properties of the following heterocyclic compounds with reference to electrophilic and nucleophilic substitution: furan, pyrrole,	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		Catalysis and green chemistry- comparison of heterogeneous and homogeneous catalysis, biocatalysis, asymmetric catalysis and photocatalysis.	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
	Practicals:	Synthesis of 4-methyl-7- hydroxycoumarin by condensation of resorcinol with ethyl acetoacetate (Method 2: repeat)	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8): Applied Organic Chemistry
	Practicals:	Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides).	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC11: Chemistry04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo - hydrocarbons	B. Sc. (P)- Life Science, III-Year,	UPC- 42177926 CHEMISTRY – DSE-12 Course

		and carbohydrates (Including Derivative preparation) _Unknown compound experiments	Semester-VI	Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
		Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, carbonyl compounds and esters) 2.Saponitification value of an oil.3. Iodine value of an oil	B.Sc. CHEMISTRY (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-XI LAB: Organic Chemistry IV
May	Theory:	personal hygiene products: Antiperspirants and deodorants, oral hygiene products, lavours and essential	B.Sc. Life sciences, III Year, Semester VI (Batch-B)	CHEMISTRY –SEC-10 Course Title: Chemistry of Cosmetics and Perfumes
		Introduction, classification, structure, nomenclature and uses. Preparation and properties of the following heterocyclic compounds with reference to electrophilic and nucleophilic substitution: thiophene, and pyridine	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 10: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles
		• Green energy and sustainability. • Real-time analysis for pollution prevention. • Prevention of chemical accidents, designing greener processes, inherent safer design, principle of ISD "What you don't have cannot harm you", greener alternative to Bhopal Gas Tragedy (safer route to carbaryl) and Flixborough accident (safer route to cyclohexanol) subdivision of ISD, minimization, simplification, substitution, moderation and limitation	B.Sc. CHEMISTRY (Hons.) II Year, Semester IV	Green Chemistry
	Practicals:	Repeat Practical (As per student demand)	B. Sc. (H) Chemistry II Yr, Semester IV	(DSE-8):Applied Organic Chemistry
	Practicals:	Systematic qualitative analysis and preparation of suitable crystalline derivative (carboxylic acids, carbonyl, alcohols, phenols, amines (1°, 2°, 3°) and amides).	B. Sc. (P)- Life Science, II-Year, Semester-IV	UPC- 2172512401 DSC 11: Chemistry 04- Chemistry of Carboxylic Acids & their Derivatives, Amines and Heterocycles

	Practicals:	Systematic qualitative analysis of organic compounds possessing monofunctional groups: amide, amines, halo - hydrocarbons and carbohydrates (Including Derivative preparation) _Unknown compound experiments	B. Sc. (P)- Life Science, III-Year, Semester-VI	UPC- 42177926 CHEMISTRY – DSE-12 Course Title: Organometallics, Bioinorganic Chemistry, Polynuclear Hydrocarbons and UV, IR Spectroscopy
	Practical s:	Any pending work	B.Sc. CHEMISTR Y (Hons.) II nd Year, Semester IV	CHEMISTRY PRACTICAL –CC-XI LAB: Organic Chemistry IV



Signature of Teacher



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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Neelam Kumari
Semester: II/IV/VI

Department: CHEMISTRY

Month		Topics	Course	Paper Code/Name
January	Theory:	Preparation: Oxidation reactions of alcohols, aldehydes and ketones, Acidic and alkaline hydrolysis of esters: Hell Volhard, Zelinsky Reaction	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-A)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Theory	Preparation: Oxidation reactions of alcohols, aldehydes and ketones, Acidic and alkaline hydrolysis of esters: Hell Volhard Zelinsky Reaction	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-B)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Theory	Unit I: Cosmetics- Definition, History, Classification, Ingredients, Nomenclature,	B.Sc. (P) Life Sciences, III Year, Sem VI	Chemistry of Cosmetics and Perfumes
	Practical	1. Talcum powder. 2. Shampoo. 3. Enamels	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Practical	1. Acetylation of any one of the following compounds: amines (aniline, o-, m-, p-toluidines and o-, m-, p-anisidine) and phenols (β -naphthol, salicylic acid) by any one method: i. Using conventional method ii. Using green approach	B.Sc. CHEMISTRY (Hons.) I st Year, Semester II	CHEMISTRY PRACTICAL – CC-V LAB: Organic Chemistry II
	Practical	Qualitative analysis and preparation of suitable derivatives	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-III)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Practical	Development of fingerprint through Conventional method	SEC	Forensic Chemistry
February	Theory	Carboxylic acid derivatives (aliphatic): Preparation: Acid chlorides, anhydride, esters and amides from acids and their interconversion Claisen Condensation,	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-A)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles

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	Theory	Carboxylic acid derivatives (aliphatic): Preparation: Acid chlorides, anhydride, esters and amides from acids and their interconversion Claisen Condensation,	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-B)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Theory	Unit 1: Cosmetics Regulation Unit 2: Face Preparation: Structure of skin, Face powder,	B.Sc. (P) Life Sciences, III Year, Sem VI	Chemistry of Cosmetics and Perfumes
	Theory	Definition of green chemistry and how it is different from conventional chemistry and environmental chemistry. * Need of green chemistry	BSc, 2nd Year	GE-4, Green Chemistry
	Practical	Face cream. Nail polish and nail polish remover. Hand wash	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Practical	1. Benzoylation of one of the following amines (aniline, o-, m-, p-toluidines and o, m-, p-anisidine) or one of the following phenols (β -naphthol, resorcinol, p-cresol) by Schotten-Baumann reaction. 2. Bromination of acetanilide/aniline/phenol by anyone of the following: a) Green method b) Conventional method 3. Nitration of Nitrobenzene/chlorobenzene/ phenols.	B.Sc. CHEMISTR Y (Hons.) I st Year, Semester II	CHEMISTRY PRACTICAL -CC-V LAB: Organic Chemistry II
	Practical	Qualitative analysis and preparation of suitable derivatives	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-III)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Practical	Development of fingerprint through Chemical method	SEC	Forensic Chemistry
March	Theory:	Reactions: Relative reactivities of acid derivatives towards nucleophiles, Reformatsky reactions, Perkin Condensation	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-A)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles

	Theory	Reactions: Relative reactivities of acid derivatives towards nucleophiles, Reformatsky reactions, Perkin Condensation	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-B)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Theory	Unit 2: Compact powder, Talcum powder.	B.Sc. (P) Life Sciences, III Year, Sem VI	Chemistry of Cosmetics and Perfumes
	Theory	Importance of green chemistry in- daily life, Industries and solving human health problems (four examples each). A brief study of Green Chemistry Challenge Awards (Introduction, award categories and study about five last recent awards).	BSc, 2nd Year	GE-4, Green Chemistry
	Practicals:	Hand sanitizer Body lotion Soap	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Practicals:	1.Oxidation of benzyl alcohol to benzoic acid 2.Estimation of the given sample of phenol/amine by: a)Acetylation b) Bromate-Bromide method	B.Sc. CHEMISTRY (Hons.) I st Year, Semester II	CHEMISTRY PRACTICAL –CC-V LAB: Organic Chemistry II
	Practicals	Qualitative analysis and preparation of suitable derivatives Benzoylation of Aniline and Phenols	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-III)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
		Phenolphthalein test for trap cases TLC of amino acid	SEC	Forensic Chemistry
April	Theory	Active methylene compounds: Keto enol tautomerism. Preparation and synthetic applications of ethyl acetoacetate Class Test and Assignment	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-A)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Theory	Active methylene compounds: Keto enol tautomerism. Preparation and synthetic applications of ethyl acetoacetate Class Test and Assignment	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-B)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles

	Theory	Unit 6: Personal hygiene products: Antiperspirants and deodorants, Class Test and Assignment	B.Sc. (P) Life Sciences, III Year, Sem VI	Chemistry of Cosmetics and Perfumes
	Theory	Unit 3: The following Real-world Cases in green chemistry should be discussed: Surfactants for carbon dioxide – replacing smog producing and ozone depleting solvents with CO ₂ for precision cleaning and dry cleaning of garments. Designing of environmentally safe marine antifoulant. Class Test and Assignment	BSc, 2nd Year	GE-4, Green Chemistry
	Practicals	Tooth powder Tooth paste	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Practicals:	1. Functional group tests for alcohols, phenols, carboxylic acids, phenols, carbonyl compounds, esters.	B.Sc. CHEMISTRY (Hons.) I st Year, Semester II	CHEMISTRY PRACTICAL –CC-V LAB: Organic Chemistry II
	Practical	Qualitative analysis and preparation of suitable derivatives Acetylation of Aniline and Phenols	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-III)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Practical	To check the alcohol presence in different liquor Identification of Handwriting Individual Characteristics Study of Disguise in Handwriting	SEC	Forensic Chemistry
May	Theory	Revision of Unit 1 and solving past year question papers	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-A)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Theory	Revision of Unit 1 and solving past year question papers	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles

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	Theory	Unit 6: oral hygiene products, flavours and essential oils Revision and PYQs	B.Sc. (P) Life Sciences, III Year, Sem VI	Chemistry of Cosmetics and Perfumes
	Theory	Rightfit pigment: Synthetic azo pigments to replace toxic organic and inorganic pigments. An efficient, green synthesis of a compostable and widely applicable plastic (polylactic acid) made from corn. Revision and PYQs	BSc, 2nd Year	GE-4, Green Chemistry
	Practicals	Any Pending Work	B. Sc. (P) Life Sciences III Year, Semester VI	Chemistry of Cosmetics and Perfumes
	Practicals	Any Pending Work	B.Sc. CHEMISTRY (Hons.) I st Year, Semester II	CHEMISTRY PRACTICAL –CC-V LAB: Organic Chemistry II
	Practicals	Any Pending Work	B.Sc. (P) Life Sciences II Year, Semester IV (Batch-III)	DSC 11 (Chemistry-IV) Chemistry of Carboxylic acids & derivatives, Amines and Heterocycles
	Practical	Any Pending Work	SEC	Forensic Chemistry

Teacher Signature

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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Meena Bisht

Department: CHEMISTRY

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory:	Origin of spectra, interaction of radiation with matter, fundamental laws of spectroscopy and selection rules	B.Sc. (H) Chemistry, III Year, Semester VI (Batch-B)	DSE-4 Analytical Methods in Chemistry
	Theory	Definitions, Scope and Need of forensic science, Ethics in forensic science, History of forensic science, Basic principles of forensic science, Organizational structure of forensic science laboratories, Different branches in forensic science	Skill Enhancement Courses (SEC)	Forensic Chemistry
	Practical	Perform the following potentiometric titrations: 1.Strong acid vs. strong base	B.Sc. (H) Chem SEM-IV	DSC-12, Physical Chemistry IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practical	Determination water equivalent of calorimeter.	B.Sc. (H) Chem SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Practical	Development of fingerprint through Conventional method	SEC	Forensic Chemistry
February	Theory	UV-Visible Spectrometry: Basic principles of instrumentation (choice of source, monochromator and detector) for single and double beam instrument; Transmittance. Absorbance and Beer-Lambert law. Basic principles of quantitative analysis: estimation of metal ions from aqueous solution, geometrical isomers, keto-enol tautomers.	B.Sc. (H) Chemistry, III Year, Semester VI	DSE-4 Analytical Methods in Chemistry
	Theory	Definition, History of fingerprint identification, Fingerprint as forensic evidence, Visible Finger marks, Latent Finger marks, ten-digit classification, Methods of Development	SEC	Forensic Chemistry  प्रधानाचार्य Principal श्री. वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-2

		of latent fingerprints using conventional methods–Powdering Methods of development of latent fingerprint using chemical method		
	Practical	Perform the following potentiometric titrations: 2. Weak acid vs. strong base 3. Dibasic acid vs. strong base 4. Mixture of strong and weak acid vs strong base	B.Sc. (H) Chem SEM-IV	DSC-12, Physical Chemistry IV Electrochemical Cells, Chemical Kinetics and Catalysis
	Practical	Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide (c) Determination of the enthalpy of ionization of ethanoic acid. (d) Determination of integral enthalpy (endothermic and exothermic) solution of salts.	B.Sc. (H) Chem SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Practical	Development of fingerprint through Chemical method	SEC	Forensic Chemistry
March	Theory:	Theory of thermogravimetry (TG) and basic principle of instrumentation of thermal analyser. Techniques for quantitative estimation of Ca and Mg from their mixture. ASSIGNMENT GIVEN	B.Sc. (H) Chemistry, III Year, Semester VI	DSE-4 Analytical Methods in Chemistry
	Theory	Automated Fingerprint identification system (AFIS), Poroscopy and Edgescopy, Scope & significance of Forensic Chemistry, Types of cases/exhibits received for analysis. Trap Cases: Collection, and Preliminary analysis of evidence in trap cases. Dyes: Scope & Significance of dyes in crime investigation, analysis of ink by TLC and UV visible spectrophotometry. ASSIGNMENT GIVEN	SEC	Forensic Chemistry
	Practicals:	1. Acid hydrolysis of methyl acetate with hydrochloric acid. 2. Saponification of ethyl acetate	B.Sc. (H) Chem SEM-IV	DSC-12, Physical Chemistry V Electrochemical Cells, Chemical Kinetics and Catalysis

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	Practicals:	(e) Determination of integral enthalpy (endothermic and exothermic) solution of salts. (f) Determination of basicity of a diprotic acid by the thermochemical method in terms of the changes of temperatures observed in the graph of temperature versus time for different additions of a base. Also calculate the enthalpy of neutralization of the first step.	B.Sc. (H) Chem SEM-II	DSC-6: Physical Chemistry – II Chemical Thermodynamics and its Applications
	Practicals	Phenolphthalein test for trap cases TLC of amino acid	SEC	Forensic Chemistry
April		On maternity leaves from 21st Feb 2024.		



Teacher Signature



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Mrs. Sunita Chhabra

Department: Commerce

Semester: 6th 2023-24

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JANAURY	Theory:	Communication process, AIDA model, advertising – importance, types and objectives, DAGMAR approach, Audience selection.	B.Com. Sem VI	Paper BC 6.3 (A) B.Com. Sem VI Advertising, Personal selling and Salesmanship
FEBRAURY	Theory:	Methods of setting advertising budget, Advertising appeals, Advertising copy: Elements of print and broadcast advertising copy, Types of media: Merits and Demerits, media scheduling.	B.Com. Sem VI	Paper BC 6.3 (A) B.Com. Sem VI Advertising, Personal selling and Salesmanship
MARCH	Theory:	Advertising agency: Roles and types, Evaluating communication sales effect, Pre and Post testing Techniques, Concept of personal selling and salesmanship, personal selling situations, Qualities of a Good Sales Person, types of salespersons, Role of Personal selling in CRM, Personal selling process – Prospecting, Pre approach, Approach.	B.Com. Sem VI	Paper BC 6.3 (A) B.Com. Sem VI Advertising, Personal selling and Salesmanship
	Assignment:	Unit 1		
APRIL	Theory:	Personal selling process – Presentation and	B.Com. Sem VI	Paper BC 6.3 (A) B.Com. Sem VI Advertising,


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		Demonstration, Handling of objections, Closing the sale, Follow up,		Personal selling and Salesmanship
	Test:	Unit 2 and 5		

MAY	Theory:	Carrer Opportunities in selling, Measures for making selling as an attractive career, Buying Motives. “Revision Of Syllabus”	B.Com. Sem VI	Paper BC 6.3 (A) B.Com. Sem VI Advertising, Personal selling and Salesmanship



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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mrs. Sunita Chhabra

Department: Commerce

Semester: 2th 2023-24

Month		Topics	Course	Paper Code/Name
January	Theory	1. Human Resource Management: Basic concepts and significance of HRM, Organization of HR Department, Role and functions of HR Manager, Status and competencies of HR Manager, HR Policies. Emerging issues in HRM Empowerment, Workplace diversity, Downsizing, VRS, Work life balance and work from home.	B.Com.Hons 2 th Semester	B.Com. Semester II DSC-2.3 Human Resource Management
	Tutorials	1. What do you mean by HRM and define 5 characteristics. 2. Difference between HRM and Personnel Management. 3. Explain in brief operative functions of HRM.	B.Com.Hons 2 th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Continuous Assessment	Group Projects and Quiz. Presentations		
February	Theory	Procurement of Human Resource: Human Resource Planning- Quantitative and Qualitative dimensions: Job analysis – job description and job specification; Recruitment – concept and sources; selection – concept and process; tests and interview; placement induction.	B.Com.Hons 2 th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Tutorials	1. Briefly explain the organization structure of HR deptt. 2. What is job analysis? 3. What are the sources of recruitment?	B.Com.Hons 2 th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Assignment	Unit 1: Emerging Issues in HRM	B.Com.Hons 2 th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management

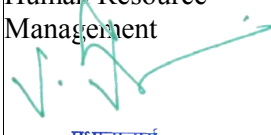
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March	Theory	Socialization, Employee Retention. Training And Development: Concept and importance, Role specific and competency-based training, Apprenticeship, understudy, Job rotation, vestibule training, case-study, role playing, sensitivity training, in-basket, management games, conference and seminar, coaching and mentoring, management development program, training process outsourcing.	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
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			B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Tutorials	Unit 1 and 2	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Continuous Assignment	Group Project Work and Presentations.	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
April	Theory	Performance Appraisal System: Nature and objective, Process and methods, Performance management, Techniques of performance appraisal, Potential appraisal and employee counseling; Job changes – transfers and promotions, Compensation concept and policies, Types of compensation: Base and supplementary compensation, Individual group and organization incentive plans, Fringe benefits, Performance linked compensation, Employee Stock option, Pay band compensation system and job evaluation. Employee Health and Safety; Employee welfare; Social Security; Grievance handling and redressal.	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Tutorials	Unit 3 and 4	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
	Continuous Assessment	Quiz from Unit 2, 3 and 4. Group project work and Presentation.		

May	Theory	Employer-employee relation, Industrial disputes, Causes and settlement machinery, e-HRM, Human resource information system (HRIS), Impact of HRM practices on organizational performance, HR Audit, Contemporary issues in HRM. Revision Of Syllabus.	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management  प्रधानाचार्य Principal श्री. वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21
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Tutorials	Unit 4 and 5	B.Com.Hons 2th Semester	B.Com. Semester VI DSC-2.3 Human Resource Management
Continuous Assessment	Group Project Work and Presentations.		

Sunita Chhabra



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SRI VENKATESWARA COLLEGE
(University of Delhi)
Semester-Wise Teaching Plan
Session : (2023-24)
(Even-Semester-2024)

Name of the Faculty: Dr. Mamta Arora
Designation: Associate Professor
Department: Commerce
Course: B. Com (H)/B.Com
Semester: IV/VI

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
January 2024	Theory	Unit 1: Descriptive Statistics Measures of Central Tendency: Concept and properties of averages including Arithmetic mean, Median and Mode. Measures of Dispersion: An overview of Range, Quartile Deviation and Mean Deviation; Standard deviation; Variance and Coefficient of variation.	B.Com. (Hons) –IV	DSC 4.1 Business Statistics
	Tutorial	Discussion on types of audit, audit planning, internal control system, vouching	B.Com. (Hons) –VI	BCH 6.1 – Auditing and Corporate Governance
February 2024	Theory	Moments: Computation and significance; Skewness; Kurtosis. Unit 2: Probability and Probability Distributions Theory and approaches to probability; Probability Theorems: Addition and Multiplication; Conditional probability and Bayes' Theorem. Expectation and variance of a random variable. Discrete Probability distributions: Binomial	B.Com. (Hons) –IV	DSC 4.1 Business Statistics
	Tutorial	Verification of assets and liabilities, rights, duties and liabilities of auditor, Auditor's report, corporate governance theories and models	B.Com. (Hons) –VI	BCH 6.1 – Auditing and Corporate Governance
	Assignment	Unit I	B.Com. (Hons) –IV	DSC 4.1 Business Statistics
March 2024	Theory	Poisson (Properties and Applications). Normal distribution: Properties of Normal curve; Computation of Probabilities and Applications. Unit 3: Simple Correlation and Regression Analysis (11 hours) Correlation Analysis: Meaning and types of Correlation; Correlation Vs Causation; Pearson's coefficient of correlation (computation and properties); Probable and standard errors; Rank correlation. Regression Analysis: Principle of least squares and regression lines; Regression equations and estimation;		
	Tutorial	Major corporate failures, leadership, committees and regulatory framework	B.Com. (Hons) –VI	BCH 6.1 – Auditing and Corporate Governance
	Test	Unit I and Unit II	B.Com. (Hons) –IV	DSC 4.1 Business Statistics

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April 2024	Theory	Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate. Unit 4: Time Series Analysis (7 hours) Time Series Data; Components of time series; Additive and Multiplicative models. Trend analysis; Fitting of trend using principle of least squares – linear and second-degree parabola. Shifting of Origin and Conversion of annual linear trend equation to quarterly/monthly basis and vice-versa.	B.Com. (Hons) –IV	DSC 4.1 Business Statistics
	Tutorial	Discussion on business ethics and corporate social responsibility	B.Com. (Hons) –VI	BCH 6.1 – Auditing and Corporate Governance
May 2024	Theory	Unit 5: Index Numbers Meaning and uses of index numbers. Construction of Index numbers: Methods of Laspeyres, Paasche and Fisher's Ideal index. Construction and Utility of Consumer Price Indices; BSE SENSEX, and NSE NIFTY.	B.Com. (Hons) –IV	DSC 4.1 Business Statistics
	Tutorial	Revision of all topics	B.Com. (Hons) –VI	BCH 6.1 – Auditing and Corporate Governance

Mamta Arora

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
EVEN SEMESTER 2024

Name of the Faculty: Dr. Shruti Mathur

Department: Commerce

Semester: VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Unit 1: The Investment Environment - The investment decision process, Types of Investments – Commodities, Real Estate and Financial Assets, the Indian securities market, the market participants and trading of securities, security market indices, sources of financial information	B.Com H Sem VI	DSE-Fundamentals of Investment
	Tutorials	1). Discussion on IPO/FPO, Book building, Understanding SENSEX, NIFTY.	B.Com (H) Sem VI	DSE: Fundamentals of Investment
FEBRUARY	Theory:	Unit 1: The Investment Environment - Concept of return and risk, Impact of Taxes and Inflation on return Unit 2: Fixed Income Securities - Bond features, types of bonds, estimating bond yields, Bond Valuation, Bond Value Theorems, Bond Duration, types of bond risks, default risk and credit rating.	B.Com H Sem VI	DSE: Fundamentals of Investment
	Tutorials:	Practice numerical on calculation of risk and return Numerical and Presentations: Calculating Bond Yields . Valuation and duration	B.Com H Sem VI	DSE: Fundamentals of Investment
	Assignment:	Assignment & presentation on any topic selected by the student from the syllabus	B.Com H Sem VI	DSE: Fundamentals of Investment

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MARCH	Theory:	Unit 3: Approaches to Equity Analysis Valuation of Equity Shares using various models. Introductions to Fundamental Analysis Technical Analysis and Efficient Market Hypothesis, Unit 4: Portfolio Analysis and Financial Derivatives: Mutual funds. Introduction, evolution, types, structure. NAV, return and expenses	BCom H Sem VI	DSE: Fundamentals of Investment
	Tutorials:	Analyzing the company's performances using various ratios and historical records. Numericals on Equity Valuation. Discussion and numericals on MF	BCom H Sem VI	DSE: Fundamentals of Investment
	<u>Test</u>	Unit 1, 2 and 3	BCom H Sem VI	DSE: Fundamentals of Investment
APRIL	Theory:	Unit 4: Portfolio Management and Financial Derivatives: Portfolio and Diversification, Portfolio Risk and Return. Introduction to Financial Derivatives- Forward, Futures & Options, Financial Derivatives Markets in India.	BCom H Sem VI	DSE: Fundamentals of Investment
	Tutorials:	1) Portfolio Risk and Return. Including Markowitz model, CAPM etc Discussion on Derivatives and payoffs	BCom H Sem VI	DSE: Fundamentals of Investment
	RETEST	Unit 1, 2 and 3	BCom H Sem VI	DSE: Fundamentals of Investment
MAY	Theory:	Unit 5: Investor Protection – Role of SEBI & stock exchanges in investor protection, investor grievances and their redressal system, insider trading, investors' awareness and activism.	BCom H Sem VI	DSE: Fundamentals of Investment  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-21

	Tutorials	Revision of all topics	BCom H Sem VI	DSE: Fundamentals of Investment
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Shruti Mathur

DR SHRUTI MATHUR
ASSOCIATE PROFESSOR
DEPARTMENT OF COMMERCE

V. B.

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Principal
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
EVEN SEMESTER 2024

Name of the Faculty: Dr. Shruti Mathur

Department: Commerce

Semester : VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Unit 1: The Investment Environment - The investment decision process, Types of Investments – Commodities, Real Estate and Financial Assets, the Indian securities market, Investment, speculation and gambling.	B.Com Sem VI	DSE-Fundamentals of Investment
	Tutorials	Discussion on theory topics	B.Com Sem VI	DSE: Fundamentals of Investment
FEBRUARY	Theory:	Unit 1 : Risk and Return Sources of financial information, The market participants and trading of securities, security market indices, Concept of return and risk	B.Com Sem VI	DSE: Fundamentals of Investment
	Tutorials:	IPO/FPO, Book building. Understanding SENSEX, NIFTY. Practice numerical on calculation of risk and return analyzing the company's ratios	B.Com Sem VI	DSE: Fundamentals of Investment
	<u>Assignment:</u>	Assignment on any topic selected by the student from the syllabus	B.Com Sem VI	DSE: Fundamentals of Investment


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MARCH	Theory:	Unit 1: Risk and Return Impact of Taxes and Inflation on returns Unit 2: Fixed Income Securities - Bond features, types of bonds, estimating Bond Valuation,	B.Com Sem VI	DSE: Fundamentals of Investment
	Tutorials:	Numericals on Bond Valuation Impact of taxes and inflation on returns Valuation models of Equity	B.Com Sem VI	DSE: Fundamentals of Investment
	Test	Unit 1, 2 and 3	B.Com Sem VI	DSE: Fundamentals of Investment
APRIL	Theory:	Unit 2 bond yields, and Bond Value Theorems. types of bond risks,	B.Com Sem VI	DSE: Fundamentals of Investment
	Tutorials:	Discussion on Numerical topics : Bond Yields Portfolio risk and return – Markowitz model and CAPM	B.Com Sem VI	DSE: Fundamentals of Investment
MAY	Theory:	Unit 2: default risk and credit rating.	B.Com Sem VI	DSE: Fundamentals of Investment
	Tutorials:	Numericals on Mutual Funds and Derivatives	B.Com Sem VI	DSE: Fundamentals of Investment

Shruti Mathur

DR SHRUTI MATHUR
ASSOCIATE PROFESSOR
DEPARTMENT OF COMMERCE

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sindhu Mani Bag

Department: Commerce

Semester: II/IV/VI

Month	Type of Class	Topics	Course	Paper Code/Name
January-2024	Theory	1. Meaning and characteristics of a company, Lifting of Corporate Veil; Overview of Administration of Company Law; types of Companies, Including private and public company. 2. Meaning and characteristics of a company, Lifting of Corporate Veil; Overview of Administration of Company Law; types of Companies, Including private and public company. 3. Corporate Governance: Meaning principles and significance of management and corporate governance, Theories and models of corporate governance, Board structure and Independent director, Board committees and their functions, shareholders activism and proxy advisory firms Role of rating agencies, Whistle blowing, class action.	1. B.com (H)IInd sem-A 2. B.Com(P)-II sem-B 3. B.Com (H)-VI sem-B	1. BCH: DSC- 2.2 : Company Laws 2.BCH: DSC- 2.2- Company Laws 3. BCH- 6.1- Auditing & Corporate Governance
	Tutorial	1. allotted topic presented by the students. 2. allotted topic presented by the students. 3. Case Laws present by the students	1.B.com (H)IInd sem-A 2. B.Com(H)-IInd sem-B 3. B.Com (H)-VI sem-B	1. BCH: DSC- 2.2 : Business Laws 2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & Corporate Governance
February - 2024	Theory	1. Types of Company; Government Company, Foreign Company, One person Company, small company, associate company, Dormant company, and producer company, Association not for profit, Illegal association. Formation and Incorporation: Formation of Company, Promoters, their legal positions and pre-incorporation contracts, online registration of a company, Memorandum of Association and its alteration,	1. B.com (H)IInd sem-A	1. BCH: DSC- 2.2 : Company Laws  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		Articles of association and its alteration, Doctrine of Constructive notice, Doctrine of ultra vires and Indoor management. 2. Types of Company; Government Company, Foreign Company, One person Company, small company, associate company, Dormant company, and producer company, Association not for profit, Illegal association. Formation and Incorporation: Formation of Company, Promoters, their legal positions and pre-incorporation contracts, online registration of a company, Memorandum of Association and its alteration, Articles of association and its alteration, Doctrine of Constructive notice, Doctrine of ultra vires and Indoor management. 3. Corporate Governance Framework in India: Initiative and reform- Confederation of Indian Industry (CII)1997, Kumara Managalam Birla(1999), N.R.Narayana Murthy Committee(2005) and Udaya Kotak Committee (2017). Regulatory Framework: Relevant provisions of Companies ACT-2013, SEBI; Listing Obligations and disclosure requirements regulations (LODR) 2015. Corporate Governance in public sector Banking and Non Banking Financial Institutions.	2. B.Com(H)-Ist sem-A 3. B.Com (H)-Vith sem-B	2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & CG.
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1.B.com (H)IInd sem-A 2. B.Com(P)-IInd sem-B 3. B.Com (H)-VIsem-B	1. 1. BCH: DSC- 2.2 : CompanyLaws 2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & CG
March-2024	Theory	1. Share Capital; Prospectus, shelf and redherring prospectus, Mis	1. B.com (H)IInd sem-A	1. BCH: DSC- 2.2 : Company Laws

		statement in prospectus, Book building, allotment and forfeiture of shares, sweat equity, ESOPS, Bonus Issues, and further issue of shares, buyback, split of shares and provisions regarding buyback, transfer and transmission of shares, Demat system. 2.Share Capital; Prospectus, shelf and redherring prospectus, Mis statement in prospectus, Book building, allotment and forfeiture of shares, sweat equity, ESOPS, Bonus Issues, and further issue of shares, buyback, split of shares and provisions regarding buyback, transfer and transmission of shares, Demat system. 3. Major Corporate Governance Failure and International Code; BCCI (UK), MAX WELL Communication (UK), Enron (USA), Anderson world wide (USA), Vivendi (France).	2. B.Com(P)- IInd sem-A 3. B.Com (H)- Vith sem-B	2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & CG.
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1. B.com (H)IInd sem-A 2. B.Com(P)- IInd sem-B 3. B.Com (H)- Vith sem-B	1. BCH: DSC- 2.2 : Company Laws 2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & CG.
	Internal Test Exam	Conduct Internal examination (Notification of Conducting Internal Exam)	1. B.com (H)IInd sem-A 2. B.Com(H)- IInd sem-B 3. B.Com (H)- VI sem-B	1. BCH: DSC- 2.2 : Company Laws. 2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & CG.
April-2024	Theory	1. Management and Meetings: Directors, legal positions, disqualifications, Director Identification Number(DIN), Classification of directors,- additional, alternate and casual directors, women director, Independent director, small shareholder's directors,	1. B.com (H) IInd sem-A	1. BCH: DSC- 2.2 : Company Laws  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		appointment and removal of directors, powers and duties; Key managerial personnel(KMP), Board meetings, shareholders meeting,, AGM and EGM, convening and conduct of meeting, requisite of a valid meeting, Resolutions (virtual meeting), postal ballot, e-voting. Dividend, Audit and Winding up: provisions relating to payment of dividend, 2. Management and Meetings: Directors, legal positions, disqualifications, Director Identification Number(DIN), Classification of directors,- additional, alternate and casual directors, women director, Independent director, small shareholder's directors, appointment and removal of directors, powers and duties; Key managerial personnel(KMP), Board meetings, shareholders meeting,, AGM and EGM, convening and conduct of meeting, requisite of a valid meeting, Resolutions (virtual meeting), postal ballot, e-voting. Dividend, Audit and Winding up: provisions relating to payment of dividend, 3. Satyam Computer Services Limited, Lehman brothers, Kingfisher airlines, PNB HEISTS and IL&FS GROUP crisis, common governance problems noticed in various corporate codes and standard on corporate governance, Sir Adrian Cadbury committee-1992, (UK),	2. B.Com(H)- IInd sem-A 3. B.Com (H)- VIth sem-B	2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1 Auditing & CG.
	Tutorials	1. Case laws present by the students. 2. Case laws present by the students. 3. Case Laws present by the students	1. B.com (H)IInd sem-A 2. B.Com(H)- IInd sem-B 3. B.Com (H)- Vith sem-B	1. BCH: DSC- 2.2 : Company Laws 2. BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & CG.

	Internal Exam	Internal Exam Conducted and evaluate. Finalisation of Internal Assessment	B.Com. (H) – IInd sem-A B.com(H)-IInd sem B B.com(H)-VIth sem B	1. BCH- DSC 2.2- Company Laws. 2. BCH- DSC 2.2- Company Laws. 3. BCH- 6.1- Auditing & CG.
May-2024	Theory	1.Dividend, Audit and Winding up: Company audit, auditor's qualifications and disqualifications, auditor's appointment, rotation and removal, secretarial audit, Winding Up: concepts and modes of winding up,, provisions of winding up under Insolvency and Bankruptcy Code-2016. 2.Dividend, Audit and Winding up: Company audit, auditor's qualifications and disqualifications, auditor's appointment, rotation and removal, secretarial audit, Winding Up: concepts and modes of winding up,, provisions of winding up under Insolvency and Bankruptcy Code-2016. 3.OECD principle of corporae governance and Sarbanes Oxley (SOX) Act 2002 (USA).	1. B.com (H)IInd sem-A 2. B.Com(H)-IInd sem-B 3. B.Com (H)-Vith sem-B	1. BCH: DSC- 2.2 : Company Laws 2.BCH: DSC- 2.2- Company Laws 3. BCH: 6.1- Auditing & C G

Signature:




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SRI VENKATESWARA COLLEGE

University of Delhi

Semester-Wise Teaching Plan (2023-24) (Even-Semester)

Name of the Faculty: Dr. Vinod Kumar

Designation: Assistant Professor

Department: Commerce

Course: B. Com (H)/B.Com

Semester: IV

Session: 2023-24 (18th January 2024 to 11th May 2024)

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
January 2024	Theory/ Tutorial	Unit 1: Introduction to International Business - Globalization - concept, significance and impact on international business; - International business contrasted with domestic business; - Complexities of international business; - Internationalization stages and orientations; - Modes of entry into international businesses.	B.Com. – IV B.Com. (Hons) – IV	B.Com. DSC 4.3 International Business B. Com Hons. DSC 4.3 International Business
February 2024	Theory/ Tutorial	Unit 2: International Business Environment - Role of political and legal systems in international business; - Cultural environment of international business (including Hofstede's dimensions of culture); - Implications of economic environment for international business.	B.Com. – IV B.Com. (Hons) – IV	B.Com. DSC 4.3 International Business B. Com Hons. DSC 4.3 International Business
	Assignment	Topics were allotted for making the assignments.		
March 2024	Theory/ Tutorial	Unit 3: International Trade and BOP - Theories of international trade – - Theory of Absolute Advantage theory, - Theory of Comparative Advantage, - Factor Proportions theory and Leontief paradox, - Product Life Cycle theory, - Theory of National Competitive Advantage; - Instruments of trade control. Balance of payments (BOP) statement and its components	B.Com. – V B.Com. (Hons) – III	B.Com. DSC 4.3 International Business B. Com Hons. DSC 4.3 International Business  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

April 2024	Theory/ Tutorial	Unit 4: Regional Economic Integration and International Economic Organizations - Forms of regional economic integration; - Integration efforts amongst countries in Europe, North America and Asia: EU, USMCA, SAARC and ASEAN; - Cost and benefits of regional economic integration. - International Economic Organisations: WTO- functions, structure and scope; World Bank and IMF. Unit 5: International finance and contemporary issues in IB - Types of FDI - Greenfield investment, Mergers & Acquisition, strategic alliances; - Benefits and drawbacks of FDI. - Overview of exchange rate systems. - Contemporary issues in international business: Outsourcing and its potential for India; - International business and sustainable development.	B.Com. – V B.Com. (Hons) – III	B.Com. DSC 4.3 International Business B. Com Hons. DSC 4.3 International Business
	Test	Test would be conducted on the concerned subject.	B.Com. – V	B.Com. DSC 4.3 International Business
May 2024	Theory/ Tutorial	Revision of all Units	B.Com. (Hons) – III	B. Com Hons. DSC 4.3 International Business

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SRI VENKATESWARA COLLEGE
(University of Delhi)
Semester-Wise Teaching Plan
Session : (2023-24)
(Even-Semester-2024)

Name of the Faculty: Dr. Pooja Jain

Designation: Assistant Professor

Department: Commerce

Course: B. Com (H)/B.Com Semester: IV

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
January 2024	Theory	Unit 1: Introduction Meaning, scope, objectives and advantages of cost accounting; Difference between financial and cost accounting. Cost concepts and classifications, Overview of elements of cost and Cost sheet. Role of a cost accountant in an organisation. Introduction to Cost Accounting Standards & Cost Accounting Records and Audit Rules Unit IV: Methods of Costing : Unit costing and Job costing	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
	Tutorial	• Practical problems will be discussed related to following topics Cost Sheet and Job Costing. • Continuous Assessment will be undertaken on weekly basis based on the topics discussed in the class and tutorials. • Group Presentations will be taken as part of Continuous Assessment	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
February 2024	Theory	Unit II: Elements of Cost: Material and Labour <i>Materials:</i> Material/inventory control techniques. Accounting and control of purchases, storage and issue of materials. Inventory systems, Methods of pricing of materials issues — FIFO, LIFO, Simple Average, Weighted Average, Replacement, Standard Cost; Physical Verification, Accounting treatment and control of losses— Wastage, scrap, spoilage and defectives <i>Labour:</i> Accounting and Control of labour cost. Time-keeping and time-booking. Concept and treatment of idle time, over time, labour turnover and fringe benefits. Methods of wage payment and Incentive schemes- Halsey, Rowan, Taylor's differential piece wage.	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting

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	Tutorial	• Practical problems will be discussed related to Materials and Labour. • Continuous Assessment will be undertaken on weekly basis based on the topics discussed in the class and tutorials. • Group Presentations will be taken as part of Continuous Assessment	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
	Assignment	Assignment from Unit I and II	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
March 2024	Theory	Unit III: Elements of Cost: Overheads Classification, allocation, apportionment and absorption of overheads, Under- and over- absorption; Capacity Levels and Costs; Treatments of certain items in costing like interest on capital, packing expenses, bad debts, research and development expenses. Unit IV: Methods of Costing: Service costing (only transport).;	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
	Tutorial	• Practical problems will be discussed related to Overheads and Service costing • Continuous Assessment will be undertaken on weekly basis based on the topics discussed in the class and tutorials. • Group Presentations will be taken as part of Continuous Assessment	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
April 2024	Theory	Unit IV: Methods of Costing Contract costing, Process costing (including process losses, valuation of work-in-progress, joint and by-products). Unit V: Cost Accounting Book-Keeping Systems Integral and non-integral systems; Reconciliation of cost accounting records with financial accounts.	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
	Tutorial	• Practical problems will be discussed related to Methods of Costing and Book Keeping • Continuous Assessment will be undertaken on weekly basis based on the topics discussed in the class and tutorials. • Group Presentations will be taken as part of Continuous Assessment.	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting


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	Test	Class Test will be conducted in the middle of the month from these topics: Unit I and II	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting
May 2024	Theory and Tutorials	Revision of all topics	• B.Com. (Hons) –IV A+B • B.Com. IV A	• DSC 4.2 Cost Accounting • DSC 4.2 Cost Accounting

Pooja Jain

V. B.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Department of Commerce (Year 2023-24)
EVEN SEMESTER TEACHING PLAN (JANUARY-MAY 2023-24)

Name of the Faculty: Ms. Angel Josy Lakra

Department: Commerce

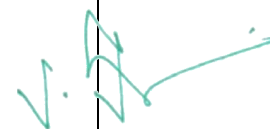
Semester: II/IV

Course: BCOM

Month	Type of Class	Topics	Course	Paper Code/Name
January	Theory	1. DSC: Human Resource Management ✓ Concept, and nature ✓ Role, status, and competencies of HR Manager ✓ HR Policies ✓ HR Evolution ✓ Emerging challenges of HRM: workplace diversity, empowerment, downsizing, VRS, and work-life balance Tutorial: ✓ Practice Case study	B.Com II	DSC 2.3
	Theory	2. DSC: Entrepreneurship & New Venture Planning ✓ Understanding the concept and process of creativity; students exploring within themselves the nature of the creative process; approaches to understanding creativity ✓ Differentiate between invention and innovation ✓ Basics of Entrepreneurship: Evolution of Entrepreneurship; meaning; definition; can entrepreneur be a manager also; types; functions; role in the economic development; entrepreneurial process; prerequisites/traits/characteristics; determinants of entrepreneurship; misconceptions and myths. ✓ Understanding entrepreneurial mindset and skills(creativity, decision making, risk-taking behaviour, networking) and entrepreneurship in different contexts (eg. Social, Cooperative, Commercial, Public, Not for Profit organisations) ✓ Business Groups and Family Business: Concept; Features; Role; Key challenges; Resolving conflicts among family members; Changing orientation of family business in India; What makes Indian family business special? ✓ Creativity and Innovation: creativity; innovation; importance, process of creativity; types of innovation, process of innovation; Innovation and business/role of managers in promoting innovations. Tutorial: ✓ Individual PPT presentation assigned to a few students: Family Business, their philosophy, values, philanthropic activities	B.Com IV	DSC 4.1

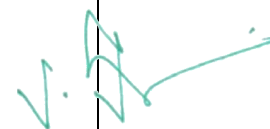

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February	Theory	1. DSC: Human Resource Management ✓ HRP-Quantitative & Qualitative dimensions ✓ Job Analysis-job description and job specification ✓ Recruitment- concept and sources ✓ Selection-concept, meaning, significance, and process ✓ Test and interview ✓ Placement- meaning and purpose ✓ Induction- meaning and purpose ✓ Socialization- meaning and purpose ✓ Retention-why do employees leave, managing retention ✓ Training and development- overview ✓ Concept and significance ✓ Role specific and CBT Tutorial: ✓ Case study assigned to all the students. ✓ Quiz	B.Com II	DSC 2.3
	Theory	2. DSC: Entrepreneurship & New Venture Planning ✓ Dimensions of Entrepreneurship: intrapreneurship, technopreneurship, netpreneurship, international entrepreneurship, ecopreneurship, culture entrepreneurship; social entrepreneurship; women entrepreneurship; Entrepreneurship and new challenges of globalization. ✓ Identifying a specific problem through observation, contemplation, networking and research ✓ Generating ideas for problem solving using mind mapping, brainstorming, focus groups, idea generation tool kit (SCAMPER); morphological analysis, semantics; many other techniques ✓ Sources of Business Ideas: Introduction; Definition of business idea; Prerequisite of convincing business idea; identifying business opportunity. ✓ Feasibility of the study: Introduction; meaning, elements of feasibility analysis ✓ Business Plan: Introduction, meaning, need/significance pitfalls to be avoided while planning/writing a business plan, contents of business plan/project proposal; Sample Business Plan. ✓ Understanding customers/stakeholders and evaluating the business plan through survey/questionnaire/interview/secondary research Tutorial: ✓ Individual PPT presentation assigned to next few students: Types of entrepreneurship reflected in	B.Com Hons V	DSC 4.1



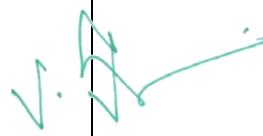
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		different organization practice.		
Month	Type of Class	Topics	Course	Paper Code/Name
March	Theory	1. DSC: Human Resource Management ✓ Training and development methods-apprenticeship; understudy, job rotation, vestibule training, case study, role playing, hands on, shadowing, e-learning, sensitivity training, conferences, seminars, coaching, and mentoring ✓ Management development programs ✓ Training process outsourcing ✓ Performance appraisal-nature, objectives, and process ✓ Performance management ✓ Methods of performance appraisal ✓ Potential Appraisal IA test Tutorial: ✓ Submission of case studies ✓ Case study	B.Com II	DSC 2.3
	Theory	2. DSC: Entrepreneurship & New Venture Planning ✓ Learning through failures of others ✓ Government support for Innovation and Entrepreneurship in India ✓ Designing, prototyping and iteration ✓ Networking and growth strategies ✓ Financing the innovation: pitching and communicating the idea ✓ Sources of finance: crowdfunding, venture capital, equity funds, angel investing, borrowing (including government initiatives, bank and public funded schemes) ✓ Requirement, Availability, and Access to Finance: Reasons for requirement of funds; Factors determining the requirement of capital; Funding Life Cycle; Problems in financing a New Venture ✓ Business Incubators, Angel Investors, Venture Capital, and Private Equity Funds and other sources of finances ✓ Role of Industries/Entrepreneurs Associations: Institutions set up by Government; Industrial Association. ✓ Access to Marketing Assistance: Factors to be considered in market research; Marketing Assistance; Role of Technology; Digital Marketing. IA Test Tutorial: ✓ Individual PPT presentation assigned to next few students: Government innovation for Innovation and Entrepreneurship in India	B.Com IV	DSC 4.1



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		✓ Quiz for all the students ✓ Assignment for all the students: Case studies of ventures that could not sustain		
Month	Type of Class	Topics	Course	Paper Code/Name
April	Theory	1. DSC: Human Resource Management ✓ Employee Counseling-concept and nature, qualities of an effective counselor, need and importance, reasons of counseling, benefits of counseling, types, process, and counseling errors ✓ Job transfer and promotion- concept, difference between the two, and criteria of promotion ✓ Compensation-concept and policies, base and supplementary compensation ✓ Individual, group, and organizational incentive plans ✓ Fringe benefits ✓ Performance linked compensation ✓ ESOP ✓ Pay band compensation system ✓ Job evaluation- objectives, benefits, limitation, job evaluation methods ✓ Employee health and safety; employee welfare, social security ✓ Employer-employee relations; grievance handling and redressal, Industrial disputes, stress free environment, rejuvenation breaks and leisure activities ✓ Emerging horizons, redundant manpower, e-HRM, HRIS IA Assignment: Training tools and practices used in companies. Tutorial: Role play	B.Com II	DSC 2.3
	Theory	3. DSC: Entrepreneurship & New Venture Planning ✓ Business processes: meaning, types, steps in business processes; Challenges related to business process; Technical solution to business process challenges. ✓ Support and Sustainability of Enterprise: meaning of business sustainability; Advantages; Steps for sustainable business/ futuristic outlook for sustainable business. ✓ Resource Mobilization: Attributes to Resource Mobilization, types, importance, and impediments/challenges. ✓ Utilities and Accommodation; Preliminary contracts; Contract management, Start-up Problems. ✓ Managing finance, Understanding Capital structure ✓ Understanding organizational structure	B.Com IV	DSC 4.1


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		✓ Management of Human resource of a new enterprise ✓ Utilities and Accommodation; Preliminary contracts; Contract management, Start-up Problems. Group Assignment for IA: Business Plan Presentation Tutorial: ✓ Individual PPT presentation assigned to rest of the students: Sources of finances		
Month	Type of Class	Topics	Course	Paper Code/Name
May	Theory	1. DSC: Human Resource Management ✓ HR Audit ✓ Emerging job opportunities ✓ Talent Management ✓ Employee burnout ✓ Work life balance ✓ Work from home Tutorial: Quiz Revision	B.Com II	DSC 2.3
	Theory	3. Entrepreneurship Development (DSE) ✓ Setting and scaling up ✓ Entrepreneurial resilience and ongoing creativity ✓ Understanding of Marketing mix ✓ Management of Assets and Liabilities ✓ Relationship Management ✓ Cost Management Group Assignment for IA: Business Plan Presentation Tutorial: Revision	B.Com IV	DSC 4.1



Teacher's Signature



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Department of Commerce (Year 2023-24)

TEACHING PLAN

Name of the Faculty: Mr. Aashish Jain

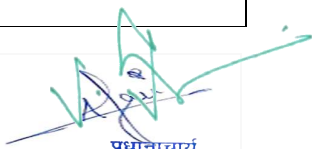
Department: Commerce

Semester II/IV/VI

Month	Type of Class	Topics	Course	Paper Code/Name
January	Theory	Corporate Accounting a) Types of Shares, Issue of Rights and Bonus Shares. Goods & Service Tax & Custom Laws a) Constitutional framework of indirect tax before GST, Concept of VAT, Major defects before GST b) Rationale of GST, Structure of GST, GST Council, GST Network, State Compensation Scheme.	1. B. Com – (H) I Semester-II 2. B. Com (H) - III Semester-VI	1. BCH: DSC – 2.1 Corporate Accounting 2. BCH 6.2: Goods & Service Tax and Custom Laws
February	Theory	Corporate Accounting a) ESOPs, Buy back of shares b) Redemption of Preference Shares, Bonus Issue, Underwriting of Shares c) Issue of Debentures Goods & Service Tax and Custom Laws a) Taxable event – supply of Goods & Services, Place of Supply, Time of Supply, Valuation of Supply, Exemption of Goods & Services. b) Composition Scheme, Classification of Goods & Services, Composite & Mixed Supply	1. B. Com – (H) I Semester-II 2. B. Com (H) – III Semester-VI	1. BCH: DSC – 2.1 Corporate Accounting 2. BCH 6.2: Goods & Service Tax and Custom Laws


Mr. Aashish Jain
Assistant Professor
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March	Theory	Corporate Accounting - Redemption of Debentures in Cash - Redemption of Debentures out of Capital - Corporate Financial Reporting (using live data of Companies) - Valuation of Brand Value - Value of Goodwill Goods & Services Tax and Custom Laws - Eligibility and non-eligibility of taking benefit of ITC, Apportionment of Credit, Blocked Credits, Recovery of excess tax, Transfer of input credits - Payment of Taxes Refund process, TDS, TCS, Reverse charge Mechanism, Job Work	B. Com – (H) I Semester-II B. Com – (H) III Semester-VI	- BCH: DSC – 2.1 Corporate Accounting - BCH 6.2: Goods & Service Tax and Custom Laws
	Assignment	1. Continuous assessment conducted time to time on regular basis: in the classroom and tutorial classes	1. B. Com – (H) I Semester-II	1. BCH: DSC – 2.1 Corporate Accounting
	Test	1. Test conducted on the concerned subject after mid-semester break.	B. Com – (H) I Semester-II B. Com (H) III Semester – VI	- BCH: DSC – 2.1 Corporate Accounting - BCH 6.2: Goods & Service Tax and Custom Laws
April - May	Theory	Corporate Accounting - Value added Statement, Economic Value Added, Market Value and Shareholder Value Added - Amalgamation of Companies - Accounting for different forms of Internal Reconstruction - Financial Statement of Companies: Final A/cs, Cash Flow statement and Ratio Analysis Goods & Service Tax and Custom Laws - Registration under GST, Tax Invoice, Debit & Credit notes, E way Bill, Zero rated supply - Basic concept of Custom Law, Types of Custom Duties - Determining Assessable Value, Rate of Exchange & Rate of Duty - Baggage Rules	B. Com – (H) I Semester-II B. Com (H) – III Semester-VI	- BCH: DSC – 2.1 Corporate Accounting - BCH 6.2: Goods & Service Tax and Custom Laws


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Assistant Professor



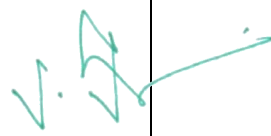
**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

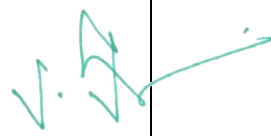
Name of the Faculty: Antima Sharma

Department: Commerce

Semester: II & IV (January 2024-May 2024)

Months		Topics	Course	Paper Code/Name
January 2024	Theory	Unit I: Issue of Rights and Bonus Shares, ESOPs, and Buy-Back of Shares, Issue and Redemption of Preference shares and Debentures, Underwriting of Shares, and debentures.	B.com P- SEM II (A+B)	Corporate Accounting (DSC 2.1)
		Unit I: Meaning, Scope, Advantages of Cost Accounting, difference between Financial Accounting and Cost Accounting, Cost Concept and Classification, CAS 4 & CAS 22.	B.com P- SEM IV (B)	Cost Accounting (DSC 4.2)
	Tutorials	Unit I: Unit 1: Issue of Rights and Bonus Shares, ESOPs, and Buy-Back of Shares, Issue and Redemption of Preference shares	B.com P- SEM II (A+B)	Corporate Accounting (DSC 2.1)


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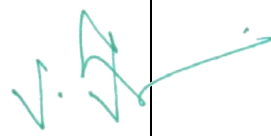
		and Debentures. Unit I: Difference between Financial Accounting and Cost Accounting, Cost Concept and Classification, CAS 4 & CAS 22.	B.com P- SEM IV (B)	Cost Accounting (DSC 4.2)
February 2024	Theory	Unit II: Financial Statements of Companies: Balance Sheet, Profit & Loss, Cash Flow Statements. Unit II: Material: Accounting and Control of Purchases, Storage and Issue of Materials, Techniques of Inventory Control, Methods of Pricing of Material Issue: FIFO, LIFO, Weighted Average Method.	B.com P- SEM II (A+B) B.com P- SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)
	Tutorials	Unit II: Financial Statements of Companies: Balance Sheet, Profit & Loss, Cash Flow Statements.	B.com P- SEM II (A+B)	Corporate Accounting (DSC 2.1)  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-21

		Unit II: Techniques of Inventory Control, Methods of Pricing of Material Issue: FIFO, LIFO, Weighted Average Method.	B.com P- SEM IV (B)	Cost Accounting (DSC 4.2)
	Assignment	Unit I: Redemption of Preference Shares. Unit I: Cost sheet	B.com P- SEM II (A+B) B.com P- SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)
March 2024	Theory	Unit III: Valuation of Intangible assets and Shares, Value added statements, Economic Value added. Market value added, and shareholder value added. Unit III: Overheads: Classification, Absorption, and Apportionment of Overheads, Under and Over Absorption of Overheads, Capacity Levels and Costs; Treatment of Certain Items in Costing like Interest and Financing Charges, Packing Expenses, Bad	B.com P- SEM II (A+B) B.com P- SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)


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		Debts, Research and Development Costs.		
	Tutorials	Unit III: Valuation of Intangible assets and Shares, Value Added statements, Market Value Added, Economic Value Added. Unit III: Overheads: Classification, Absorption, and Apportionment of Overheads, Under and Over Absorption of Overheads.	B.com P-SEM II (A+B) B.com P-SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)
April 2024	Theory	Unit IV: Amalgamation of Companies and Internal Reconstruction. Unit IV: Methods of costing: Job Costing, Process Costing, Contract Costing, Service Costing.	B.com P-SEM II (A+B) B.com P-SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)
	Tutorials	Unit IV: Amalgamation of Companies and Internal Reconstruction. Unit IV: Methods of costing: Job Costing,	B.com P-SEM II (A+B) B.com P-SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)


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		Process Costing, Contract Costing, Service Costing.		
	Test	Unit 1: Accounting for shares, Redemption of preference shares, Buy back of shares, ESOP. Unit1: Difference between financial accounting and cost accounting, cost concept and classification, CAS 4 & CAS 22. Unit II: Material: Accounting and control of purchases, storage and issue of materials, Techniques of inventory control, Methods of pricing of material issue: FIFO, LIFO, Weighted Average Method.	B.com P- SEM II (A+B) B.com P- SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)
May 2024	Theory	Unit V: XBRL Reporting, Segment Reporting, Sustainability Reporting, CSR Reporting, Triple Bottom Line Reporting	B.com P- SEM II (A+B)	Corporate Accounting (DSC 2.1)  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

		Unit V: An overview of integral and non-integral systems, Reconciliation of cost accounting profit with financial profits.	B.com P- SEM IV (B)	Cost Accounting (DSC 4.2)
	Tutorials	Unit V: XBRL Reporting, Segment Reporting, Sustainability Reporting, CSR Reporting, Triple Bottom Line Reporting Unit V: An Overview of Integral and Non-Integral Systems, Reconciliation of Cost Accounting Profit with Financial Profits.	B.com P- SEM II (A+B) B.com P- SEM IV (B)	Corporate Accounting (DSC 2.1) Cost Accounting (DSC 4.2)

Antima

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SRI VENKATESWARA COLLEGE

University of Delhi

Semester-Wise Teaching Plan (2023-24) (Even-Semester)

Name of the Faculty: Dr. M. Rama Naik

Designation: Assistant Professor

Department: Commerce

Course: B. Com (GE-2.2)

Semester: II

Session: 2023-24 (18th January 2024 to 11th May 2024)

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
January 2024	Theory/ Tutorial	Unit-1, Introduction of Financial Management; Meaning and Importance of finance Role of Finance Manager Time Value of Money (Compounding & Discounting) Risk & Return. Alternative Investment options Sources of Long term Financing and short term Financing.	GE-2.2 B.Com. SEM-II	GE-2.3- FINANCIAL MANAGEMENT FOR BEGINNERS
February 2024	Theory/ Tutorial	Unit 2: Financial Analysis and Capital Budgeting: Financial statement – income statement, balance sheet, ratio analysis, meaning and significance and limitation. Current ratio, quick ratio, absolute liquidity ratio, debt equity ratio, debtor turn over ratio, average collection period, creditor turn over ratio, average payment period, return on capital employed, return on equity earnings per share, dividend per share, price earnings ratio.	GE-2.2 B.Com. SEM-II	GE-2.3- FINANCIAL MANAGEMENT FOR BEGINNERS
	Assignment	Preparation of financial statement		
March 2024	Theory/ Tutorial	Unit 3: Cost of Capital & Capital Structure. Concept of cost of capital and capital structure: Cost of debt capital, Cost of preference share capital, Cost of equity share capital, Weighted average cost of capital (WACC). Meaning of leverage. Operating leverage, financial leverage, Combined leverage.	GE-2.2 B.Com. SEM-II	GE-2.3- FINANCIAL MANAGEMENT FOR BEGINNERS

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April 2024	Theory/ Tutorial	Unit 4: Dividend Decisions & Working Capital Types of dividends, Dividend policies and factors affecting dividend policies. Stock-split and bonus Shares. Concept of working capital, its components and factors affecting working capital requirements.	GE-2.2 B.Com. SEM-II	GE-2.3- FINANCIAL MANAGEMENT FOR BEGINNERS
	Test	Test would be conducted on the concerned subject.	GE-2.2 B.Com. SEM-II	GE-2.3- FINANCIAL MANAGEMENT FOR BEGINNERS
May 2024	Theory/ Tutorial	Revision of all Units		

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SRI VENKATESWARA COLLEGE
University of Delhi
Semester-Wise Teaching Plan
(2023-24) (Even-Semester)

Name of the Faculty: Dr. Rama Naik

Designation: Assistant Professor

Department: Commerce

Course: B. Com (P)/B.Com

Semester: IV

Session: 2023-24 (18th January 2024 to 11th May 2024)

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
January 2024	Theory/ Tutorial	Unit 1: Introduction to International Business - Globalization - concept, significance and impact on international business; - International business contrasted with domestic business; - Complexities of international business; - Internationalization stages and orientations; - Modes of entry into international businesses.	B.Com (P) –IV	B.Com(P) DSC 4.3 International Business
February 2024	Theory/ Tutorial	Unit 2: International Business Environment - Role of political and legal systems in international business; - Cultural environment of international business (including Hofstede's dimensions of culture); - Implications of economic environment for international business.	B.Com. – IV	B.Com. DSC 4.3 International Business
	Assignment	Topics were allotted for making the assignments.		
March 2024	Theory/ Tutorial	Unit 3: International Trade and BOP - Theories of international trade – - Theory of Absolute Advantage theory, - Theory of Comparative Advantage, - Factor Proportions theory and Leontief paradox, - Product Life Cycle theory, - Theory of National Competitive Advantage; - Instruments of trade control. Balance of payments (BOP) statement and its components	B.Com. – IV	B.Com. DSC 4.3 International Business

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April 2024	Theory/ Tutorial	Unit 4: Regional Economic Integration and International Economic Organizations • Forms of regional economic integration; • Integration efforts amongst countries in Europe, North America and Asia: EU, USMCA, SAARC and ASEAN; • Cost and benefits of regional economic integration. • International Economic Organisations: WTO- functions, structure and scope; World Bank and IMF. Unit 5: International finance and contemporary issues in IB • Types of FDI - Greenfield investment, Mergers & Acquisition, strategic alliances; • Benefits and drawbacks of FDI. • Overview of exchange rate systems. • Contemporary issues in international business: Outsourcing and its potential for India; • International business and sustainable development.	B.Com. – IV	B.Com. DSC 4.3 International Business
	Test	Test would be conducted on the concerned subject.	B.Com. – IV	B.Com. DSC 4.3 International Business
May 2024	Theory/ Tutorial	Revision of all Units		

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SRI VENKATESWARA COLLEGE
University of Delhi
Semester-Wise Teaching Plan
(2023-24) (Even-Semester)

Name of the Faculty: Dr. Rama Naik

Designation: Assistant Professor

Department: Commerce

Course: B. Com (P)/B.Com

Semester: VI

Session: 2023-24 (18th January 2024 to 11th May 2024)

Month	Type of Class	Topics	Course/ Semester	Paper Code/Name
January 2024	Theory/ Tutorial	Unit 1: Introduction to International Business: Globalization and its growing importance in the world economy; Impact of Globalization; International business contrasted with domestic businesses-complexities of international business; Modes of entry into International businesses. International Business Environment: Economic, demographic, cultural and political legal environment.	B.Com. –VI	B.Com. DSE International Business
February 2024	Theory/ Tutorial	Unit 2: International Trade: Theories of International trade Absolute advantage theory, Comparative advantage theory, Factory proportion theory and Leontief paradox, Product life cycle theory, National competitive advantage theory; Tariff and Non-Tariff Barriers. BOP- Balance of payment account and its components.	B.Com. –VI	B.Com. DSE International Business
	Assignment	Topics were allotted for making the assignments.		
March 2024	Theory/ Tutorial	Unit 3: Regional Economic Integration: Forms of regional integration; Integration efforts amongst countries in Europe, North America and Asia: PU, NAFTA and SAARC. International Economic Organisations: WTO, World Bank and IMF.	B.Com. –VI	B.Com. DSE International Business

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April 2024	Theory/ Tutorial	Unit 4: International Financial Environment: Foreign exchange markets participants and functioning; spot and forward rate quotations, direct and indirect quote, arbitrage, hedging and speculation; Foreign exchange risk and exposure. Foreign exchange rate: exchange rate determination, types of exchange rate systems fixed and flexible, currency convertibility, soft peg, crawling peg, free float, managed float. Unit 5: Foreign Direct Investment Types of FDI Greenfield investment, Brownfield investments, Mergers & Acquisition, Strategic alliances; Benefits and drawbacks of FDI. Contemporary issues in International Business: IT and outsourcing and its potential for India; environmental sustainability	B.Com. – VI	B.Com. DSE International Business
	Test	Test would be conducted on the concerned subject.	B.Com. – VI	B.Com. DSE International Business
May 2024	Theory/ Tutorial	Revision of all Units		

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SRI VENKATESWARA COLLEGE

(University of Delhi)

Semester-Wise Teaching Plan

(2023-24) (Even-Semester)

Name of the Faculty: Dr. Devendra Malapati

Designation: Assistant Professor

Department: Commerce

Course: B. Com (H) & B. Com

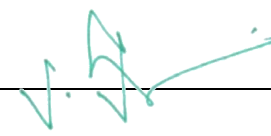
Semester: II, IV & VI

Session: 2023-24 (January, 2024 to May, 2024)

Month	Type of Class	Course Contents	Course	Paper Code/Name
JANUARY 2024	Theory	Unit 1: Accounting for Share Capital and Debentures - Types of shares; - Accounting for Share Capital, Issue of Rights and Bonus Shares; - ESOPs and Buy-Back of shares; - Issue and Redemption of preference Shares and Debentures. Unit 1: Introduction to Investment - Concept of Investment, - Investment Decision Process; - Avenues for investment-features and classes; - Difference between investment, speculation, and gambling; Primary market-IPO, Unit-III: Financial Institutions I - Financial Institutions: - Commercial banking – introduction, classification, - Role in financing-commercial and consumer, - Recent developments like	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
	Tutorials	1. buy-back of shares 2. Avenues of investments 3. Role of commercial banks		

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	Assignment	Continuous assessment on Unit I, I& III	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
February, 2024	Theory	Unit 1: Accounting for Share Capital and Debentures - Underwriting of Shares and Debentures. [In reference to Relevant Accounting Standards (AS and Ind AS) and Guidance Notes as applicable.] Unit 2: Financial Statements of Companies - Preparation of financial statements of corporate entities including one Person Company (excluding calculation of managerial remuneration) as per Division I and II of Schedule III of the Companies Act 2013; Related Parties as per AS-18, - Preparation of Statement of Profit and Loss, Balance Sheet, Statement of Equity and Cashflow Statement manually and using appropriate software. Unit 1: Introduction to Investment - Secondary Markets- - Trading of securities; Security market indices; - Return and risk: concept, calculation, - trade-off between risk and return; - Impact of taxes and inflation on investments. Unit-III: Financial Institutions I - MUDRA financing, - Problem of NPAs, - Bankruptcy and Insolvency Act, - Financial Inclusion.	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
	Tutorial	- Underwriting of shares - Cash flow statements - Security market indices		 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

	Assignment	Continuous assessment on Unit I, I& III	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
February, 2024	Theory	Unit 2: Financial Statements of Companies - Interpreting the ratios calculated as per Schedule III of the Companies Act 2013 [with reference to Relevant Accounting Standards (AS and Ind AS) and the relevant provisions of The Companies Act,2013, as applicable.]. Calculation of EPS as per AS 20. Unit 3: Valuation of Intangible Assets and Shares: - Valuation of Intangible Assets and Shares. - Value Added Statement, Unit 2: Bond Analysis and Valuation Bond - Fundamentals; - Estimating bond yields; - Bond Valuation and Malkiel Theorems; - Bond risks and credit rating; Present Scenario of Indian Debt Market Unit IV: Financial Institutions II - Life and non-life insurance companies in India - Public and private. - Mutual Funds – Introduction and their role in capital market development	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
	Tutorial	- Interpreting the ratios calculated as per Schedule III - Valuation of Intangible Assets - Various types of Mutual Funds	4.	4.
	Assignment	Continuous assessment on Unit		1. Discipline Specific Core Course -2.1


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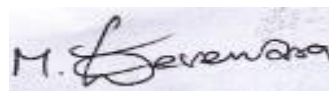
	ent	II,III & IV	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
MARCH 2024	Theory	Unit 3: Valuation of Intangible Assets and Shares: - Economic Value Added, - Market Value Added, - Shareholder Value Added. Unit 4: Amalgamation of Companies and Internal Reconstruction: - Accounting for Amalgamation of Companies (excluding inter-company holdings) applying AS 14/Ind AS 103. Unit 3: Equity Analysis and Valuation - Fundamental Analysis; - Technical Analysis and Unit IV: Financial Institutions II - Types of mutual fund schemes (Open ended vs close ended, - Equity, Debt, - Hybrid schemes and ETFs. - Non-banking financial companies (NBFCs). Unit-V: Financial Services Industry Overview of financial services industry. Merchant banking – Pre and Post issue management	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
	Tutorial	- Market Value Added, - Fundamental Analysis; - Issue management of Merchant banking		
	Assignment	Continuous assessment on Unit III, IV & V	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
MARCH 2024		Unit 4: Amalgamation of Companies and Internal Reconstruction Accounting for Different forms of Internal Reconstruction (excluding drafting of Internal	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)

		Reconstruction Scheme). Unit 5: Corporate Financial Reporting • Meaning, need and objectives; • Constituents of Annual Report and how it is different from financial statements; Unit 4: Portfolio Management Portfolio Management- • Concept and need, . Unit-V: Financial Services Industry • Underwriting.		
	Tutorial	• Different forms of Internal Reconstruction • different from financial statements • applications of underwriting		
	Assignment	Continuous assessment on Unit IV& V	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
APRIL 2024	Theory	Unit 5: Corporate Financial Reporting • Contents of report of the Board of Directors; • XBRL Reporting. • Drafting of Notes to Accounts. • Segment Reporting as per AS - 17 , Sustainability Reporting, Unit 3: Equity Analysis and Valuation • Efficient Market Hypothesis; • Valuation of Equity Shares using Dividend Discount Model and P/E Ratio model. Unit 4: Portfolio Management Portfolio Management • Measurement of Portfolio Return and risk; Diversification- • Markowitz Theory; • Capital Asset Pricing Model Unit-V: Financial Services Industry • Regulatory framework relating to merchant banking in India. • Consumer and Housing finance, • Venture Capital Finance,	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)

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	Tutorial	- Contents of report of the Board of Directors - Dividend Discount Model and P/E Ratio model - Venture Capital Finance		1.
	Assignment	Continuous assessment on Unit III, IV & V	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	2. Discipline Specific Core Course -2.1 3. Discipline Specific Elective Course-4.2 4. Discipline Specific Elective Course-6.1.(e)
MAY, 2024		Unit 5: Corporate Financial Reporting - Triple Bottom Line Reporting, - CSR Reporting. Unit 5: Mutual Fund and Derivatives - Mutual Fund -concept and types; - Performance Evaluation; - Overview of Financial - Derivatives - Forwards, Futures and Options Unit-V: Financial Services Industry - Credit Rating.	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-V	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)
	Tutorial	- CSR Reporting. - Forms of derivatives - Significance of Credit Rating		
	Assignment	Continuous assignment V & V	1. B.COM (H)-II 2. B.Com.(H) – IV 3. B.Com-VI	1. Discipline Specific Core Course -2.1 2. Discipline Specific Elective Course-4.2 3. Discipline Specific Elective Course-6.1.(e)

Dr. Devendra Malapati




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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Department of Commerce (Year 2023-24)

TEACHING PLAN

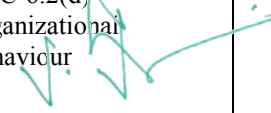
Name of the Faculty: Dr. Neha Singhal

Department: Commerce

Semester: VI

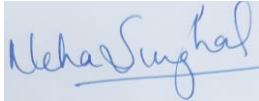
Month	Type of Class	Topics	Course	Paper Code/Name
January	Theory	1.Introduction, Types of Audit. 2. Introduction to organisational theories; Organisational behavior- concepts, determinants, challenges and opportunities.	1.B.Com (H)-VI 2. B.Com -VI	1.BCH-6.1-Auditing andCG 2. BC-6.2(d)-Organizational Behaviour
	Tutorial	1. Types of Deposits: Types of banks in India; Role of Foreign Banks in India; Advantages and Disadvantages of Foreign banks, Road Map for Foreign Banks in India; India's approach to Banking Sector reforms 2. Case study on Organizational Theories	1.BC-6.1 (b) 2. B.Com -VI	1. BC-6.1 (b) Banking and Insurance 2. BC-6.2(d)-Organizational Behaviour
February	Theory	1.Audit Planning and Documentation, Internal Control System, Evidence in Auditing, Vouching, Verification of Assets, Verification of Liabilities, Appointment and Removal of Auditor, Rights and Duties of a Company Auditor, Auditor's Report, Liabilities of Auditor. 2. Contributing disciplines of OB; OB models, Group dynamics- concepts, types- group norms, group roles, and group cohesiveness.	1.B.Com (H)-VI 2. B.Com -VI	1.BCH-6.1-Auditing andCG 2. BC-6.2(d)-Organizational Behaviour
	Tutorial	1.Electronic Clearing System (ECS), e-payments, Electronic Fund Transfer (EFT), E-money, Safeguard for internet banking, Critical comparison of traditional banking methods and e-banking.	1.BC-6.1 (b) 2.B.Com -VI	1. BC-6.1 (b) Banking and Insurance 2. BC-6.2(d)-Organizational Behaviour प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		2. Case Study on OB Models		
March	Theory	1.Role of Auditor, PCAOB, NFRA 2.Corporate Governance Theories and Models 3.Major Corporate Failures 4. Leadership- concept and trait theory, leadership continuum, transactional, charismatic, and transformational leadership.	1.B.Com (H)-VI 2. B.Com -VI	1.BCH-6.1-Auditing andCG 2.BC-6.2(d)-Organizational Behaviour
	Tutorial	1. Principles of sound lending, Types of loans and advances, Advances against various securities; Securitization of Standard Assets; Basel Accord: merits and weaknesses of the Basel II, Basel III; NPA. 2. Case Study On Leadership Traits and Theories	1.BC-6.1 (b) 2. B.Com -VI	1. BC-6.1 (b) Banking and Insurance 2. BC-6.2(d)-Organizational Behaviour
	Test	1. Types of Audit, Audit Programme and Audit Process, Internal Control and Internal Check, NFRA, CG Models and Theories 2. Introduction to OB Theories, Motivation, Communication and Leadership.	1.B.Com (H)-VI 2.B.Com -VI	1.BCH-6.1-Auditing andCG 2.BC-6.2(d)-Organizational Behaviour
April	Theory	1.Committees and Regulatory Framework 2.LODR and SEBI Clause 49 3. Conflict- sources and resolution strategies; Organisational culture-concept and determinants; Organisational change- importance, resistance to change, managing change.	1.B.Com (H)-VI 2. B.Com -VI	1.BCH-6.1-Auditing andCG 2. BC-6.2(d)-Organizational Behaviour
	Tutorial	1. Indemnity, Insurable Interest, Utmost Good faith, Proximate Cause, Contribution, Subrogation, Economic Function; Reinsurance and Co-insurance. 2. Case Study on Organizational Change and Climate	1.BC-6.1 (b) 2.B.Com -VI	1. BC-6.1 (b) Banking and Insurance 2. BC-6.2(d)-Organizational Behaviour
May	Theory	1.Business Ethics 2. Stress- individual and organisational factors to stress, prevention and management of stress.	1.B.Com (H)-VI 2. B.Com -VI	1.BCH-6.1-Auditing andCG 2.BC-6.2(d)-Organizational Behaviour
	Tutorial	1. Types of Insurance, Life and Non-Life: Features, needs, policies of different types of Insurance, Control of Malpractices and Mis selling, Negligence, Loss Assessment and Loss control, Computation of Insurance Premium, Dematerialisation of Insurance	1.BC-6.1 (b) 2. B.Com -VI	1. BC-6.1 (b) Banking and Insurance 2.BC-6.2(d)-Organizational Behaviour


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		Policies; Regulatory Framework of Insurance: IRDA Act 1999 2. Case Study on Stress Prevention and Management		
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Signature:




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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Ajit Singh

Department: Commerce

Semester: IV & VI

Month		Topics	Course	Paper Code/Name
JAN -2024	Theory/ Practical	1. Unit 1 : Introduction Experiencing and Voicing Dissatisfaction: Concept of Consumer, Consumer buying process and Post-Purchase behaviour, Factors affecting voicing of consumer grievances, Alternatives available to Dissatisfied Consumers: Private action and Public Action; Conciliation and Intermediation for out-of-court Redressal.	1.B.COM H VI	1.BCH 6.3(d) Consumer Affairs & Customer Care
		2. Unit I: Introduction (7 hours) Human Resource Development (HRD)- concept, components, evolution, need and significance, difference between human resource management and human resource development, Role of HR manager, HRD culture and climate, contemporary issues in HRD.	2. DSE 4.1) IV	2. DSE-4.1 HRD
		3. Unit I: Introduction to Financial system & its components.	3. B.Com(P)-VI	3. BCM (5.4) C) FMIS
	Tutorial s /Practi cal:	1. Cases Discussed & presented by the teacher and practiced by the Students.	1. B.COM H VI	1. BCH 6.3(d) Consumer Affairs & Customer Care
		2. Case Studies and contemporary issues in HRD discussed and presented by the Students.	2. DSE 4.1) IV	2. DSE-4.1 HRD
		3. Case Studies and companies Financial system discussed and presented by the Students.	3. B.Com(P)-VI	3. BCM (5.4) C) FMIS

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FEBRUARY 2024	Theory/ Practical	1. Unit II The Consumer Protection Act (CPA), 1986 Objectives and Basic Concepts: Consumer rights and UN Guidelines on consumer protection, Consumer, goods, defect in goods, spurious goods and services, service, deficiency in service, unfair trade practice, restrictive trade practice. Organisational set-up under the Consumer Protection Act: Advisory Bodies: Consumer Protection Councils at the Central, State and District Levels; Adjudicatory Bodies: District Forums, State Commissions, National Commission: Their Composition, Powers, and Jurisdiction (Pecuniary and Territorial), Role of Supreme Court under the CPA with important case law. 2. Unit 2: Strategic Perspectives in HRD (11 hours) Concept of Strategic HRD, HRD Interventions-Performance Appraisal, Potential Appraisal, Performance Coaching and Feedback, Career Planning, Training, Systems Development. 3. Unit 1: Introduction to Financial system & its components.	1. B.COM H VI 2. DSE 4.1) IV 3. B.Com(P)-VI	1. BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD 3. BCM (5.4) C) FMIS
	Tutorials /Practical:	1. Cases Discussed & presented by the teacher and practiced by the Students. 2. Case Studies and contemporary issues in HRD discussed and presented by the Students. 3. Case Studies and companies Financial system discussed and presented by the Students.	1. B.COM H VI 2. DSE 4.1) IV 3. B.Com(P)-VI	1. BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD 3. BCM (5.4) C) FMIS
	<u>Assignment</u>	Assignment and Presentation Given to the students.	1. B.COM H VI 2. DSE 4.1) IV 3. B.Com(P)-VI	1. BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD 3. BCM (5.4) C) FMIS



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March 2024	Theory/ Practical	1. Unit III: Grievance Redressal Mechanism under the CPA, 1986 Filing and handling of Complaints; Who can file a complaint; Grounds of filing a complaint; Limitation period; Procedure for filing and hearing of a complaint; Disposal of cases; Relief/Remedy available; Temporary Injunction; Enforcement of order; Appeal; Frivolous and vexatious complaints; Offences and penalties. Leading Cases decided under Consumer Protection law by Supreme Court/National Commission: Medical Negligence; Banking; Insurance; Housing & Real Estate; Electricity Supply; Telecommunication; Education; Defective Products; Unfair Trade Practices. 2. Course- 4.1 (DSE-4.1): Human Resource Development 11 Rewards, Employee Welfare and Work Life balance, Roles of HR Developer, Physical and Financial Resources for HRD, HR Accounting, HRD Audit. 3. Unit II: Financial Market Money.	1.B.COM H VI 2. DSE 4.1) IV 3. B.Com(P)-VI	1.BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD 3. BCM (5.4) C) FMIS
	Tutorials/ Practical:	1. Cases Discussed & presented by the teacher and practiced by the Students. 2. Case Studies and Training methods discussed and presented by the Students. 3. Case Studies and companies Financial market discussed and presented by the Students.	1. B.COM H VI 2. DSE 4.1) IV 3. B.Com(P)-VI	1. BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD 3. BCM (5.4) C) FMIS
	<u>Test/Work Book</u>	Time schedule decided for conduct of Internal exam in March/April.	1. B.COM H VI 2. DSE 4.1) IV	1. BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD

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April/May 2024	Theory/ Practical	1. Unit IV: Consumer Protection in India Quality and Standardisation: Voluntary and Mandatory standards; Indian Standards Mark (ISI), Ag-mark, Hallmarking, Consumer Grievance Redressal under the BIS Act, 2016; ISO 10000 suite. Industry Regulators and Consumer Complaint Redressal Mechanism Banking Ombudsman; Insurance Ombudsman; Telecommunication: TRAI; Food Products: FSSAI; Advertising Standard Council of India; Real Estate Regulatory Authority. Unit V: Competition Act, 2002 Objectives and basic concepts: Consumer, goods, service; Prohibition of anti-competitive agreements; Prohibition of Abuse of Dominant Position; Regulation of Combination; Composition and Powers of Competition Commission of India, Complaints and Procedures For Investigation, Hearings and Enquiry and Appeal Provisions.	1.B.COM H VI	1.BCH 6.3(d) Consumer Affairs & Customer Care
		2. Unit IV: Human Resource Training and Development (T&D) (9 hours) Concept and Importance, Assessing Training Needs, Designing and Evaluating Training & Development Programmes, Role, Responsibilities and challenges to Training Managers.	2. DSE 4.1) IV	2. DSE-4.1 HRD
		3. Unit II: Financial Market Money. (Sharing)	3. B.Com(P)-VI	3. BCM (5.4) C) FMIS
	Tutorials/ Practical:	1. Cases Discussed & presented by the teacher and practiced by the Students. 2. Case Studies and Training methods discussed and presented by the Students. 3. Case Studies and companies Financial market discussed and presented by the Students.	1. B.COM H VI 2. DSE 4.1) IV 3. B.Com(P)-VI	1. BCH 6.3(d) Consumer Affairs & Customer Care 2. DSE-4.1 HRD 3. BCM (5.4) C) FMIS

Ajit Singh




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SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Arpita Kaul

Department: Commerce

Semester: II, IV, VI

Month		Topics	Course	Paper Code/Name
January	Theory	Unit 2: Individual Behaviour (9 hours) Individual characteristics - Inherited characteristics vs. learned characteristics; Personality: concept and types; Components of Attitude, organisational commitment and job satisfaction as work attitude; Sources and types of values; role of values and beliefs in the making of an individual.	Hons IV	GE: Organisational behaviour
		Unit 2: Individual Behaviour: Foundations of Individual Behavior; Personality- factors influencing personality, Traits, Type A and B; Values, attitudes & learning- concept and types of values- terminal values and instrumental values;	B.Com VI	BC 6.2(d) Organisational Behaviour
		Unit 1: Introduction to Human Resource Management Concept and functions; Role, status and competencies of HR manager; HR policies; Evolution of HRM; Emerging challenges of HRM- Workplace diversity, empowerment, downsizing, VRS, work life balance	B.Com Hons II	Human Resource Management
	Practicals	Kinds of yoga, chakra cleaning, Ashtang yoga	Sem IV	SEC: Yoga in practice
	Tutorials	Continuous assessment 1: Students will fill the OCEAN questionnaire and know their personality type, they will paste the duly filled questionnaire in their file and analyse their personality type mentioning whether they agree with the result or not and mention supporting incidences of life. https://www.truity.com/test/big-five-personality-test CA 1: MCQ on unit I CA 1: Mention all the seven chakras and details about them in the yoga file. Elaborate on your experience while	Hons IV B.Com Hons II Sem IV	GE: Organisational behaviour प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi घराना कुल, महाविद्यालय / Hostel-Kulam, University of Delhi-21 BSC2-3 Human Resource Management

	doing chakra cleaning. MBTI Questionnaire will be filled by the students and they will understand the various personality types. https://www.truity.com/test/type-finder-personality-test-new	B.com VI	Yoga in practice BC 6.2(d) Organisational behaviour (DSE)



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February	Theory:	Unit 1: Introduction (7 hours) Introduction to organisational studies, importance of organisations, relationship between management and organizing function, emergence and development of Organisation Behaviour, Organisational Behaviour in changing times Components of attitude, job related attitudes (only job satisfaction & job involvement); Perception and emotions- concept, perceptual process, factors influencing perception; Emotional Intelligence. Unit 2: Procurement of Human Resource Human resource planning- Quantitative and qualitative dimensions; Job analysis – Job description and job specification; Recruitment – concept and sources; Selection – concept and process; Test and interview; Placement, induction and socialization; Retention of employees.	Hons IV B.Com VI B.Com H III	GE: Organisational behaviour BC 6.2(d) Organisational Behaviour(DSE) DSC2.3 Human Resource Management
	Practicals:	Yamas, Surya Namaskar, Padahastasana, Tadasana, Garud asana, Natraj asana, Bhujangasana, Padmasana, Shavasana	Sem IV	SEC: Yoga in practice
	Tutorials:	Doubt clearing sessions Continuous assessment 2: Group presentations Continuous assessment 2: Describe the surya namaskar with its steps in the file, explain your experience while performing surya namaskar in your file. Students will fill emotional intelligence questionnaire and	Hons IV B.Com H II Sem IV	GE: Organisational behaviour DSC2.3 Human Resource Management SEC: Yoga in practice प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi घौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

		understand the concept of EI and their level of EI https://www.drugsandalcohol.ie/26776/1/Emotional_intelligence_questionnaire-LAL1.pdf	B.Com VI	BC 6.2(d) Organisational behaviour
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March	Theory	Unit 3: Communication and Motivation (11 hours) Communication - concept, process and types, essentials of effective communication; Johari Window. Why people work - Maslow's Need Hierarchy theory, intrinsic and extrinsic rewards, monetary and non-monetary incentives, contemporary motivation practices. Meaning and importance of motivation; Theories- Equity, Intrinsic Motivation by Ken Thomas; Behavior modification; Communication and feedback; Unit 3: Upgrading Employees: Training and Development A. Concept and significance; Role specific and competency-based training; Training and development methods – Apprenticeship, understudy, job rotation, vestibule training, case study, role playing, hands on, shadowing, e-learning, sensitivity training, In-basket, management games, conferences and seminars, coaching and mentoring, management development programs; Training process outsourcing. B. Scope of training; On board, soft skills, technical skills, product & service, quality, antiharassment, legal	Hons IV B. Com VI B.Com H II	GE: Organisational behaviour BC 6.2(d)Organisational Behaviour(DSE) DSC2.3Human Resource Management
	Practicals	Niyamas, Vajrasana, Siddhasana, Bhadrasana, Shashankasana, Chakrasana, Gomukhasaa, Naukasana	IV Sem	SEC: Yoga in practice
	Tutorial	Continuous assessment 3: Students will list their top 3 terminal and instrumental values according to the Rokeach Value survey and analyse their values in their practical file mentioning whether they agree with the result or not and mention supporting incidences of life. https://ung.edu/center-ethical-leadership/_uploads/files/rokeach-value-survey.pdf?t=1652832000256 CA 3: All the students will make their linkedin account and learn how to art of networking with	Hons IV B.com H II	GE: Organisational behaviour DSC2.3Human Resource Management



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	people CA 3: Any one standing asana and any one sitting asana will be described in the yoga files. Doubt clearing session Doubt clearing sessions	Sem IV B.Com VI	Yoga in practice BC 6.2(d) Organisational behaviour (DSE)
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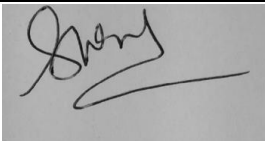
	Internal Assessment	Students will submit an assignment on challenges of human resource management. The test will be held on 18th March, 2024. The test will be held on 18th March, 2024. Group presentations/ individual presentations by students. The test will be held on 18th March, 2024.	B.Com H II	DSC2.3 Human Resource Management GE: Organisational behaviour BC6.2(d): Organisational behaviour (DSE)
April	Theory:	Unit 4: Group Behaviour and Leadership (11 hours) Importance of groups, groups vs. teams; Leadership - trait theory, nature vs. nurture leadership; difference between a leader and a manager; Leadership styles (Likert) - exploitative, benevolent, consultative, and participative; making of great leaders, contemporary leadership practices. Transactional Analysis; JOHARI Window; Motivation practices of 5 prominent organisations. Unit 4: Performance Appraisal and Compensation Management Performance appraisal- Nature, objectives and process; Performance management; Methods of performance appraisal; Potential appraisal; Employee counselling; Job Transfer and promotion. Compensation - Concept and policies, Base and supplementary compensation; Individual, group and organisation incentive plans; Fringe benefits; Performance linked compensation; Employee stock option; Pay band compensation system; Job evaluation	Hons IV	GE: Organisational behaviour
			B Com VI	BC 6.2(d) Organisational behaviour (DSE)
			B.Com H II	DSC2.3 Human Resource Management
	PRACTICAL	Mandukasana, Kukkutasana, Dhanurasana, Mayurasana, Marjarasana, Makrasana, Utanapadasana, Sarvangasana. Shershasana	Sem IV	SEC: Yoga in practice



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	Tutorials:	CA4: Students will categorise the given adjectives in either of the 4 windows of the Johari window and understand the concept of Johari window. CA 4: MCQ for unit 2, 3 and 4	Hons IV B.Com H II	GE: Organisational behaviour DSC2.3 Human resource management Doubt clearing session
May	Theory	Unit 5: Organisational Dynamics (7 hours) Organisation as a system; organisational structure, relationship between organisation structure, system, and strategy; Managing conflict - reasons, types and resolutions; Managing stress. Case studies Unit 5: Employee Maintenance, Engagement and Emerging Horizons Employee health and safety; Employee welfare; Social security (excluding legal provisions); Employer-employee relations; Grievance handling and redressal; Industrial disputes: Causes and settlement machinery, Stress-free environment, Rejuvenation breaks and leisure activities. Emerging Horizons; Redundant manpower, e-HRM; Human Resource Information System (HRIS); HR Audit, Emerging job opportunities, Talent management, Employee burnout, Work life balance, Work from Home	B. Com VI B.Com H II B.Com VI	GE: Organisational behaviour BC Organisational behaviour DSC2.3 Human Resource Management  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21 BC Organisational behaviour

	Tutorial	CA5: Students will fill McClelland's questionnaire and understand the concept along with what motivates them. CA6: Students will understand the leadership theories by filling in the managerial grid questionnaire and the least preferred coworker scale. Doubt clearing session	Hons IV	GE: Organisational behaviour
			B Com VI	BC6.2(d) Organisational behaviour (DSE)
		Doubt clearing session	B.Com H II	DSC2.3 Human resource management
	Practical	The practical for all the yoga students will be held. Pranayama-Purak, Rechak and Kumbhaka	Sem IV Sem IV	Yoga in practice Yoga in practice



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Tirumala Tirupati Devasthanams

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Sri Venkateswara College

(University of Delhi)

NAAC Grade A+

**DEPARTMENT OF COMMERCE
SEMESTER-WISE TEACHING PLAN**

Name of the Faculty: Dr. Deepika

Semester: II

Course: B.Com. (P)

Section: A & B

Month	Type of Class	Topics	Course	Paper Code/Name
January 2024	Theory	Unit 1: Introduction Meaning and Characteristics of Company Lifting of Corporate Veil	B.COM (P) Semester II, Section A & B	COMPANY LAW, DSC - 2.2
February 2024	Theory and Tutorial	Unit 1: Introduction Overview of Administration of Company Law Types of Companies Unit 2: Formation and Incorporation Documents Formation of company; Promoters & their legal position, Pre-Incorporation Contract; Online Registration Memorandum of Association & Alterations, Doctrine of Ultra Vires TUTORIAL: PRESENTATIONS		
March 2024	Theory and Tutorial	Unit 2: Formation and Incorporation Documents Articles of Association & Alterations Doctrine of Constructive Notice; Doctrine of Indoor Management Unit 3: Share Capital Prospects Shares: Book Building, Allotment & Forfeiture of Shares; Buy Back; ESOP, Bonus and Right Issue; Sweat Equity Shares; Transfer & Transmission, Demat System TUTORIAL: DISCUSSIONS (DOUBTS) AND PRESENTATIONS ON VARIOUS CASES (Assigned to Students)		
April 2024	Theory and Tutorial	Unit 4: Management and Meetings Directors (legal position, DIN, Types; qualifications & disqualifications; removal; power & duties) Key Managerial Personnel Meetings (AGM, EGM, requisites of a valid meeting, e-voting, postal ballot etc.) Unit 5: Dividends, Audit and Winding Up Dividend TUTORIAL: GROUP PRESENTATIONS & VIVA		
May 2024	Theory and Tutorial	Unit 5: Dividends, Audit and Winding Up Audit (qualification; disqualification; appointment; rotation; removal) Winding Up (Modes; Provisions of IBC, 2016) TUTORIAL: DISCUSSION (DOUBTS)		

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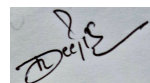
Name of the Faculty: Dr. Deepika

Semester: IV

Course: B.Com. (H)

Section: B

Month	Type of Class	Topics	Course	Paper Code/Name
January 2024	Theory	Unit 1: Introduction Constitutional Framework of indirect taxes before GST Concept of VAT	B.COM (H) Semester IV Section B	Goods & Services Tax and Customs Law BCH 6.2
February 2024	Theory and Tutorial	Unit 1: Introduction Major Defects in the structure of indirect taxes prior to GST Rationale for GST; Structure of GST GST Council; GSTN; State Compensation Cess Unit 4: Procedures and Special Provisions under GST Registration Unit 2: Levy and Collection of GST Taxable Event - Supply TUTORIAL: DISCUSSION (Topics covered till date)		
March 2024	Theory and Tutorial	Unit 2: Levy and Collection of GST Taxable Event - Supply (Contd.) Place of Supply Time of Supply Value of Supply Composite and Mixed Supplies Composition Scheme TUTORIAL: DISCUSSION (Doubts of Students)		
April 2024	Theory and Tutorial	Unit 3: Input Tax Credit Eligible and ineligible ITC; Credit and Blocked Credit; ITC in Capital Goods; ISD; Refund; Job Work; Doctrine of Unjust Enrichment Unit 4: Procedures and Special Provision under GST Tax Invoice; Credit and Debit Notes; Returns; Audit in GST TUTORIAL: DISCUSSION (Doubts of Students; Viva)		
May 2024	Theory and Tutorial	Unit 4: Procedures and Special Provision under GST Self Assessment; Anti-Profitteering; E-Way bills; Zero rated supply; offences and penalties; appeals TUTORIAL: DISCUSSION (DOUBTS)		



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SEMESTER WISE TEACHING PLAN

Name of the Faculty: Mohini Yadav

Department: Commerce

Semester: IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	Unit 1: Introduction to International Business	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 5: Types of FDI	B.Com – Sem VI	BC 6.2 (a): International Business
		Unit 1: Issues in Collective Bargaining	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
	Tutorials	Unit 1: Introduction to International Business	B.Com (H) – Sem VI	BCH 6.4(d): International Business
	Practical	Random Numbers	B.Com (H) – Sem IV	DSC-4.1: Business Statistics
February	Theory	Unit 1: International Business Environment: Unit 2: Balance of payment account and its components	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 5: Benefits and drawbacks of FDI	B.Com – Sem VI	BC 6.2 (a): International Business
		Unit 2: Collective Bargaining in India	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
	Tutorials	Unit 1: International Business Environment: Unit 2: Balance of payment account and its components	B.Com (H) – Sem VI	BCH 6.4(d): International Business
	Practical	Descriptive stats using excel formulas, and data analysis tool pack	B.Com (H) – Sem IV	DSC-4.1: Business Statistics
March	Theory	Unit 2: Theories of International trade	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 5: IT and outsourcing and its potential for India	B.Com – Sem VI	BC 6.2 (a): International Business
		Unit 3: Negotiating a Contract	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
	Tutorials	Unit 2: Theories of International trade	B.Com (H) – Sem VI	BCH 6.4(d): International Business


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	Practical	Regression, Correlation, Time series	B.Com (H) – Sem IV	DSC-4.1: Business Statistics
	Assignment	Unit 1 & 2	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 1 & 5	B.Com – Sem VI	BC 6.2 (a): International Business
		Unit 1 & 2	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
April	Test	Unit 1 & 2	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 1 & 2	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
	Theory	Unit 3 & 4: Regional Economic Integration, International Economic Organisations, International Financial Environment, Exchange rate Determination	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 5: Greenfield investment, Brownfield investments, Mergers & Acquisition, Strategic alliances;	B.Com – Sem VI	BC 6.2 (a): International Business
		Unit 4: Negotiation Skills	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
May	Tutorials	Unit 3 & 4	B.Com (H) – Sem VI	BCH 6.4(d): International Business
	Practical	Probability Distribution, Index numbers	B.Com (H) – Sem IV	DSC-4.1: Business Statistics
	Theory	Unit 5: Foreign Direct Investment and Developments and Issues in International Business	B.Com (H) – Sem VI	BCH 6.4(d): International Business
		Unit 5: Revision	B.Com – Sem VI	BC 6.2 (a): International Business
		Unit 5: Negotiation and Administration	B.Com – Sem VI	BC 6.3 (b): Collective Bargaining and Negotiation Skills
	Tutorials	Unit 5	B.Com (H) – Sem VI	BCH 6.4(d): International Business
	Practical	Revision	B.Com (H) – Sem IV	DSC-4.1: Business Statistics

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20/3/21



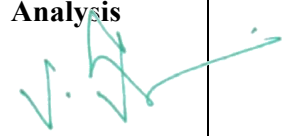
SRI VENKATESWARA COLLEGE (DU)
SEMESTER WISE TEACHING PLAN (2023-24)

Name of the Faculty: Dr. P.CHENGALRAYULU

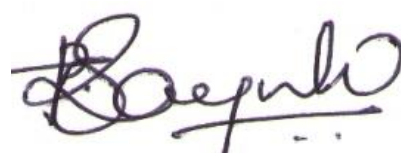
Subject: Financial Reporting & Analysis

Department: Commerce, Semester: B.Com (H), VI

MONTH		TOPICS	COURSE	PAPER CODE/NAME
January, 2024	Theory	<u>Unit-1: Introduction</u> Concept and objectives of financial reporting, Users of financial reports, Conceptual Framework for financial reporting, understanding financial statements of a Joint Stock Company: Balance sheet, Statement of Profit and Loss, Cash Flow statement, Statement of changes in Equity, Notes to the accounts, Significant accounting policies, Accounting Standards, Converged Indian Accounting Standards (Ind AS) relevant to the financial statements	VI Semester	BCH 6.4(a): Financial Reporting & Analysis
February, 2024	Theory & Illustration	<u>Unit-2: Disclosures</u> Disclosures under Companies Act, 2013, Accounting Standards, Securities Exchange Board of India (SEBI) – in annual reports and company website	VI Semester	BCH 6.4(a): Financial Reporting & Analysis
March, 2024	Theory & Illustration Assignment	<u>Unit-3: Analysis of Financial Statements – Techniques</u> Comparative financial statements, Common Size Financial Statements, Ratio Analysis, Cash Flow Analysis, Trend Analysis.	VI Semester	BCH 6.4(a): Financial Reporting & Analysis
April, 2024		<u>Unit-4: Analysis of Financial Statements – A Case Study</u> Intra-firm and inter-firm comparison of any three listed companies from any sector/industry for a period of five years using the spread sheet- Use of Ratio analysis, Industry Averages, Growth rates, CAGR, Z-score etc. in the analysis	VI Semester	BCH 6.4(a): Financial Reporting & Analysis


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May, 2024		<u>Unit-5: Emerging Trends in Reporting</u> Accounting for E-commerce business – Introduction, elements of e-commerce transactions, business models, classification of e-commerce websites, revenue recognition and measurement of costs, Indian Accounting Standard and its implication on E-Commerce companies. Integrated Reporting – Meaning, Purpose, Salient features of framework, the Capitals and Value creation-Value Added Statement	VI Semester	BCH 6.4(a): Financial Reporting & Analysis
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प्रधानाचार्य
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SEMESTER WISE TEACHING PLAN (2023-2024)

SRI VENKATESWARA COLLEGE (DU)

Name of the Faculty: **Dr. P.CHENGALRAYULU**

Department: Commerce

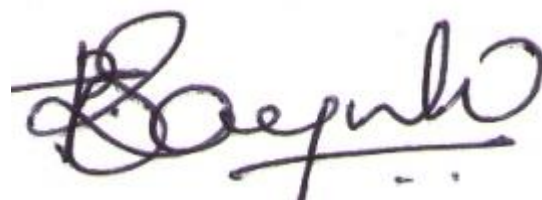
Semester: B.Com (P) BC 6.1(C)-VI Semester

MONTH		TOPICS	COURSE	PAPER CODE/NAME
January, 2024	Theory	Unit I: Introduction Meaning, objectives, nature and scope of management accounting, difference between different forms of accounting— Cost, Financial and Management accounting, Cost control and Cost reduction.	VI Semester	BC 6.1(C)- Management Accounting
February, 2024	Theory & Illustration	Unit II: Marginal Costing Concept of marginal cost and marginal costing; Absorption versus Variable Costing; Distinctive features and income determination; Cost-volume-profit analysis; Break-even analysis - mathematical and graphical approaches; Profit-volume ratio, angle of incidence, margin of safety, Cash break-even point and Composite break-even point, determination of cost indifference point.	VI Semester	BC 6.1(C)- Management Accounting
March, 2024	Theory & Illustration Assignment	Unit III: Decision Making Steps in Decision Making Process, Concept of Relevant Costs and Benefits, Various short -term decision making situations –Profitable product mix, Acceptance or Rejection of special/ export offers, Make or buy, Addition or Elimination of a product line, Sell or process further, Operate or shut down, Fixation of selling price.	VI Semester	BC 6.1(C)- Management Accounting
April, 2024	Theory & Illustration	Unit IV: Budgetary Control and Standard Costing System (a) Budgeting and Budgetary Control: Concept of budget, budgeting and budgetary control; Objectives, merits and limitations; Budget Administration; Functional Budgets; Fixed and Flexible budgeting; Zero base budgeting; Programme and Performance budgeting. (b) Standard Costing and Variance	VI Semester	BC 6.1(C)- Management Accounting

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		Analysis: Meaning of standard cost and standard costing; advantages, limitations and applications; Variance Analysis – material and labour variances only; Control ratios.		
May, 2024	Theory & Illustration	Unit V: Performance Measurement Responsibility Accounting: Concept, Significance, Different Responsibility Centres; Divisional Performance Measurement: Financial and Non-Financial measures; Transfer pricing.	VI Semester	BC 6.1(C)- Management Accounting




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SEMESTER WISE TEACHING PLAN

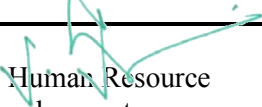
SRI VENKATESHWARA COLLEGE

Name of the Faculty: Dr. Neetu Kushwaha

Department: Commerce

Semester: 2nd, 4th, 6th

Month		Topics	Course	Paper Code/Name
January	Theory	Introduction to HRM: Basic concepts and significance of HRM, Role and functions of HR manager.	B. Com II Sem	DSC 2.3 Human Resource Management
		Orientation about the subject Ethics & Culture	VAC II Sem	Ethics & Culture
		Training with Industry: On the job and off the job	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
February	Theory	Emerging issues in human resource management: Workplace diversity, employee empowerment, downsizing, VRS, work life balance, and work from home. Procurement of Human Resource Human resource planning- Quantitative and qualitative dimensions; Job analysis – Job description and job specification; Recruitment – concept and sources; Selection – concept and process; Tests and interview; Placement, induction and socialization; Employee retention.	B. Com II Sem	DSC 2.3 Human Resource Management
		Introduction- The Basics of Ethics	VAC II Sem	Ethics & Culture
		Management Development: Lecture method, Role play, in-basket, simulation, vestibule, management	B.Com (H) IV Sem	DSE 4.1. Human Resource Development


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		games, case study, programmed instruction, sensitivity training, strategies of training program, Review on T & D Programmes in India		
		Introduction to Advertising: Communication Process; AIDA Model, Advertising: Importance, types and objectives; DAGMAR Approach; Audience Selection; Methods of setting Advertising Budget.	B.Com VI Sem	SEC: Advertising, Personal Selling and Salesmanship
February	Assessment	Internal Assessment: Assignment		
		Continuous Assessment Activity: Quiz	B. Com II Sem	DSC 2.3 Human Resource Management
		Continuous Assessment Activity: Knowing each other	VAC II Sem	Ethics & Culture
		Continuous Assessment Activity: Case Study	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
March	Theory	Aspects of Training and Development : Concept and importance; Role specific and competency based training; Training and development methods – Apprenticeship, understudy, job rotation, vestibule training, case study, role playing, sensitivity training, In-basket, management games, conferences and seminars, coaching and mentoring, management development programs; Training process outsourcing. Performance Appraisal and Compensation Management: Performance appraisal- Nature, objectives, process, and methods; Performance management; Potential appraisal; Employee counselling;	B. Com II Sem	DSC 2.3 Human Resource Management



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		The Role of Intelligence, Reason and Emotions	VAC II Sem	Ethics & Culture
		Learning Technology for HRD: Learning and HRD, Models and Curriculum, Principles of learning	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
		Message and Media Decisions: Advertising Appeals; Advertising Copy: Elements of print and broadcast advertising copy; Types of Media: Merits and Demerits; Media Scheduling. Advertising Effectiveness: Advertising Agency: Role and types. Evaluating Communication and Sales Effect; Pre and Post-testing Techniques.	B.Com VI Sem	SEC: Advertising, Personal Selling and Salesmanship
March	Assessment	Continuous Assessment Activity: Presentation & CV Building	B. Com II Sem	DSC 2.3 Human Resource Management
		Continuous Assessment Activity: Quiz	VAC II Sem	Ethics & Culture
		Continuous Assessment Activity: Quiz	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
April	Theory	Employee enhancement: transfer and promotion. Compensation - concept and policies, Types of compensation: base and supplementary compensation; Individual, group and organisation incentive plans; Fringe benefits; Performance linked compensation: employee stock option; pay band compensation system and job evaluation. Maintenance of employees and Emerging Horizons of HRM: Employee health and safety; Employee welfare; Social security (excluding legal provisions); Employer-employee relations;	B. Com II Sem	DSC 2.3 Human Resource Management



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		Cultivating Inner Values: Ethics in the world of work and play	VAC II Sem	Ethics & Culture
		Individual and group learning, Assessment Centre, Transactional Analysis, Behaviour modeling and self-directed learning	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
		Introduction to Personal Selling and Salesmanship: Concept of Personal Selling and Salesmanship; Personal Selling Situations; Qualities of a Good Salesperson; Types of Salespersons; Role of Personal Selling in CRM; Career Opportunities in Selling; Measures for making selling as an attractive career; Buying Motives.	B.Com VI Sem	SEC: Advertising, Personal Selling and Salesmanship
April	Assessment	Internal Assessment: Internal Test		
		Continuous Assessment Activity: Quiz	B. Com II Sem	DSC 2.3 Human Resource Management
		Continuous Assessment Activity: Presentation and interview activity	VAC II Sem	Ethics & Culture
		Continuous Assessment Activity: Preparing training model	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
May	Theory	Grievance handling and redressal; Industrial disputes: Causes and settlement machinery; e-HRM; Human Resource Information System (HRIS) and e-HRM; Impact of HRM practices on organisational performance; HR Audit, Contemporary issues in HRM - emerging job opportunities, work life balance and work from home.	B. Com II Sem	DSC 2.3 Human Resource Management
		Striving for a Better world	VAC II Sem	Ethics & Culture

	Evaluating HRD	B.Com (H) IV Sem	DSE 4.1. Human Resource Development
	Personal Selling Process: Prospecting; Pre Approach; Approach; Presentation and Demonstration; Handling of Objections; Closing the Sale; Follow-Up.	B.Com VI Sem	SEC: Advertising, Personal Selling and Salesmanship

Neetu
20/03/2024

Dr. Neetu Kushwaha
Assistant Professor
Department of Commerce
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(University of Delhi)



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**SEMESTER WISE TEACHING PLAN SRI
VENKATESWARA COLLEGE**

Name of the Faculty: Mausumi Mohanty
Semester : VIth /2023-24

Department: ECONOMICS
Sub: Indian Economy

MONTH		TOPICS	COURS E	PAPE R COD E /NAME
JANUARY	Theory	India's Stalled Rise – How the state has stifled growth- Subramanian A. and Felman J. (2021)	B.A (Hons.)	12271601
	Tutorials	Discussion on the contemporary reference material- Subramanian and Rajan – Is the Indian Economy back?		
FEBRUARY	Theory:	- India's inward (re)turn : Is it warranted will it work? – Chatterjee, S and Subramanian, A. (2020) - Indian Financial Sector: Structure, Trends and Turns- Mohan, Rakesh and Partha Ray. - Trade Policy Review – Chapter 2: Trade and Investment Regimes. WTO (2020)	B.A (Hons.)	12271601
	Tutorials:	Discussion on budget and its implications in the FY 2023-24. Clarification of doubts in the topics covered		

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MARCH	Theory:	- Trade Policy Reforms since 1991- Singh, Harsh Vardhan (Working paper 02, Brookings India) - A Multitude of Labour laws and their Reforms in India's tryst with destiny – Bhagawati and Panagariya – Collins Business , Ch-08 - Labour reforms in a neo-liberal setting: Lessons from India- Roychoudhury A. and Sarkar, K.- Global Labour Journal 12 (2021).	B.A (Hons.)	12271601
	Tutorials:	Conduct of Internal Test and discussion of questions thereafter. Discussion on the references: India's great slowdown: what happened? What's the way out? – Subramanian, A. (2019)- CID working papers. Indian Monetary Policy in the time of inflation targeting and demonetization – Mohan, R. and Ray, P. (2019)		

APRIL-MAY	Theory:	- Transformation Of Indian Agriculture? Growth, Inclusiveness And Sustainability- Dev, M - Estimates and Analysis of Farm Income in India, 1983–84 to 2011–12- Chand, Saxena, R. and Rana, S. (2015) EPW, Vol No. 22. - Agricultural market reforms : Is there a trade-off between efficiency and equality? Acharya, S. and Mehrotra, S. (2020)- Institute of Human Development		
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	• Economic Reforms and Manufacturing Sector Growth- Nagaraj, R.(2017) • Has India deindustrialized prematurely? A disaggregated analysis- Chakraborty J., and Nagaraj, R. (2020)- EPW • Is India Moving Up the Global Value Chain? A Sectoral Study of Indian Exports- Mukherjee, D. (2021) • Reforming Labour market in States : Revisiting the futility Thesis- Chakraborty, A. (2015) EPW • Economic growth without employment • The story of Indian manufacturing • -Thomas, J.J. (2018) • India's Service sector: Trends, opportunities and challenges - Chanda, R. (2019); Macroeconomic policies, Sectoral Developments and Performance (Ch—29)	B.A (Hons.)	12271601
Tutorials:	Collection of assignment and discussion on the framing of answers to specific questions followed by clarification of doubts over assignment. Discussion on reference: Economic reforms and agricultural growth in India - - Roy, S.D. (2017) Reforming Indian Agriculture – Gulati, A., Kapur, D., & Bouton, M.M. (2020)- EPW	B.A (Hons.)	12271601





SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mausumi Mohanty
Department: ECONOMICS

Semester: GE VI /2023-24
Sub-Principles of Macroeconomics

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
JANUARY	Theory	• Introduction to Macroeconomics • Macroeconomic concepts and school of thoughts • Macroeconomic issues of India	B.Com prog.	PGE 61
	Tutorials	Review questions from book		
FEBRUARY	Theory:	• National Income Accounting • Concepts of GDP/GNP and other national income metrics • Measurement of national income and related aggregates • Determination of national income • Consumption and Investment function	B.Com prog	PGE 61
	Tutorials:	Review questions from book and doubt session, discussion on assignment question		
MARCH	Theory:	• Equilibrium GDP- APS,MPS,APC and MPC • Autonomous expenditure • Multiplier • National Income determination in open economy. • Fiscal Policy • Changes in government expenditure and taxes and their impact	B.Com prog	PGE 61

B.Com
prog

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	Tutorials:	Doubt sessions		
APRIL-MAY	Theory:	• Net export function and equilibrium of national income • Concept of money and Monetary aggregates • Demand for money • Quantity Theory of money	B.Com prog	PGE 61
		• Liquidity preference and rate of interest • Monetary policy, money supply and credit creation		
	Tutorials:	Important questions and past paper discussions, doubt sessions		



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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Sonakshi Jain

Department: ECONOMICS

Semester : II/2022-23

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
January	Theory	Linear Algebra	B.A.Hon s Economi cs	Intermediate Mathematical Methods for Economics
	Tutorials	End chapter exercises		
February	Theory:	Linear Algebra		
	Tutorials:	End chapter exercises		
March	Theory:	Functions of several real variables		
	Tutorials:	End chapter exercises Continuous Assessment		
April- May	Theory:	Multivariate Optimization		


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	Tutorials:	End chapter exercises Continuous Assessment		
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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Sonakshi Jain

Department: ECONOMICS

Semester : II/2023-24

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
January	Theory	Introduction	General Elective	ECON026 Principles Of Macroeconom i cs 1
	Tutorials	Discussion of research project		
February	Theory:	National Income Accounting Determination of GDP		
	Tutorials:	Discussion of research project		
March	Theory:	National Income determination in an open economy with government		
	Tutorials:	End chapter exercises Continuous Assessment		
April-May	Theory:	Money in Modern Economy		


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	Tutorials:	End chapter exercises Continuous Assessment		
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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Sonakshi Jain

Department: ECONOMICS

Semester : IV/2022-23

MONTH		TOPICS	COURSE	PAPER CODE /NAME
JANUARY	Theory	<i>Linear Regression Model OLS method of Estimation and Properties of estimators, Measures of Fit, Testing of Hypotheses, Prediction, Introduction to</i>	B.A.Hon s Economi cs	Econ012 /Introductory Econometrics
	Practical:	End chapter exercises		
FEBRUARY	Theory:	<i>Multiple Regression Model OLS method of estimation and Properties of OLS estimators, Testing of Hypotheses, Measures of fit, practical application using econometric software</i>		
	Practical:	Problem Sets		
MARCH	Theory:	<i>Functional Forms and Qualitative independent variables Nonlinear Models and Transformations of Variables, Dummy variables, practical application using econometric software</i>		
	Practical:	<i>, practical application using econometric software</i>		

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**SEMESTER WISE TEACHING PLAN SRI
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Name of the Faculty: V. Sushmitha Naidu

Department: ECONOMICS

Semester: VI /2023-24

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
JANUARY	Theory	Unit 1: Historical & General Overview References: 1. Chandra, Bipan (1992). “The Colonial Legacy” in Bimal Jalan (ed) The Indian Economy: Problems and Prospects, Viking; Penguin Books. 2. Dreze, Jean and Amartya Sen (2013). An Uncertain Glory: India and its Contradictions, Princeton University Press, “A New India?” (Chapter 1).	Gener al Electiv e Indian Econo my	The Indian Economy (PGE 62)
	Tutorials	Taking doubts and answer writing for the above readings		

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FEBRUARY	Theory: Unit 2: Growth and Structural Change – Phases of Growth, Economic Liberalisation and Structural Change, Assessment of Growth and Development References: 3. Dreze and Sen (2013). “Integrating Growth and Development” (Chapter 2) 4. Lamba, Rohit and Arvind Subramanian (2020), Dynamism with Incommensurate Development: The Distinctive Indian Model, Journal of Economic Perspectives, Volume 34, Number 1 [Sections from this article will be used for India-China comparison relevant for Unit 3.] 5. Omkarnath, G. (2013). “Liberalisation and Growth” (Ch.7, pg. 199-215) in Economics: A Primer for India, Orient Blackswan.	General Elective Indian Economy	The Indian Economy (PGE 62)
	Tutorials: Taking doubts for the above readings. Discussed the Union Budget. Gave practice questions from past year question papers.		


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MARCH	Theory: Unit 3: The Indian Economy in a Comparative Perspective References: 6. Dreze and Sen (2013). “India in Comparative Perspective” (Chapter 3). 7. Lamba & Subramanian (2020) from Unit 2 to be used for India-China comparison Internal Assesment-1, Unit-2, 3 Unit 4. Key Issues: Poverty, Inequality, Education, Health and Gender 8. Dreze and Sen (2013). “The Centrality of Education” (Ch.5), “India’s Health Care Crisis” (Ch.6), “Poverty and Social Support” (Ch.7), “The Grip of Inequality” (Ch. 8). [For Education, Health, Poverty & Inequality respectively. Ch.8 to be used for Gender inequality also] 9. Gupta, Indrani (2012). “Health Indicators” in K. Basu and A. Maertens (eds), New Oxford Companion to Economics in India, OUP. {Referred to as NOCEI hereafter} 10. Agarwal, Bina (2012). “Gender Inequality” in NOCEI [For Gender]	Unit 3: The Indian Economy in a Comparative Perspective References: 6. Dreze and Sen (2013). “India in Comparative Perspective” (Chapter 3). 7. Lamba & Subramanian (2020) from Unit 2 to be used for India-China comparison Internal Assesment-1, Unit-2, 3 Unit 4. Key Issues: Poverty, Inequality, Education, Health and Gender 8. Dreze and Sen (2013). “The Centrality of Education” (Ch.5), “India’s Health Care Crisis” (Ch.6), “Poverty and Social Support” (Ch.7), “The Grip of Inequality” (Ch. 8). [For Education, Health, Poverty & Inequality respectively. Ch.8 to be used for Gender inequality also] 9. Gupta, Indrani (2012). “Health Indicators” in K. Basu and A. Maertens (eds), New Oxford Companion to Economics in India, OUP. {Referred to as NOCEI hereafter} 10. Agarwal, Bina (2012). “Gender Inequality” in NOCEI [For Gender]	General Elective Indian Economy	The Indian Economy (PGE 62)
	Tutorials:	Taking doubts for the above readings. Gave practice questions from past year question papers. Discussed Internal Assessment questions.		
APRIL-MAY	Theory:	Unit 5: Sectoral Performances and Issues in Contemporary Indian Economy – Agriculture, Industry, Services and International Trade	General Elective Indian Economy	The Indian Economy (PGE 62) प्रधानाचार्य, श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi घौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

References:

11. Dev, Mahendra (2012).
“Agricultural Development” in
NOCEI
12. Ghatak, Maitreesh (2012).
“Land Reforms” in NOCEI
13. Nagaraj, R. (2012)
“Industrial Growth” in
NOCEI
14. Nagaraj, R. (2017).
“Economic Reforms and
Manufacturing Sector
Growth. Need for
Reconfiguring the Industrialisation
Model”
. Economic and Political Weekly,
52(2), pg.61-68.
15. Economic Survey 2016-17.
“Clothes and Shoes: Can India
Reclaim Low Skill
Manufacturing?”
(Chapter 7), Ministry of Finance,
Government of India, 2017.
16. Chanda, Rupa (2012). “Services
led Growth” in NOCEI
17. Pal, Partha Pratim (2014), “India
and International Trade since the
establishment of WTO” and
“New Developments and
Policy Challenges” (Chapters
5 & 6) in International Trade
and
India, Oxford India Short Introductions,
Oxford University Press.
18. Economic Survey 2020-21 Volume
2. “Developments in India’s
Balance of Payments (BOP)” in
(pg. 93-115), Ministry of Finance,
Government of India, 2021. [This is
meant to provide up-to-
date information on the BOP situation
and is to be read along with Pal, PP
(2014) Ch. 5.]

Tutorials:

Taking doubts for the above readings.
Gave practice questions from past year
question papers.
Discussed Internal Assessment
questions.



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**SEMESTER WISE TEACHING PLAN SRI
VENKATESWARA COLLEGE**

Name of the Faculty: V. Sushmitha Naidu

Department: ECONOMICS

Semester: VI /2022-23

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
JANUARY	Theory	1. Introduction: What is environmental economics; review of microeconomics and welfare economics. References: Economics and the Environment, Chapter-1, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Positive vs Normative Analysis , Chapter-2, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Don Fullerton and Robert Stavins (1998). "How Economists See the Environment." Nature, Vol. 395, Oct 1, 1998, pp. 433-434.	BA Eco(Hons)	12277608/ Environmental Economics
	Tutorials	Discussed the structure of the course as mentioned in the minutes of meeting. Problem solving.		

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FEBRUARY	Theory:	Introduction: What is environmental economics; review of microeconomics and welfare economics. References: Making Social Choices, Chapter 3, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Welfare and Markets , Chapter 4, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press 2. The Theory of Externalities): Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.	BA Eco(Hons)	12277608/ Environmental Economics
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		References: Pricing Public Goods and Bads, Chapter- 5, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Coase and the Assignment of Property Rights, Chapter 13: Do Section I, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press		
	Tutorials:	Discussed the end chapter exercise and previous year question papers.		


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MARCH	Theory: 3. The Design and Implementation of Environmental Policy: Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy. References: Basic Environmental Regulation, Chapter 11, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Pricing emissions, Chapter 12, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Coase and the Assignment of Property Rights Chapter 13, Sections II.A and II.B, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Internal Assessment-1, Unit-2 Voluntary Measures, Chapter 14, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Spatial and Temporal Dimensions of Regulation , Chapter 15: Do Sections I and II, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press	BA Eco(Hons)	12277608/ Environmental Economics
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APRIL-MAY	Theory:	5. Measuring the Benefits of Environmental Improvements: Non- market values and measurement methods; risk assessment and perception. References: Demand for Environmental Goods , Chapter 7, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Hedonic Pricing Theory, Chapter 8: Do p. 147 and Section IV, Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Stated Preferences, Experiments, and Referenda Chapter 10 , Charles Kolstad. Intermediate Environmental Economics, Oxford University Press Internal Assignment-2, Unit-3 Presentations for the following readings: 1. State of Environment Report: India 2009 (Ministry of Environment and Forests, Government of India, 2009): Chapter 2 (State and Trends of the Environment): Land. Air (p. 10 to 39). 2. Three Year Action Agenda (NITI Aayog, April 2017): Chapter 23	BA Eco(Hons)	12277608/ Environmental Economics
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- (Environment and Forests)
3. Schmalensee, Richard and Robert N. Stavins (2017). "The design of environmental markets: What have we learned from experience with cap and trade?" Oxford Review of Economic Policy, Vol. 33, No. 4, pp. 572-588.
 4. State of Environment Report: India 2009 (Ministry of Environment and Forests, Government of India, 2009): Chapter 2 (State and Trends of the Environment): Water, Biodiversity (p. 40-71).
 5. Blackman, Allen, Li, Z., and Liu, A. A. (2018). "Efficacy of command-and-control and market-based environmental regulation in developing countries," Annual Review of Resource Economics, Vol. 10, pp. 381-404.
 6. Economic Survey 2017-18 Volume 2, Chapter 5 p. 77-78 (Air Pollution in Delhi) ; Three Year Action Agenda (NITI Aayog, April 2017): Chapter 23 (Environment and Forests)
 7. Geoffrey Heal (2012). "Reflections—Defining and Measuring Sustainability" Review of Environmental Economics and Policy Vol. 6, No. 1 (winter 2012), p. 147–163.

Pushmita Naidu

V. A.

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	Tutorials:			
		Discussed the end chapter exercise and previous year question papers.		



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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. KANIKA PATHANIA

Department: ECONOMICS

Semester: 2ND (EVEN) /2023-24

MONTH		TOPICS	COURSE	PAPER CODE /NAME
JANUARY	Theory	UNIT 1: Sampling distribution of a Statistics: Concepts of statistics and parameter, sampling distribution References: Devore Chapter 5.3	BA(H) ECONOMICS	ECON006/ INTERMEDIATE STATISTICS FOR ECONOMICS
	Tutorials	Back questions of Devore ch 5.3, discussion on the topic of sampling distribution.	BA(H) ECONOMICS	ECON006/ INTERMEDIATE STATISTICS FOR ECONOMICS
FEBRUARY	Theory:	Unit 1: Sampling distribution of a Statistics: Central limit theorem, sampling. References: Devore Chapter 5.4, 5.5 UNIT 2: ESTIMATION: estimator and methods of estimation, point estimator, method of moments, MLE, Properties of estimator. References: Devore Chapter 6	BA(H) ECONOMICS	ECON006/ INTERMEDIATE STATISTICS FOR ECONOMICS
	Tutorials:	UNIT 2: ESTIMATION 1. Back book questions 2. Discussions on the topics covered. 3. Continuous Evaluation (1): MCQ for sampling Distribution (5 marks). 4. Continuous Evaluation (2): Group Project to be given based on survey using the sampling methods, and point and interval estimation to be continued till next month. (15 marks)	BA(H) ECONOMICS	ECON006/ INTERMEDIATE STATISTICS FOR ECONOMICS

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MARCH	Theory:	UNIT 2: ESTIMATION: Interval estimation, confidence level, chi square, f distribution. References: Devore Chapter 7 UNIT 3: INFERENCE: Hypothesis testing, Type I & II error.	BA(H) ECONOMICS	ECON006/ INTERMEDIATE STATISTICS FOR ECONOMICS
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		References: Devore 8.1		
	Tutorials:	UNIT 2: ESTIMATION: 1. Back exercise questions. 2. Internal Assessment 1 (12 Marks): Unit 1 & Unit 2 (only till point estimation). 3. Continuous Evaluation (2) group project continued. Students will make a group of 4 and first decide a question to be analyzed and target population. Then they will draw a sample of at least 30 and will be asked to fill up the questionnaire. Based on the sample drawn, they will analyse the sample statistics and will make a point and interval estimation for the population mean. They will conclude the report with limitations of the study. This report will be of 15 marks and 5 marks will be for presentation on the same to be done in next month. UNIT 3: INFERENCE: Hypothesis testing, Type I & II error. 1. Discussion of the topics covered and the back exercise questions.	BA(H) ECONOMICS	ECON006/ INTERMEDIATE STATISTICS FOR ECONOMICS

APRIL -MAY	Theory:	UNIT 3 to be continued UNIT 4: HYPOTHESIS TESTING: Testing of a population mean, proportions, p values, testing for variance, testing for two samples, testing for equality of means; testing for ratio of variances. References: Devore: Ch 8.2-8.5, ch 9	BA(H) ECONOMI CS	ECON006/ INTERMEDIAT E STATISTICS FOR ECONOMICS
	Tutorials:	UNIT 3: - Internal Assessment (12 marks): Unit 2 and Unit 3 - Back questions - Presentations of group projects. UNIT 4: HYPOTHESIS TESTING: - Continuous Evaluation (4): Understanding based case study test on topics covered in this unit (5 marks)	BA(H) ECONOMI CS	ECON006/ INTERMEDIAT E STATISTICS FOR ECONOMICS
		- Discussion and application of the hypothesis testing - CE(5) (5marks) MCQ for quick revision of the entire syllabus.		





**SEMESTER WISE TEACHING PLAN SRI
VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Kanika Pathania
Department: ECONOMICS

Semester : 2nd (Even) /2023-24

MONTH		TOPICS	COURSE	PAPER CODE /NAME
JANUARY	Theory	UNIT1: Introduction and Overview: Populations and samples; sample statistics; descriptive Statistics References: Mc Clave: Chapter 1, 2.1-2.5, Anderson, Sweeny Chapter 3.2	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S
	Tutorials	Back exercise of McClave and discussion on populations and various case studies.	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S
FEBRUARY	Theory:	Unit 1 to be continued Unit 2: Basic Concepts of Probability: Spaces and Events; Probability concepts, Conditional Probability References: McClave: Chapter 3	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S

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Tutorials :	1. Continuous Evaluation (1): MCQ on the understanding of population, sampling, and techniques. (5 marks) 2. Continuous Evaluation (2): Individual project will be given to students. They will learn on how to download the data and analyse it using the concepts learned in Unit 1. This is for 10 marks report writing followed by 5 marks presentation (to be done in next month). As per their roll number, they will be given a product code(HS 2007), and then based on it, they will analyze that product trade flows across countries, with major reporter country as India. 3. Continuous Evaluation (3): Problem set given based on PROBABILITY. 4. More problem set will be given on the topics of Bar graph, Descriptive Statistics, Probability apart from the Referred textbook.	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S
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MARCH	Theory:	UNIT 3: Probability Distribution and Sampling: Random variables- Discrete and continuous, various probability distribution function and Characteristics; commonly used distribution – Uniform, Binomial, Exponential, Poisson, Hypergeometric and Normal random variable; Joint Distribution – Conditional Distributions and Expectations, Covariance and Correlation. References: Mc Clave: Chapter 4 Anderson, Sweeny Ch 5.4	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S
	Tutorials :	1. Internal Assessment (1 2. Continuous Evaluation (5): Class assessment of 5 marks will be done for the topic on inference. 3. Back exercise question to be discussed and problem set will be given for unit 3 4. Presentations of Continuous evaluation (2) to be continued.	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S

APRIL-MAY	Theory:	UNIT 4: ESTIMATION AND HYPOTHESIS TESTING: Properties of estimators; confidence intervals; defining statistical hypothesis; distributions of test statistics; testing hypothesis related to population parameters; Type I and II error; power of the test. References: McClave: Ch:6.1-6.3 and 7.1-7.5, 7.8	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S
	Tutorials :	1. Internal Assessment (2): 12 marks 2. Continuous Evaluation(5 marks): class assessment on the application of hypothesis testing by giving some case study., 3. Back exercise and discussions on the topics covered. 4. Solving of problem sets given.	BA(P) Major for Economics	ECON022/ BASIC STATISTICS FOR ECONOMIC S



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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Kanika Pathania
Department: ECONOMICS

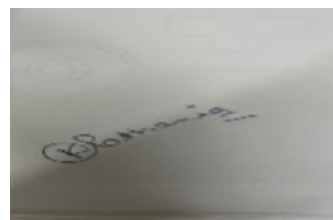
Semester : 2nd (Even) /2022-23

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
JANUARY	Theory	UNIT1: IS-LM Analysis : Derivations of the IS and LM functions; IS-LM and aggregate demand; shifts in the AD curve References: Dornbusch, Fischer and Startz: Chapter 10 and Chapter 11	BA(P) Major for Economics	ECON008/ Intermediate Macroeconom ics I: Foundations of Aggregate
	Tutorials	Bridging the gap by revising Chapter 9 of Dornbush regarding Good market equilibrium.	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate
FEBRUARY	Theory:	Unit 1 to be continued Unit 2: Short-run and medium-run equilibrium: The labour market, Wage determination; wages, prices and unemployment; natural rate of unemployment; from employment to output, Derivation of aggregate supply curve, Interaction of aggregate demand and supply to determine equilibrium output, price level and employment. References: Blanchard and Johnson: Chapters 6 and 7	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate


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	Tutorials :	1. Continuous Evaluation (1): Class Assignment on Unit 1, majorly dealing with crowding out and transmission mechanism and with some focus on numericals. 2. Continuous Evaluation (2): Individual project will be given on analyzing the macroeconomic variables of different countries (each student one country) specifically focusing on the consumption, investment, savings, labour market, inflation covering the topics in Unit 1, 2 and 3. They will be downloading the data on various parameter and an analysis need to be done. This is for 15 marks report writing followed by 5 marks presentation (to be done in next month). 3. Problem set given questions based on the equilibrium level of income, interest rate, prices. 4. Internal Assessment (1): 12 marks UNIT 1 & 2.(chapter 6)	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate
MARCH	Theory:	UNIT 2: to be continued UNIT 3: Phillips Curve and Theory of Expectations Inflation, unemployment and expectations, Phillips Curve; adaptive and rational expectations; policy ineffectiveness debate. References: Blanchard and Johnson: Chapter 8 (ii) Attfield, Demery and Duck: pp 6 – 9, 18 – 28	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate
	Tutorials :	1. Continuous Evaluation (3): Class assessment of 5 marks will be done for understanding of the inflation, and related topic. 2. Back exercise question to be discussed and problem set will be given for unit 3. 3. Presentations (CE3) of Continuous evaluation (2) to be continued.	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate

APRIL-MAY	Theory:	UNIT 3: to be continued UNIT 4: Microeconomic foundations of macroeconomic behaviours : Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypothesis; other theories of consumption expenditure. Investment: determinants of business fixed investment, residential investment, and inventory investment. References: Dornbusch, Fischer and Startz: Chapter 13 (Boxes & Optional on pp 338 to be excluded) (ii) Dornbusch, Fischer and Startz: Chapter 14	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate
	Tutorials :	1. Internal Assessment (2): 12 marks 2. Continuous Evaluation (5): class assessment on the application of microeconomic foundations of macroeconomic behavior. 3. Back exercise and discussions on the topics covered. 4. Solving of problem sets given.	BA(P) Major for Economics	ECON008/ Intermediate Macroeconomic s I: Foundations of Aggregate



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**SEMESTER WISE TEACHING PLAN SRI
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Name of the Faculty: SHEEBANI GOSWAMI

Department: ECONOMICS

Semester: IV /2023-24

MONTH		TOPICS	COURSE	PAPE R COD E /NAME
JANUARY	Theory	UNIT – I: MONOPOLY Monopoly, pricing, in efficiency, price, discrimination, regulation Suggested reading AMG – chapter 10, chapter 11	DSC	INTERMED IATE MICROEC ON OMICS
	Tutorials	Doubts session, book exercises	DSC	 प्रधानाचार्य Principal

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February	Theory:	UNIT – II: General equilibrium, Exchange, economy, Robinson, Crusoe, economy, Pareto, optimality, welfare, theorems, welfare, and social choice. SF CHAPTER 15 DSEN – applications, chapter 9 Internal Assessment-II Assignment. Syllabus: Unit-2	DSC	Intermediate microeconomics II: market, government and welfare
	Tutorials:	Doubts session. Assignment of topics for groups. QUIZ	DSC	/



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March	Theory:	UNIT – III: models of monopolistic competition Forms with differentiated products, Mark up, short, term and long run equilibrium SF – chapter 12 Unit IV: externalities Market efficiency under externalities, pig attacks, cost, theorem, market, creation, and other solutions AMG: chapter 17	DSC	Intermediate microeconomics two: it, government and welfare
	Tutorials:	Doubts sessions Continues assessments- Quiz, Group Questions		
April	Theory:	UNIT – V : public goods In efficiency of market equilibrium, optimal public, good provision, free rider, problem, Lindahl tax SF – chapter 18	DSC	Intermediate microeconomics two, market, government and welfare
	Tutorials:	Doubts Session Internal Assessments and continuous assessments.		


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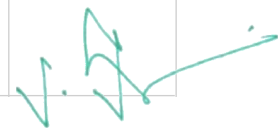
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Name of the Faculty: SHEEBANI GOSWAMI

Department: ECONOMICS

Semester: II/2023-24

MONTH		TOPICS	COURSE	PAPER CODE /NAME
Jan	Theory	UNIT I: historical and general overview of Indian economy since independence Core readings by Balakrishnan and Amartya Sen	General elective	Indian economy / general elective – semester II
	Tutorials	Doubts Sessions Answer writing practice	GENERAL ELECTIVE	


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February	Theory:	Unit II Growth and structural change Core readings, by Vijay Joshi, Rakesh Mohan and MS Ahluwalia	General elective	Indian economy / general elective — semester II
	Tutorials:	Doubts Sessions Answer Writing Assignment of topics for groups. Instructions for project	General elective	Indian economy / general elective — semester II


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March	Theory:	UNIT III: Indian economy in a comparative perspective Core readings by Amartya Sen and Praveen Jha Internal Assessment-II Assignment.	General elective	Indian economy / general elective – semester II
	Tutorials:	Doubts sessions Continues assessments- Projects, Presentation.		
April	Theory:	UNIT IV: key issues of poverty, inequality, education, health, and gender Core readings, by Deshpande, government of India, what's a Patnaik, Himanshu and Vijay Joshi Unit five: agriculture, industry, services and international trade Core readings by Mishra and Pandey, Praveen, Jha, or Nagraj, JJ, Thomas and government of India	General elective	Indian economy / general elective – semester II
	Tutorials:	Doubts sessions		



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SEMESTER WISE TEACHING PLAN SRI
VENKATESWARA COLLEGE

Name of the Faculty: SHEEBANI GOSWAMI

Department: ECONOMICS

Semester: IV /2023-24

Subject: VAC DIGITAL EMPOWERMENT
Sem IV

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January	Practical	Unit I: - Needs and challenges - Vision of Digital India: Digilocker, E Pathshala, BHIM, e kranti. Public utility portals such as RTI, Health, Finance, Income tax filing , education Continuous evaluation:Survey on the awareness of use of various services offered by digital India like DigiLocker, BHIM, E Path Shala. II : spread digital literacy/awareness amongst the vulnerable groups and marginalised sections of the society like street, vendors, domestic, help, security, guards, senior citizens.Rodney Jones and Christoph Hafner “ understanding digital literacies: A practical introduction” www.digitalindia.gov.in	VALU E ADDE D COUR SE	6967000027 / DIGITAL EMPOWER MENT
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		Doubts Sessions , case studies, group exercises		
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February	Practical	Unit II: Communication and collaboration in the cyberspace 1. Electronic communication: electronic mail, blogs, social media 2. Collaborative digital platforms 3. Tools/platforms for online learning 4. Collaboration using file, sharing, messaging, video conferencing Continuous evaluation : writing blogs, or creating mini vlogs, social media handles and creating content for the same. collaborating with each other for better social media, outreach and marketing	VALU E ADDE D COUR SE	6967000027 / DIGITAL EMPOWER M ENT
	:	Projects	VAC	6967000027 / DIGITAL EMPOWER M ENT 

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March	Practical	Unit III: towards safe and secure cyber space 1. Online security and privacy 2. Threats in digital world: data breach in cyber attacks 3. Blockchain technology 4. Security initiatives by the government of India 5. Practical evaluation : finding out different type of online frauds and conducting a survey to raise awareness : looking at different security initiatives by the government of India and tracking the progress of cases of fraud pending www.cybercrime.gov.in www.cybersafeindia.in	VAC	6967000027 / DIGITAL EMPOWERMENT
		Doubts Sessions		
April	Practical	UNIT IV: ethical issues in digital world 1. Net etiquette 2. Ethics in digital communication 3. Ethics in cyberspace 4. Practical evaluation : doing case studies and examples of ethics in digital communication and cyber space www.meity.gov.in/cyber-surakshit-bharat-programme	VAC	6967000027 / DIGITAL EMPOWERMENT
		Doubts Sessions		


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 धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

MARCH	Theory:	Unit-2 Credit market models Unit-3 Environment and Sustainable development, understanding the economics of environment		
	Tutorials:	Last year's question papers and discussed the internal examination questions		
	Tutorials:			
APRIL- MAY	Theory:	Unit-4 Globalization, globalization paradox and understanding the economics of globalization		
	Tutorials:	Previous Year's question papers and doubt-clearing sessions on the Credit and labor unit		



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Department: ECONOMICS

Semester: VI /2023-24

MONTH		TOPICS	COURSE	PAPER CODE /NAME
JANUARY	Theory	Public Finance basics and use for public finance, fundamental theorems of welfare economics AAppendix D	DSE Public Finance	62277628/ DSE
	Tutorials	Doubt sessions related to the finances of the government and how it manages its finances		
FEBRUAR Y	Theory:	Market failure, Public goods, Externalities and burden of taxation with the incidence of taxation		 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi
	Tutorials:	Doubt sessions on externalities and their impact on the public and discuss previous years' question		

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MARCH	Theory:	Current issues of India's tax system including GST, Analysis of Budget and Deficits
	Tutorials:	Sessions on GST implementation and discussion on the current fiscal year's budget and discussion over the internal assessment I question paper


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	Tutorials:			
APRIL- MAY	Theory:	Fiscal Federalism in India, devolution of taxes between centre and states and 15 th finance commission recommendations		
	Tutorials:	Doubt session on previous year's question papers and assignment questions covered		

**SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE**

Name of the Faculty: D. BRAHMA REDDY
Department: ECONOMICS

Semester: VI /2023-24

MONTH		TOPICS	COURSE	PAPER CODE /NAME
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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Name of the Faculty: D. BRAHMA REDDY

Department: ECONOMICS

Semester: II /2023-24

MONTH		TOPICS	COURSE	PAPER CODE /NAME
JANUARY	Theory	UNIT – I: Introduction (05 Hours) UNIT – II: National Income Accounting (10 Hours) Concepts of GDP and National What is macroeconomics? Macroeconomic issues in an economy	Economics (Hons.)	GE-II Principles of Macroeconomics-I
	Tutorials:	Project allocation		
FEBRUARY	Theory:	UNIT – II: National Income Accounting (10 Hours) Concepts of GDP and National Income; measurement of national income and related aggregates; nominal and real income; limitations of the GDP concept <i>(i) Abel, Bernanke and Croushore: Chapter 2 (The Measurement and Structure of the National Economy)</i>		
	Tutorials:	Project discussion		
MARCH	Theory:	UNIT – III: Determination of GDP (10 Hours) Actual and potential GDP; aggregate expenditure; consumption function; investment function; equilibrium GDP; concepts of MPS, APS, MPC, APC; autonomous expenditure; Concept of		
	Tutorials:	Project discussion		
APRIL-MAY	Theory:	UNIT – IV: National Income Determination in an Open Economy with Government (10 Hours) Income determination; Fiscal Policy: impact of changes in government expenditure and taxes; net exports function; net exports and equilibrium national income. UNIT – V: Money in a Modern Economy (10 Hours) Concept of money in a modern economy; monetary aggregates; demand for money; quantity theory of money; liquidity preference and rate of interest; money supply and credit creation; monetary policy.		 प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21
	Tutorials:	Project presentation		

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ABReddy



SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Mr. Abhishek Malhotra

Department: ECONOMICS

Semester: IV /2023-24

Basic Econometrics

MONTH		TOPICS	COURSE	PAPER CODE /NAME

V. A.

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**Semester: IV /2023-24**[illegible]

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	Tutorials: Discussions on Indian budget over the years. Reports of 14th and 15th Finance Commissions and the requirements of the different tiers of the government. Tutorials:		
APRIL-MAY	Theory: Unit 3: Fiscal Federalism in India Unit 4: Development and Welfare Policies. Tutorials: Doubt session on previous year's question papers and the chapters covered.		

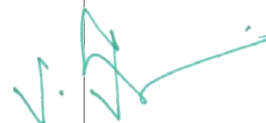
SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

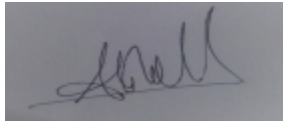
Semester: II /2023-24

MONTH	TOPICS	COURSE PAPER Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय (University of Delhi) धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-21

JANUARY	Theory	Unit 1: Introduction	General Elective (GE-4)	ECON026
		AApplix D		
	Tutorials	Discussion about macroeconomics and its relevance.		
FEBRUARY	Theory:	Unit 2: National Income Accounting		
	Tutorials:	Doubt sessions on the three ways of calculating the national income. Numerical examples were covered.		
MARCH	Theory:	Unit 3: Determination of GDP Unit 4: National Income Determination in an open economy with government		
	Tutorials:	Doubt session on the chapters covered. Numerical examples and assignments to be discussed.		
	Tutorials:			


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APRIL-MAY	Theory: Tutorials:	Unit 4: National Income Determination in an open economy with government Unit 5: Money in a modern economy Doubt session on previous year's question papers and the chapters covered.		
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**SEMESTER WISE TEACHING PLAN
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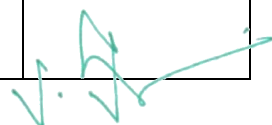
January to July, 2023

Name of the Faculty: Dr. Neeru Kumar

Department: Electronics

Semester: Second and Fourth

Month		Topics	Course	Paper Code/Name
January	Theory:	Introduction: Block diagram of an electronic communication system, electromagnetic spectrum-band designations and applications, need for modulation, concept of channels and base-band signals. Amplitude modulation: Basics of Amplitude Modulation, generation of AM (balanced modulator, collector modulator).	B.Sc. Electronics IV Semester	DSC-12 NEP Principles of Communication Systems
	Practicals	Sem IV: 1. Study of Amplitude Modulation 2. Study of Amplitude Demodulation		
	Theory:	Number System and Codes. Logic Gates and Boolean Algebra. Combinational Logic Analysis and Design	B.Sc. Electronics II Semester	DSC – 5 NEP Digital Electronics
	Practicals	1. To verify various logic gates		
February	Theory:	Amplitude Demodulation (diode detector), Double side band suppressed carrier, DSBSC generation (balanced modulator), Single side band suppressed carrier, SSBSC generation (filter method, phase cancellation method) Other forms of AM (Pilot Carrier Modulation, Vestigial Side Band modulation, Independent Side Band Modulation). Block diagram of AM Transmitter and Receiver	B.Sc. Electronics IV Semester	DSC-12 NEP Principles of Communication Systems


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	<u>Mid Term Test</u>	Given from the syllabus covered		
April	Theory Practicals:	Pulse Code Modulation: Need for digital transmission, Quantizing, Uniform and Nonuniform Quantization, Quantization Noise, Companding, Coding, Digital Formats. Decoding, Regeneration, Transmission noise and Bit Error Rate. Differential Pulse Code Modulation, Delta Modulation, Quantization noise, DPCM Sem IV: 1. Study of Pulse Code Modulation 2. Study of Delta Modulation	B.Sc. Electronics IV Semester	DSC-12 NEP Principles of Communication Systems
	Theory Practicals:	Signal Conversion, Memories and Logic Families Sem II: 1.Design a counter using D/T/JK Flip-Flop. 2.Design a shift register and study Serial and parallel shifting of data.	B.Sc. Electronics II Semester	DSC – 5 NEP Digital Electronics

□

M. Kumar

V. A.

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SEMESTER-WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Jan-May 2023-2024

Name of the Faculty: Dr. Sunita Jain

Department: Electronics

Semester: Even

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	PHOTONICS: Introduction to EM waves, concept of spherical & plane waves, reflection and transmission, total internal reflection, origin of refractive index and dispersion. Interference, division of wave front, division of amplitude. Young's double slit experiment,	B.Sc. (H)	CC-XIV PHOTONICS
		MICROPROCESSOR: Introduction to microprocessor, Classification of microprocessor, speed, word size & memory capacity. Introduction to 8085 microprocessors. Basic architecture of 8085 microprocessors, Block diagram.	B.Sc. (H)	DSC-11 MICROPROCES SOR
	Practical	Law of Malus. LED & Photodiode Characteristics	B.Sc. (H)	CC-XIV PHOTONICS Lab
		Basic understanding of Kit Simple program of addition & Subtraction	B.Sc. (H)	DSC-11 MICROPROCES SOR LAB
FEBRUARY	Theory	PHOTONICS: Newton's ring & Michelson Interferometer. Fresnel and Fraunhofer diffraction. Diffraction by rectangular aperture, single slit, and double slit, diffraction grating and circular aperture. Resolving and dispersive power of grating. Resolving power of telescope and microscope. Introduction to Polarization of light and various ways of producing polarized light.	B.Sc. (H)	CC-XIV PHOTONICS
		MICROPROCESSOR: General purpose register, flag register, SP & PC register. Types of buses, address & data bus demultiplexing. Instruction set and its classification, Addressing Modes and programming examples.	B.Sc. (H)	DSC-11 MICROPROCES SOR

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	Practical	PHOTONICS: Determination of unknown wavelength using diffraction grating. Determination of Resolving and dispersive power of grating. Determination of wavelength using Newton rings. MICROPROCESSOR: Program for multibyte addition & subtraction. Program for block transfer. Program for 8 bit multiplication. Program to search a no. in given list	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS LAB DSC-11 MICROPROCES SOR LAB
MARCH	Assignment	PHOTONICS: Questions based on interference, diffraction and Polarization. MICROPROCESSOR: Questions based on instructions and programming.	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS DSC-11 MICROPROCES SOR
MARCH	Theory	PHOTONICS: Production & Analysis of Linearly, Elliptically & Circularly polarized. QWP & HWP. Liquid crystal display. Interaction of radiation and matter, Einstein coefficients, Condition for amplification, laser cavity, threshold for laser oscillation, line shape function. The semiconductor injection laser. MICROPROCESSOR: Stack operations. Call & Return and PUSH & PUSH instructions. Timing diagrams, counter & delay loops. Interrupts of 8085 & their processing. Latency time & response time.	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS DSC-11 MICROPROCES SOR
	Practical	PHOTONICS: Characteristics of LEDs and Photodetector and Photodiode. Specific rotation of sugar cane solution using Polarimeter. MICROPROCESSOR: Program for 16/8 bit division. Program for GCD. Program to generate Fibonacci series. Program to find Minimum & Maximum among N nos.	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS LAB DSC-11 MICROPROCES SOR LAB



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	Mid-Term Test	PHOTONICS: Questions based on interference, diffraction and polarization. MICROPROCESSOR: Questions based on Architecture, Instructions, Programming & Stack.		CC-XIV PHOTONICS DSC-11 MICROPROCES SOR
APRIL	Theory	PHOTONICS: LED, Photodiode, photodetector, CCD & bolometer tube and other photonic devices. Quantum efficiency & Responsivity. T.E. and T.M. modes in symmetric slab waveguide. Wave propagation and concept of linearly polarized waves inside dielectric waveguide. Group velocity and dispersion relation. Single mode and multimode fiber. MICROPROCESSOR: PPI 8255, 8253/8254 Timer and 8259 interrupt controller interface with 8085. Designing of Traffic Light Controller.	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS DSC-11 MICROPROCES SOR
	Practical	PHOTONICS: Diffraction Practical using LASER MICROPROCESSOR: Program to arrange nos. in ascending/descending order. Program to verify Truth table of Logic gates. Interfacing using PPI 8255.	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS LAB DSC-11 MICROPROCES SOR LAB
MAY	Theory	PHOTONICS: Dispersion & Attenuation in Optical fiber. MICROPROCESSOR: Difference between 8085 & 8086 Microprocessor	B.Sc. (H) B.Sc. (H)	CC-XIV PHOTONICS DSC-11 MICROPROCES SOR

	Practical	PHOTONICS: Diffraction Practical using LASER	B.Sc. (H)	CC-XIV PHOTONICS LAB
		MICROPROCESSOR: Interfacing PPI 8255.	B.Sc. (H)	DSC-11 MICROPROCES SOR LAB

Sumita Jain



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2023-2024 (Even Semester)

Name of the Faculty : Dr Hari Singh

Department : Electronics

Semester: Theory : B.Sc. (H) Electronics, Semester II
 B.Sc./B.Com/B.A. (H/P), Semester II

Practical : B.Sc. (H) Electronics, Semester VI
 B.Sc. (H) Electronics, Semester II
 B.Sc./B.Com/B.A. (H/P), Semester II

Month		Topics	Course	Paper Code/ Name
Jan	Theory	Unit I: Fundamentals of Electronic Measurements Qualities of Measurement: SI system of units. Specifications of instruments, their static and dynamic characteristics. Error (Gross error, systematic error, absolute error and relative error) and uncertainty analysis. Unit I: Introduction - Self-Awareness and Happiness • Getting to Know Each Other • What to Expect from this Course? • Getting to Know Oneself	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning
	Practical	✚ Design of ammeter and voltmeter using galvanometer. ✚ Measurement of resistance by Wheatstone bridge. ✚ Measurement of Capacitance by De Sauty's bridge. ✚ Measurement of Inductance by Anderson's bridge. ✚ To determine the characteristics of resistance transducer - Strain Gauge. ✚ To determine the characteristics of an LVDT. ✚ To study the variations of thermo-emf of a thermocouple. (Type J/Type K) ✚ To study the I-V characteristics of Solar Cell. ✚ To study the Characteristics of LDR, Photodiode (i) Variable Illumination (ii) Linear Displacement. ✚ Characteristics of one Solid State sensor/ Fiber optic sensor. ✚ Activities/Discussions/Watching Movies/Reading Books/Maintaining A Reflective Journal/Field Engagement/Mindfulness Exercises, etc. as per the syllabus ✚ Study of Amplitude Modulation and Demodulation	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II B.Sc.(Hons) Electronics, Semester VI	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning Core Course V/Communication Electronics

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		Introduction to R and familiarization of RStudio, Basic components in R Studio	B.Sc.(Hons) Electronics, Semester II	SEC: R Programming for Data Analytics
Feb	Theory	Unit I: Fundamentals of Electronic Measurements Basic Measurement Instruments: PMMC instrument, galvanometer, DC measurement-ammeter, voltmeter, ohm meter, AC measurement (rectifier type, electro dynamo meter), Watt meter. Digital voltmeter systems (integrating and non-integrating types), digital multimeter, Connectors and Probes: low capacitance probes, high voltage probes, current probes, identifying electronic connectors - audio and video, RF/Coaxial, USB etc. Unit II: Impedance Measurement and Power Supplies Regulated Power Supplies: Power Supply characteristics, Fixed power supply (78XX based) Unit I: Introduction - Self-Awareness and Happiness • What Makes One Happy/ Unhappy? Outer vs Inner Sources of Happiness, Joy of Giving Unit II: Social Relationships Mindfulness • Sharing vs Power: Peers, Family and Society • Going Beyond Power Relationships Through Open Conversation • The Value of Silence and Reflection	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning
	Practical	✚ Design of ammeter and voltmeter using galvanometer. ✚ Measurement of resistance by Wheatstone bridge. ✚ Measurement of Capacitance by De Sauty's bridge. ✚ Measurement of Inductance by Anderson's bridge. ✚ To determine the characteristics of resistance transducer - Strain Gauge. ✚ To determine the characteristics of an LVDT. ✚ To study the variations of thermo-emf of a thermocouple. (Type J/Type K) ✚ To study the I-V characteristics of Solar Cell. ✚ To study the Characteristics of LOR, Photodiode (i) Variable Illumination (ii) Linear Displacement. ✚ Characteristics of one Solid State sensor/ Fiber optic sensor. ✚ Activities/Discussions/Watching Movies/Reading Books/Maintaining A Reflective Journal/Field Engagement/Mindfulness Exercises, etc. as per the syllabus 1. Study of Amplitude Modulation and Demodulation 2. Study of Frequency Modulation and Demodulation 3. Study of Single Side Band Modulation and Demodulation	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II B.Sc.(Hons) Electronics, Semester VI	Discipline-Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning Core-Course-VIII/Communication Electronics
				Principal Sri Venkateswara College University of Delhi Dhola Kuan, New Delhi-110021

		R Syntax and programming	B.Sc./B.Com/B.A. (Hons/Prog), Semester II	SEC: R Programming for Data Analytics
Mar	Theory	Unit II: Impedance Measurement and Power Supplies Dual power supplies (78XX and 79XX based), Variable power supply (LM317 based), current limiting, short-circuit shut down. Introduction of switch mode power supply (SMPS) Unit III: Oscilloscopes and Signal Generators Electronic Displays: The Cathode Ray Oscilloscope (CRO): Block diagram of a General Purpose Oscilloscope and its basic operation. Measurement of voltage, frequency and phase by oscilloscope. Oscilloscope probes. Sampling Oscilloscope. Unit II: Social Relationships Mindfulness • Practice of Mindfulness Unit III: Identity, Self-Image, Status, Self-Worth- Digital Identity • Identity Construction and Expression: Individual and Collective • Accepting and Valuing Oneself • Understanding the Gendered World • Identifying and transcending stereotypes	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning
	Practical	✚ Design of ammeter and voltmeter using galvanometer. ✚ Measurement of resistance by Wheatstone bridge. ✚ Measurement of Capacitance by De Sauty's bridge. ✚ Measurement of Inductance by Anderson's bridge. ✚ To determine the characteristics of resistance transducer - Strain Gauge. ✚ To determine the characteristics of an LVDT. ✚ To study the variations of thermo-emf of a thermocouple. (Type J/Type K) ✚ To study the I-V characteristics of Solar Cell. ✚ To study the Characteristics of LOR, Photodiode (i) Variable Illumination (ii) Linear Displacement. ✚ Characteristics of one Solid State sensor/ Fiber optic sensor. ✚ Activities/Discussions/Watching Movies/Reading Books/Maintaining A Reflective Journal/Field Engagement/Mindfulness Exercises, etc. as per the syllabus 4. Study of AM Transmitter and Receiver 5. Study FM Transmitter and Receiver 6. Study of Pulse Amplitude Modulation Understanding tidyverse, tibble, dplyr, ggplot2, tidyr, purrr, readr, forcats, stringr for tidying, manipulating, and plotting data Linear Programming Models, Optimization models, understanding optim()	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II B.Sc.(Hons) Electronics, Semester VI B.Sc./B.Com/B.A. (Hons/Prog), Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning SEC: R Programming for Data Analytics Core-Course-VIII/Communication Electronics
				प्रधानाचार्य श्री वेमदिवर महाविद्यालय, श्री यशोवर्धन कॉलेज, दिल्ली विश्वविद्यालय / University of Delhi SEC: R Programming for Data Analytics

Mid-Term Test and Assignment		As per the syllabus covered		
April	Theory	Unit III: Oscilloscopes and Signal Generators Digital Storage Oscilloscope (DSO), advantages and applications, Oscilloscope specifications (bandwidth, sensitivity, rise time). Signal Generators: Types of generators and their operation: Audio oscillator, Function generators, Pulse generators, RF generators, Random noise generators. Unit IV: Transducers and Sensors Transducers and sensors: Classification of transducers, Basic requirement/characteristics of transducers, active & passive transducers, Resistive (Potentiometer, Strain gauge - Theory, types, temperature compensation and applications), Capacitive (Variable Area, air gap and permittivity Type), Inductive (LVDT) and piezoelectric transducers. Unit III: Identity, Self-Image, Status, Self-Worth- Digital Identity • Identity Formation and Validation in the Digital World • Discrimination and its Forms Unit IV: Lifestyle Choices I Stress and Its Management • What Choices Does One Get To Make? • Is Choice influenced? Relationships, Career Choices • Career Pressures, Examinations • Dealing with Disappointment, Coping Skills, Health and Fitness	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning
	Practical	✚ Design of ammeter and voltmeter using galvanometer. ✚ Measurement of resistance by Wheatstone bridge. ✚ Measurement of Capacitance by De Sauty's bridge. ✚ Measurement of Inductance by Anderson's bridge. ✚ To determine the characteristics of resistance transducer - Strain Gauge. ✚ To determine the characteristics of an LVDT. ✚ To study the variations of thermo-emf of a thermocouple. (Type J/Type K) ✚ To study the I-V characteristics of Solar Cell. ✚ To study the Characteristics of LOR, Photodiode (i) Variable Illumination (ii) Linear Displacement. ✚ Characteristics of one Solid State sensor/ Fiber optic sensor. ✚ Activities/Discussions/Watching Movies/Reading Books/Maintaining A Reflective Journal/Field Engagement/Mindfulness Exercises, etc. as per the syllabus 7. Study of Pulse Width Modulation 8. Study of Pulse Position Modulation 9. Study of Pulse Code Modulation 10. Study of Delta Modulation 11. Study of Adaptive Delta Modulation	B.Sc.(Hons) Electronics, Semester II B.Sc./B.Com/B.A. (Hons/Prog), Semester II B.Sc.(Hons) Electronics, Semester VI	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques Value Addition Course II/Social and Emotional Learning Core-Course- VIII/ Communication Electronics
			B.Sc.(Hons) Electronics, Semester VI	Core-Course- VIII/ Communication Electronics

		Classification based on similarities with k-nearest neighbours, odds with logistic regression, maximizing separation with discriminant analysis, classifying with decision tree, regression with kNN, random forest, XGBoost, Understanding mlr(), classif() , regr(). Dimension Reduction- Maximizing variance with Principal Component Analysis; k-means cluster, understanding cluster.	B.Sc./B.Com/B.A. (Hons/Prog) ,Semester II	SEC: R Programming for Data Analytics
May	Theory	Unit IV: Transducers and Sensors Measurement of displacement, Measurement of temperature (RTD, thermistor, thermocouple, semiconductor IC sensors), Light transducers (photo resistors, photovoltaic cells, photodiodes).	B.Sc.(Hons) Electronics, Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques
		Unit IV: Lifestyle Choices I Stress and Its Management • Connect With Nature: Sensitivity Towards Other Sentient Beings	B.Sc./B.Com/B.A. (Hons/Prog) ,Semester II	Value Addition Course II/Social and Emotional Learning
	Practical	 Design of ammeter and voltmeter using galvanometer.  Measurement of resistance by Wheatstone bridge.  Measurement of Capacitance by De Sauty's bridge.  Measurement of Inductance by Anderson's bridge.  To determine the characteristics of resistance transducer - Strain Gauge.  To determine the characteristics of an LVDT.  To study the variations of thermo-emf of a thermocouple. (Type J/Type K)  To study the I-V characteristics of Solar Cell.  To study the Characteristics of LDR, Photodiode (i) Variable Illumination (ii) Linear Displacement.  Characteristics of one Solid State sensor/ Fiber optic sensor.	B.Sc.(Hons) Electronics, Semester II	Discipline Specific Core Course IV/Basic Instrumentation and Measurement Techniques
		 Activities/Discussions/Watching Movies/Reading Books/Maintaining A Reflective Journal/Field Engagement/Mindfulness Exercises, etc. as per the syllabus	B.Sc./B.Com/B.A. (Hons/Prog) ,Semester II	Value Addition Course II/Social and Emotional Learning
		Final Assessment	B.Sc.(Hons) Electronics, Semester VI	Core-Course-VIII/ Communication Electronics
		Final Assessment	B.Sc./B.Com/B.A. (Hons/Prog) ,Semester II	SEC: R Programming for Data Analytics

Dr Hari Singh

Dr Hari Singh
Assistant Professor
Department of Electronics


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session 2023-24 (EVEN)

Name of the Faculty: Dr. Hina Yadav

Department: Electronics

Semester: II/IV/VI

Semester: Theory : B.Sc(H) Electronics, Sem IV
Practical : B.Sc(H) Electronics, Sem IV

Month		Topics	Course	Paper Code/Name
January	Theory	Sem IV: Introduction: What is mobile Application Programming, Different Platforms, Architecture and working of Android, iOS and Windows phone 8 operating system, Comparison of Android, iOS and Windows phone 8	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
	Practicals	Sem IV: 1. Develop an application that uses GUI components, Font and Colors. 2. Develop an application that uses Layout Managers and event listeners.	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
		Sem IV: Study of open circuit test on single phase transformer.	B.Sc.(Hons) Electronics, Sem IV	DSC: Electrical Technology
		Sem VI: 1. Modulation of LED and detection through Photo detector. 2. Calculation of the transmission losses in an optical communication system	B.Sc.(Hons) Electronics, Sem IV	DSE: Modern Communication
February	Theory	Sem IV: Understanding Flutter, Flutter framework, Introduction to Android studio, Flutter SDK - Installing and Configuring, Introduction to Dart writing Dart code, Dart Pad, Installing Dart SDK. Basic DART Programming Concepts: Introduction, Main () function, Dart variables, Dart Data Types, Dart Conditional Operators: - if- Else statements, Loop operators, Break statements, switch case statements	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
	Assignment	As per syllabus covered		
	Practicals	Sem IV: 3. Develop a native calculator application. 4. Write an application that draws basic graphical primitives on the screen. 5. Develop an application that makes use of database.	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
		Sem IV: Study of open circuit test on single phase transformer Study of short circuit test on single phase transformer	B.Sc.(Hons) Electronics, Sem IV	DSC: Electrical Technology

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		Sem VI: 3. Study of 16 QAM modulation and Detection with generation of Constellation Diagram 4. Study of Amplitude Shift Keying	B.Sc.(Hons) Electronics, Sem IV	DSE: Modern Communication
March	Theory	Sem IV: Dart Functions & Object -Oriented Programming: Functions- its structure, creating a function, function Return Data Types, Void function, variable scope, OOP- Objects and classes, creating a Class, Adding Methods to classes, Providing constructors for classes, Class – Getters and Setters, Class Inheritance, Abstract Class, Dart Project Structure and Dart Libraries. Flutter Widgets Fundamentals: Scaffold, Image, Container, Column and Row, Icon Widgets, Layouts, Card Widgets, App Icon for iOS and Android apps, Hot reload and Hot Restart, Stateful and Stateless Widgets, Using custom Font. Navigation and Routing: Button, Floating Action Button	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
		Internal test conducted As per syllabus covered		
	Practicals	Sem IV: 6. Implement an application that implements multi-threading. 7. Develop a native application that uses GPS location information. 8. Implement an application that writes data to the SD card.	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
		Sem IV: Study of characteristics of DC Series motor Study of characteristics of DC Shunt motor Study of characteristics of single phase induction motor	B.Sc.(Hons) Electronics, Sem IV	DSC: Electrical Technology
		Sem VI: 5. Study of Frequency Shift Keying 6. Study of Phase Shift Keying 7. Study of architecture of Mobile phone.	B.Sc.(Hons) Electronics, Sem IV	DSE: Modern Communication
April	Theory	Sem IV: Visual, Behavioral and Motion- Rich Widgets Implementation: Bottom Navigation Bar, ListTile, ListView, Drawer, DataTable, Selectable Text, Stack, Input and Selections, Text field, Checkbox group and Radio Button, Date Picker, Time Picker, Slider, Switch, Dialogs, Alerts and Panels. App testing & Publishing: Testing and feedback for your App, setting up a test environment, Usability Testing, starting your Test Session, Analyzing your Test, Publishing Flutter Apps, Publishing Android App on Google Play store	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
	Practicals	Sem IV: 9. Implement an application that creates an alert upon receiving a message. 10. Write a mobile application that creates alarm clock. 11. Develop an application for working with Menus and Screen Navigation. 12. Develop an application for working with Notifications	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
		Sem IV: Study of Stepper Motor Study of Universal Motor	B.Sc.(Hons) Electronics, Sem IV	DSC: Electrical Technology


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		Sem VI: 8. Study of Satellite Communication System. 9. Study of Optical Fiber Communication System	B.Sc.(Hons) Electronics, Sem IV	DSE: Modern Communication
May	Theory	Sem IV: Understanding Flutter Versions, Flutter macOS Setup, macOS development Environment, Publishing iOS app on Apple store.	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
	Practicals	Sem IV: 1. Counter App 2. Calculator App 3. Audio recorder App 4. Voice to text Converter 5. Tic-tac-toe Game	B.Sc.(Hons) Electronics, Sem IV	GE-IV Mobile Application Development
		Sem IV: Study of DC Motor using SCR	B.Sc.(Hons) Electronics, Sem IV	DSC: Electrical Technology
		Sem VI: ASSIGNMENT TAKEN AND PRACTICAL TEST CONDUCTED	B.Sc.(Hons) Electronics, Sem IV	DSE: Modern Communication




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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Session(2023-24) (Jan to May)

Name of the Faculty: Dr Rahul

Department: Electronics

Semester: II /IV/VI

Semester : Theory: B.Sc./B.A. (H/P), Semester II (GE)

B.Sc.(H) Electronics VI Sem

Practical : B.Sc./B.A. (H/P), Semester II (GE)

B.Sc. (H) Electronics IV Sem

B.Sc.(H) Electronics VI Sem

Month		Topics	Course	Paper Code/Name
Jan 2024	Theory	Unit-1 Multiplexing: TDM and FDM Digital Modulation Technique: Block diagram of digital transmission and reception, Information capacity, Bit Rate, Baud Rate and M-ary coding. Amplitude Shift Keying (ASK), Frequency Shift Keying (FSK), Phase Shift Keying (PSK), Binary Phase Shift Keying (BPSK)	BSc(H) Electronics SEM VI	Modern Communication Systems
	Theory	UNIT- I Introduction to Data Visualization, Various tools for Data Visualization. Introduction to Numpy, Pandas and Matplotlib. Structured & Semi-structured Dataset, Data Cleaning and Preparation. Handling Missing Data, Data Transformation. Basic Plotting with Matplotlib, Dataset on Immigration e.g. Canada (source: https://open.canada.ca/) any other. Univariate and Multivariate Visualization. Introduction to cloud computing.	B.Sc./B.A. (H/P), Semester II (GE)	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques
	Practical	1. Modulation of LED and detection through Photo detector. 2. Calculation of the transmission losses in an optical communication system.	BSc(H) Electronics SEM VI	Modern Communication Systems Lab
	Practical	1. Visualization of Spreadsheet Models. 2. Visualization of Semi-Structured Data.	B.Sc./B.A. (H/P), Semester II (GE), LAB	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques, LAB

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	Practical	1. Study of Amplitude Modulation. 2. Study of Frequency Modulation	BSc(H) Electronics SEM IV	Principles of Communication Systems
Feb 2024	Theory	Quadrature Phase Shift Keying (QPSK). Binary Line Coding Technique, Multi level coding, QAM (Modulation and Demodulation) UNIT- II Optical Communication: Introduction of Optical Fiber, Types of Fiber, Guidance in Optical Fiber, Attenuation and Dispersion in Fiber, Optical Sources and Detectors, Block Diagram of optical communication system, optical power budgeting	BSc(H) Electronics SEM VI	Modern Communication Systems
	Theory	UNIT- II Data Visualizations Techniques: Line Plots, Area Plots, Histograms, Bar Charts, Pie Charts, Box Plots, Scatter Plots, Bubble Plots, Waffle Charts, Word Clouds, Seaborn and Regression Plots, Creating Maps and Visualizing Geospatial Data - Introduction to Folium, Maps with Markers, Choropleth Maps.	B.Sc./B.A. (H/P), Semester II (GE)	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques
	Practical	3. Study of 16 QAM modulation and Detection with generation of Constellation Diagram 4. Study of Amplitude Shift Keying	BSc(H) Electronics SEM VI	Modern Communication Systems Lab
	Practical	3. Interactive Plots in Python and Tableau. 4. Hierarchical and Topographical Data Visualizations in Tableau. 5. Calendar Heatmaps and Flow Data Visualizations in Python.	B.Sc./B.A. (H/P), Semester II (GE), LAB	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques, LAB
	Practical	3. Study of AM Transmitter and Receiver. 4. Study FM Transmitter and Receiver. 5. Study of Pulse Amplitude Modulation	BSc(H) Electronics SEM IV	Principles of Communication Systems LAB
Mar 2024	Theory	Unit-3 Cellular Communication: Concept of cellular mobile communication – cell and cell splitting, frequency bands used in cellular communication, absolute RF channel numbers (ARFCN), frequency reuse, roaming and hand off, authentication of the SIM card of the subscribers, IMEI number, concept of data encryption, architecture (block diagram) of cellular mobile communication network, CDMA technology, CDMA overview, simplified block diagram of cellular phone handset, Comparative study of GSM and CDMA, 2G, 3G and 4G concepts	BSc(H) Electronics SEM VI	Modern Communication Systems
	Theory	UNIT- III Creating Dashboards with Plotly Introduction to Seaborn, Basic plotting with Seaborn. Introduction to Plotly. Scatter chart, Bubble Plot, Pie chart, Gantt	B.Sc./B.A. (H/P), Semester II (GE)	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques Principal

		chart, Contour plotting, Sunburst and Polar charts, Heatmaps.		
	Practical	5. Study of Frequency Shift Keying 6. Study of Phase Shift Keying 7. Study of architecture of Mobile phone.	BSc(H) Electronics SEM VI	Modern Communication Systems Lab
	Practical	6. Time Series Data Visualization in 'Plotly'. 7. Creating cloud account Amazon/Azure/Google/IBM to store images /files / programs.	B.Sc./B.A. (H/P), Semester II (GE), LAB	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques, LAB
	Practical	6. Study of Pulse Width Modulation 7. Study of Pulse Position Modulation. 8. Study of Pulse Code Modulation 9. Study of Delta Modulation	BSc(H) Electronics SEM IV	Principles of Communication Systems LAB
April 2024	MID TERM EXAM as Per Syllabus Covered			
	Theory	Unit-4 Satellite communication: Introduction, need, satellite orbits, advantages and disadvantages of geostationary satellites. Satellite visibility, satellite system – space segment, block diagrams of satellite sub systems, up link, down link, cross link, transponders (C- Band), effect of solar eclipse, path loss, ground station, simplified block diagram of earth station. Satellite access, TDMA, FDMA, CDMA concepts, comparison of TDMA and FDMA, Satellite antenna (parabolic dish antenna), GPS-services like SPS & PPS. Local area networks (LAN): Primary characteristics of Ethernet-mobile IP, OSI model, wireless LAN requirements-concept of Bluetooth, Wi-Fi and WiMAX.	BSc(H) Electronics SEM VI	Modern Communication Systems
	Theory	UNIT- IV Data Visualization using Tableau Introduction to Tableau Desktop, connecting to dataset, Data preparation, Filtering and sorting data, Creating basic chart types (bar charts, line charts etc.), Assembling a dashboard layout, Using dashboard filters, Transform the data, Simple calculations in Tableau, Creating advanced chart types. Introduction-to Data Story.	B.Sc./B.A. (H/P), Semester II (GE)	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques
	Practical	8. Study of Satellite Communication System. 9. Study of Optical Fiber Communication System	BSc(H) Electronics SEM VI	Modern Communication Systems Lab
	Practical	8. Use a dataset that contains immigration details e.g. Canada for a given duration of 30 years (Canada Immigration Dataset, source: https://open.canada.ca) or any other a. Create an area plot for top 6 immigrant countries in a given duration. b. Create and year-wise immigrant bar chart from India to Canada in a given duration.	B.Sc./B.A. (H/P), Semester II (GE), LAB	GENERIC ELECTIVES (GE-2B): Data Visualization Techniques, LAB  प्रधानाचार्य Principal

		c. Create a boxplot of immigrants for three given countries. d. Show the total no. of immigrants using Area Chart and Pie chart for two given countries. e. Create a scatter Histogram for the immigrants in the given year for two specific countries.		
	Practical	7. Study of Pulse Position Modulation. 8. Study of Pulse Code Modulation 9. Study of Delta Modulation	BSc(H) Electronics SEM IV	Principles of Communication Systems LAB
ASSIGNMENT TAKEN AND PRACTICAL TEST CONDUCTED				



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Teaching Plan for the Semester

January - May (2024)

Dr Lalita Josyula / Department of Electronics

Paper : Skill Enhancement Course (II semester) / R Programming for Data Analytics ---> (4P Practicals) / Week

Continuous Assessment=20 Marks / End of Term Practicals Exam = 40 Marks / Viva Voce = 20 Marks

Subject Month	PRACTICALS
January, 2024	Introduction to R and familiarization of RStudio, Basic components in R Studio
February, 2024	R Syntax and programming
March, 2024	Understanding tidyverse, tibble, dplyr, ggplot2, tidyr, purrr, readr, forcats, stringr for tidying, manipulating, and plotting data Linear Programming Models, Optimization models, understanding optim()
April, 2024	Classification based on similarities with k-nearest neighbours, odds with logistic regression, maximizing separation with discriminant analysis, classifying with decision tress, regression with kNN, random forest, XGBoost, Understanding mlr(), classif() , regr(). Dimension Reduction- Maximizing variance with Principal Component Analysis; k-meancluster, understanding cluster.
May, 2024	Final Assessment


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Learning Objectives

- To introduce the basic concepts in R programming.
- To equip the students with the popular statistical programming language R.
- To familiarize the students with utility of 'R' for managerial decision making.

Learning Outcomes

Upon successful completion of this course the student will be able to:

- Learn Syntax and Semantics of R Programming
- Understand the file system and data handling in R.
- Visualize and analyse the data using statistical methods.
- Apply best practice model design methodologies to real problems using R



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Teaching Plan for the Semester

January - May (2024)

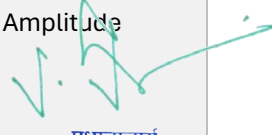
Dr Lalita Josyula / Department of Electronics

Paper : CCXIII/ Communication Electronics ---> (4T (Theory) + 4P (Practicals)) per Week

Theory : Internal Assessment=25 Marks / End of Term Exam = 75 Marks : Total / 100 Marks

Practicals = Internal Assessment=25 Marks / End of Term Exam = 25 Marks : Total / 50 Marks

Subject Month	Theory	Practicals
January, 2024	Unit-1 (20 Lectures) Introduction: Block diagram of an electronic communication system, electromagnetic spectrum-band designations and applications, need for modulation, concept of channels and base-band signals.	1. Study of Amplitude Modulation and Demodulation
February, 2024	Amplitude modulation: Basics of Amplitude Modulation, generation of AM (balanced modulator, collector modulator), Amplitude Demodulation (diode detector), Double side band suppressed carrier, DSBSC generation (balanced modulator), Single side band suppressed carrier, SSBSC generation (filter method, phase cancellation method, Weaver's method), Introduction to other forms of AM (Pilot Carrier Modulation, Vestigial Side Band modulation, Independent Side Band Modulation). Assignment for IA : 10 Marks	1. Study of Amplitude Modulation and Demodulation 2. Study of Frequency Modulation and Demodulation 3. Study of Single Side Band Modulation and Demodulation
March, 2024	Unit-2 (14 Lectures) Angle modulation: Frequency and Phase modulation, modulation index and frequency spectrum, equivalence between FM and PM, Generation of FM (direct and indirect methods), FM detector (PLL). Comparison between AM, FM and PM. Unit-3 (10 Lectures)	4. Study of AM Transmitter and Receiver 5. Study FM Transmitter and Receiver 6. Study of Pulse Amplitude Modulation


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	Transmitters: Low-level and high-level modulation, AM transmitter, FM transmitter. Receivers: Receiver parameters: sensitivity, selectivity and fidelity, AM receiver, FM receiver. Concept of Noise: External noise, internal noise, signal to noise ratio, noise factor, noise temperature, Friss' formula Written Test for IA : 10 Marks	
April, 2024	Unit -4 (16 Lectures) Pulse Analog Modulation: Sampling theorem, Pulse Amplitude Modulation (PAM), Pulse Width Modulation (PWM) and Pulse Position Modulation (PPM). Generation and detection of PAM, PWM, PPM signals. Pulse Code Modulation: Need for digital transmission, Quantizing, Uniform and Nonuniform Quantization, Quantization Noise, Companding, Coding, Digital Formats. Decoding, Regeneration, Transmission noise and Bit Error Rate. Differential Pulse Code Modulation, Delta Modulation, Quantization noise, Adaptive Delta Modulation.	7. Study of Pulse Width Modulation 8. Study of Pulse Position Modulation 9. Study of Pulse Code Modulation 10. Study of Delta Modulation 11. Study of Adaptive Delta Modulation
May, 2024	Final Exams (Theory & Practicals)	Project Work if Any ! Final Exams

Learning Objectives

- To introduce basic concepts of various modulation techniques used in Electronic Communication
- Systems and analyze their comparative performance.
- To understand the effect of noise on communication receivers.

Learning Outcomes

At the end of this course, students will be able to

- Understand the basic concept of a communication system and need for modulation
- Evaluate modulated signals in time and frequency domain for various continuous modulation techniques
- Describe working of transmitters and receivers and effect of noise on a communication system
- Understand baseband Pulse Modulation




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SEMESTER-WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

January-May 2023-2024

Name of the Faculty: Dr. Nutan Kala Joshi

Department: Electronics

Semester: Even

Month	Paper	Topics	Course	Paper Code/Name
JANUARY	Electrical Technology Theory	Unit 1 : Transformers: overview of types pf transformers, emf equation, transformer losses, no load operation, operation under load, phasor diagram.	B.Sc. (H)	DSC-10 Electrical Technology
	ET Practical	Study of open circuit test on single phase transformer.		
	Photonics Practical	Law of Malus. LED & Photodiode Characteristics	B.Sc. (H)	CC-XIV PHOTONICS Lab
	Analog Electronics-I Practical	Sem II Study of the half wave or full wave rectifier Study of Zener diode as voltage regulator.	B.Sc. (H)	DSC-6 Analog Electronics-I
FEBRUARY	Electrical Technology Theory	Unit 1 (contd.) equivalent circuit of transformer, voltage regulation, condition for maximum efficiency, all day efficiency, short circuit and open circuit tests. DC Machines: Overview of basic constructional features and physical principles involved in electrical machines. Lap and wave connections. Unit 2 : DC Generators : concept of Armature, reaction and commutation	B.Sc. (H)	CC-XIV PHOTONICS
	ET Practical	Study of open circuit test on single phase transformer Study of short circuit test on single phase transformer	B.Sc. (H)	DSC-10

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	Photonics Practical	PHOTONICS: Determination of unknown wavelength using diffraction grating. Determination of Resolving and dispersive power of grating. Determination of wavelength using Newton rings.	B.Sc. (H)	CC-XIV PHOTONICS LAB
	Analog Electronics-I Practical	Sem II Study of any two types of (a) clipping circuits (b) clamping circuits. Study of a Single Stage CE amplifier	B.Sc. (H) B.Sc. (H)	DSC-11 MICROPROCESSOR LAB DSC-6 Analog Electronics-I
MARCH	<u>Assignment</u>	Electrical Technology	B.Sc. (H)	CC-XIV PHOTONICS
	<u>Electrical Technology Theory</u>	Polyphase circuits :Line and phase relations in three phase circuits(unit 1). DC Generators: emf equation, methods of excitation, characteristics of different generators , losses and efficiency. DC Motors: comparison, principle of operation, back emf, maximum power, torque and speed relation, characteristics of series, shunt and compound excited motors, Losses and efficiency, 3 point starter, factors affecting speed of dc motors. Unit 3 Polyphase induction motors : general constructional features		DSC-9
	<u>ET Practicals</u>	Study of characteristics of DC Series motor Study of characteristics of DC Shunt motor Study of characteristics of single phase induction motor		
MARCH				
	Practical	PHOTONICS: Characteristics of LEDs and Photodetector and Photodiode. Specific rotation of sugar cane solution using Polarimeter.	B.Sc. (H)	CC-XIV PHOTONICS LAB
	Analog Electronics-I	Study of Class A or Class B Power Amplifiers. Study of Voltage divider bias for MOSFET	B.Sc. (H)	DSC-6 Principal

	Practical			Electronics-I
	Mid-Term Test	Electrical Technology		DSC-10
APRIL	Electrical Technology Theory	Unit 3 (contd.)Types of rotors , rotating magnetic field, Ferrari's principle, Production of torque, slip, starting torque, torque equation, torque-slip characteristics. Factors affecting speed of induction motors. Single phase induction motor : features, applications,split phase motor, c startand run motor, reluctance motor, stepper motor, Universal motor. Unit 4: Principle of operation and construction, features of Alternators, emf equation, principle of synchronous motor, methods of starting, power developed in synchronous motors, factors for failure to start, applications, comparison of synchronous and induction motors.	B.Sc. (H)	DSC-10
	ET Practicals	Study of Stepper Motor Study of Universal Motor		
	Practical	PHOTONICS: Diffraction Practical using LASER	B.Sc. (H)	CC-XIV PHOTONICS LAB
	Analog Electronics-I Practical	Sem II Study of Voltage divider bias for MOSFET Study of the frequency response of Common Source MOSFET amplifier.	B.Sc. (H)	DSC-6 Analog Electronics-I
MAY	Electrical Technology Theory	Unit 4 (contd.) Principle of synchronous motor, methods of starting, power developed in synchronous motors, factors for failure to start, applications, comparison of synchronous and induction motors	B.Sc. (H)	DSC 10
	ET Practicals	Study of DC Motor using SCR		

	Practical	PHOTONICS: Diffraction Practical using LASER	B.Sc. (H)	CC-XIV PHOTONICS LAB
	Analog Electronics-I Practical	Sem II Study of MOSFET based Phase Shift Oscillator	B.Sc. (H) B.Sc. (H)	DSC-6 Analog Electronics-I

Signed : Nutan Kala Joshi
Department of Electronics


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
January-May 2023-24

Name of the Faculty: Dr. Rakhi Narang

Department: Electronics

Semester: II/IV/VI

Semester: Theory : B.Sc. (H) Electronics, Sem II

**Practical : B.Sc. (H) Electronics, Sem II
 B.Sc. (H) Electronics, Sem IV
 B.Sc. (H) Electronics, Sem VI**

Month		Topics	Course	Paper Code/Name
January	Theory	Sem II: UNIT-I Diode applications Diode Circuits: Ideal diode, piecewise linear equivalent circuit, de load line, static and dynamic resistance, Quiescent (Q) point. Clipping and clamping circuits. Rectifiers: HWR, FWR (center tapped and bridge). Circuit diagrams, working and waveforms, ripple factor & efficiency, Voltage doubler Filters: Circuit diagram and explanation of shunt capacitor filter with waveforms. Voltage Regulator: Zener diode regulator circuit diagram and explanation for load and line regulation.	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
	Practicals	Sem II Study of the half wave or full wave rectifier Study of Zener diode as voltage regulator. Sem IV Basic understanding of Kit Simple program of addition & Subtraction Sem VI: MATLAB simulation software installation with control systems tool box. Plot the pole-zero configurations in s-plane for the given transfer function. Determine the transfer function for given closed loop system in block diagram representation.	B.Sc. (H) Electronics I B.Sc. (H) Electronics II B.Sc. (H) Electronics III	DSC-6 Analog Electronics-I DSC-11 MICROPROCESSOR LAB DSE III : Control Systems

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February	Theory	UNIT-II: BJT based Amplifiers and Oscillator Transistor: Input and Output Characteristics, Concept of Biasing and its significance, Concept of DC and AC analysis. Overview of Common Emitter BJT amplifier	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
	Practicals	Sem II Study of any two types of (a) clipping circuits (b) clamping circuits. Study of a Single Stage CE amplifier Sem IV MICROPROCESSOR: Program for multibyte addition & subtraction. Program for block transfer. Program for 8 bit multiplication. Program to search a no. in given list Sem VI: Block diagram reduction technique using MATLAB To study characteristics of Synchro transmitter receiver To study position control of DC motor To study speed control of DC motor	B.Sc. (H) Electronics I B.Sc. (H) Electronics II B.Sc. (H) Electronics III	DSC-6 Analog Electronics-I DSC-11 MICROPROCESSOR LAB DSE III : Control Systems
March	Theory	Sem II: Concept of Darlington pair Power Amplifiers: Difference between voltage and power amplifier, classification of power amplifiers (Class A, Class B, Class AB, Class C, Class D), Concept of Class A single ended power amplifier, Transformer coupled Class A power amplifier and complementary symmetry Class B push pull power amplifier, overall efficiency, concept of crossover distortion, harmonic distortion and heat sinks. Feedback Amplifiers: Concept of feedback, negative and positive feedback, voltage (series and shunt), feedback amplifiers gain, input and output impedances. Barkhausen criterion for oscillations, RC phase shift oscillator	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
	Practicals	Sem II Study of Class A or Class B Power Amplifiers. Study of Voltage divider bias for MOSFET Sem IV MICROPROCESSOR: Program for 16/8 bit division. Program for GCD. Program to generate Fibonacci series. Program to find Minimum & Maximum among N nos.	B.Sc. (H) Electronics I B.Sc. (H) Electronics II B.Sc. (H) Electronics III	DSC-6 Analog Electronics-I DSC-11 MICROPROCESSOR LAB Principal श्री वेकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi घोला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21 DSE III Control Systems

		Sem VI: To find characteristics of AC servo motor To study time response of type 0, 1 and 2 systems To study frequency response of first and second order systems		
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Dr. Rakhi Narang



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	<u>Mid Term Test</u>	Sem II: Based on Unit I, II	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
	Assignment	Presentations based on topics of the curriculum as well as its applications	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
April	Theory	Sem II: UNIT-III MOSFET Fundamentals MOSFET: Operation of n-channel and p-channel MOSFETs, Overview of Depletion and Enhancement MOSFET, Transfer Characteristics, Drain Characteristics, MOSFET as a switch. short channel effects, non-ideal effects in MOS transistors: the finite output resistance in the saturation region, the body effect, subthreshold conduction, breakdown effects, and temperature effects. MOSFET DC analysis: Biasing circuits-drain feedback, voltage divider, source feedback, bias stability, Graphical analysis, load line. UNIT-IV MOSFET based Amplifiers MOSFET AC analysis: AC equivalent circuit of MOSFET, MOSFET parameters, MOSFET Amplifiers: circuit and small signal model of Common Source amplifier, small signal parameters: input resistance, output resistance and voltage gain, circuits of Common Drain and Common Gate configurations. Comparison of BJT based (CE, CB and CC) and MOSFET based (CS, CD, CG) - Qualitative only.	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
	Practicals	Sem II Study of Voltage divider bias for MOSFET Study of the frequency response of Common Source MOSFET amplifier. Sem IV MICROPROCESSOR: Program to arrange nos. in ascending/descending order. Program to verify Truth table of Logic gates. Interfacing using PPI 8255. Sem VI: Plot unit step response of given transfer function and finds delay time, rise time, peak time and peak overshoot. Plot Bode plot of given transfer function. Also determine the relative stability by measuring gain and phase margins.	B.Sc. (H) Electronics I B.Sc. (H) Electronics II B.Sc. (H) Electronics III	DSC-6 Analog Electronics-I DSC-11 MICROPROCESSOR LAB DSE III : Control Systems
MAY	Theory	Multistage MOSFET circuits: Cascaded circuits and Cascade circuits, effect of multistage circuits on gain and bandwidth. MOSFET Application circuits: CMOS as inverter circuit, depletion mode n-MOSFET and p-MOSFET as load device	B.Sc. (H) Electronics II	DSC-6 Analog Electronics-I


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Practical	Sem II Study of MOSFET based Phase Shift Oscillator	B.Sc. (H) Electronics I	DSC-6 Analog Electronics-I
	Sem IV MICROPROCESSOR: Difference between 8085 & 8086 Microprocessor	B.Sc. (H) Electronics II	DSC-11 MICROPROCESSOR LAB
	SEM VI: Study of P, PI and PID controller.	B.Sc. (H) Electronics III	DSE III : Control Systems



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SRI VENKATESWARA COLLEGE

(University of Delhi)

DEPARTMENT OF ELECTRONICS

SEMESTER WISE TEACHING PLAN

January -May 2023-24

Name of the Faculty: Dr.Tarakeswara Rao Kaviti

Department: Electronics

Semester: II / IV / VI

Semester: Theory : B.Sc. (H) Electronics, Semester VI

Practical : B.Sc. (H) Electronics, Semester VI
B.Sc. (H) Electronics, Semester IV
B.Sc. (H) Electronics, Semester II

Month		Topics	Course/year	Paper Code/Name
January	Theory	Sem VI: Introduction to Control Systems: Open loop and Closed loop control systems, Mathematical modelling of Electrical systems Mathematical modelling of physical Mechanical Translational and Rotational systems Mathematical modelling of Thermal systems	B.Sc. (H) Electronics III	DSE III : Control Systems
	Practicals	Semester VI: MATLAB simulation software installation with control systems tool box. Plot the pole-zero configurations in s-plane for the given transfer function. Determine the transfer function for given closed loop system in block diagram representation.	B.Sc. (H) Electronics III	DSE III : Control Systems

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		SEM II Installation of Jupyter Notebook using anaconda on windows, Download anaconda installer, Launch Jupyter Notebook. Visualization of Spreadsheet Models. Visualization of Semi-Structured Data. Interactive Plots in Python and Tableau. SEM II Design of ammeter and voltmeter using galvanometer. Measurement of resistance by Wheatstone bridge. Measurement of Capacitance by De Sauty's bridge.	B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---I B.Sc. (H) Electronics I	GE II: Data Visualization Techniques DSC IV : Basic Instrumentation and measurement Techniques
March	Theory	Semester VI: Time Domain Analysis: Time domain performance criteria, transient response of first, second & higher order systems, steady state errors and static error constants, Performance indices. Concept of Stability: Asymptotic stability and conditional stability, Routh Hurwitz criterion, relative stability analysis, Root Locus plots and their applications. Frequency Domain Analysis: Correlation between time and frequency response, Polar and inverse polar plots, frequency domain specifications	B.Sc. (H) Electronics III	DSE III : Control Systems
	Practicals	Sem VI: To find characteristics of AC servo motor To study time response of type 0, 1 and 2 systems To study frequency response of first and second order systems Sem VI: Study of 16 QAM modulation and Detection with generation of Constellation Diagram Study of Amplitude Shift Keying	B.Sc. (H) Electronics III B.Sc. (H) Electronics III	DSE III : Control Systems DSE IV: Modern Communication Systems

		Study of Frequency Shift Keying Study of Phase Shift Keying SEM IV Installation of Django, Introduction to Django; Model view controller(MVC) model; Django structure; HTML templates; URL dispatcher, Django Template System, Interacting with a Database SEM II Hierarchical and Topographical Data Visualizations in Tableau. Calendar Heatmaps and Flow Data Visualizations in Python. Time Series Data Visualization in 'Plotly. Creating cloud account Amazon/Azure/Google/IBM to store images /files / programs. SEM II Measurement of Inductance by Anderson's bridge. To determine the characteristics of resistance transducer - Strain Gauge. To determine the characteristics of an LVDT. To study the variations of thermo-emf of a thermocouple. (Type J/Type K)	B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---II B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---I B.Sc. (H) Electronics I	SEC IV: Back-End Web Development GE II: Data Visualization Techniques DSC IV : Basic Instrumentation and measurement Techniques
	<u>Mid Term Test</u>	Sem VI: Based on Unit I, II Sem IV: Based on Unit I, II		
	<u>Assign ment</u>	Presentations based on topics of the curriculum as well as its applications		
April	Theory	Semester VI: Frequency Domain Analysis: Logarithmic plots (Bode Plots), gain and phase margins, Nyquist stability criterion, relative stability using Nyquist criterion, constant M	B.Sc. (H) Electronics III	DSE III : Control Systems  प्रधानाचार्य Principal

		Create an area plot for top 6 immigrant countries in a given duration. Create and year-wise immigrant bar chart from India to Canada in a given duration. Create a boxplot of immigrants for three given countries. Show the total no. of immigrants using Area Chart and Pie chart for two given countries. Create a scatter Histogram for the immigrants in the given year for two specific countries. SEM II To study the 1-V characteristics of Solar Cell. To study the Characteristics of LOR, Photodiode (i) Variable Illumination (ii) Linear Displacement. Characteristics of one Solid State sensor/ Fiber optic sensor.	B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---I B.Sc. (H) Electronics I	GE II: Data Visualization Techniques DSC IV : Basic Instrumentation and measurement Techniques
May	Theory	Semester VI: Controllers and Compensation Techniques: Response with P, PI and PID Controllers, Concept of compensation, Lag, Lead and Lag-Lead networks	B.Sc. (H) Electronics III	DSE III : Control Systems
	Practicals	SEM VI: Study of P, PI and PID controller. SEM IV Build a website for student admission in a college/university.	B.Sc. (H) Electronics III B.Sc.(H)/ B.A.(H)/ B.COM(H)/ B.A(P)---- II	DSE III: Control Systems SEC IV: Back-End Web Development

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X *K. Tarakeswara Rao*

K.Tarakeswara Rao

Signed by: ed9b7ad4-fadb-437b-a4d7-a47af5796d89


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Teacher Name: Dr. Pankaj Kumar
Semester: II

Department: Environmental Sciences

Semester II

Month	Topics	Course	Paper Code/Name
January	Theory	• B.Sc. (Hons.) Statistics and Mathematics • B.A. (Hons.) Economics, English, and Hindi • B.Com. (Hons.) • B.Com. Prog. • B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I
	Practical	--	--
	Tutorials	--	--
February	• Functions of Ecosystem: Physical (energy flow), Biological (food chains, food web, ecological succession), and Biogeochemical (nutrient cycling) processes. Concepts of productivity, ecological pyramids and homeostasis • Types of Ecosystems: Tundra, Forest, Grassland, Desert, Aquatic (ponds, streams, lakes, rivers, oceans, estuaries);	• B.Sc. (Hons.) Statistics and Mathematics • B.A. (Hons.) Economics, English, and Hindi • B.Com. (Hons.) • B.Com. Prog. • B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I


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March		importance and threats with relevant examples from India			
	Practical	- Schematic collection of data for depicting ecological pyramids in the College campus - Differentiation of natural and managed ecosystems using Google Earth/Google Map - Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc.	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I	
	Tutorials	--	--	--	
	Theory	- Ecosystem services (Provisioning, Regulating, Cultural, and Supporting); Ecosystem preservation and conservation strategies; Basics of Ecosystem restoration - Land resources: Minerals, soil, agricultural crops, natural forest products, medicinal plants, and forest-based industries and livelihoods; Land cover, land use change, land degradation, soil erosion, and desertification; Causes of deforestation; Impacts of mining and dam building on environment, forests, biodiversity, and tribal communities	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I	
	Practical	- Develop a working model of any ecosystem - Use of worksheets to identify structure and function of different ecosystems	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-1: Environmental Science: Theory into Practice – I	
	Tutorials	--	--	--	
	Theory	Water resources: Natural and man-made sources; Uses of water; Over exploitation of surface and ground water resources;	B.Sc. (Hons.) Statistics and Mathematics	AEC-1: Environmental Science: Theory into Practice – I	
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March

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		Floods, droughts, and international & inter-state conflicts over water Energy resources: Renewable and non-renewable energy sources; Use of alternate energy sources; Growing energy needs; Energy contents of coal, petroleum, natural gas and bio gas; Agro-residues as a biomass energy source	- B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	
	Practical	Field visit to Sultanpur National Park - Visit to a solar plant in the College campus - Time-series analysis of natural resource consumption of a given country using publicly available data	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--
	Assignment/Test	Test on the basis of covered syllabus	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
	Theory	Case studies: Contemporary Indian issues related to mining, dams, forests, energy, etc (e.g., National Solar Mission, Cauvery River water conflict, Sardar Sarovar dam, Chipko movement, Appiko movement, Tarun Bharat Sangh, etc)	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.) - B.Com. Prog. - B.A. Prog.	AEC-I: Environmental Science: Theory into Practice – I
	Practical	Visit to a rainwater harvesting plant in the College campus	- B.Sc. (Hons.) Statistics and Mathematics - B.A. (Hons.) Economics, English, and Hindi - B.Com. (Hons.)	AEC-I: Environmental Science: Theory into Practice – I

May

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			• B.Com. Prog. • B.A. Prog.		
Tutorials	--		--	--	
Revision/Doubt Classes		Revision/Doubt Classes on different topics related with curriculum.	• B.Sc. (Hons.) Statistics and Mathematics • B.A. (Hons.) Economics, English, and Hindi • B.Com. (Hons.) • B.Com. Prog. • B.A. Prog.		AEC-1: Environmental Science: Theory into Practice – I

Dr. Pankaj Kumar
Assistant Professor
Department of Environmental Sciences


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Semester IV/II

Month		Topics	Course	Paper Code/Name
January	Theory	Definition of Biodiversity; Levels of biological diversity: genetic, species and ecosystem diversity (Sem III)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II
		Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere (Sem I)		AEC-I: Environmental Science: Theory into Practice – I
	Practical	Formulate questionnaire/online surveys for assessment of the impact of climate change on people (Sem III)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II
		- Analysis of achievement of Sustainable Development Goals of any country. - Gain insights of sustainability framework for an industrial activity using activity worksheets (Sem I)		AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--
February	Theory	India as a mega-biodiversity nation; Biogeographic zones of India; Biodiversity hotspots; Endemic and endangered species of India; IUCN Red list criteria and categories	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II
		Value of biodiversity: Ecological, economic, social, ethical, aesthetic, and informational values of biodiversity with examples; sacred groves and their importance with examples (Sem III)		AEC-I: Environmental Science: Theory into Practice – I

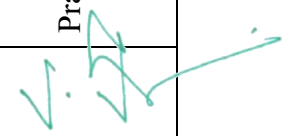
		• Scope and importance; Concept of sustainability and sustainable development; Brief history of environmentalism (Sem I)			
	Practical	• Sampling of plant and animal biodiversity of the College campus • Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. (Sem III) • Assess air quality index (AQI) of any location using real-time air quality parameters • Develop and maintain compost/vermicompost using biodegradable waste in the College (Sem I)		AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	
	Tutorials	--	--	--	--
March	Theory	• Threats to biodiversity: Habitat loss, degradation, and fragmentation; Poaching of wildlife; Man-wildlife conflicts; Biological invasion with emphasis on Indian biodiversity; Current mass extinction crisis (Sem III) • Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards • Nuclear hazards and human health risks (Sem I)		AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	


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	Practical	- Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. - Identification of the floral diversity of Delhi and other states. - Determine species location in a given study area . (Sem III)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	Repurpose waste for economic and environmental benefits in your college/near by area/colony (submit a small video). (Sem I)	--	--
April	Theory	- Biodiversity conservation strategies: in-situ and ex-situ methods of conservation; National Parks, Wildlife Sanctuaries, and Biosphere reserves; Keystone, Flagship, Umbrella, and Indicator species; Species reintroduction and translocation (Sem III) - Solid waste management: Control measures for various types of urban, industrial waste, Hazardous waste, E-waste, etc; Waste segregation and disposal (Sem I)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
	Practical	- Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. - Acquaintance with open-source databases of biodiversity (Sem III)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I


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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		- Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. - Repurpose waste for economic and environmental benefits in your college/near by area/colony (submit a small video). (Sem I)		Science: Theory into Practice – I
	Tutorials	--	--	--
	Assignment/Test	Test on the basis of covered syllabus (Sem III/I)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
	Theory	- Case studies: Contemporary Indian wildlife and biodiversity issues, movements, and projects (e.g., Project Tiger, Project Elephant, Vulture breeding program, Project Great Indian Bustard, Crocodile conservation project, Silent Valley movement, Save Western Ghats movement, etc) (Sem III) - Pollution case studies: Ganga Action plan (GAP), Delhi air pollution and public health issues, Plastic waste management rules, Bhopal gas tragedy, etc (Sem I)		AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I
May	Practical	Field visit to terrestrial and aquatic ecosystems (a) forests, (b) grasslands, (c) wetlands, (d) biodiversity parks, etc. (Sem III/I)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II


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				AEC-I: Environmental Science: Theory into Practice – I
	Tutorials	--	--	--
	Revision/Doubt Classes	Revision/Doubt Classes on different topics related with curriculum. (Sem III/I)	Sem III: BAP, BCom (H), BCom (P), Maths, Statistics, Economics, Hindi Sem I: Botany, Zoology	AEC- II: Environmental Science: Theory into Practice – II AEC-I: Environmental Science: Theory into Practice – I

Dr. Robin Suyesh
Assistant Professor
Department of Environmental Sciences


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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

SEMESTER



WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr Ram Kishore Yadav

Department: Hindi Department

Semester: II

Month		Topics	Course	Paper Code/Name
January	Theory	Hindi Kavita (sagun bhakti dhara) Hindi anapacharik lekhan B Hindi samprashan aur Sanchar Hindi anapacharik lekhan B Hindi Bhasha aur sahitya B	B.A. (H) Hindi II Sem Bsc LF Sem II Bsc LF Sem II B.A(P) Sem II B.A(P) Sem II	DSC- 4 (hindi Kavita) AEC Hindi B AEC Hindi A AEC Hindi B GE
February	Theory	Hindi Kavita (sagun bhakti dhara) Hindi anapacharik lekhan B Hindi samprashan aur Sanchar Hindi anapacharik lekhan B Hindi Bhasha aur sahitya B	B.A. (H) Hindi II Sem Bsc LF Sem II Bsc LF Sem II B.A(P) Sem II B.A(P) Sem II	DSC- 4 (hindi Kavita) AEC Hindi B AEC Hindi A AEC Hindi B GE
	Practical			

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

March	Theory	Hindi Kavita (sagun bhakti dhara)	B.A. (H) Hindi II Sem	DSC- 4 (hindi Kavita)
		Hindi anapacharik lekhan B	Bsc LF Sem II	AEC Hindi B
		Hindi samprashan aur Sanchar	Bsc LF Sem II	AEC Hindi A
		Hindi anapacharik lekhan B	B.A(P) Sem II	AEC Hindi B
		Hindi Bhasha aur sahitya B	B.A(P) Sem II	GE
	Assignment	Hindi Kavita (sagun bhakti dhara)	B.A. (H) Hindi II Sem	DSC- 4 (hindi Kavita)
		Hindi anapacharik lekhan B	Bsc LF Sem II	AEC Hindi B
		Hindi samprashan aur Sanchar	Bsc LF Sem II	AEC Hindi A
		Hindi anapacharik lekhan B	B.A(P) Sem II	AEC Hindi B
		Hindi Bhasha aur sahitya B	B.A(P) Sem II	GE
April	Theory	Hindi Kavita (sagun bhakti dhara)	B.A. (H) Hindi II Sem	DSC- 4 (hindi Kavita)
		Hindi anapacharik lekhan B	Bsc LF Sem II	AEC Hindi B
		Hindi samprashan aur Sanchar	Bsc LF Sem II	AEC Hindi A
		Hindi anapacharik lekhan B	B.A(P) Sem II	AEC Hindi B
		Hindi Bhasha aur sahitya B	B.A(P) Sem II	GE
	TEST	Hindi Kavita (sagun bhakti dhara)	B.A. (H) Hindi II Sem	DSC- 4 (hindi Kavita)
		Hindi anapacharik lekhan B	Bsc LF Sem II	AEC Hindi B
		Hindi samprashan aur Sanchar	Bsc LF Sem II	AEC Hindi A
		Hindi anapacharik lekhan B	B.A(P) Sem II	AEC Hindi B
		Hindi Bhasha aur sahitya B	B.A(P) Sem II	GE

MAY	Theory	Hindi Kavita (sagun bhakti dhara) Hindi anapacharik lekhan B Hindi samprashan aur Sanchar Hindi anapacharik lekhan B Hindi Bhasha aur sahitya B	B.A. (H) Hindi II Sem Bsc LF Sem II Bsc LF Sem II B.A(P) Sem II B.A(P) Sem II	DSC- 4 (hindi Kavita) AEC Hindi B AEC Hindi A AEC Hindi B GE

Dr Ram kishore Yadav

Signature of the teacher



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धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr Ram Kishore Yadav

Department: Hindi

Semester :IV

Month		Topics	Course	Paper Code/Name
Jan	Theory	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A(H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
Feb	Theory	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
	Tutorials/ Practical	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
March	Theory	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
	Tutorials/ Practical	Bhartiya kavysahstra	B.A (H) Sem IV	BAHDSC 10

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	Assignment	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
April	Theory	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
	Tutorials/ Practical	Bhartiya kavysahstra	B.A (H) Sem IV	BAHDSC 10
	Test	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
	Theory	Bhartiya kavysahstra Jan sanchar aur rachnatmak lekhan	B.A (H) Sem IV Bsc LS SemIV	BAHDSC 10 AEC HNB
May	Tutorials/ Practical	Bhartiya kavysahstra	B.A (H) Sem IV	BAHDSC 10


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr Ram Kishore Yadav

Department: Hindi

Semester: VI

Month		Topics	Course	Paper Code/Name
Janurary	Theory	Lok natya , Bidesiya Hindi nibhandh anya gadhya vidhayein	B.A (H) Hindi VI sem	BAHHDSE Lok natya BAHHCC 14 Hindi nibhandh anya gadhya vidhayein
Feburary	Theory	Lok natya , Bidesiya Hindi nibhandh anya gadhya vidhayein	B.A (H) Hindi VI sem	BAHHDSE Lok natya BAHHCC 14 Hindi nibhandh anya gadhya vidhayein
	Tutorials/ Practical			
March	Theory	Lok natya , Bidesiya Hindi nibhandh anya gadhya vidhayein	B.A (H) Hindi VI sem	BAHHDSE Lok natya BAHHCC 14 Hindi nibhandh anya gadhya vidhayein
	Tutorials/ Practical			
	Assignmen t			 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

April	Theory	Lok natya , Mach Hindi nibhandh anya gadhya vidhayein	B.A (H) Hindi VI sem	BAHHDSE Lok natya BAHHCC 14 Hindi nibhandh anya gadhya
	Tutorials/ Practical	Lok natya , Mach Hindi nibhandh anya gadhya vidhayein	B.A (H) Hindi VI sem	BAHHDSE Lok natya BAHHCC 14 Hindi nibhandh
	Test			
May	Theory	Lok natya , Mach Hindi nibhandh anya gadhya vidhayein	B.A (H) Hindi VI sem	BAHHDSE Lok natya BAHHCC 14 Hindi nibhandh anya gadhya vidhayein
	Tutorials/ Practical			
	Theory			
	Tutorials/ Practical			
	Test			


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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

Teaching Plan, 2023-2024: Dr Jai Vinod Kumar, Department of Hindi, Sri Venkateswara College, DU

The workload included -

1. DSC, Sem II
2. DSC (Hons) SEM VI
3. AEC
4. GE SEM IV

The pedagogy to engage students was diverse and aimed to ensure maximum participation of students. The lectures were held in the format of interaction aiming to strengthen or build up critical skills of students to get engaged/with the discipline and it included-

1. Contextualisation of Topics and its Correspondence to Contemporary Developments
2. Group activity by forming academic group of students
3. Organising discussion of relevant themes of papers
4. Preparation of advertisements activity
5. Dialogue Writings activity
6. Songs Writing Activity
7. Trained to participate in Interviews and skills required for successful engagement in Interviews

Finally, The above mentioned activities were crafted in the scenario of emerging trends and role of Hindi Literature to engage the society in various ways including social media, online media and film industry etc. ; the pedagogy aimed not only to provide creative knowledge but also strengthen capability enhancement process leading to successful placement without compromising the critical and creative role as intellectual dedicated to carry forward legacy of India as civilization for a better society.

Assignment and Tests were conducted.

Dr. Jai Vinod Kumar
Associate Professor
Department of Hindi
Sri Venkateswara College
University of Delhi



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घौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

Teaching Plan, 2023-2024: Dr Lata, Department of Hindi, Sri Venkateswara College, DU

The workload included -

1. AEC, SEM II
2. HINDI (Hens) SEM II
3. GE SEM 114
4. GE SEM IV
5. AEC SEMIV

The pedagogy to engage students was diverse and aimed to ensure maximum participation of students. The lectures were held in the format of interaction aiming to strengthen or build up critical skills of students to get engaged/with the discipline and it included-

1. Contextualisation of Topics and its Correspondence to Contemporary Developments
2. Group activity by forming academic group of students
3. Organising discussion of relevant themes of papers
4. Preparation of advertisements activity
5. Dialogue Writings activity
6. Songs Writing Activity
7. Trained to participate in Interviews and skills required for successful engagement in Interviews

Requirement: ICT lab is required for IV sem paper AEC Hindi A. With the help of ICT, the students will be taught about CV making , waiting blog, etc.

Finally, The above mentioned activities were crafted in the scenario of emerging trends and role of Hindi Literature to engage the society in various ways including social media, online media and film industry etc. ; the pedagogy aimed not only to provide creative knowledge but also strengthen capability enhancement process leading to successful placement without compromising the critical and creative role as intellectual dedicated to carry forward legacy of India as civilisation for a better society.

Dr. Lata
Assistant Professor
Department of Hindi
Sri Venkateswara College
University of Delhi

प्रधानाचार्य
Principal
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: AEC हिंदी D

शिक्षक: डॉ. अविनाश कुमार

सत्र: चतुर्थ (4)

प्रश्नपत्र: AEC हिंदी D, विदेशी विद्यार्थियों के लिए

अवधि

पाठ-योजना

1 से 7 सप्ताह

भारतीय संस्कृति एवं जन-जीवन (सामान्य परिचय)
भारत के महत्वपूर्ण दर्शनीय स्थल (कोई पाँच)
भारतीय भोजन, भारतीय पर्व, उत्सव और मेले
पारंपरिक भारतीय वेशभूषा

8 से 15 सप्ताह

हिंदी लेखन अभ्यास
संवाद लेखन
किसी घटना, दृश्य अथवा स्थल का वर्णन
पत्र-लेखन (अनौपचारिक)
अपठित गद्यांश

23/12

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: AEC हिंदी (क)

शिक्षक: डॉ. अविनाश कुमार

सत्र: द्वितीय (2)

प्रश्नपत्र: AEC हिंदी A, हिंदी भाषा: संप्रेषण और संचार

अवधि

पाठ-योजना

1 से 7 सप्ताह

संप्रेषण: सामान्य परिचय

संप्रेषण की अवधारणा

संप्रेषण की प्रक्रिया

संप्रेषण के विविध आयाम

संप्रेषण और संचार

8 से 15 सप्ताह

संप्रेषण और संचार के विविध रूप

संप्रेषण के प्रकार

सर्वेक्षण आधारित रिपोर्ट तैयार करना

जागरूकता संबंधित अभियान

अनुच्छेद लेखन, संवाद लेखन, डायरी लेख

ब्लॉग लेखन, संपादकीय लेखन HSNSS

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.ए. (Hons) हिंदी

शिक्षक: डॉ. अविनाश कुमार

सत्र: षष्ठ (6)

प्रश्नपत्र: DSC हिंदी आलोचना

अवधि

पाठ-योजना

1 से 4 सप्ताह

हिंदी आलोचना का विकास: भारतेन्दु युग से
द्विवेदी युग तक

4 से 8 सप्ताह

छायावादयुगीन आलोचना : पाठ आधारित

9 से 12 सप्ताह

नई कविता के युग की आलोचना: पाठ
आधारित

12 से 15 सप्ताह

नव लेखन के युग की आलोचना (कथा
आलोचना) : पाठ आधारित

23/12

प्रधानाचार्य
Principal

श्री वेंकटेश्वर महाविद्यालय
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.ए. (Hons) हिंदी

शिक्षक: डॉ. अविनाश कुमार

सत्र: षष्ठ (6)

प्रश्नपत्र: DSE लोकनाट्य

अवधि

पाठ-योजना

1 से 4 सप्ताह

लोकनाट्य: अवधारणा, स्वरूप और इतिहास

4 से 8 सप्ताह

बिदेसिया - भिखारी ठाकुर

9 से 12 सप्ताह

सांग- नल दयमंती: लखमीचन्द

12 से 15 सप्ताह

माच- राजा भरथरी सिद्धेश्वर सेन





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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: AEC 'C' (All)

शिक्षक: डॉ. अविनाश कुमार

सत्र: द्वितीय (2)

प्रश्नपत्र: AEC हिंदी 'ग', सोशल मीडिया और ब्लॉग लेखन

अवधि

पाठ-योजना

1 से 7 सप्ताह

सोशल मीडिया अर्थ और परिभाषा
सोशल मीडिया का प्रभाव और महत्व
सोशल मीडिया के प्रकार (विकीपीडिया,
ब्लॉग, सोशल नेटवर्किंग साइट्स, ट्विटर,
यूट्यूब, इन्स्टाग्राम आदि)
ब्लॉग लेखन: सामान्य परिचय

8 से 15 सप्ताह

किसी सामाजिक अभियान के प्रचार के लिए सोशल
मीडिया हेतु एक विज्ञापन तैयार करना
अपना निजी ब्लॉग तैयार करने की प्रक्रिया
सोशल मीडिया से बनने वाली किसी खबर पर रिपोर्ट तैयार
करना
सोशल मीडिया से सम्बन्धित विविध विषयों पर आलेख
तैयार करना

25/12

प्रधानाचार्य
Principal

श्री वेंकटेश्वर महाविद्यालय
Sri Venkateswara College
दिल्ली विश्वविद्यालय / University of Delhi
धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: AEC हिंदी 'C' (All)

शिक्षक: डॉ. अविनाश कुमार

सत्र: चतुर्थ (4)

प्रश्नपत्र: हिंदी भाषा और तकनीक, हिंदी 'ग'

अवधि

पाठ-योजना

1 से 7 सप्ताह

ई-गवर्नेंस में हिंदी का प्रयोग
राजभाषा के प्रचार-प्रसार में कम्प्यूटर की भूमिका
हिंदी और वेब डिजाइनिंग
हिंदी के संदर्भ में यूनिकोड का प्रयोग

8 से 15 सप्ताह

इंटरनेट पर हिंदी की प्रमुख पत्रिकाओं की सूची बनाना
हिंदी की किसी एक प्रमुख वेबसाइट की भाषा का
विश्लेषण करना
कम्प्यूटर पर हिंदी में स्ववृत्त, एस.एम.एस. और संदेश
लेखन
मशीनी अनुवाद से संबंधित प्रमुख सॉफ्टवेयर की सूची
बनाना

25/12

V. A.

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.एस.सी. (लाइफ़ साइंसेज (ए))

शिक्षक: डॉ. ध्रुव कुमार

सत्र: द्वितीय

प्रश्नपत्र: AEC हिंदी ख, हिंदी औपचारिक लेखन

अवधि

पाठ-योजना

1 से 7 सप्ताह

कार्यालयी हिंदी

व्यावसायिक हिंदी

टिप्पण और प्रारूपण: सामान्य परिचय

प्रतिवेदन और विज्ञप्ति का महत्व

8 से 15 सप्ताह

स्ववृत्त लेखन

सूचना के अधिकार के लिए लेखन

कार्यालयी और व्यावसायिक पत्र लेखन

किसी व्यावसायिक कार्यक्रम के संदर्भ में प्रेस

विज्ञप्ति तैयार करना

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.एस.सी. केमिस्ट्री (ऑ)

शिक्षक: डॉ. ध्रुव कुमार

सत्र: चतुर्थ

प्रश्नपत्र: AEC हिंदी ख, जनसंचार और रचनात्मक लेखन

अवधि

पाठ-योजना

1 से 7 सप्ताह

रचनात्मक लेखन का अर्थ और महत्व
रचनात्मक लेखन के विविध रूप
जनसंचार माध्यमों के लिए रचनात्मक लेखन
जनसंचार माध्यमों में हिंदी

8 से 15 सप्ताह

प्रिंट माध्यम के लिए लेखन
साक्षात्कार, यात्रा अनुभव लेखन
इलेक्ट्रॉनिक माध्यम के लिए लेखन
संवाद लेखन और गीत
विज्ञापन लेखन

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.एस.सी. (लाइफ़ साइंसेज (ए))

शिक्षक: डॉ. ध्रुव कुमार

सत्र: द्वितीय

प्रश्नपत्र: AEC हिंदी ख, जनसंचार और रचनात्मक लेखन

अवधि

पाठ-योजना

1 से 7 सप्ताह

रचनात्मक लेखन का अर्थ और महत्व
रचनात्मक लेखन के विविध रूप
जनसंचार माध्यमों के लिए रचनात्मक लेखन
जनसंचार माध्यमों में हिंदी

8 से 15 सप्ताह

प्रिंट माध्यम के लिए लेखन
साक्षात्कार, यात्रा अनुभव लेखन
इलेक्ट्रॉनिक माध्यम के लिए लेखन
संवाद लेखन और गीत
विज्ञापन लेखन

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.ए. प्रोग्राम

शिक्षक: डॉ. ध्रुव कुमार

सत्र: षष्ठ (6)

प्रश्नपत्र: GE हिंदी, हिन्दी सिनेमा और उसका अध्ययन

अवधि

पाठ-योजना

1 से 4 सप्ताह

कला विधा के रूप में सिनेमा और उसकी
सैद्धांतिकी

4 से 8 सप्ताह

हिन्दी सिनेमा: उद्भव और विकास

9 से 12 सप्ताह

हिंदी सिनेमा की अंतर्वस्तु और तकनीक का
विस्तृत अध्ययन

12 से 15 सप्ताह

नई तकनीक और सिनेमा: संभावनाएँ और
चुनौतियाँ

प्रधानाचार्य
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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: बी.ए. प्रोग्राम

शिक्षक: डॉ. ध्रुव कुमार

सत्र: चतुर्थ

प्रश्नपत्र: GE हिंदी 'ग', हिंदी गद्य का उद्भव और विकास

अवधि

पाठ-योजना

1 से 4 सप्ताह

हिंदी गद्य: उद्भव और विकास

हिंदी गद्य-रूपों का संक्षिप्त परिचय (कहानी,
निबंध, नाटक, रेखाचित्र/संस्मरण)

4 से 8 सप्ताह

प्रेमचंद - ईदगाह

भीष्म - साहनी चीफ की दावत

9 से 12 सप्ताह

बालकृष्ण - भट्ट जवान

शरद जोशी - होना कुछ नहीं का

शिवपूजन सहाय - गाँव की अनिवार्य

आवश्यकताएँ

12 से 15 सप्ताह

महादेवी वर्मा - गिल्लू

विष्णु प्रभाकर - वापसी

विश्वनाथ त्रिपाठी - गंगा स्नान करने चलोगे?

प्रधानाचार्य
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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: AEC D (All)

शिक्षक: डॉ. ध्रुव कुमार

सत्र: द्वितीय

प्रश्नपत्र: AEC हिंदी घ, विदेशी छात्रों के लिए

अवधि

पाठ-योजना

1 से 7 सप्ताह

लिपि ज्ञान
वर्ण माला: स्वर, व्यंजन
संयुक्त व्यंजन
अनुस्वार एवं अनुनासिक
विराम चिह्न
संज्ञा-सर्वनाम

8 से 15 सप्ताह

हिंदी की आधारभूत शब्दावली (हिंदी एवं
अंग्रेजी)
फल-सब्जियाँ
रंग-पर्व उत्सव
सप्ताह के दिन
ऋतुएं
पर्यटन स्थल
रिश्ते-नाते
शरीर के अंग
खाने-पीने की चीजें
प्रमुख वस्तुएं

प्रधानाचार्य
Principal

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श्री वेंकटेश्वर महाविद्यालय

हिंदी विभाग

शिक्षण कार्य-योजना (जनवरी-मई, 2024)

पाठ्यक्रम: SEC (All)

शिक्षक: डॉ. ध्रुव कुमार

सत्र: द्वितीय

प्रश्नपत्र: SEC हिंदी, रचनात्मक लेखन

अवधि / पाठ-योजना

1 से 7 सप्ताह

रचनात्मक लेखन: अवधारणा, स्वरूप, आधार एवं विश्लेषण
भाव एवं विचार की रचना में अभिव्यक्ति की प्रक्रिया
अभिव्यक्ति के विविध क्षेत्र: साहित्य, पत्रकारिता, विज्ञापन, भाषण
लेखन के विविध रूप: मौखिक लिखित, गद्य-परा, कथात्मक कथेतर
अर्थ निर्मिति के आधार: शब्द और अर्थ की मीमांसा, शब्द के पुराने नए
प्रयोग, शब्द की व्याकरणिक कोटि

8 से 15 सप्ताह

भाषा भंगिमा और साहित्य लेखन
भाषा की भंगिमाएँ: औपचारिक अनौपचारिक, मौखिक लिखित, मानक भाषिक संदर्भ:
क्षेत्रीय, वर्ग-सापेक्ष, समूह- सापेक्ष
रचना-सौष्ठव: शब्दशक्ति, प्रतीक, बिम्ब, अलंकार
कविता: संवेदना, भाषिक सौष्ठव, छंदबद्ध छंदमुक्त, लय, गति, तुक
कथा-साहित्य: वस्तु, पात्र, परिवेश, कथ्य और भाषा

विविध विधाओं एवं सूचना माध्यमों के लिए लेखन
नाट्य-साहित्य: वस्तु, पात्र, परिवेश, कथ्य, रंगमंच और नाट्य-भाषा
विविध गद्य विधाएँ: निबंध, संस्मरण, आत्मकथा, व्यंग्य, रिपोर्टाज, यात्रा-वृत्तांत
प्रिंट माध्यम के लिए लेखन: फीचर, यात्रा-वृत्तांत, साक्षात्कार, विज्ञापन
इलेक्ट्रानिक माध्यम के लिए लेखन: विज्ञापन, पटकथा, संवाद

अध्यापिका
Principal
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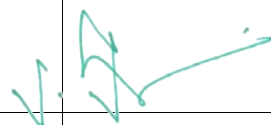
SEMESTER WISE
TEACHING PLAN
SRI VENKATESWARA
January - April, 2023

Name of the Faculty: Dr. Vandana Joshi

Department: History Semester: VI 2024

Papers: History of Modern Europe BAH and Twentieth Century World BAP VI (shared with RK)

Month		Topics	Course	Paper Code/Name
January	Theory:	I. Varieties of Nationalisms and the remaking of states in the 19 th and 20 th centuries [a] Intellectual currents, popular movements and the formation of national identities in Italy and the Balkans. [b] Post-Unification: problems of state building in Germany and Italy II. Tsarist Russia and the coming of the Bolshevik revolution [a] Serfdom, Populism and Social Democracy [b] The Revolution of 1905; the revolutions of 1917: origins, visions, movements	BA HON Core Course XIV	History of Modern Europe-II I.
		Unit III: Popular Movements a) Environmental Struggles: Chipko Movement	BA Programme DSE	Twentieth Century World history II
	Practicals:			
	Tutorials:	Presentations		
		Presentation		


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Principal
 श्री वेंकटेश्वर महाविद्यालय
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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

February	Theory:	I. Varieties of Nationalisms and the remaking of states in the 19 th and 20 th centuries [a] Intellectual currents, popular movements and the formation of national identities in Germany [b] Post-Unification: problems of state building in Germany and Italy II. Tsarist Russia and the coming of the Bolshevik revolution [a] Serfdom, Populism and Social Democracy [b] The Revolution of 1905; the revolutions of 1917: origins, visions, movements III. Imperialism, war and crisis, c. 1880-1939	BA HON Core Course XIV	History of Modern Europe-II I.
		Unit III: Popular Movements a) Environmental Struggles: Chipko Struggles for the Amazon; Bhopal	BA Programme DSE	Twentieth Century World history II Europe
	Practicals:			
	Tutorials:			
March	Theory:	III. Imperialism, war and crisis, c. 1880-1939 [a] Theories and mechanisms of Imperialism [b] War of 1914-18: historiographical debates; developments leading to the War; power blocs and alliances	BA HON Core Course XIV	History of Modern Europe-II  प्रधानाचार्य Principal श्री वैकुण्ठेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		(b) Student Movements: Paris 1968 (c) Anti-apartheid movements in S. Africa and Civil Rights Movement USA (d) Women's Movements: Issues and Debates/Women and Work Place-Vishakha	BA Programme DSE	Twentieth Century World history II
	Practicals:			
	Tutorials:	presentattions		
	<u>Assignment</u>			
April	Theory	[c] Fascism and Nazism: origins and forms; nature of the fascist state IV. Cultural and intellectual developments since c.1850 [a] Creation of a new public sphere, print culture, mass education and the extension of literacy [b] Creation of new cultural forms: romanticism to abstract art [c] Institutionalization of disciplines: history, anthropology, psychology	BA HON Core Course XIV	History of Modern Europe-II



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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

		(c) Anti-apartheid movements in S. Africa and Civil Rights Movement USA (d) Women's Movements: Issues and Debates/Women and Work Place-Vishakha Unit IV: Leisure and Entertainment (a) Spectator Sports (football/Olympics) (b) Cinema (James Bond films in the context of the Cold War, Satyajit Ray's films and Bicycle Thief in the context of the Depression)	BA Programme DSE	Twentieth Century World history II
	Practicals:			
	Tutorials:			
	<u>Mid Term Test</u>			
May	Theory:	[d] Culture and empire: race, gender and Imperialism; Orientalism	BA HON Core Course XIV  Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi प्लॉट - ३३, गेट - दिल्ली / Dhola Kuan, New Delhi-110021	History of Modern Europe-II Principal

		(b) Cinema (James Bond films in the context of the Cold War, Satyajit Ray's films and Bicycle Thief in the context of the Depression And Revision	BA Programme DSE	Twentieth Century World history II
	Practicals:			
	Tutorials:			




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 धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21



SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE
January -May, 2024

Name of the Faculty: Dr Praveen Verma

Department: History

**Semester: IV, (Rise of the Modern West-II, Cultural Transformation of
Early Modern Europe) IV (History of Latin America c.1500-1960s)**

Month		Topics	Course	Paper Code/Name
January	Theory:	Unit 1- 17th Century Crisis 1. Economic, social and political dimensions	BA (Hons) II year (IV Semester)	RMW-II
		Unit-1 Historiography and Brief Survey	BA (Hons) III Yr (VI Semester)	History of Latin America c. 1500-1960
		Unit-1 Scientific Revolution and Enlightenment 1. New view of the world 2. matter and reflections on the scientific method	BA (Prog) II year (III Semester)	Cultural Transformation of Early Modern Europe
	Tutorials:	Introducing the course and its theme to the students. Discussion in Hindi took place.		
		discussion on same themes took place		
FEBRUARY	Theory:	Unit 2- English Revolution 1. Major Issues, 2. Strands 3. Implications	BA (Hons) II yr (IV Semester)	RMW-II
		Unit II. Colonization and Conquest of Latin America, 1490s onwards- Spain and Portugal	BA (Hons) III Yr (VI Semester)	History of Latin America c. 1500-1960
		(Conti.) Unit-1 Scientific Revolution and Enlightenment 3. New view of the world 4. matter and reflections on the scientific method	BA (Prog) II year (III Semester)	Cultural Transformation of Early Modern Europe

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	Tutorials: Assignment:	discussions and doubts on concepts and class notes. Assignment were given		
MARCH	Theory:	Unit 3- Scientific Revolution and Enlightenment 1. Political 2. economic 3. social ideas	BA (Hons) II yr (IV Semester)	RMW-II
		Unit-3- Movements for Independence: 1. Social base 2. Practices 3. ideologies	BA (Hons) III Yr (VI Semester)	History of Latin America c. 1500-1960
		Unit-2 Literary and Artistic Developments 1. Literary trends- Dante to Shakespere 2. Art- Baroque to Rococo and Neoclassicism	BA (Prog) II year (III Semester)	Cultural Transformation of Early Modern Europe
	Tutorials: Mid Term Test:	Discussions over class notes and doubts. discussions in Hindi. Internal exam took place.		
APRIL	Theory:	Unit 4- Mercantilism and European Economies 1. Trade and Empire	BA (Hons) II yr (IV Semester)	RMW-II
		Unit-4 Class and State Formation 1. industrialisation and immigration 2. popular Culture	BA (Hons) III Yr (VI Semester)	History of Latin America c. 1500-1960

		3. case studies: Mexico, Argentina and Brasil		
		Unit-3 Transitions in Popular Culture and Mentalities c.1550-1780 1. Family and Marriage Patterns 2. Decline of Magic 3. Popular Protests	BA (Prog) II year (III Semester)	Cultural Transformation of Early Modern Europe
	Tutorials:	Revision and discussions on Class notes.		
MAY		Unit 6- Origins of Industrial Revolution and Divergence Debate	BA (Hons) II yr (IV Semester)	RMW-II
		Unit-5 Authoritarianism, Populism, revolutions and Politics of of Literature, Music and Sports	BA (Hons) III Yr (VI Semester)	History of Latin America c. 1500-1960
			BA (Prog) II year (III Semester)	Cultural Transformation of Early Modern Europe
	Tutorials:			

Green Wang

V. B.

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SEMESTER WISE TEACHING PLAN
(2023 – 2024)
SRI VENKATESWARA COLLEGE
January - May, 2024

Name of the Faculty: Dr. Sunitaa Saikia

Department: History

Semester: II (BAP DSC), VI (BAP DSE), VI (BAP SEC)

Month		Topics	Course	Paper Code/Name
January	Theory:	I. Survey of the Sources	B.A. (Prog.) 1 st Year	DSC-1: HISTORY OF INDIA – II (c. 300 – 1200 CE)
		I. The World Divided	B.A. (Prog.) 3 rd Year	DSE: Issues in Twentieth Century World History-II
	Tutorials:	Introducing the courses and the consisting themes.		
February	Theory:	II. The Guptas & the Vakatakas: Administration, Economy, Society, Culture	B.A. (Prog.) 1 st Year	DSC-1: HISTORY OF INDIA (300 CE to 1200 CE)
		(contd.) I. The Cold War Case Studies: Vietnam & Korea II. Decolonisation & Colonial Exploitation (Algeria)	B.A. (Prog.) 3 rd Year	DSE: Issues in Twentieth Century World History-II
		I. Broadcasting in India (Colonial Period) a) Colonial Foundations in Inter-War Years b) AIR Programming, Policies and Propaganda	B. A. P. 3 rd Year	SEC: Radio and Cinema in India (A Social History)
	Tutorials:	Discussion on recommended readings given in syllabus		
	Assignment:	Choice of questions from the themes already covered from the syllabus and a month to submit after going through the prescribed readings.		
March	Theory:	III. Changes in Post-Gupta period (Towards Early Medieval): Vardhanas, Pallavas, Chalukyas IV. Tripartite Struggle for Supremacy (Rashtrakutas, Palas & Pratiharas)	B.A. (Prog.) 1 st Year	DSC-1: HISTORY OF INDIA (300 CE to 1200 CE)
		III. Popular Movements c) Anti-Apartheid Movements in South Africa & Civil Rights movements in USA	B.A. (Prog.) 3 rd Year	DSE: Issues in Twentieth Century World History-II

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		b) Student Movements – Paris 1968		
		(cont.) I. c) QIM & Congress Radio II. Establishment & Expansion of Akashvani under Keskar	B. A. P. 3 rd Year	SEC: Radio and Cinema in India (A Social History)
	Tutorials:	General clarification of topics already taken up in class lectures		
April	Theory:	(contd.) IV. Tripartite Struggle V. Socio-Economic Foundations of Rajputana in North India	B.A. (Prog.) 1 st Year	DSC-1: HISTORY OF INDIA (300 CE to 1200 CE)
		(contd) a) Environmental Struggles: Chipko, Amazon, Bhopal d) Women's Movements: Issues, debates, Women & Workplace – Vishakha Guidelines IV. Leisure & Entertainment	B.A. (Prog.) 3 rd Year	DSE: Issues in Twentieth Century World History-II
		(cont.) a) Classical Vs. Popular b) Ban on Film Music: Radio Ceylon, Vividh Bharti	B. A. P. 3 rd Year	SEC: Radio and Cinema in India (A Social History)
	Tutorials:	Further elaboration on the lecture classes		
	Mid-Term Test:	Internal Class Test from the themes already covered from the syllabus		
MAY	Theory:	VI. Cholas: State, Administration, Economy & Culture	B.A. (Prog.) 1 st Year	DSC-1: HISTORY OF INDIA (300 CE to 1200 CE)
		(contd.) a) Spectator Sports b) Cinema (Cold War, Depression)	B.A. (Prog.) 3 rd Year	DSE: Issues in Twentieth Century World History-II
	Tutorials:	Discussion of previous years' question papers and revision of important topics.		

Teacher's Signature

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SEMESTER WISE TEACHING PLAN (2023-2024)

SRI VENKATESWARA COLLEGE

January - May 2024 (Even Semester)

Name of the Faculty: Rajbir Kaur

Department: History

Semester: IV, VI

Month		Topics	Course	Paper Code/ Name
JANUARY	Theory	UNIT- I Introduction - The Basis of Ethics	B.A. (Hons.) IIInd Year VAC Sec.A	VAC Ethics and Culture
	Practical	Introducing the Practical Component of the course to the students with a focus on ethical and cultural basis in a society.		
	Theory	Unit I: The World Divided: The Cold War-case studies	B.A. (Prog.) IIIrd Year His DSE	Issues in Twentieth Century World History - II
	Tutorial	Introducing the course and its themes/units.		
	Theory	I. Many pasts of Delhi: Ecology, Archaeology and History II. Cities of Delhi: Urban Settlements from the 13th and 14th centuries – Focus on any two Mehrauli, Siri, Tughluqabad, Firuzabad	B.A. (Prog.) IIIrd Year GE History	GE VI Delhi through the Ages
	Tutorial	Introducing the course and its themes/units.		
FEBRUARY	Theory	UNIT- II The Role of Intelligence, Reason and Emotions	B.A. (Hons.) IIInd Year VAC Sec.A	VAC Ethics and Culture
	Practical	Group Discussions and practical on ethical decision making in one's life. Students are asked to conduct surveys/ interview while engaging in various community and outreach activities along with developing a cultural and ethical intellect and also prepare a project report on the same.		

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	Assignment/ Project Work	Make a project report on any one community outreach/ engagement as discussed in the practical classes along with certain amount of fieldwork (conduct surveys/ interviews or make video documentaries etc.)	B.A. (Hons.) IInd Year VAC Sec.A	VAC Ethics and Culture
	Theory	Unit I: The World Divided: Korea/Vietnam	B.A. (Prog.) IIIrd Year His DSE	Issues in Twentieth Century World History - II
	Tutorial	Discussion with the tutorial groups on the topics already taken up in the lectures		
	Theory	III. 18th and early 19th Century Shahjahanabad: Politics, Literary Culture and Delhi College IV. Delhi in 1857: Revolt and Re-conquest	B.A. (Prog.) IIIrd Year	GE VI Delhi through the Ages
	Tutorial	Discussion with the tutorial groups on the topics already taken up in the lectures		
	Assignment	1. Ancient monuments have been reinterpreted several times over through the ages. Explain with reference to the Ashokan pillar and the Mehrauli Iron pillar. 2, Explain the development and changing landscape of Delhi during the 13th and 14th centuries with special reference to any two sites: Mehrauli, Siri, Tughlakabad or Firozabad. 3. What was the role of different bazaars in the economic life of Shahjahanabad? 4. What changed in the life of the city and its landscape after the British recaptured Delhi in 1857. 5. What was the impact of the riots during the partition of Delhi?		
MARCH	Theory	UNIT- III Cultivating Inner Values- Ethics in the World of Work and Play	B.A. (Hons.) IInd Year VAC Sec.A	VAC Ethics and Culture


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	Practical	Group Discussions on the aspects of inner values such as empathy, compassion, justice and adaptability; Students will be asked to visit old-age homes, hospitals, child care centers, cancer wards, etc. to interact and write about their experiences with old people, caregivers, patients, nursing staff, helpers, etc.	B.A. (Hons.) IInd Year VAC Sec.A	VAC Ethics and Culture
	Mid Term Test	Internal Class Test from the Themes covered till then		
	Theory	Unit II: Decolonization and the long shadow of colonial exploitation: Ghana	B.A. (Prog.) IIIrd Year His DSE	Issues in Twentieth Century World History - II
	Tutorial	Discussion group for Hindi medium students		
	Mid Term Test	Internal Class Test from the Themes covered till then		
	Theory	V. Making of the New Imperial Capital: Delhi 1911-1930 VI. Delhi in 1947: Partition and After	B.A. (Prog.) IIIrd Year	GE VI Delhi through the Ages
	Tutorial	Discussion group for Hindi medium students		
	Mid Term Test	Internal Class Test from the Themes covered till then		
APRIL	Theory	UNIT- IV Striving for a Better World Outreach Activities	B.A. (Hons.) IInd Year VAC Sec.A	VAC Ethics and Culture
	Practical	Group Discussions on conservation and preservation of the natural resources, spreading awareness about environmental issues, preserving cultural and heritage sites; and to work towards an inclusive community.		
	Theory	Unit II: Decolonization and the long shadow of colonial exploitation: Algeria	B.A. (Prog.) IIIrd Year His DSE	Issues in Twentieth Century World History - II
	Tutorial	Discussion with regard to specific readings given for study		

	Theory	VII. Delhi as economic and cultural centre: Case study (Any Two) a. Crafts and artisans b. Music c. Hazrat-i Dehli d. Tombs of Delhi e. Coronation park	B.A. (Prog.) IIIrd Year	GE VI Delhi through the Ages
	Tutorial	Revision of the course and discussion on the previous year's question papers		
		Discussion with regard to specific readings given for study		
MAY	Theory	Revision of the course and discussion on the previous year's question papers	B.A. (Hons.) IIInd Year VAC Sec.A	VAC Ethics and Culture
	Practical	Students make presentations on their individual project reports on the activities undertaken.		
	Theory	Revision on the themes of the course	B.A. (Prog.) IIIrd Year His DSE	Issues in Twentieth Century World History - II
	Tutorial	Discussion on the previous year's question papers		
	Theory	Revision on the themes of the course	B.A. (Prog.) IIIrd Year	GE VI Delhi through the Ages
	Tutorial	Discussion on the previous year's question papers		

Rajbir Kumar

Signature of the teacher

V. A. K.

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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

January -May 2023-2024

Name of the Faculty: NUTI NAMITA

Department: HISTORY

Semester: EVEN SEMESTER 2024

Month		Topics	Course	Paper Code/Name
JANUARY	THEORY:	1.Delhi in the 19 th century: Mughal Court, Company Raj	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
	TUTORIAL:	Oral Quiz, impromptu class discussion	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
JANUARY	THEORY:	1. Transition from Feudalism to Capitalism 2.Crisis of the Tokugawa Bakuhau	B.A Hons. Second Year (4 th Semester)	DSC: History of Modern Japan (1868-1950)
	TUTORIAL	Question-Answer Session, Doubt Clearance	B.A Hons. Second Year (4 th Semester)	DSC: History of Modern Japan (1868-1950)
JANUARY	THEORY	2. Transition from Feudalism to Capitalism 3. Crisis of the Tokugawa Bakuhau	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan(1868-1950s)
	TUTORIAL	Tutorial: Question-Answer sessions, group discussion	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan(1868-1950s)
FEBRUARY	THEORY:	2. 1857 in Delhi; Rebel Violence and British Re-conquest. Aftermath of 1857 revolt in Delhi	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
	TUTORIAL	Continuous Assessment Surprise Test	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
FEBRUARY	THEORY:	4. Meiji Restoration 5. Economic Change; Agrarian Settlement, Fiscal policies, Industrialization	B.A Hons. Second Year (4 th Semester) 1V Semester	DSC: History of Modern Japan (1868-1950)

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	TUTORIAL	Continuous Assessment Surprise Test	B.A Hons. Second Year (4 th Semester) 1V Semester	DSC: History of Modern Japan (1868-1950)
FEBRUARY	THEORY	6. Meiji Restoration 7. Economic Change; Agrarian Settlement, Fiscal policies, Industrialization	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan (1868-1950S)
	Tutorials:	Assignment was given: Q. What were the internal and external crises of the Tokugawa Shogunate which led to its decline?	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan (1868-1950S)
MARCH	THEORY:	3) Making of New Delhi: Imperial Ideology and Urban Morphology	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
		TUTORIAL: ASSIGNMENT WAS GIVEN DISCUSSION ON THE ASSIGNMENT. Q. Revolt of 1857 was an expression of anger by the soldiers and people of India against East India Company. Explain. What was the aftermath of British reconquest of Delhi in September 1857?	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
MARCH	THEORY:	4. Meiji Constitution; 5. Popular Rights Movement	B.A Hons. Second Year (4 th Semester) 1V Semester	DSC: History of Modern Japan (1868-1950)
	Tutorials:	Assignment was given: Q. What were the internal and external crises of the Tokugawa Shogunate which led to its decline?	B.A Hons. Second Year (4 th Semester) 1V Semester	DSC: History of Modern Japan (1868-1950)
MARCH	THEORY	6. Meiji Constitution; 7. Popular Rights Movement	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan and Korea
	TUTORIAL	CLASS TEST	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan(1868-1950s)
APRIL	THEORY	4.Delhi in 1947; Partition and its Aftermath	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
		TUTORIAL: Class test and Presentations	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
APRIL	THEORY	6.Militarism 7. Japanese Imperialism; Ideology, Expansion and Conflict	B.A Hons. Second Year (4 th Semester) 1V Semester	DSC: History of Modern Japan (1868-1950)
	TUTORIAL	CLASS TEST	B.A Hons. Second Year (4 th Semester)	DSC: History of Modern Japan

			1V Semester	(1868-1950)
APRIL	THEORY	6.Militarism 7. Japanese Imperialism; Ideology, Expansion and Conflict	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan(1868-1950S)
	Tutorials:	REMEDIAL CLASSES FOR HINDI MEDIUM STUDENTS: GROUP DISCUSSION	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan(1868-1950S)
MAY	THEORY	5) Making of Contemporary Delhi: Capital Culture; Public Spaces, Politics and Socialites	B.A(Hons.) First year (2 nd semester)	GE Course 1: Delhi Through the Ages: From Colonial to Contemporary Times
	TUTORIAL	Revision		
MAY	THEORY	8. American Occupation of Japan 9. Women's Movement in Japan	B.A Hons. Second Year (4 th Semester) 1V Semester	DSC: History of Modern Japan (1868-1950)
	TUTORIAL	Revision		
MAY	THEORY	8.American Occupation of Japan 9. Women's Movement in Japan	B.A Hons Third Year. History V1 SEMESTER	DSE History of Modern Japan(1868-1950S)
	TUTORIAL	Revision		

Ant. Narita



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr Ningmuanching
Department: History
Semester: II, IV

Month		Topics	Course	Paper Code/Name
January	Theory	Introductory lecture, course outline and discussion of syllabus and mode of assessment etc; Ancient Greece: Emergence of the Polis in Athens	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Theory	Introductory classes, discussion of course outline, syllabus, readings; the concept of climate change, Anthropocene, global warming and studying History	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Theory	Introductory lecture, course outline and discussion of syllabus and mode of assessment etc; Understanding Feudalism	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
February	Theory	Evolution of the Polis in Ancient Greece: Athens and Sparta; Rome from the Republic to Principate: Conflict of the Orders	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Tutorial	Discussion based on selected readings for themes covered in class	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Theory	End of the Ice Age and Early Holocene Human History, Plant and Animal Domestication	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Theory	Understanding Feudalism: Church and Nobility, Peasants and State; Feudal Relationships and economic changes; growth of towns and urban centers.	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives

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March	Theory	Ancient Greece and Rome: Slavery in Ancient Greece and Rome; Crisis of the Roman Empire; Early Islamic Societies in west Asia: Transition from Tribe to State	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Tutorial	Discussion on selected readings on topics covered in class, Student group presentations	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Theory	Civilizations and Mining; Climate Disasters and Social Transformations-Empires, Wars, Famines:	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Theory	Feudal Crisis, Genesis of a new social order and Islamic culture: Pre-Islamic Arabia and Rise of Islam; The Caliphate	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
	Theory	Transitions in popular Culture and Mentalities c. 1550-1780: Family and Marriage Patterns	B.A. (P) IV Sem	DSC-2 Cultural Transformations in Early Modern Europe-II
	Tutorial	Discussion on selected readings, Student presentations	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Tutorial	Discussion on selected readings, Student presentations	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
	Tutorial	Discussion on selected readings	B.A. (P) IV Sem	Cultural Transformations in Early Modern Europe-II
	Assignment	Questions from the topics including Emergence of the polis in Ancient Greece: Athen and Sparta	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Assignment	Climate Change and Social Transformations: Empires, Wars and Famines	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Assignment	On Understanding Feudalism	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
April	Theory	Feudal Societies in medieval Europe(8 th to 14 th Centuries): The emergence of Feudal States: church, State, Society; Growth of Medieval Economy-8 th to 11 th Centuries; Transition in the Feudal Economy from 11 th to 14 th Centuries	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Theory	Little Ice Age and Seventeenth Century Crisis; Capitalism and Nature-Climate Change Denialism versus Climate Justice	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Theory	Islamic Culture; Medieval China: Dynastic China, State Ideology, Administrative Machinery	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives

	Theory	Transitions in popular Culture and Mentalities c. 1550-1780: The decline of Magic, the rise of witch trials	B.A. (P) IV Sem	DSC-2 Cultural Transformations in Early Modern Europe-II
	Tutorial	Discussions on selected readings, Student Presentations	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Tutorial	Discussions on selected readings, Student Presentations	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Tutorial	Discussions on selected readings, Student Presentations	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
	Tutorial	Discussion on topics covered including the decline of magic, the rise of witch trials	B.A. (P) IV Sem	DSC-2 Cultural Transformations in Early Modern Europe-II
	Mid-Term Test	Questions from the topics including the Rise of Islam and subsequent development, The Caliphate.	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Mid-Term Test	Question on Climate Change and its affect on human societies including domestication of plants and animals.	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Mid-Term Test	Questions on Genesis of a new social order and Islamic Culture	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
May	Theory	Onset of Feudal Crisis in the 13 th and 14 th Centuries	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II

	Theory	Capitalism and Nature: Metabolic Rift; Planetary Boundaries	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Theory	Medieval China: Agriculture and Trade, Technological Growth and Cultural Efflorescence	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
	Theory	Transitions in popular Culture and Mentalities c. 1550-1780: Changing mentalities and popular protests	B.A. (P) IV Sem	DSC-2 Cultural Transformations in Early Modern Europe-II
	Tutorial	Revision and discussion of past questions	B.A. (H) History II Sem	DSC-2 Social Formations and Cultural Patterns of the Medieval World-II
	Tutorial	Revision and discussion of past questions	B.A. (H) History IV Sem	GE-3 Climate Change and Human History
	Tutorial	Revision and discussion of past questions	B.A. (P) II Sem	DSC-2 Medieval Societies: Global Perspectives
	Tutorial	Revision of the Unit covered	B.A. (P) IV Sem	DSC-2 Cultural Transformations in Early Modern Europe-II

Signature of the teacher

प्रधानाचार्य
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SEMESTER WISE TEACHING PLAN (2022-2023)

SRI VENKATESWARA COLLEGE

January – May, 2024

Name of the Faculty: Jhansi Rangu

Department: History

Semester: VI BA Hons., I BA Hons. & VI BA (Prog.)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Introduction to understanding 19 th century India I. Caste Community and Nation (19 th Century) (a) Regional, religious and linguistic identities (b) Gender and Caste Identities- Women and Social Reform, Jyotirao Phule (c) Sanskritizing trends and lower caste movements II. Economy and Social classes (a) Economic critique of colonial rule-Drain of wealth theory (b) Rise of modern industry: capitalists and working class (c) Famines and their impact	B.A. (Hons.) Core Course XIII Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
		I. Development of Political Structures (c. 4 th BCE- c 300 CE) a. The Mauryan Empire; the nature of dhamma b. Post-Mauryan polities with special reference to Kushanas and Satavahanas c. Tamilakam	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
		III. Early Years of Indian Cinema (a) Silent era to talkies: Social, Historical, Mythological and action (b) Women enter films	B.A. (Prog.) SEC-VIII Semester VI	Radio and Cinema in India: a Social History
	Tutorials	Introduction to the paper and discussion of Historiography on the given themes.	B.A. (Hons.) Core Course XIII Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
		Discussion on the notion of 'Empire'	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE प्रधानाचार्य Principal

FEBRUAR Y	Theory:	III. Early nationalism (a) Emergence of Indian National Congress-theories and debates (b) Moderates and extremists (c) Swadeshi movement-trends and analysis (d) Revolutionary movements IV. Gandhian Nationalism-introduction	B.A. (Hons.) Core Course Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
		II. Economy and Society (c. 4 th century BCE to 300 CE) a. Expansion of agrarian economy and production relations b. Urban growth: north India, central India, Deccan and south India; crafts production; trade interactions across the sub-continent and beyond. c. Social stratification: varna; jati untouchability; gender; marriage and property relations	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
		III (c) Studio Era: AVM & Gemini (d) Colonial Censorship and Patriotic Creativity	B.A. (Prog.) SEC-VIII Semester VI	Radio and Cinema in India: a Social History
	Tutorials	Discussion of scholarly works on moderates and extremists	B.A. (Hons.) Core Course XIII Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
		Discussion on Varna and jati	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
	MARCH	Theory:	IV. (a) Gandhian Philosophy and ideology (b) Early Struggles: Champaran, Kheda and Ahmedabad (c) Rowlatt, Khilafat and Non-Cooperation Movements (d) Civil Disobedience movement-historiography (e) Quit India movement	B.A. (Hons.) Core Course Semester VI
III. Polity, Economy and Society a. The nature of polities b. Agrarian developments, land grants and peasantry c. Urban patterns; trade and currency			B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
IV. Social Films of Nehruvian Era and its aftermath (a) Angry Young Man, Melodrama			B.A. (Prog.) SEC-VIII Semester VI	Radio and Cinema in India: a Social History प्रधानाचार्य

APRIL

Tutorials	Reading the 'Hind Swaraj' & 'Annihilation of Caste'	B.A. (Hons.) Core Course XIII Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
	Discussion on land grants	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
	ASSIGNMENTS		
Theory:	V. Interfaces: Nationalism & Socio-Political Movements (a) Ambedkar & Dalit movements (b) Bhagat Singh and H.S.R.A (c) Singh Sabha and Akali movements; Dravidian movements (d) Left movements: Peasants and Working Class (e) Tribal Movements VI. Communalism: Ideologies & Practices (a) Trends in Communalism (b) Partition	B.A. (Hons.) Core Course Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
	III d. Society: the proliferation of jatis: changing norms of marriage and inheritance IV. Religion and Cultural developments (4 th century BCE- 750 CE) a. Theistic traditions	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
	IV (b) Music: Song genres	B.A. (Prog.) SEC-VIII Semester VI	Radio and Cinema in India: a Social History
Tutorials	Reading Communalism and partition through scholarly works Revision and discussion of major themes, covered.	B.A. (Hons.) Core Course XIII Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
	Discussion on theistic traditions	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE

MAY

Theory:

Tutorials

CLASS TESTS		
VII. Independence and the New State (a) World war II & Post war Crisis (b) Negotiations for Independence (c) Integration of the Princely States (d) The Making of the Constitution	B.A. (Hons.) Core Course Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
IV. Religion and Cultural developments (4 th century BCE- 750 CE) b. Art and Architecture; forms of patronage (Sculptures, Stupas, Rock cut caves and Temples)	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE
Revision of topics covered	B.A. (Prog.) SEC-VIII Semester VI	Radio and Cinema in India: a Social History
Revision of all topics	B.A. (Hons.) Core Course Semester VI	History of India VIII (c.1857-1950) Unique Paper Code: 12311603
Revision of all topics	B.A. (Hons.) Discipline Specific Core Course -1 (DSC-1) Semester II	History of India II c. 300 CE-750 CE

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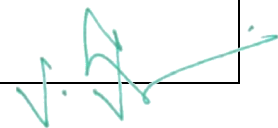
Semester Wise Teaching plan
Sri Venkateswara College
2023- 2024 Even Semester

Name of Faculty: Ms. Shakuntla Wadhwa

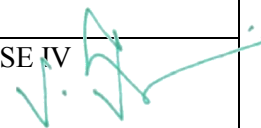
Department: Mathematics

Semester: VI

<u>Month</u>		<u>Topics</u>	<u>Course</u>	<u>Paper Name and code</u>
January	Theory	Linear Diophantine equation, prime counting function	B.Sc. (H) Mathematics III year	DSE IV Number Theory
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics III year	DSE IV
	Practicals	1. Make a geometric plot to show that the nth roots of unity are equally spaced points that lie on the unit circle and form the vertices of a regular polygon with n sides, for $n = 4, 5, 6, 7, 8$. 2. Find all the solutions of the equation $z^3=8i$ and represent these geometrically.	B.Sc. (H) Mathematics VI	Complex Analysis, BMATH613
February	Theory	Statement of prime number theorem, Goldbach conjecture, linear congruence Set of residues, Chinese remainder theorem, Fermat's little theorem, Wilson's theorem	B.Sc. (H) Mathematics III year	DSE IV Number Theory
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics III year	DSE IV


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	Practicals	3. Write parametric equations and make a parametric plot for an ellipse centered at the origin with horizontal major axis of 4 units and vertical minor axis of 2 units. Show the effect of rotation of this ellipse by an angle of $\pi/6$ radians and shifting of the centre from (0,0) to (2,1), by making a parametric plot. 4. Image of open disk under the given linear transformation Plotting image of right half plane under the given linear transformation 5. To plot the given polygonal path 6. Performing contour integration of the given functions along the given path	B.Sc. (H) Mathematics VI	Complex Analysis, BMATH613
March	Theory	Number theoretic functions for sum and number of divisors, totally multiplicative functions. The Mobius inversion formula, the greatest integer function, Euler's phi function, Euler's theorem, reduced set of residues.	B.Sc. (H) Mathematics III year	DSE IV Number Theory
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics III year	DSE IV
	Prcacticals	7. Some more problems on contour integration 8. Finding and plotting three different Laurent series representations of the given function 9. To compute the poles of given complex functions.	B.Sc. (H) Mathematics VI	Complex Analysis, BMATH613
	Assignment	Assignment given before mid- semester break on the basis of topics covered in the class.	B.Sc. (H) Mathematics III year	DSE IV
	Internal Test	Internal Exam will be conducted on the basis of topics covered in the class	B.Sc. (H) Mathematics III year	DSE IV


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April	Theory	Order of an integer modulo n , primitive roots for primes, composite numbers having primitive roots. Euler's criteria, the Legendre symbol and its properties, quadratic reciprocity, quadratic congruences.	B.Sc. (H) Mathematics III year	DSE IV Number Theory
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics III year	DSE IV
	Practicals	10. Finding residues of given functions 11. Evaluation of integrals by finding residues	B.Sc. (H) Mathematics VI	Complex Analysis, BMATH613
May	Theory	Public key encryption, RSA encryption and decryption	B.Sc. (H) Mathematics III year	DSE IV Number Theory
	Tutorials	Revision of the Syllabus	B.Sc. (H) Mathematics III year	DSE IV
	Practicals	Revision and finalizing Internal Assessment of students	B.Sc. (H) Mathematics VI	Complex Analysis, BMATH613

Shakuntla

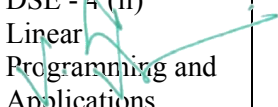
Signature of Teacher

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TEACHING PLAN
Prof. Ramesh K Budhraja
Sri Venkateswara College
2023 - 2024 (Even Semester)

Name of Faculty: **Prof. Ramesh K Budhraja**
Department: **Mathematics**
Semester: **VI & IV/ Even Semesters**

Month		Topics	Course	Paper Code and Name
January	Theory	Introduction to Linear Programming, Graphical solution, Basics of Simplex Method,	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Practicals	1. Make a geometric plot to show that the nth roots of unity are equally spaced points that lie on the unit circle and form the vertices of a regular polygon with n sides, for $n = 4, 5, 6, 7, 8$. 2. Find all the solutions of the equation $z^3=8i$ and represent these geometrically. 3. Write parametric equations and make a parametric plot for an ellipse centered at the origin with horizontal major axis of 4 units and vertical minor axis of 2 units. Show the effect of rotation of this ellipse by an angle of $\pi/6$ radians and shifting of the cent from (0,0) to (2,1), by making a parametric plot.	B.Sc. (H) Mathematics VI B	BMATH613 Complex Analysis
	Tutorials	Doubts and Questions based on these Theory Topics will be taken up.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications


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February	Theory	Basic Feasible solutions, Reduction of feasible solution to BFS, Examples, Illustrations and Questions based on these topics. Simplex Method along with statement and proofs of Improvement, Unbounded and Optimality Theorems, Solving LPPs using Simplex method.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Practicals	4. Image of open disk under the given linear transformation 5. Plotting image of right half plane under the given linear transformation 6. To plot the given polygonal path 7. Performing contour integration of the given functions along the given path VAC – Fit India • Fit India Protocol • Physical Activity, Health and Fitness • Indicators of Fitness	B.Sc. (H) Mathematics VI B All Courses	BMATH613 Complex Analysis Sem IV
	Tutorials	Doubts and Questions based on these Theory Topics will be taken up.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
March	Theory	Solving LPPs using Simplex method. Big-M and Two-Phase methods. Solution of System of Equations and Inverse finding method. Introduction to Duality Theory, Primal Dual Relationships, Fundamental theorem of Duality and Complementary Slackness Property.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Practicals	8. Some more problems on contour integration 9. Finding and plotting three different Laurent series representations of the given function 10. To compute the poles of given complex functions. VAC – Fit India • Muscular Strength and Endurance Training • Body composition and Flexibility	B.Sc. (H) Mathematics VI B All Courses	BMATH613 Complex Analysis Sem IV

	Tutorials	Doubts and Questions based on these Theory Topics will be taken up.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Assignment	Assignment given before mid-semester break on the basis of topics covered in the class.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Test	Internal Exam will be conducted on the basis of topics covered in the class	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
April	Theory	Transportation Problem: Introduction and Formulation; Initial Basic Feasible Solution using North West Corner Rule, Least Cost method, Vogel's Approximation Method, Algorithm to solve a Transportation problem. Assignment Problem: Formulation and Hungarian method to solve it. Theory of Games, Basic Concepts, Formulation and solution of Two person zero sum games, Rectangular Games,	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Practicals	11. Finding residues of given functions 12. Evaluation of integrals by finding residues VAC – Fit India • Healthy Eating Diet • Balanced Diet • Caloric content of Food • Depression, Anxiety and Stress Scale. • Rosenberg Self Esteem Scale	B.Sc. (H) Mathematics VI B All Courses	BMATH613 Complex Analysis Sem IV  Principal

	Tutorials	Doubts and Questions based on these Theory Topics will be taken up.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
May	Theory	Saddle point, Games with mixed strategies. Linear Programming method of solving of a game. Equivalent Primal Dual problems of a rectangular game.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications
	Practicals	VAC – Fit India Continuous Assessment of the Students	All Courses	Sem IV
	Tutorials	Doubts and Questions based on these Theory Topics will be taken up.	B.Sc. (H) Mathematics Sem VI A	DSE - 4 (ii) Linear Programming and Applications

Prof. Ramesh K Budhraja

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Semester Wise Teaching plan
Sri Venkateswara College
2023- 2024 Even Semester

Name of Faculty: Dr. Mainak Mukherjee

Department: Mathematics

Semester: IV

<u>Month</u>		<u>Topics</u>	<u>Course</u>	<u>Paper Code and Name</u>
January	Theory 1	Pointwise and uniform convergence of sequence of functions, The uniform norm, Cauchy criterion for uniform convergence	B.Sc. (H) Mathematics IV A	DSC-10 Sequences and Series of Functions
	Theory 2	Definition and examples of function of two variables, Level curves and surfaces, Limits and continuity of functions of two variables. Partial differentiation and partial derivatives as slope and rate.	B.Sc. (H) Mathematics IV B	DSC-11 Multivariate Calculus
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics IV A and IV B	Sequences and Series of Functions and Multivariate Calculus
February	Theory 1	Continuity of the limit function of a sequence of functions, Interchange of the limit and derivative, and the interchange of the limit and integral of a sequence of functions, Bounded convergence theorem. Pointwise and uniform convergence of series of functions, Theorems on the continuity, and integrability of the sum function of a series of functions.	B.Sc. (H) Mathematics IV A	DSC-10 Sequences and Series of Functions
	Theory 2	Higher order partial derivatives. Tangent planes, Total differential, Differentiability, Chain rule for one independent variable. Extensions of the chain rule to two independent parameters, Directional derivatives and the gradient, Maximal and normal property of the gradient, Tangent planes and normal lines. Extrema of functions of two variables, Lagrange multipliers	B.Sc. (H) Mathematics IV B	DSC-11 Multivariate Calculus


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		method for optimization problems with one constraint.		
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics IV A and IV B	Sequences and Series of Functions and Multivariate Calculus
March	Theory 1	Theorem on the differentiability of the sum function of a series of functions, Cauchy criterion, and the Weierstrass M-test for uniform convergence. Definition of a power series, Radius of convergence, Absolute convergence (Cauchy- Hadamard theorem)	B.Sc. (H) Mathematics IV A	DSC-10 Sequences and Series of Functions
	Theory 2	Double integration over rectangular regions. Double integration over nonrectangular regions, Double integrals in polar coordinates. Triple integral over a parallelopiped, Triple integral over solid regions, Volume by triple integrals.	B.Sc. (H) Mathematics IV B	DSC-11 Multivariate Calculus
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics IV A and IV B	Sequences and Series of Functions and Multivariate Calculus
	Assignment	Assignment given before mid-semester break on the basis of topics covered in the class.	B.Sc. (H) Mathematics IV A and IV B	Sequences and Series of Functions and Multivariate Calculus
	Test	Internal Exam will be conducted on the basis of topics covered in the class	B.Sc. (H) Mathematics IV A and IVB	Sequences and Series of Functions and Multivariate Calculus
April	Theory 1	Differentiation and integration of power series, Abel's theorem. Weierstrass's approximation theorem. The exponential and logarithmic functions: Definitions and their basic properties. Vector field, Divergence and curl, Line integrals and its properties.	B.Sc. (H) Mathematics IV A	DSC-10 Sequences and Series of Functions

	Theory 2	Triple integration in cylindrical and spherical coordinates. Jacobians: Change of variables in double and triple integrals. Vector field, Divergence and curl, Line integrals and its properties, Applications of line integrals to mass and work.	B.Sc. (H) Mathematics IV B	DSC-11 Multivariate Calculus
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics IV A and IV B	Sequences and Series of Functions and Multivariate Calculus
May	Theory 1	The trigonometric functions: Definitions and their basic properties.	B.Sc. (H) Mathematics IV A	DSC-10 Sequences and Series of Functions
	Theory 2	Applications of line integrals to mass and work. Surface integrals, Statements of Stokes' theorem and Gauss divergence theorem.	B.Sc. (H) Mathematics IV B	DSC-11 Multivariate Calculus
	Tutorials	Doubts of students are discussed on the basis of topics covered in the class. Exercise questions are also discussed.	B.Sc. (H) Mathematics IV A and IV B	Sequences and Series of Functions and Multivariate Calculus



Signature of Teacher



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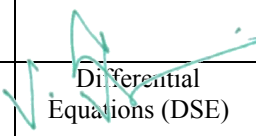


TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Pratibha Gaur
Department: Mathematics
Semester: Even Semester (II, IV & VI)

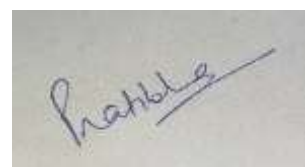
Month		Topics	Course	Paper Code/Name
January	Theory	Limits of functions (ϵ - δ and sequential approach), Algebra of limits, One-sided limits, Infinite limits and limits at infinity	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Tutorial	Problems based on limit of functions using both the approaches	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Theory	Order and degree of partial differential equations, Concept of linear and nonlinear partial differential equations, formation of first order partial differential equations	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Tutorial	Discussing Problems based on the theory covered.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Practical	Installation of Django, Introduction to Django, MVC Model (Model-View-Controller Model) and Django structure.	SEC Sem IV (Sec-A)	Back-End Web Development
February	Theory	Continuous functions and its various properties on closed and bounded interval $[a, b]$ viz., boundedness and maximum-minimum value theorem, Intermediate value theorem and the preservation of intervals theorem, Uniform continuity, Differentiability of a function	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Tutorial	Problems based on various properties of continuity and uniformly continuity of functions	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus

	Theory	Linear partial differential equations of first order and their solutions.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Tutorial	To discuss Problems based on the theory covered in Feb.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)


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	Practical	HTML templates; URL dispatcher, Django Template System and Interacting with a Database. Allocation of Project Work.	SEC Sem IV (Sec-A)	Back-End Web Development
March	Theory	Algebra of differentiable functions and chain rule. Relative extrema, Interior extremum theorem, Rolle's theorem, Mean-value theorem and its applications, Intermediate value property of derivatives	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Tutorial	Applications of differentiability of functions	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Theory	Concept of non-linear partial differential equations, Lagrange's method, Charpit's method	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Tutorial	To discuss Problems based on Lagrange's method, Charpit's method.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Practical	The Django Administration Site Wrapper-Functions, Custom Views GET and POST methods and Deployment of Django.	SEC Sem IV (Sec-A)	Back-End Web Development
	Theory	Higher order derivatives, Calculation of the nth derivative, Leibnitz's theorem; Taylor's theorem, Taylor's series expansions, Indeterminate forms, L'Hôpital's rule. Concavity and inflexion points; Singular points	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Tutorial	Problems based on nth derivative, intermediate forms and Taylor's series expansion	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Theory	classification of second order partial differential equations into elliptic, parabolic and hyperbolic through illustrations only.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Tutorial	To discuss Problems based on the theory covered in the class.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
April	Practical	Automating tasks with Django. Execution and Group Discussions	SEC Sem IV (Sec-A)	Back-End Web Development
	Assignment	Based on the topics covered in Jan, Feb and Mar.	B.Sc. (H) Mathematics Sem-II, Sec-B and BA (P) Sem-VI CBCS	DSC-5 Calculus; BA (P)-Diff Equations
	Mid-Term Test	Based on the topics covered in Jan, Feb and Mar.	B.Sc. (H) Mathematics Sem-II, Sec-B and BA (P) Sem-VI CBCS	DSC-5 Calculus; BA (P)-Diff Equations
May	Theory	Tangents at the origin and nature of singular points; Concepts of asymptotes parallel to axes and oblique, Graphing	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus

		rational functions and polar equations		
	Tutorial	Problems based on singular points and graphing of functions	B.Sc. (H) Mathematics Sem-II, Sec-B	DSC-5 Calculus
	Theory	Revision of all the topics.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Tutorial	Revision of all the topics.	BA (Prog.) DSE Sem VI Mathematics	Differential Equations (DSE)
	Practical	Building Web APIs using Django REST. Course Revision Project Submission	SEC Sem IV (Sec-A)	Back-End Web Development



Signature of Teacher



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SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

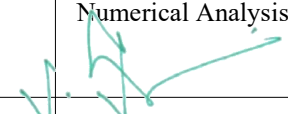
2023-24 Even Semester, January-May, 2024

Name of the Faculty: Prof. Swarn Singh

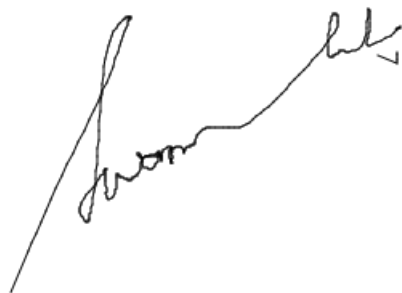
Department: Mathematics

Semester: IV

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	To introduce the concepts of Rate and order of Convergence, Bisection Method and various problems related to these and to discuss various theorems related to convergence of the method	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Practicals:	Basic concepts of Mathematica and Practical (1) Bisection method	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Tutorials:			
FEBRUARY	Theory:	False position method, Fixed point iteration method, Newton's method, Secant method, LU decomposition, Gauss- Jacobi method, Gauss-Seidel method, and to discuss various theorems related to convergence of these methods.	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Practicals:	Practicals (2) Newton Raphson Method, (3) Secant method, (4) LU decomposition method	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Tutorials:			
MARCH	Theory:	Lagrange and Newton interpolation, Piecewise linear interpolation, First and higher order approximation for first derivative, approximation for second derivative, and to discuss various theorems related to these methods.	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Practicals:	Practicals: (5) Gauss-Jacobi method (6) Gauss Siedel method (7) Lagrange Interpolation, (8) Newton Interpolation	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Tutorials:			
	Assignment	Assignment to be given related to syllabus.	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis


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	<u>Mid Term Test</u>	To take internal Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
APRIL	Theory	Numerical Integration by closed Newton-Cotes formulae: trapezoidal rule, Simson's rule and its error analysis, Euler's method to solve ODE's,	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Practicals:	Practicals: (9) Trapezoidal rule (10) Simpson's rule (11) Euler's method	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Tutorials:			
	<u>Mid Term Test</u>	To take internal Lab Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
MAY	Theory:	Modified Euler's method, Fourth order Runge-Kutta methods and to revise whole syllabus. To discuss previous year questions papers some of which are available on my Blog https://numericalmaths.wordpress.com/	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Practicals:	Practical (12) Fourth order Runge-Kutta method and revise all practicals	B.Sc.(Hons.)Maths Sem IV	DSC-12 Numerical Analysis
	Tutorials:			




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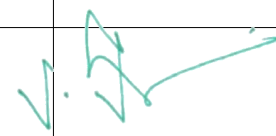
2023-24 Even Semester, January-May, 2024

Name of the Faculty: Prof. Swarn Singh

Department: Mathematics

Semester: IV

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	To introduce the concepts of double integration over rectangular regions.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus
	Practicals			
	Tutorials:			
FEBRUARY	Theory:	Double integration over nonrectangular regions, Double integrals in polar coordinates.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus
	Practicals:			
	Tutorials:			
MARCH	Theory:	Triple integral over a parallelopiped, Triple integral over solid regions, Volume by triple integrals.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus
	Practicals:			
	Tutorials:			
	<u>Assignment</u>	Assignment to be given related to syllabus.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus


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	<u>Mid Term Test</u>	To take internal Test based on the syllabus covered.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus
APRIL	Theory	Triple integration in cylindrical and spherical coordinates.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus
	Practicals:			
	Tutorials:			
MAY	Theory:	Jacobians: Change of variables in double and triple integrals.	B.Sc.(Hons.)Maths Sem IV	DSC-11 Multivariate Calculus
	Practicals:			
	Tutorials:			

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr Deepti Jain

Department: Mathematics

Semester: II

Month		Topics	Course	Paper Code/Name
January	Theory	Fundamental operation with vectors in Euclidean space $\mathbb{R}^n$, Linear combinations of vectors, Dot product and their properties, Cauchy-Schwarz inequality, Triangle inequality.	B.Sc. (H) Mathematics II Sem (Section B)	DSC-4 Linear Algebra
	Tutorial	Exercises and doubts based on vector addition, dot product, parallel and orthogonal vectors.	B.Sc. (H) Mathematics II Sem (Section B)	DSC-4 Linear Algebra
	Theory	Fundamental operation with vectors in Euclidean space $\mathbb{R}^n$, Linear combinations of vectors, Dot product and their properties, Cauchy-Schwarz inequality, Triangle inequality.	B.Sc. (H) Mathematics II Sem (Section A)	DSC-4 Linear Algebra
	Tutorial	Exercises and doubts based on vector addition, dot product, parallel and orthogonal vectors.	B.Sc. (H) Mathematics II Sem (Section A)	DSC-4 Linear Algebra
	Theory	Fundamental operation with vectors in Euclidean space $\mathbb{R}^n$, Linear combinations of vectors, Dot product and their properties, Cauchy-Schwarz inequality, Triangle inequality.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Tutorial	Exercise questions and doubts based on vector addition, dot product, parallel and orthogonal vectors.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Practical	1. Solutions of first, second and third order differential equations. 2. Plotting of family of solutions of differential equations of first, second and third order.	B.Sc. (H) Mathematics II Sem	DSC-6 Ordinary Differential Equations
February	Theory	Solving system of linear equations using Gaussian elimination, Gauss-Jordan row reduction, Reduced row echelon form. Equivalent systems, Rank and row space of a matrix, Eigenvalues, Eigenvectors, Eigenspace, Diagonalization, Characteristic polynomial of a matrix, Cayley-Hamilton theorem.	B.Sc. (H) Mathematics II Sem (Section B)	DSC-4 Linear Algebra
	Tutorial	Exercise questions and doubts based on Gauss Elimination Method and Gauss-Jordan Method, Eigenvalues and Eigenvectors, Cayley-Hamilton Theorem.	B.Sc. (H) Mathematics II Sem (Section B)	DSC-4 Linear Algebra

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	Theory	Solving system of linear equations using Gaussian elimination, Gauss-Jordan row reduction, Reduced row echelon form.	B.Sc. (H) Mathematics II Sem (Section A)	DSC-4 Linear Algebra
	Tutorial	Exercise questions and doubts based on Gauss Elimination Method and Gauss-Jordan Method	B.Sc. (H) Mathematics II Sem (Section A)	DSC-4 Linear Algebra
	Theory	Gauss Elimination Method and Gauss-Jordan Method, Eigenvalues and Eigenvectors, Diagonalization of matrices.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Tutorial	Exercise questions and doubts based on Gauss Elimination Method and Gauss-Jordan Method, Eigenvalues and Eigenvectors, Diagonalization of matrices.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Practical	3. Solution of differential equations using method of variation of parameters. 4. Growth and decay model (exponential case).	B.Sc. (H) Mathematics II Sem	DSC-6 Ordinary Differential Equations
March	Theory	Fields, Vector spaces, Subspaces, Algebra of subspaces, Linear combination of vectors, Linear span, Linear independence, Bases and dimension, Dimension of subspaces.	B.Sc. (H) Mathematics II Sem (Section B)	DSC-4 Linear Algebra
	Tutorial	Exercises and doubts based on Linear span, Linear independence and dependence, bases and dimension of vector spaces.	B.Sc. (H) Mathematics II Sem (Section B)	DSC-4 Linear Algebra
	Theory	Solution of simultaneous system of equations, Equivalent systems, Rank and row space of a matrix.	B.Sc. (H) Mathematics II Sem (Section A)	DSC-4 Linear Algebra
	Tutorial	Exercises and doubts based on Solution of simultaneous system of equations, Equivalent systems, Rank and row space of a matrix.	B.Sc. (H) Mathematics II Sem (Section A)	DSC-4 Linear Algebra
	Theory	Linear span, Linear independence and dependence, bases and dimension of vector spaces.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Tutorial	Exercises and doubts based on Linear span, Linear independence and dependence, bases and dimension of vector spaces.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Practical	5. Lake pollution model (with constant/seasonal flow and pollution concentration). 6. Density-dependent growth model.	B.Sc. (H) Mathematics II Sem	DSC-6 Ordinary Differential Equations
	Assignment	Questions from the topics including Vectors, Systems of linear equations, eigenvalues, eigenvectors, diagonalization.	B.Sc. (H) Mathematics II Sem Section A & B	DSC-4 Linear Algebra Principal

	Test	Questions from the topics including Vector spaces, subspaces, bases, dimension of subspaces, linear independence and dependence.	B.Sc. (H) Mathematics II Sem Section A & B	DSC-4 Linear Algebra
April	Theory	Linear transformations, Null space, Range, Rank and nullity of a linear transformation, Matrix representation of a linear transformation, Algebra of linear transformations, Invertibility and isomorphisms	B.Sc. (H) Mathematics II Sem Section B	DSC-4 Linear Algebra
	Tutorial	Exercises and doubts based on Linear transformations, rank and nullity, invertibility and isomorphism.	B.Sc. (H) Mathematics II Sem Section B	DSC-4 Linear Algebra
	Theory	Eigenvalues, Eigenvectors, Eigenspace, Diagonalization, Characteristic polynomial of a matrix	B.Sc. (H) Mathematics II Sem Section A	DSC-4 Linear Algebra
	Tutorial	Exercises and doubts based on Eigenvalues, Eigenvectors, Eigenspace, Diagonalization, Characteristic polynomial of a matrix, Cayley-Hamilton theorem.	B.Sc. (H) Mathematics II Sem Section A	DSC-4 Linear Algebra
	Theory	Exercises and doubts based on Linear transformations, rank and nullity	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Tutorial	Linear transformations, Null space, Range, Rank and nullity of a linear transformation, Matrix representation of a linear transformation, Algebra of linear transformations, Invertibility and isomorphisms	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Practical	7. Predatory-prey model (basic Volterra model, with density dependence, effect of DDT, two prey one predator). 8. Epidemic model of influenza (basic epidemic model, contagious for life, disease with carriers).	B.Sc. (H) Mathematics II Sem	DSC-6 Ordinary Differential Equations
May	Theory	Application: Computer graphics – Fundamental movements in a plane, homogenous coordinates, and composition of movements.	B.Sc. (H) Mathematics II Sem Section B	DSC-4 Linear Algebra
	Tutorial	Exercise questions and doubts based on applications of linear transformations to computer graphics.	B.Sc. (H) Mathematics II Sem Section B	DSC-4 Linear Algebra
	Theory	Cayley-Hamilton theorem and applications.	B.Sc. (H) Mathematics II Sem Section A	DSC-4 Linear Algebra
	Tutorial	Exercise questions and doubts based on Cayley-Hamilton theorem and applications.	B.Sc. (H) Mathematics II Sem Section A	DSC-4 Linear Algebra

	Theory	Invertibility and isomorphism of linear transformations.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Tutorial	Exercise questions and doubts based on invertibility and isomorphism of linear transformations.	B.A. (Prog) II Sem	DSC A-2 Elementary Linear Algebra
	Practical	Revision and test of practical done in the entire semester.	B.Sc. (H) Mathematics II Sem	DSC-6 Ordinary Differential Equations

Deepthi Jain

Signature of the teacher

V. B. K.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Ninian Nauneet Kujur

Department: Mathematics

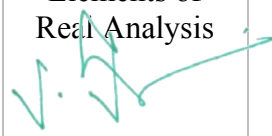
Month		Topics	Course	Paper Code/Name
January	Theory	Basics of Graph theory, Königsberg bridge problem.	BA(P)/BCom (P) VI Sem	GE-2 General Mathematics- II
	Theory	Field and order properties of $\mathbb{R}$, basic properties and inequalities of the absolute value of a real number.	B.Sc. (H) IV Sem	GE-4 Elements of Real Analysis
	Tutorial	Discuss the topics done so far in class	B.Sc. (H) VI Sem	DSE-4 Linear Programming and Applications
	Practical	[1] Chapter 14 (Sections 14.1 To 14.4) [2] Chapter 2, Chapter 3	BA(P) VI-Sem	SEC-4: Statistical Software: R
	Practical	1. Make a geometric plot to show that the n th roots of unity are equally spaced points that lie on the unit circle and form the vertices of a regular polygon with n sides, for $n = 4, 5, 6, 7, 8$. 2. Find all the solutions of the equation $m = 89$ and represent these geometrically. 3. Write parametric equations and make a parametric plot for an ellipse centered at the origin with horizontal major axis of 4 units and vertical minor axis of 2 units. Show the effect of rotation of this ellipse by an angle of radians and shifting of the centre from $(0,0)$ to $(2,1)$, by making a parametric plot.	B.Sc(H) Maths VI Sem	Complex Analysis (Analysis V)

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February	Theory	Four-color map problem, Möbius strip and Klein bottle. Introduction of functions, Graphs of functions, Increasing and decreasing functions, Even and odd functions, Location of points of extrema, Inflection, Periodic functions – all via graphs. Perspective and Projection, Perspective geometry: Lines and points in 2D and 3D, Fundamental trigonometric functions, Use of perspective in drawing, Historic background, Common tools adopted by artists for such representations, Analysis of some paintings to spot uses of perspective and projection techniques. Types of symmetry, Concrete examples of symmetry groups, Study of symmetry and patterns by looking at monuments/buildings/ornamental art, Fibonacci sequences in nature, Golden ratio, Golden triangle.	BA(P)/BCom (P) VI Sem	General Mathematics- II
	Theory	Bounded above and bounded below sets, Suprema and infima, The completeness axiom and the Archimedean property of $\mathbb{R}$. Convergence of a real sequence, Algebra of limits. The squeeze principle and applications. Monotone sequences	B.Sc. (H) IV Sem	GE-4 Elements of Real Analysis
	Tutorial	Discuss the topics done so far in class	B.Sc. (H) VI Sem	DSE-4 Linear Programming and Applications
	Practical	[2] Chapter 4, Chapter 5	BA(P) VI-Sem	SEC-4: Statistical Software: R
	Practical	4. Show that the image of the open disk $D_1(-1-i) = \{z: z+1+i < 1\}$ under the linear transformation $w=f(z)=(3-4i)z+6+2i$ is the open disk $D_5(-1-3i) = \{w: w+1-3i < 5\}$. 5. Show that the image of the right half plane $\text{Re } z = x > 1$ under the linear transformation $w = (-1+i)z - 2 + 3i$ is the half plane $v > u + 7$, where $u = \text{Re}(w)$, etc. Plot the map.	B.Sc(H) Maths VI Sem	Complex Analysis (Analysis V)


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		6. Show that the image of the right half plane $A = \{z : \operatorname{Re} z \geq 1/2\}$ under the mapping $D_1(1) = \{w : w - 1 \leq 1\}$ in the w plane. 7. Make a plot of the vertical lines $x = a$, for $a = -1, -1/2, 1/2, 1$ and the horizontal lines $y = b$, for $b = -1, -1/2, 1/2, 1$ and, 1. Find the plot of this grid under the mapping $w = f(z) = 1/z$. 8. Find a parametrization of the polygonal path $C = C_1 + C_2 + C_3$ from $-1 + i$ to $3 - i$, where C_1 is the line from: $-1 + i$ to -1, C_2 is the line from: -1 to $1 + i$ and C_3 is the line from $1 + i$ to $3 - i$. Make a plot of this path.		
March	Theory	Shapes and solids, Basic tilings, The regular polyhedron, Importance of Platonic solids and mystical significance to the ancient Greeks; Fractals in nature, Snowflake curves, Sierpinski triangle. Solving systems of linear equations, Gaussian elimination method and row operations, Consistent and inconsistent system, Gauss-Jordan row reduction and reduced row echelon form, Homogenous system,	BA(P)/BCom (P) VI Sem	General Mathematics- II
	Theory	Monotone convergence theorem and applications. Cauchy sequences, Cauchy criterion for convergence and applications. Convergence and divergence of infinite series of real numbers, Necessary condition for convergence, Cauchy criterion for convergence of series	B.Sc. (H) IV Sem	GE-4 Elements of Real Analysis
	Tutorial	Discuss the topics done so far in class	B.Sc. (H) VI Sem	DSE-4 Linear Programming and Applications
	Practical	[2] Chapter 7	BA(P) VI-Sem	SEC-4: Statistical Software: R

	Practical	9. Plot the line segment 'L' joining the point $A = 0$ to $B = 2 + \pi/4i$ and give an exact calculation of $\int_C e^z dz$. 10. Plot the semicircle 'C' with radius 1 centered at $z = 2$ and evaluate the contour integral $\int_C \frac{1}{z-2} dz$. 11. Show that $\int_{C_1} z dz = \int_{C_2} z dz = 4+2i$ where C_1 is the line segment from $-1 - i$ to $3 + i$ and C_2 is the portion of the parabola $x = y^2 + 2y$ joining $-1 - i$ to $3 + i$. Make plots of two contours C_1 and C_2 joining $-1 - i$ to $3 + i$. 12. Use ML inequality to show that $\int_C \frac{1}{z^2+1} dz \leq \frac{1}{2\sqrt{5}}$, where C is the straight line segment from 2 to $2 + i$. While solving, represent the distance from the point z to the points i and $-i$, respectively, i.e. $z-i$ and $z+i$.	B.Sc(H) Maths VI Sem	Complex Analysis (Analysis V)
	Assignment			
	Mid-Term Test			
April	Theory	Equivalent systems and row equivalence of matrices, Rank of a matrix, Relation between homogenous system and rank. A brief introduction to the lives and information on the works of the following mathematicians: Euler, Lagrange, Gauss, Cauchy, Abel, Galois, Riemann, Hardy, Noether, Ramanujan, von Neumann, Wiles, and Bhargava.	BA(P)/BCom (P) VI Sem	General Mathematics- II
	Theory	Tests for convergence of positive term series, Applications of the integral test, Comparison tests, D'Alembert's ratio test, Cauchy's nth root test, Raabe's test. Alternating series, Leibniz alternating series test, Absolute and conditional convergence	B.Sc. (H) IV Sem	GE-4 Elements of Real Analysis  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	Tutorial	Discuss the topics done so far in class	B.Sc. (H) VI Sem	DSE-4 Linear Programming and Applications
	Practical	[2] Chapter 14	BA(P) VI-Sem	SEC-4: Statistical Software: R
	Practical	13. Show that $\int_C \frac{1}{2z^{1/2}} dz$ where $z^{1/2}$ is the principal branch of the square root function and C is the line segment joining 4 to $8 + 6i$. Also plot the path of integration. 14. Find and plot three different Laurent series representations for the function $f(z) = \frac{3}{2+z-z^2}$, involving powers of z. 15. Locate the poles of $f(z) = \frac{3}{5z^4+26z^2+5}$ and specify their order. 16. Locate the zeros and poles of $g(z) = \frac{\pi \cot \pi z}{z^2}$ and determine their order. Also justify that $\text{Res}(g, 0) = -\frac{\pi^2}{3}$.	B.Sc(H) Maths VI Sem	Complex Analysis (Analysis V)
May	Theory	Revision	BA(P)/BCom (P) VI Sem	General Mathematics- II
	Theory	Revision	B.Sc. (H) IV Sem	GE-4 Elements of Real Analysis
	Tutorial	Revision	B.Sc. (H) VI Sem	DSE-4 Linear Programming and Applications
	Practical	Revision	BA(P) VI-Sem	SEC-4: Statistical Software: R

	Practical	17. Evaluate $\int_{C_1^+(0)} e^{2/z} dz$, where $C_1^+(0)$ denotes the circle $\{z : z = 1\}$ with positive orientation. Similarly evaluate $\int_{C_1^+(0)} \frac{1}{z^4 + z^3 - 2z^2} dz$. Revision of Practicals.	B.Sc(H) Maths VI Sem	Complex Analysis (Analysis V)
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Ninian Nauneet Kujur

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Even Semester Teaching Plan (Jan-May 2024)

Name of the Faculty: Dr. Amit Kumar

Department: Mathematics

Month		Topics	Course	Paper Code/Name
January	Theory	Definition of sequence of functions, related examples pointwise and uniform convergence of sequence of functions.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to Definition of sequence of functions.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Theory:	Modular arithmetic; Definition and examples of groups, Elementary properties of groups.	BA (Prog.) Sem-IV	Abstract Algebra
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to groups and Abelian groups.	BA(Prog.) Sem-IV	Abstract Algebra
	Practicals	Introduction of the mathematical software Mathematica and discuss the general questions and examples like, Addition, Subtraction, Multiplications, Limit, Integration, Differentiation, Matrix addition, multiplication etc.	B.Sc(H) Maths Sem-II A	Differential Equation
February	Theory	The uniform norm, Cauchy criterion for uniform convergence. Continuity of the limit functions of a sequence of functions, Interchange of the limit and derivative, and the interchange of the limit and integral of a sequence of functions, Bounded convergence theorem. Pointwise and uniform convergence of series of functions.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions

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दिल्ली विश्वविद्यालय / University of Delhi
धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

Tutorials	To discuss the doubt of students and various exercise questions and examples related to uniform norm, uniform convergence, Continuity of the limit functions of a sequence of functions, Interchange of the limit and derivative, and the interchange of the limit and integral of a sequence of functions, Pointwise and uniform convergence of series of functions.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
Theory	Order of a group and order of an element of a group; Subgroups and its examples, Subgroup tests; Center of a group and centralizer of an element of a group. Cyclic groups and its properties, Generators of a cyclic group.	BA (Prog) Sem-IV	Abstract Algebra
Tutorials	To discuss the doubt of students and various exercise questions and examples related to subgroups, Center of a group and centralizer of an element of a group. Cyclic groups and its properties, Generators of a cyclic group; Group of symmetries; Permutation groups, Cyclic decomposition of permutations.	BA (Prog) Sem-IV	Abstract Algebra
Practical	Plotting of family of solutions of differential equations of first, second and third order. VAC – Fit India Physical Activity, Health and Fitness Indicators of Fitness	B.Sc(H) Maths Sem-II A All Courses Sem-IV	Differential Equation VAC-Fit India
Assignment / Class Test	To take Assignment/ class test related to syllabus.	B.Sc(H) Maths Sem-IVB BA(Prog) Sem-Iv	DSC10: Sequences and Series of Functions & Abstract Algebra

March	Theory	Theorems on the continuity and inerrability of the sum function of a series of functions. Theorem on the differentiability of the sum function of a series of functions, Cauchy criterion, and the Weierstrass M-test for uniform convergence. Definition of a power series, Radius of convergence, Absolute convergence (Cauchy Hadamard theorem).	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to continuity differentiability, and inerrability of the sum function of a series of functions. Cauchy criterion, and the Weierstrass M-test for uniform convergence. Also discuss the about power series, Radius of convergence, Absolute convergence (Cauchy Hadamard theorem).	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

	Theory	Group of symmetries; Permutation groups, Cyclic decomposition of permutations and its properties. Even and odd permutations and the alternating group;	BA (Prog) Sem-IV	Abstract Algebra
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to group of symmetries; Permutation groups, Cyclic decomposition of permutations and its properties. Even and odd permutations and the alternating group;	BA (Prog) Sem-IV	Abstract Algebra
	Practicals	Solution of differential equations using method of variation of parameters. Growth and decay model, Lake pollution model. VAC – Fit India • Muscular Strength and Endurance Training • Body composition and Flexibility	B.Sc(H) Maths Sem-II A All Courses Sem-IV	Differential Equation VAC- Fit India
	Assignment / Class test	To be given assignment/Class test related to syllabus.	B.Sc(H) Maths Sem-IV B BA(Prog) Sem-IV	Sequences and Series of Functions & Abstract Algebra
April	Theory	Differentiation and integration of power series, Abel's theorem. Weierstrass's approximation theorem. The exponential and logarithmic functions: Definitions and their basic properties.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to differentiation and integration of power series, Abel's theorem. Weierstrass's approximation theorem. The exponential and logarithmic functions: Definitions and their basic properties.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Theory	Cosets and Lagrange's theorem; Definition and examples of normal subgroups, Quotient groups; Group homeomorphisms and properties. Definition, examples and properties of rings.	BA (Prog) Sem-IV	Abstract Algebra
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to cosets and Lagrange's theorem; Definition and examples of normal subgroups, Quotient groups; Group homeomorphisms and properties. Definition, examples and properties of rings.	BA (Prog) Sem-IV	Abstract Algebra
	Practical	Density dependent growth model, Predatory-prey model. • Caloric content of Food • Depression, Anxiety and Stress Scale. • Rosenberg Self Esteem Scale	B.Sc(H) Maths Sem-II A All Courses Sem-IV	Differential equations VAC-Fit India
	Assignment / Class test	To be given assignment/Class test related to syllabus.	B.Sc(H) Maths Sem-IV B BA(Prog) Sem-IV	Sequences and Series of Functions & Abstract Algebra

May	Theory	The trigonometric functions: Definitions and their basic properties.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to the trigonometric functions: Definitions and their basic properties.	B.Sc(H) Maths Sem-IV B	DSC10: Sequences and Series of Functions
	Theory	Subrings, integral domains, fields, ideals and factor rings; Characteristic of a ring; Ring homeomorphisms and properties.	BA (Prog) Sem-IV	Abstract Algebra
	Tutorials	To discuss the doubt of students and various exercise questions and examples related to subrings, integral domains, fields, ideals and factor rings; Characteristic of a ring; Ring homeomorphisms and properties.	BA (Prog) Sem-IV	Abstract Algebra
	Practical	Epidemic model of influenza.	B.Sc(H) Maths Sem-II A	Differential Equation
		VAC – Fit India Continuous Assessment of the Students	All Courses Sem-IV	VAC-Fit India
	Assignment / Class test	To be given assignment/Class test related to syllabus.	B.Sc(H) Maths Sem-IV B BA(Prog)-IV	Sequences and Series of Functions & Abstract Algebra

Dr. Amit Kumar

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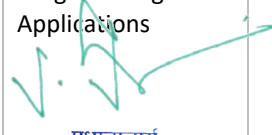
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr. Sudhakar Yadav

Department: Mathematics

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
Jan	Theory	Using data to formulate a model, Discrete versus Continuous models, A continuous population growth model, Long-term behavior and equilibrium states, Analyzing equilibrium states.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	Functions of complex variable, Mappings, Mappings by the exponential function, Limits, Theorems on limits, Limits involving the point at infinity, Continuity.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Theory	To discuss students' doubts, and numerous exercise problems and examples associated to using data to construct a model, Discrete versus Continuous models, A continuous population growth model, Long-term behavior and equilibrium states, Analyzing equilibrium states.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to functions of complex variable, Mappings, Mappings by the exponential function, Limits, Theorems on limits, Limits involving the point at infinity, Continuity.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Practical	1. Make a geometric plot to show that the n th roots of unity are equally spaced points that lie on the unit circle and form the vertices of a regular polygon with n sides, for $n = 4, 5, 6, 7, 8$. 2. Find all the solutions of the equation $m^2 = 89$ and represent these geometrically. 3. Write parametric equations and make a parametric plot for an ellipse centered at the origin with horizontal major axis of 4 units and vertical minor axis of 2 units. Show the effect of rotation of this ellipse by an angle of radians and shifting of the centre from (0,0) to (2,1), by making a parametric plot.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to linear programming problem: Standard, Canonical and matrix forms, Graphical solution; Convex and polyhedral sets, Hyperplanes, Extreme points, Basic solutions.	B.Sc(H) Maths Sem-VI	DSE4 (ii): Linear Programming and Applications


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	Continuous Evaluation	To take the test/viva voce/project work.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
Feb	Theory	The Verhulst model for discrete population growth, Administration of drugs, Differential equation of Chemical Reactions, Predator-prey models (Function response: Types I, II and III), Introduction to infectious disease, The spread of an Epidemic.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to the Verhulst model for discrete population growth, Administration of drugs, Differential equation of Chemical Reactions, Predator-prey models (Function response: Types I, II and III), Introduction to infectious disease, The spread of an Epidemic.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Theory	Derivatives, Differentiation formulae, CauchyRiemann equations, Sufficient conditions for differentiability, Analytic functions, Examples of analytic functions, Exponential function, Logarithmic function, Branches and Derivatives of Logarithms, Trigonometric functions, Derivatives of functions, Definite integrals of functions, Contours.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to derivatives, Differentiation formulae, CauchyRiemann equations, Sufficient conditions for differentiability, Analytic functions, Examples of analytic functions, Exponential function, Logarithmic function, Branches and Derivatives of Logarithms, Trigonometric functions, Derivatives of functions, Definite integrals of functions, Contours.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Practical	4. Show that the image of the open disk $D_1(-1-i)=\{z: z+1+i < 1\}$ under the linear transformation $w=f(z)=(3-4i)z+6+2i$ is the open disk $D_5(-1-3i)=\{w: w+1-3i < 5\}$. 5. Show that the image of the right half plane $\text{Re } z = x > 1$ under the linear transformation $w = (-1 + i)z - 2 + 3i$ is the half plane $v > u + 7$, where $u = \text{Re}(w)$, etc. Plot the map. 6. Show that the image of the right half plane $A = \{z : \text{Re } z \geq 1/2\}$ under the mapping $D_1(1) = \{w : w - 1 \leq 1\}$ in the w plane. 7. Make a plot of the vertical lines $x = a$, for $a=-1, -1/2, 1/2, 1$ and the horizontal lines $y = b$, for $b = -1, -1/2, 1/2, 1$ and, 1. Find the plot of this grid under the mapping $w=f(z) = 1/z$.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)


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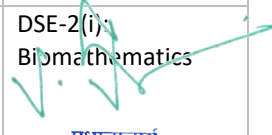
		8. Find a parametrization of the polygonal path $C = C_1 + C_2 + C_3$ from $-1 + i$ to $3 - i$, where C_1 is the line from: $-1 + i$ to -1 , C_2 is the line from: -1 to $1 + i$ and C_3 is the line from $1 + i$ to $3 - i$. Make a plot of this path.		
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to Basic feasible solutions, Reduction of feasible solution to a basic feasible solution, Correspondence between basic feasible solutions and extreme points.	B.Sc(H) Maths Sem-VI	DSE4 (ii): Linear Programming and Applications
	Continuous Evaluation	To take the test/viva voce/project work.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
March	Theory	The SIS Model, Interpreting the parameter β , The long-term evolution of the disease, The SIR and SEIR models of an epidemic, Phase plane analysis of epidemic model, Stability of equilibrium points, Classifying the equilibrium state, Local stability.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to the SIS Model, Interpreting the parameter β , The long-term evolution of the disease, The SIR and SEIR models of an epidemic, Phase plane analysis of epidemic model, Stability of equilibrium points, Classifying the equilibrium state, Local stability.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Theory	Contour integrals and its examples, upper bounds for moduli of contour integrals, Antiderivatives, proof of antiderivative theorem, State Cauchy-Goursat theorem, Cauchy integral formula.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to contour integrals and its examples, upper bounds for moduli of contour integrals, Antiderivatives, proof of antiderivative theorem, State Cauchy-Goursat theorem, Cauchy integral formula.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Practical	9. Plot the line segment 'L' joining the point $A = 0$ to $B = 2 + \pi/4i$ and give an exact calculation of $\int_C e^z dz$. 10. Plot the semicircle 'C' with radius 1 centered at $z = 2$ and evaluate the contour integral $\int_C \frac{1}{z-2} dz$. 11. Show that $\int_{C_1} z dz = \int_{C_2} z dz = 4 + 2i$ where C_1 is the line segment from $-1 - i$ to $3 + i$ and C_2 is the portion of the parabola $x = y^2 + 2y$ joining $-1 - i$ to $3 + i$. Make plots of two contours C_1 and C_2 joining $-1 - i$ to $3 + i$. 12. Use ML inequality to show that $\int_C \frac{1}{z^2+1} dz \leq \frac{1}{2\sqrt{5}}$, where C is the straight line segment from 2 to $2 + i$. While solving, represent the distance from the point z to the points i and $-i$, respectively, i.e. $z-i$ and $z+i$.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)


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	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to methods of Solving Linear Programming Problem.	B.Sc(H) Maths Sem-VI	DSE4 (ii): Linear Programming and Applications
	Assignment	To give assignment related to syllabus.	B.Sc(H) Maths Sem-IV/VIA	
	Mid-Term Test	To take internal test related to syllabus and internal lab test related to above Practicals.	B.Sc(H) Maths Sem-IV/VIA	
April	Theory	Limit cycles, Limit cycle criterion and Poincaré-Bendixson theorem (interpretation only with Example 5.6.1), Bifurcation, Bifurcation of a limit cycle, Discrete bifurcation and period-doubling, Chaos, Stability of limit cycles, Introduction of Poincaré plane, Modelling molecular evolution: Matrix models of base substitutions for DNA sequences.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to limit cycles, Limit cycle criterion and Poincaré-Bendixson theorem (interpretation only with Example 5.6.1), Bifurcation, Bifurcation of a limit cycle, Discrete bifurcation and period-doubling, Chaos, Stability of limit cycles, Introduction of Poincaré plane, Modelling molecular evolution: Matrix models of base substitutions for DNA sequences.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Theory	An extension of Cauchy integral formula, Consequences of Cauchy integral formula, Liouville's theorem and the fundamental theorem of algebra, Convergence of sequences, Convergence of series, Taylor series, proof of Taylor's theorem, Examples, Laurent series and its examples, Absolute and uniform convergence of power series, uniqueness of series representations of power series, Isolated singular points.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to An extension of Cauchy integral formula, Consequences of Cauchy integral formula, Liouville's theorem and the fundamental theorem of algebra, Convergence of sequences, Convergence of series, Taylor series, proof of Taylor's theorem, Examples, Laurent series and its examples, Absolute and uniform convergence of power series, uniqueness of series representations of power series, Isolated singular points.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Practical	13. Show that $\int_C \frac{1}{2z^{1/2}} dz$ where $z^{1/2}$ is the principal branch of the square root function and C is the line segment joining 4 to $8 + 6i$. Also plot the path of integration. 14. Find and plot three different Laurent series representations for the function $f(z) = \frac{3}{2+z-z^2}$, involving powers of z. 15. Locate the poles of $f(z) = \frac{3}{5z^4+26z^2+5}$ and specify	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)


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		their order. 16. Locate the zeros and poles of $g(z) = \frac{\pi \cot \pi z}{z^2}$ and determine their order. Also justify that $\text{Res}(g, 0) = -\frac{\pi^2}{3}$.		
	Tutorial	To discuss students' doubts, and numerous exercise problems and examples associated to duality theory of linear programming, transportation problem and assignment problem.	B.Sc(H) Maths Sem-VI	DSE4 (ii): Linear Programming and Applications
	Continuous Evaluation	To take the test/viva voce/project work.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
May	Theory	Jukes-Cantor and Kimura models; Phylogenetic distances. Revise whole syllabus, to discuss previous year questions papers.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss the doubt of students and various exercise questions and examples related to whole syllabus and discuss previous year questions papers.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Theory	Residues, Cauchy's residue theorem, Residue at infinity. Revise whole syllabus, to discuss previous year questions papers.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics
	Tutorial	To discuss the doubt of students and various exercise questions and examples related to whole syllabus and discuss previous year questions papers.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Practical	17. Evaluate $\int_{C_1^+(0)} e^{2/z} dz$, where $C_1^+(0)$ denotes the circle $\{z : z = 1\}$ with positive orientation. Similarly evaluate $\int_{C_1^+(0)} \frac{1}{z^4 + z^3 - 2z^2} dz$. Revision of Practicals.	B.Sc(H) Maths Sem-VI A	Complex Analysis (Analysis V)
	Tutorial	To discuss the doubt of students and various exercise questions and examples related to game theory and whole syllabus and discuss previous year questions papers.	B.Sc(H) Maths Sem-VI	DSE4 (ii): Linear Programming and Applications
	Continuous Evaluation	To take the test/viva voce/project work.	B.Sc(H) Maths Sem-IV	DSE-2(i): Biomathematics


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Sudhakar Yadav

Signature of the teacher

Semester Wise Teaching plan
Sri Venkateswara College
2023-2024 Even Semester

Name of Faculty: Dr. Nisha Bohra

Department: Mathematics

Semester: II/ VI

<u>Month</u>		<u>Topics</u>	<u>Course</u>	<u>Paper Code and Name</u>
January	Theory 1	Properties of Complex Numbers, Regions in Complex plane, Functions of Complex variable.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	Theory 2	Fields, Vector spaces: Definitions and Examples	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
	Practical 1	1. Make a geometric plot to show that the nth roots of unity are equally spaced points that lie on the unit circle and form the vertices of a regular polygon with n sides, for $n = 4, 5, 6, 7, 8$. 2. Find all the solutions of the equation $z^3=8i$ and represent these geometrically.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	Tutorial	Practicing questions from exercises of topics covered so far. Assessing students during class discussions.	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
February	Theory 1	Mappings, Differentiability, Cauchy-Riemann equations, Analytic functions, Exponential function, Logarithmic function, Trigonometric function. Goursat Theorem.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613


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	Theory 2	Subspaces, Algebra of subspaces, Linear combination of vectors, Linear span, Linear independence	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
	Practical 1	3. Write parametric equations and make a parametric plot for an ellipse centered at the origin with horizontal major axis of 4 units and vertical minor axis of 2 units. Show the effect of rotation of this ellipse by an angle of $\pi/6$ radians and shifting of the centre from (0,0) to (2,1), by making a parametric plot. 4. Image of open disk under the given linear transformation Plotting image of right half plane under the given linear transformation 5. To plot the given polygonal path 6. Performing contour integration of the given functions along the given path	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	VAC	Theory-Fit India Protocol- Discussing Indicators of Body flexibility, Muscle Strength and Physical Endurance. Practice-Aerobic Work Out, Running/Walking	B.Sc. (H) Mathematics Second Year	FIT INDIA
	Tutorial	Practicing questions from exercises of topics covered so far. Assessing students during class discussions.	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
March	Theory 1	Derivatives of function, Definite Integrals of functions, Contours, Contour Integrals and its examples, Upper bound for moduli of contour Integrals, Antiderivatives, Proof of Antiderivative Theorem, Cauchy-Goursat Theorem.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613


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	Theory 2	Bases and dimension, Dimension of subspaces. Linear transformations, Null spaces	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
	Practical 1	7. Some more problems on contour integration 8. Finding and plotting three different Laurent series representations of the given function 9. To compute the poles of given complex functions.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	VAC	Practice-Yoga and Pranayama, Cardio vascular testing by 12 min/9 min Cooper Run/ Walk Test	B.Sc. (H) Mathematics Second Year	FIT INDIA
	Tutorials	Practicing questions from exercises of topics covered so far. Assessing students during class discussions.	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
	Assignment	Assignment given before mid-semester break on the basis of topics covered in the class.	B.Sc. (H) Mathematics IV A and VI B	Linear Algebra and Complex Analysis
	Test	Internal Theory Exam will be conducted on the basis of topics covered in the class	B.Sc. (H) Mathematics IV A and VI B	Linear Algebra and Complex Analysis
April	Theory 1	Cauchy Integral Formula, Extension of Cauchy Integral formula, Some consequences of the extension, Exercise problems. Liouville's theorem, Fundamental theorem of Algebra, Convergence of sequences and series. Taylor series and its examples, Laurent series and its examples,. Uniqueness of series representations of power series.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	Theory 2	Range, Rank and nullity of a linear transformation, Matrix representation of a linear transformation. Algebra of linear transformations, Invertibility and isomorphisms	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra

	Practical 1	10. Finding residues of given functions 11. Evaluation of integrals by finding residues	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	VAC	Theory-Muscular strength and Endurance Body composition and Flexibility Practice-Flexibility Training, Muscular Training, Endurance training, calculating BMI, Waist-Hip Ratio, Waist-Height Ratio	B.Sc. (H) Mathematics Second Year	FIT INDIA
	Tutorial	Practicing questions from exercises of topics covered so far. Assessing students during class discussions.	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
May	Theory 1	Isolated singular point, Residues.	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	Theory 2	Application: Computer graphics – Fundamental movements in a plane, homogenous coordinates, and composition of movements	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra
	Practical 1	Revision and Internal Assessment	B.Sc. (H) Mathematics VI B	Complex Analysis, BMATH613
	VAC	Revision and finalizing Continuous Assessment of students	B.Sc. (H) Mathematics Second Year	FIT INDIA
	Tutorial	Revision of various topics, finalizing Continuous Assessment of students	B.Sc.(H) Mathematics IV A	DSC-4 Linear Algebra

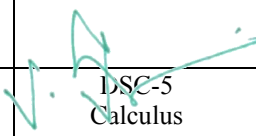

 Signature of Teacher
 Principal
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr. Rahul Thakur
Department: Mathematics
Semester: II & VI

Month		Topics	Course	Paper Code/Name
January	Theory	Limits of functions ($\epsilon - \delta$ and sequential approach), Algebra of limits, One-sided limits, Infinite limits and limits at infinity	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Tutorial	Problems based on limit of functions using both the approaches	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Theory	Polynomial rings over commutative rings, Division algorithm and consequences, Principal ideal domains, Factorization of polynomials, Reducibility tests	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Tutorial	Problems based on the division algorithm and principal ideal domains	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Practical	1. Making a geometric plot to show that the n th roots of unity are equally spaced points that lie on the unit circle and form the vertices of a regular polygon with n sides, for $n = 4, 5, 6, 7, 8$. 2. Finding all the solutions of the equation $z^3 = 8i$ and represent these geometrically. 3. Write parametric equations and make a parametric plot for an ellipse centered at the origin with horizontal major axis of 4 units and vertical minor axis of 2 units. Show the effect of rotation of this ellipse by an angle of radians and shifting of the centre from $(0,0)$ to $(2,1)$ by making a parametric plot.	B.Sc. (H) Mathematics Sem-VI Batch-A+B	BMATH613 Complex Analysis
February	Theory	Continuous functions and its various properties on closed and bounded interval $[a, b]$ viz., boundedness and maximum-minimum value theorem, Intermediate value theorem and the preservation of intervals theorem, Uniform continuity, Differentiability of a function	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Tutorial	Problems based on various properties of continuity and uniformly continuity of functions	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus


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	Theory	Irreducibility tests, Eisenstein's criterion, Unique factorization in $\mathbb{Z}[x]$, Divisibility in integral domains, Irreducibles, Primes, Unique factorization domains, Euclidean domains, Dual spaces, Double dual, Dual basis, Annihilators	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Tutorial	Checking reducibility/irreducibility of polynomials and problems on dual spaces	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Practical	4. Show that the image of the open disk $D_1(-1-i)=\{z: z+1+i <1\}$ under the linear transformation $w=f(z)=(3-4i)z+6+2i$ is the open disk $D_5(-1-3i)=\{w: w+1-3i <5\}$. 5. Show that the image of the right half plane $\text{Re } z = x > 1$ under the linear transformation $w = (-1+i)z - 2 + 3i$ is the half plane $v > u + 7$, where $u = \text{Re}(w)$, etc. Plot the map. 6. Show that the image of the right half plane $A = \{z : \text{Re } z \geq 1/2\}$ under the mapping $D_1(1) = \{w : w-1 \leq 1\}$ in the w plane. 7. Make a plot of the vertical lines $x = a$, for $a = -1, -1/2, 1/2, 1$ and the horizontal lines $y = b$, for $b = -1, -1/2, 1/2, 1$ and, 1. Find the plot of this grid under the mapping $w=f(z)=1/z$. 8. Find a parametrization of the polygonal path $C = C_1 + C_2 + C_3$ from $-1+i$ to $3-i$, where C_1 is the line from: $-1+i$ to -1, C_2 is the line from: -1 to $1+i$ and C_3 is the line from $1+i$ to $3-i$. Make a plot of this path.	B.Sc. (H) Mathematics Sem-VI Batch-A+B	BMATH613 Complex Analysis
March	Theory	Algebra of differentiable functions and chain rule. Relative extrema, Interior extremum theorem, Rolle's theorem, Mean-value theorem and its applications, Intermediate value property of derivatives	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Tutorial	Applications of differentiability of functions	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Theory	Eigenvalues, Eigenvectors, Eigenspaces and characteristic polynomial of a linear operator; Diagonalizability, Invariant subspaces and Cayley-Hamilton theorem; Minimal polynomial for a linear operator, Inner product spaces and norms	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Tutorial	Solving exercise problems based on Diagonalizability and Minimal polynomials of a linear operator	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II

	Practical	9. Plot the line segment 'L' joining the point A = 0 to B = $2 + \pi/4i$ and give an exact calculation of $\int_C e^z dz$. 10. Plot the semicircle 'C' with radius 1 centered at $z = 2$ and evaluate the contour integral $\int_C \frac{1}{z-2} dz$. 11. Show that $\int_{C_1} z dz = \int_{C_2} z dz = 4+2i$ where C_1 is the line segment from $-1 - i$ to $3 + i$ and C_2 is the portion of the parabola $x = y^2 + 2y$ joining $-1 - i$ to $3 + i$. Make plots of two contours C_1 and C_2 joining $-1 - i$ to $3 + i$. 12. Use ML inequality to show that $\int_C \frac{1}{z^2+1} dz \leq \frac{1}{2\sqrt{5}}$, where C is the straight-line segment from 2 to $2 + i$. While solving, represent the distance from the point z to the points i and $-i$, respectively, i.e., $z-i$ and $z+i$.	B.Sc. (H) Mathematics Sem-VI Batch-A+B	BMATH613 Complex Analysis
April	Theory	Higher order derivatives, Calculation of the nth derivative, Leibnitz's theorem; Taylor's theorem, Taylor's series expansions, Indeterminate forms, L'Hôpital's rule. Concavity and inflexion points; Singular points	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Tutorial	Problems based on nth derivative, intermediate forms and Taylor's series expansion	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Theory	Orthonormal basis, Gram-Schmidt orthogonalization process, Orthogonal complements, Bessel's inequality. Adjoint of a linear operator and its properties, Least squares approximation, Minimal solutions to systems of linear equations, Normal, self-adjoint	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Tutorial	Applications of Gram-Schmidt orthogonalization process, Adjoint of a linear operator	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Practical	13. Show that $\int_C \frac{1}{2z^{1/2}} dz$ where $z^{1/2}$ is the principal branch of the square root function and C is the line segment joining 4 to $8 + 6i$. Also plot the path of integration. 14. Find and plot three different Laurent series representations for the function $f(z) = \frac{3}{2+z-z^2}$, involving powers of z. 15. Locate the poles of $f(z) = \frac{3}{5z^4+26z^2+5}$ and specify their order.	B.Sc. (H) Mathematics Sem-VI Batch-A+B	BMATH613 Complex Analysis

		16. Locate the zeros and poles of $g(z) = \frac{\pi \cot \pi z}{z^2}$ and determine their order. Also justify that $\text{Res}(g, 0) = -\frac{\pi^2}{3}$.		
	Assignment	Based on the taught topics	B.Sc. (H) Mathematics Sem-II, Sec-A and B.Sc. (H) Mathematics Sem-VI, Sec-B	DSC-5 Calculus and BMATH614 Ring Theory and Linear Algebra-II
	Mid-Term Test	Based on the taught topics	B.Sc. (H) Mathematics Sem-II, Sec-A and B.Sc. (H) Mathematics Sem-VI, Sec-B	DSC-5 Calculus and BMATH614 Ring Theory and Linear Algebra-II
May	Theory	Tangents at the origin and nature of singular points; Concepts of asymptotes parallel to axes and oblique, Graphing rational functions and polar equations	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Tutorial	Problems based on singular points and graphing of functions	B.Sc. (H) Mathematics Sem-II, Sec-A	DSC-5 Calculus
	Theory	Unitary and orthogonal operators and their properties.	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Tutorial	Solving exercise problems based on Unitary and orthogonal operators	B.Sc. (H) Mathematics Sem-VI, Sec-B	BMATH614 Ring Theory and Linear Algebra-II
	Practical	17. Evaluate $\int_{C_1^+(0)} e^{2/z} dz$, where $C_1^+(0)$ denotes the circle $\{z : z = 1\}$ with positive orientation. similarly evaluate $\int_{C_1^+(0)} \frac{1}{z^4 + z^3 - 2z^2} dz$ and Revision of Practicals	B.Sc. (H) Mathematics Sem-VI Batch-A+B	BMATH613 Complex Analysis

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Teaching Plan: Even Sem 2023-24

Name of the Faculty: Ms. Monika Meena

Department: Mathematics

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	1. Rate and order of convergence 2. Bisection method 3. False position method and their convergence analysis.	B.Sc.(H) Mathematics Sem-IV B	DSC-12 Numerical Analysis
	Theory	1. Varahmihir 2. Brahmagupta	Value Added Course	Vedic Mathematics-II
	Practical	Presentation on Varahmihir.	Value Added Course	Vedic Mathematics-II
	Practical	Installing and using LaTeX for creating a first LaTeX document.	SEC	LaTeX type Setting for beginners
	Practical	1. Basics for practical 2. Bisection method.	B.Sc.(H) Mathematics Sem-IV	DSC-12 Numerical Analysis

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February	Theory	1. Fixed point iteration method 2. Newton's method 3. Secant method and their order of convergence and convergence analysis. 4. LU decomposition and its application to solve system of linear equations. 5. Iterative methods: Gauss–Jacobi, and Gauss–Seidel methods to solve system of linear equations.	B. Sc.(H) Mathematics Sem-IV B	DSC-12 Numerical Analysis
	Theory	1. Srinivasa Ramanujan 2. Neelkanth Somayya 3. Bharti Krishna Tirtha 4. Introduction of simple equation. 5. Solutions of simple equations.	Value Added Course	Vedic Mathematics-II
	Practical	Practice Questions on Simple equation. Presentation on varahmihir, Srinivasa Ramanujan.	Value Added Course	Vedic Mathematics-II
	Practical	1. Formatting text and understanding LaTeX commands and environments. 2. Designing pages, Creating a book with chapters and table of contents. 3. Creating and customizing lists. 4. Including images	SEC	LaTeX type Setting for beginners
	Practical	1. Newton-Raphson method. 2. Secant method. 3. LU decomposition method. 4. Gauss–Jacobi method. 5. Gauss–Seidel method.	B. Sc.(H) Mathematics Sem-IV	DSC-12 Numerical Analysis


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March	Theory	1. Lagrange interpolation: Linear and higher order interpolation, and error in it. 2. Divided difference and Newton interpolation 3. Piecewise linear interpolation	B.Sc.(H) Mathematics Sem-IV B	DSC-12 Numerical Analysis
	Theory	1. Solutions of linear equations in two variables. 2. Practical application of linear equations in two variables. 3. Introduction and history of Matrices and Determinants. 4. Matrices and Determinants of third order.	Value Added Course	Vedic Mathematics-II
	Practical	Practice Questions simple equations, Simultaneous linear equations, Determinant. Presentation on Neelkanth Somayya.	Value Added Course	Vedic Mathematics-II
	Practical	1. Creating tables with captions. Setting labels and references, Hyperlinks. 2. Customizing the table of contents, Generating an index, 3. Creating a bibliography. 4. Writing basic math formulas and equations.	SEC	LaTeX type Setting for beginners
	Practical	1. Lagrange interpolation. 2. Newton interpolation.	B.Sc.(H) Mathematics Sem-IV	DSC-12 Numerical Analysis
	Assignment	To give assignments Related to the above syllabus.	1. B.Sc.(H) Mathematics Sem-IV B 2. Value Added Course	1. Numerical Analysis 2. Vedic Mathematics-II

April	Theory	1. First and higher order approximation for the first derivative and error in the approximation 2. Second order forward, Backward and central difference approximations for the second derivative. 3. Numerical integration by closed Newton–Cotes formulae. 4. Trapezoidal rule, Simpson's rule, and its error analysis.	B.Sc. (H) Mathematics Sem-IV B	DSC-12 Numerical Analysis
	Theory	1. Inverse of Matrices. 2. Different forms of straight lines. 3. The Triangle 4. The Cyclic Quadrilateral, Squares, and the Circle 5. Geometrical constructions (such as Altars)	Value Added Course	Vedic Mathematics-II
	Practical	Presentation on Bharti Krishna Tirth ji. Practice Question on Inverse of Matrices, Straight Line. Show geometrical Construction.	Value Added Course	Vedic Mathematics-II
	Practical	1. Developing large documents by splitting the input and creating front/back matter. 2. Transliteration symbols with illustrative examples of the Indian languages, such as Sanskrit, Hindi (Devanagari), Punjabi, and Malayalam. 3. Creation of transliterated document for typesetting in Devanagari (Sanskrit, Hindi and Marathi), Gurumukhi (Punjabi), and Rachana (Malayalam).	SEC	LaTeX type Setting for beginners
	Practical	1. Trapezoidal rule. 2. Simpson's rule. 3. Mock Test - I	B.Sc(H) Mathematics Sem-IV B	DSC-12 Numerical Analysis
	Internal Test	To take an internal test related to syllabus.	1. B.Sc(H) Mathematics Sem-IV B 2. Value Added Course	1. Numerical Analysis 2. Vedic Mathematics-II

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May	Theory	1. Euler's method to solve ODE's 2. Modified Euler method, 3. Runge-Kutta Method (fourth-order). 4. Revision	B.Sc(H) Mathematics Sem-IV B	DSC-12 Numerical Analysis
	Theory	1. Transformation of simple shapes. 2. Kalpa Sutas-Srautha Sutas and Sulbha Sutra.	Value Added Course	Vedic Mathematics-II
	Practical	Presentation on Triangle and Cyclic Quadrilateral. Viva- voice of students.	Value Added Course	Vedic Mathematics-II
	Practical	ITRANS pre-processor package to convert English-encoded text into various Indian language script such as Gujarati, Bengali, Kannada, Tamil, Telugu, etc. and Revision.	SEC	LaTeX type Setting for beginners
	Practical	1. Euler's method. 2. Runge-Kutta Method (fourth-order). 3. Mock test -II	B.Sc. (H) Mathematics Sem-IV B	DSC-12 Numerical Analysis

Monika Meena

Teacher's Signature

V. B.

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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

Teaching Plan: Even Semester 2023-24

Name of the Faculty: Dr. P. Devaki

Department: Mathematics

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
Jan	Theory	Concept of implicit, general and singular solutions for the first order ordinary differential equation;	B.Sc(H) Maths Sem-II A	Ordinary Differential Equations
		Fundamental operations and properties of vectors in $\mathbb{R}^n$, Linear combinations of vectors, Dot product and their properties, Cauchy-Schwarz and triangle inequality, Orthogonal and parallel vectors;	GE-2 Sem-II	Introduction to Linear Algebra
		Standard form of the LPP, graphical method of solution	GE-4 Sem-IV	Linear Programming
Feb	Theory	Bernoulli's equation, Exact equations, Integrating factors, Initial value problems, Reducible second order differential equations; Applications of first order differential equations to Newton's law of cooling, exponential growth and decay problems. General solution of homogenous equation of second order, Principle of superposition for a homogenous equation, Wronskian and its properties,	B.Sc(H) Maths Sem-II A	Ordinary Differential Equations
	Theory	Solving system of linear equations using Gaussian elimination, and Gauss-Jordan row reduction, Reduced row echelon form; Equivalent systems, Rank and row space of a matrix; Eigenvalues, eigenvectors and characteristic polynomial of a square matrix; Diagonalization.	GE-2 Sem-II	Introduction to Linear Algebra

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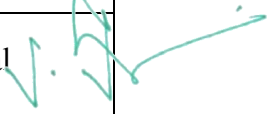
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-2 Sem-II	Introduction to Linear Algebra
	Theory	basic feasible solutions, and convexity; Introduction to the simplex method: Optimality criterion and unboundedness, Simplex tableau and examples, Artificial variables; Introduction to duality, Formulation of the dual problem with examples.	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	B.A. Prog. Sem-VI	Differential Equations
	Practical's	1. Solutions of first, second and third order differential equations. 2. Plotting of family of solutions of differential equations of first, second and third order.	B.Sc(H) Maths Sem-II Section-A	Ordinary Differential Equations

Month		Topics	Course	Paper Code/Name
March	Theory	Linear homogeneous and non-homogeneous equations of higher order with constant coefficients, Method of variation of parameters, Method of undetermined coefficients, Two-point boundary value problems, Cauchy- Euler's equation, System of linear differential equations, Application of second order differential equation: Simple pendulum problem.	B.Sc(H) Maths Sem-II A	Ordinary Differential Equations


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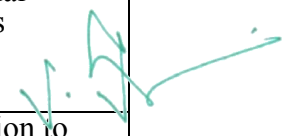
	Theory	Definition, examples and some elementary properties of vector spaces; Subspaces, Span, Linear independence and dependence; Basis and dimension of a vector space; Diagonalization and bases.	GE-2 Sem-II	Introduction to Linear Algebra
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-2 Sem-II	Introduction to Linear Algebra
	Theory	Definition of transportation problem, finding initial basic feasible solution using Northwestcorner method, Least-cost method, and Vogel approximation method;	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	B.A. Prog. Sem-VI	Differential Equations
	Practical	3. Solution of differential equations using method of variation of parameters. 4. Growth and decay model (exponential case only).	B.Sc(H) Maths Sem-II Section-A	Ordinary Differential Equations
	Assignment	Assignment to be submitted by Sem-II students based on above covered topics.		Ordinary Differential Equations/ GE-2/GE-4
	Test	Mid-term examinations to Sem-II students.		Ordinary Differential Equations/ GE-2/GE-4

Month		Topics	Course	Paper Code/Name
April	Theory	Introduction to compartmental models, Lake pollution model; Density-dependent growth model, Interacting population models, Epidemic model of influenza and its analysis	B.Sc(H) Maths Sem-II A	Ordinary Differential Equations


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	Theory	Definition, examples and elementary properties of linear transformations; The matrix of a linear transformation; Kernel and range of a linear transformation	GE-2 Sem-II	Introduction to Linear Algebra
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-2 Sem-II	Introduction to Linear Algebra
	Theory	Algorithm for solving transportation problem; Hungarian method of solving assignment problem. Introduction to game theory, rectangular games, Mixed strategies, Dominance principle;	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	B.A. Prog. Sem-VI	Differential Equations
	Practicals	5. Lake pollution model (with constant/seasonal flow and pollution concentration). 6. Density-dependent growth model.	B.Sc(H) Maths Sem-II Section-A	Ordinary Differential Equations

Month		Topics	Course	Paper Code/Name
May	Theory	Predator-prey model and its analysis, Equilibrium points, Interpretation of phase plane	B.Sc(H) Maths Sem-II A	Ordinary Differential Equations
	Theory	The dimension theorem, one-to-one and onto linear transformations.	GE-2 Sem-II	Introduction to Linear Algebra


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	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-2 Sem-II	Introduction to Linear Algebra
	Theory	Formulation of game to primal and dual linear programming problems.	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	GE-4 Sem-IV	Linear Programming
	Tutorials	To discuss the doubt of students and various exercise questions and examples	B.A. Prog. Sem-VI	Differential Equations
	Practicals	7. Predatory-prey model (basic Volterra model, with density dependence, effect of DDT, two prey one predator). 8. Epidemic model of influenza (basic epidemic model, contagious for life, disease with carriers).	B.Sc(H) Maths Sem- II A	Ordinary Differential Equations



(Dr. P. Devaki)



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SEMESTER-WISE TEACHING PLAN (SRI VENKATESWARA COLLEGE)

Teaching Plan: Even Sem (Session 2023-24)

Name of the Faculty: Mr. Anuj Kumar

Department: Mathematics

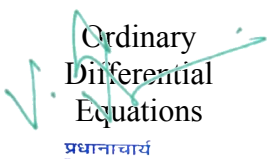
Semester: II / IV / VI

Month	Teaching Activity	Topics	Course	Paper Code/ Name
Jan	Theory	Communication processes, A model of communication systems, A quantitative measure of information, Binary unit of information, H function of measure of uncertainty, Sources and Binary Sources, Measure of information for 2-D discrete finite probability schemes. A sketch of communication network and entropy function H.	B.Sc.(H) Mathematics Sem VI	Introduction to Information Theory and Coding
	Tutorial	Solving numerical problems associated to the measure of information and entropy function H and summarized these topics.		
	Theory	First order exact differential equations including rules for finding integrating factors.	B.A. (P) Sem VI	Differential Equations <i>*Only ODE part assigned</i>
	Tutorial	Solving the associated problems.		
	Practical	Installation of Django, Introduction to Django, MVC Model (Model-View-Controller Model) and Django structure.	SEC Sem IV (Sec-A)	Back-End Web Development

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Month	Teaching Activity	Topics	Course	Paper Code/ Name
Feb	Theory	Basic relationship among different entropies, A measure of mutual information, Interpretation of Shannon's fundamental inequalities, redundancy, efficiency and channel capacity, Binary symmetric channel, Binary erasure channel, Uniqueness of the entropy function, Joint entropy and conditional entropy, Relative entropy and mutual information, Chain rules of entropy and conditional mutual information, Jensen's inequality and its characterizations, The log sum inequality and its applications, Block codes, Hamming distance.	B.Sc.(H) Mathematics Sem VI	Introduction to Information Theory and Coding
	Tutorial	Discussion on the key proofs to the problems, theorems based on inter-relationships among different type of entropies. Derived relationships between different types of information and conducted a mock test.		
	Theory	First order higher degree equations solvable for x, y, p and Clairut's equations.	B.A. (P) Sem VI	Differential Equations
	Tutorial	Doubts/Problems Solving Sessions.		
	Practical	- HTML templates; URL dispatcher, Django Template System and Interacting with a Database. - Allocation of Project Work.	SEC Sem IV (Sec-A)	Back-End Web Development
	Practical	1. Solutions of first, second and third order differential equations. 2. Plotting of family of solutions of differential equations of first, second and third order.	B.Sc.(H) Mathematics Sem II	Ordinary Differential Equations

Month	Teaching Activity	Topics	Course	Paper Code/ Name
March	Theory	Maximum likelihood decoding, Levels of error handling, Error-Correction, Error-Detection, Erasure correction, Construction of finite fields, Linear codes, Matrix representation of linear codes, Orthogonality relation.	B.Sc.(H) Mathematics Sem VI	Introduction to Information Theory and Coding
	Tutorial	1. Revision for the Internal Exam. 2. Discussion on $[n, k, d]$ and (n, M, d) forms and consolidation of the important results and proofs for the linear block codes. Derivation of the relationship between Generator G matrix and parity check matrix H. Determining the whole linear block code for a given generator matrix.		
	Internal Assess.	Conducting Internal Exam and Submission of assignments.		
	Theory	Wronskian and its properties, Linear homogeneous equations with constant coefficients. The method of variation of parameters	B.A. (P) Sem VI	Differential Equations
	Tutorial	Revision of the syllabus covered.		
	Internal Assess.	Conducting Internal Exam and Submission of assignments.		
	Practical	The Django Administration Site Wrapper-Functions, Custom Views GET and POST methods and Deployment of Django.	SEC Sem IV (Sec-A)	Back-End Web Development
	Practical	3. Solution of differential equations using method of variation of parameters. 4. Growth and decay model.	B.Sc.(H) Mathematics Sem II	Ordinary Differential Equations  प्रधानाचार्य Principal

Month	Teaching Activity	Topics	Course	Paper Code/ Name
April	Theory	Encoding of linear codes, Decoding of linear codes, Singleton bound and maximum distance separable codes, Sphere-packing bound and perfect codes, Gilbert-Varshamov bound, Mac-Williams' identities.	B.Sc.(H) Mathematics Sem VI	DSE-3(ii) Introduction to Information Theory and Coding
	Tutorial	Solving Encoder-Decoder based problems.		
	Theory	Euler's equations; Simultaneous differential equations; Total differential equations.	B.A. (P) Sem VI	Differential Equations
	Tutorial	Problem Solving Session.		
	Practical	- Automating tasks with Django. - Execution and Group Discussions	SEC Sem IV (Sec-A)	Back-End Web Development
	Practical	5. Lake pollution model (with constant/seasonal flow and pollution concentration). 6. Density-dependent growth model.	B.Sc.(H) Mathematics Sem II	Ordinary Differential Equations



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Month	Teaching Activity	Topics	Course	Paper Code/ Name
May	Theory	Revision	B.Sc.(H) Mathematics Sem VI	Introduction to Information Theory and Coding
	Tutorial	Mock Tests.		
	Theory	Revision	B.A. (P) Sem VI	Differential Equations
	Tutorial	Mock tests.		
	Practical	• Building Web APIs using Django REST. • Course Revision • Project Submission.	SEC Sem IV (Sec-A)	Back-End Web Development
	Practical	7. Predatory-prey model (basic Volterra model, with density dependence, effect of DDT, two prey one predator). 8. Epidemic model of influenza (basic epidemic model, contagious for life, disease with carriers).	B.Sc.(H) Mathematics Sem II	Ordinary Differential Equations

Anuj Kumar

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Vikas Jorwal
Department: Mathematics
Semester: VI

Month		Topics	Course	Paper Code/Name
January, 2024	Theory	Interest rates, Types of rates, Measuring interest rates, Zero rates, Bond pricing, Forward rate, Duration, Convexity. [1] Chapter 4 (Section 4.1 to 4.4, 4.6, 4.8 and 4.9).	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Theory	Introducing R, using R as a calculator; Explore data and relationships in R; Reading and getting data into R: combine and scan commands, viewing named objects and removing objects from R	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R
	Practical	[1] Chapter 14 (Exercises 1 to 3)	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R

February, 2023	Theory	Exchange traded markets and OTC markets, Derivatives- forward contracts, Futures contract, Options, Types of traders, Hedging, Speculation, Arbitrage. [1] Chapter 1 (Sections 1.1 to 1.9). No Arbitrage principle, Short selling, Forward price for an investment asset. [1] Chapter 5 (Sections 5.2 to 5.4).	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Theory	Types and structures of data items with their properties, Working with history commands, Saving work in R; Manipulating vectors, Data frames, Matrices and lists; Viewing objects within objects, Constructing data objects and their conversions.	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R
	Practical	[2] Relevant exercises of Chapters 2,3	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R
March, 2024	Theory	Types of options, Option positions, Underlying assets, Factors affecting option prices. [1] Chapter 8 (Sections 8.1 to 8.3), and	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance

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		Chapter 9 (Section 9.1). Bounds on option prices, Put-call parity, Early exercise, Effect of dividends. [1] Chapter 9 (Sections 9.2 to 9.7).		
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Theory	Summary commands: Summary statistics for vectors, Data frames, Matrices and lists; Summary tables.	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R
	Practical	[2] Relevant exercises of Chapters 4	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R

April, 2024	Theory	Binomial option pricing model, Risk neutral valuation (for European and American options on assets following binomial tree model). [1] Chapter 11 (Sections 11.1 to 11.5). Lognormal property of stock prices, Distribution of rate of return, expected return, Volatility, estimating volatility from historical data. Extension of risk neutral valuation to assets following GBM (without proof), Black-Scholes formula for European options. [1] Chapter 13 (Sections 13.1 to 13.4, 13.7 and 13.8). Hedging parameters (the Greeks: Delta, Gamma, Theta, Rho and Vega). [1] Chapter 17 (Sections 17.1 to 17.9).	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Theory	Stem and leaf plot, Histograms, Density function and its plotting, The Shapiro-Wilk test for normality, The Kolmogorov-Smirnov test.	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R
	Practical	[2] Relevant exercises of Chapter 5	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R

May, 2024	Theory	Trading strategies Involving options. [1] Chapter 10 (except box spreads, calendar spreads and diagonal spreads). Swaps, Mechanics of interest rate swaps, Comparative advantage argument, Valuation of interest rate swaps, Currency swaps, Valuation of currency swaps [1] Chapter 7 (Sections 7.1 to 7.4 and 7.7 to 7.9).	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Tutorial	Exercise questions and doubts based on Theory Lectures	B.Sc. (H) Mathematics Sem-VI	DSE-3 (i): Mathematical Finance
	Theory	Plotting in R: Box-whisker plots, Scatter plots, Pairs plots, Line charts, Pie charts, Cleveland dot charts, Bar charts; Copy and save graphics	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R

		to other applications.		
	Practical	[2] Relevant exercises of Chapter 7	B.A. (Prog.) Sem-VI	SEC-4: Statistical Software: R

References:

- [1]. Bindner, Donald & Erickson, Martin. (2011). A Student's Guide to the Study, Practice, and Tools of Modern Mathematics. CRC Press, Taylor & Francis Group, LLC.
- [2]. Gardener, M. (2012). Beginning R: The Statistical Programming Language, Wiley Publications.

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Signature of the teacher

V. B.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Ms. Arushi

Department: Department of Mathematics

Semester: II, VI

Month		Topics	Course	Paper Code/Name
January	Theory	Polynomial rings over commutative rings, Division algorithm, PID, Factorization of polynomials.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Fundamental properties with vectors in Euclidean space, Linear combination of vectors, Dot product and properties, Cauchy Schwarz inequality, Triangle inequality	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Tutorial	Exercise questions and doubts based on Polynomial rings over commutative rings, Division algorithm, PID, Factorization of polynomials.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Exercise questions and doubts based on Fundamental properties with vectors in Euclidean space, Linear combination of vectors, Dot product and properties, Cauchy Schwarz inequality, Triangle inequality	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Practical	Practicals related to Chapter 14 (Sections 14.1 to 14.4) of "A students guide to the study, Practice and tools of modern mathematics" and Chapter 2 and 3 of "Beginning R : The Statistical programming language"	B.A. Prog VI Semester	SEC-4 Statistical Software R
February	Theory	Reducibility and irreducibility tests, Einstein's criterion, Unique factorization in $\mathbb{Z}[x]$, Divisibility in integral domains, Irreducibles, Primes, UFD, ED, dual and double dual space, dual basis, Transpose of a linear transformation and its matrix in the dual basis, Annihilators	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II

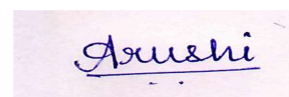
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		Solving system of linear equations using Gaussian elimination, Application: Curve Fitting, Gauss-Jordan row reduction, reduced row echelon form, Application: solving several systems simultaneously, Equivalent systems, Rank of a matrix, Row space of a matrix, Eigenvalues, eigenvectors, Eigenspace	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Tutorial	Exercise questions and doubts based on applications of Reducibility and irreducibility tests, Einstein's criterion, Unique factorization in $\mathbb{Z}[x]$, Divisibility in integral domains, Irreducibles, Primes, UFD, ED, dual and double dual space, dual basis, Transpose of a linear transformation and its matrix in the dual basis, Annihilators	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Exercise questions and doubts based on applications of Solving system of linear equations using Gaussian elimination, Application: Curve Fitting, Gauss-Jordan row reduction, reduced row echelon form, Application: solving several systems simultaneously, Equivalent systems, Rank of a matrix, Row space of a matrix, Eigenvalues, eigenvectors, Eigenspace	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Practical	Practicals related to Chapter 4 and 5 of "Beginning R : The Statistical programming language"	B.A. Prog VI Semester	SEC-4 Statistical Software R
March	Theory	Eigenvalues, Eigenvectors, Eigenspaces and characteristic polynomial, Diagonalizability, Invariant subspaces and Cayley Hamilton theorem, minimal polynomial.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Diagonalization, Characteristic Polynomial of a matrix, Vector spaces: Definition, examples and properties, subspaces, span, Linear independence, linear dependence, Basis, dimension, Maximal linearly independent sets, Minimal spanning sets	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra

	Tutorial	Exercise questions and doubts based on applications of Eigenvalues, Eigenvectors, Eigenspaces and characteristic polynomial, Diagonalizability, Invariant subspaces and Cayley Hamilton theorem, minimal polynomial.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Exercise questions and doubts based on applications of Diagonalization, Characteristic Polynomial of a matrix, Vector spaces: Definition, examples and properties, subspaces, span, Linear independence, linear dependence, Basis, dimension, Maximal linearly independent sets, Minimal spanning sets	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Practical	Practicals related to Chapter 7 of “Beginning R : The Statistical programming language”	B.A. Prog VI Semester	SEC-4 Statistical Software R
	Assignment	Assignment given on Eigenvalues, Eigenvectors, Eigenspaces and characteristic polynomial, Diagonalizability, Invariant subspaces and Cayley Hamilton theorem, minimal polynomial.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
	Assignment	Assignments given on Solving system of linear equations using Gaussian elimination, Application: Curve Fitting, Gauss-Jordan row reduction, reduced row echelon form, Application: solving several systems simultaneously, Equivalent systems, Rank of a matrix, Row space of a matrix, Eigenvalues, eigenvectors, Eigenspace	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
April	Theory	Inner product spaces, Norms, Orthonormal basis, Gram-Schmidt orthogonalization process, orthogonal complements, Bessel’s inequality, adjoint of a linear operator, least squares approximation, minimal solutions to systems of linear equations.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Linear transformations: Definition, examples and properties, the matrix of a linear transformation, kernel and range of a linear transformation, Dimension theorem, One to one and onto linear transformations	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra

	Tutorial	Exercise questions and doubts based on applications of Inner product spaces, Norms, Orthonormal basis, Gram-Schmidt orthogonalization process, orthogonal complements, Bessel's inequality, adjoint of a linear operator, least squares approximation, minimal solutions to systems of linear equations.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Exercise questions and doubts based on applications of Linear transformations: Definition, examples and properties, the matrix of a linear transformation, kernel and range of a linear transformation, Dimension theorem, One to one and onto linear transformations	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Mid Term Test	Based on syllabus done from January to April	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
	Mid Term Test	Based on syllabus done from January to April	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Practical	Practicals related to Chapter 14 of "Beginning R : The Statistical programming language"	B.A. Prog VI Semester	SEC-4 Statistical Software R
	Internal Test (Practical)	Based on syllabus done from January to April	B.A. Prog VI Semester	SEC-4 Statistical Software R
May	Theory	Normal, self-adjoint, unitary and orthogonal operators and their properties.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II

		Invertible linear transformation, Isomorphic vector spaces	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Tutorial	Exercise questions and doubts based on applications of normal, self-adjoint, unitary and orthogonal operators and their properties.	B.Sc. (H) Mathematics VI Semester	Ring Theory and Linear Algebra - II
		Exercise questions and doubts based on applications of Invertible linear transformation, Isomorphic vector spaces	B.Sc. (H) Mathematics II Semester	GE-2(ii) Introduction to Linear Algebra
	Practical	Practicals related to Chapter 14 of "Beginning R : The Statistical programming language"	B.A. Prog VI Semester	SEC-4 Statistical Software R



Signature of the teacher



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SRI VENKATESWARA COLLEGE
Teaching Plan: Even Semester 2023-24

Name of the Faculty: Mr. Mahendra Pratap Pal

Department: Mathematics

Month	Topics	Course	Paper Code/Name
Jan	Introduction to LPP, Standard Canonical and Matrix form, Graphical solution of LPP: unique, multiple, and infeasible and unbounded solution with suitable examples, Define convex, polyhedral sets with suitable examples and its properties, Hyperplane, extreme Points, Basic solution, Basic feasible solution (BFS), degenerate and non-degenerate BFS, reduction of any FS to BFS, correspondence between BFS and extreme point.	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	To discuss the doubt of students and various exercise questions and examples	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Define implicit and explicit function with suitable examples, General and singular solution of first order differential equations, homogeneous and non-homogeneous ODE, Bernoulli's equation, exact equations, Find the integrating factor of non-exact ODE, Initial value problem, Reducible second order differential equations	B.Sc(H) Maths Sem-II B	Differential Equations
	Solution of first, second and third order differential equations	B.Sc(H) Maths Sem-II B	Differential Equations

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Feb	Theory	Simplex Method algorithm for solving LPP when the number decision variables are more than two, optimal solution, unique, alternative, infeasible and unbounded solution, Artificial variables, two phase method, Big-M method, solve the system of linear equations by using simplex method, find the inverse of any nonsingular matrix by simplex	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Tutorials	To discuss the doubt of students and various exercise questions and examples	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Theory	Applications of first order ODE to Newton's law of cooling, exponential growth, and decay problems with suitable examples. General solution of homogenous equation of second order, Principle of superposition for a homogenous equation.	B.Sc(H) Maths Sem-II	Differential Equations
	Practicals	Plotting of family of solutions of differential equations of first, second and third order	B.Sc(H) Maths Sem-II A	Differential Equations
March	Theory	Introduction to duality, mathematical formulation of dual problem, how to convert primal to dual, dual, and primal relationships, dual simplex method, weak, strong duality theorem, fundamental theorem of duality, complementary slackness theorem with suitable examples.	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Theory	Linear dependent and independent of solution, Wronskian and its properties, Linear homogeneous and non-homogeneous equations of higher order with constant coefficients, Method of variation of parameters, Method of undetermined coefficients, two-point boundary value problem, Cauchy-Euler's equation.	B.Sc(H) Maths Sem-II B	Differential Equations
	Practical's	Solution of differential equations using method of variation of parameters. Growth and decay model, Lake pollution model.	B.Sc(H) Maths Sem-II B	Differential Equations
	Assignments	To give assignment Related to above syllabus.	B.Sc(H) Maths Sem-II/VI B	Differential Equations /Linear Programming and Applications
	Test	To take internal test related to syllabus	B.Sc(H) Maths Sem-II/VI B	Differential Equations /Linear Programming and Applications
April	Theory	Introduction to transportation problem, mathematical formulation of TP, Initial feasible solution of TP by using NWCM, LCM and VAM method, Find the optimal solution by using MODI method, Introduction to Assignment problem, mathematical formulation of Assignment problem, solve the assignment problem by using Hungarian method.	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications


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May	Tutorials:	To discuss the doubt of students and various exercise questions and examples	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Theory	System of linear differential equations, application of second order differential equation: Simple pendulum problem, Introduction to compartmental models, Lake pollution model, Density dependent growth model, Introduction population models, Epidemic model of influenza and its analysis.	B.Sc(H) Maths Sem-II B	Differential Equations
	Practical's	Density dependent growth model, Predatory-prey model.	B.Sc(H) Maths Sem-II B	Differential Equations
	Theory	Introduction to game, define different types of games like: two-person zero sum game, n-person zero sum game and non-zero-sum game, game with saddle and without saddle point game. Linear programming method of solving a game.	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Tutorials:	To discuss the doubt of students and various exercise questions and examples	B.Sc(H) Maths Sem-VI B	Linear Programming and Applications
	Theory	Predator-prey model and its analysis, Equilibrium points, Interpretation of phase plane.	B.Sc(H) Maths Sem-II B	Differential Equations
	Practical's	Epidemic model of influenza.	B.Sc(H) Maths Sem-II B	Differential Equations

Mahendra Pratap Pal


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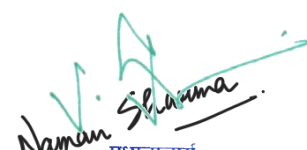
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Naman Sharma

Department: Mathematics

Semester: IV/VI

Month		Topics	Course	Paper Code/Name
Feb	Theory	Basic Concepts of functions of several variables (definitions and illustrations).	BSc. (H) Maths Sem IV	Multivariate Calculus (DSC-11)
	Theory	Game Theory: Basic concepts, Formulation and solution of two-person zero-sum games.	BSc. (H) Maths Sem VI	Linear Programming and Applications (DSE-4)
March	Theory	Limits and Continuity of functions of several variables, partial derivatives, tangent planes, total differential; Differentiability, chain rules, Directional derivatives and the gradient.	BSc. (H) Maths Sem IV	Multivariate Calculus (DSC-11)
	Theory	Games with mixed strategies, Linear programming method of solving a game. Duality Theory of Linear Programming: Motivation and formulation of dual problem.	BSc. (H) Maths Sem VI	Linear Programming and Applications (DSE-4)
April	Theory	Extrema of functions of two variables, Method of Lagrange Multiplier with one constraint. Mid Semester Internal Examination .	BSc. (H) Maths Sem IV	Multivariate Calculus (DSC-11)
	Theory	Primal-Dual relationships; Fundamental theorem of duality; Complimentary slackness. Mid Semester Internal Examination .	BSc. (H) Maths Sem VI	Linear Programming and Applications (DSE-4)
May	Theory	Revision of all the concepts done in the class, along with practice questions.	BSc. (H) Maths Sem IV	Multivariate Calculus (DSC-11)
	Theory	Revision of all the concepts done in the class, along with practice questions.	BSc. (H) Maths Sem VI	Linear Programming and Applications (DSE-4)


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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr Narendra Gaur

Department: Physical Education

Semester : II

Month		Topics	Course	Paper Code/Name
Jan (2024)	Theory/ Practical	Stress Management (GE) Definition of stress and anger, Causes and effects of stress and anger, two main emotions of stress-fear and anger, Daily life stressors, Process of stress and anger, Psycho Physiology of stress	B.A (H) Sem-II	25544001202/ B.A (H) DSC
Feb (2024)	Theory/ Practical	Stress Management (GE) - Adaption to stress-Reframing of habitual stress resistance, types of stress-personal and social stress, Occupational stress, Peer stress/Students stress. Family stress. Stress & elderly and Stress & drug abuse. - Stress related diseases- i) Sleep disorder, ii) Eating disorder, iii) Sexual and emotional disorder, iv) Other stress related diseases, v) Stress & Sprituality	B.A (H) Sem-II	25544001202/ B.A (H) DSC
March (2024)	Theory/ Practical/ Assignment	Stress Management (GE) Self-awareness and stress management, Muscular tension reduction,, Emotional tension reduction, Stress free living, Stress free examination, Stress management through physical activity, Stress management through recreation.	B.A (H) Sem-II	25544001202/ B.A (H) DSC
April (2024)	Theory/Pra ctical/Test	Stress Management (GE) - Anger management-Redford William's 12 step of anger management - Stress management- behavior modification, time management, coping strategy & intervention skills - Relaxation techniques- i) Diaphragmatic breathing, ii) Meditation, iii) Progressive muscle relaxation iv) Yoga, v) Mental imagery, vi) Music therapy, vii) Massage therapy	B.A (H) Sem-II	25544001202/ B.A (H) DSC  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

May (2024)	Theory/Practical	Stress Management (GE) Revision and conduct of practical examination	B.A (H) Sem-II	25544001202/ B.A (H) DSC
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Name of the Faculty: Dr Narendra Gaur
Department: Physical Education

Name: Dr. Ashwani Mor (Guest)
Semester: II

Month		Topics	Course	Paper Code/Name
Janurary (2024)	Practical	Fit India (VAC) - Fit India Protocol - Physical Activity, Health & Fitness - Indicators of Fitness - Aerobic Work Out/Physical Activity (Walking) - Yoga- Asanas (Lying, Sitting, and Standing positions) and Pranayama - Cardiovascular Testing by 12min/9 min Cooper Run/Walk test		6967000009
Feburary (2024)	Practical	Fit India (VAC) - Mascular Strength and Endurance - Body Compositions and Flexibility - Flexibility Training: Back Saver Sit and Reach test - Mascular Strength Training: Curl Ups/ Standing Broad Jumps/Vertical Jump/Plyometric - Endurance Training: 1 Mile Rock Port Test or 12/9 minute Cooper run/walk test. - Ideal Body Weight, Body Mass Index (BMI), Waist-Hip Ratio, Waist-Height Ratio (Data of at least 10 person to be collected)		6967000009
March (2024)	Practical Assignment	Fit India (VAC) - Healthy Eating - Balanced Diet - Caloric Content of Food - Preparing Daily Diet and Calorie Chart - Aerobic Work Out/Physical Activity (Walking) - Assesnent of Physical Activity with the Caloric intake - Asanas for: Digestive System & Excretory System		6967000009


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April (2024)	Practical Internal	Fit India (VAC) • Sports Physiology and Psychology • Depression, Anxiety and Stress Scale (DASS) • Rosenberg Self Esteem Scale • Skills learning and Participation in sports • Group Games/Relays/ Minor Games • Meditative Asanas and Pranayama • Fitness component testing (as per Fit India Protocol and Norms) and Analysis of Results • Data of at least 10 persons to be collected on DASS and		6967000009
May (2024)	Practical	Fit India (VAC) • Revision and Final Practical Test		6967000009



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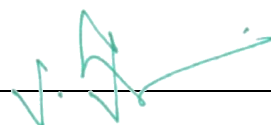


SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr Narendra Gaur
Department: Physical Education

Semester: IV

Month		Topics	Course	Paper Code/Name
Janurary (2024)	Practical	Sports for Life (VAC) - Marking of the court/field - Outdoor Adventure Activity - Skills learning in sports - Group Games/Relays - Particiaption in Intramural competiions		6967001017
Feburary (2024)	Practical	Sports for Life (VAC) - Skills learning and Participation in sports - Group Games/Relays/Minor Games - Particiaption in Intramural competiions		6967001017
March (2024)	Practical Assignment	Sports for Life (VAC) - Skills learning and Participation in sports - Group Games/Relays/Step Aerobics - Particiaption in Intramural competiions		6967001017
April (2024)	Practical Internal	Sports for Life (VAC) - Skills learning and Participation in sports - Particiaption in Intramural competiions		6967001017
May (2024)	Practical	Sports for Life (VAC) Revision of above and Final Practical Examination		6967001017


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SEMESTER WISE TEACHING PLAN SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr . Narendra Gaur
Department: Physical Education

Name: Dr. Ashwani Mor (Guest)
Semester: IV

Month		Topics	Course	Paper Code/Name
January (2024)	Theory Practical	Yoga & Stress Management (GE) • Meaning, Definition and Importance of Yoga • Origin and Hostorical development of Yoga • Concept of importance of Yogic Diet.		2554001001
Feburary (2024)	Theory Practical	Yoga & Stress Management (GE) • Ashtang Yoga (Maharishi Patanjali): Meaning and Importace • Supine Position Asanas (Ardh-Halasana, Sarvangasana, Pawanmuktasana): Prone Position Asanas (Bhujangasana, Salabhasana, Dhanurasana) • Sitting Asanas (Ardh Matsyendrasana): Standing Asanas (Utkatasana)		2554001001
March (2024)	Theory Practical Assignment	Yoga & Stress Management (GE) • Meaning, Procedure, Precautions and benefits of Pranayams: Anulom Vilom Suryabheden and etc. • Meaning, Procedure, Precautions and benefits of Shatkarmas: Kapalbhathi, Trataka and etc. • Relevance of Yoga for holistic health development in the society.		2554001001
April (2024)	Theory Practical Internal	Yoga & Stress Management (GE) • Concept, Causes and Effects of Stress. • Non-Communicable diseases (due to stress), Stress prevention and good health. • Stress Management through relaxation techniques (autogenic training and progressive muscle relaxation, deep breathing meditation), and sports, recreational, adventure sports, physical activities and developing healthy relationship as coping strategies.		2554001001  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

May (2024)	Theory Practical	Yoga & Stress Management (GE) • Physiology of stress and mind • Holistic Well-being and dimensions of holistic health: physical, emotional, social, mental, spiritual, and environmental. • Planning and maintaining a Personal Fitness Program. • Revision and conduct of practical examination	2554001001
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty : Dr. Pratima Vyas

Department : Physics

Semester : IV / VI Semester

Month		Topics	Course	Paper Code/Name
January	Theory	Classical Statistics: Macrostates and Microstates, Phase Space, Entropy and Thermodynamic Probability, Maxwell-Boltzmann Distribution Law, Partition Function, Thermodynamic Functions of an Ideal Gas, Classical Entropy Expression, Gibbs Paradox, Sackur-Tetrode equation.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics IV Sem	DSC-11 : Solid State Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIII : Electromagnetic Theory (32221601)
February	Theory	Saha's Ionization Formula. Law of Equipartition of Energy (with proof)-Applications to Specific Heat of gas and solids and its Limitations, Thermodynamic Functions of a Finite Level System, Negative Temperature. UNIT-2 : Bose-Einstein Statistics: B-E Distribution law, Thermodynamic functions of a strongly degenerate Bose Gas, Bose Einstein condensation, properties of liquid He (qualitative description),	B.Sc. (H) Physics III Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics IV Sem	DSC-11 : Solid State Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIII : Electromagnetic Theory (32221601)
March	Theory	Radiation as a photon gas and Thermodynamic functions of photon gas. Bose derivation of Planck's law. UNIT-3 : Fermi-Dirac Statistics: Fermi-Dirac Distribution Law, Thermodynamic functions of a Completely and strongly degenerate Fermi Gas, Fermi Energy Electron gas in a Metal, Specific	B.Sc. (H) Physics III Sem	CC-XIV : Statistical Mechanics (32221602)

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		Heat of Metals,		
	Practical	As listed in the syllabus.	B.Sc. (H) Physics IV Sem	DSC-11 : Solid State Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIII : Electromagnetic Theory (32221601)
	Assignment	Assignments given at regular interval.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Mid-Term Test	To be announced.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
April	Theory	Relativistic Fermi gas, White Dwarf Stars, Chandrasekhar Mass Limit. Unit 4 : Theory of Radiation: Properties of Thermal Radiation and Radiation Pressure. Blackbody Radiation and its spectral distribution. Kirchhoff law. Stefan-Boltzmann law and its Thermodynamic proof. Wien's Displacement law. Wien's Distribution Law. Rayleigh-Jean's Law. Ultraviolet Catastrophe. Planck's Quantum Postulates.	B.Sc. (H) Physics III Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics IV Sem	DSC-11 : Solid State Physics
		As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIII : Electromagnetic Theory (32221601)
May	Theory	Planck's Law of Blackbody Radiation Deduction of Wien's Distribution Law, Rayleigh-Jeans Law, Stefan-Boltzmann Law and Wien's Displacement law from Planck's law.	B.Sc. (H) Physics III Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics IV Sem	DSC-11 : Solid State Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIII : Electromagnetic Theory (32221601)

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Signature of the teacher



SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty : Prof. K. C. Singh

Department : Physics

Semester : IV / VI Semester

Month		Topics	Course	Paper Code/Name
January	Theory	Unit – I : Origin of Quantum Theory: Black body radiation and failure of classical theory, Planck's quantum hypothesis, Planck's radiation law, quantitative treatment of photo-electric effect and Compton scattering, Heisenberg's uncertainty principle, Gamma ray microscope thought experiment, position - momentum uncertainty, consequences of uncertainty principle.	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC – XIII : Electromagnetic Theory (32221601)
February	Theory	Unit – II : The Schrodinger Equation: The Schrodinger equation in one dimension, statistical interpretation of wave function, probability and probability current densities. Normalization, conditions for physical acceptability of wave functions with examples, position and momentum operators and their expectation values. Commutator of position and momentum operators Unit – III : Time Independent Schrodinger Equation: Demonstration of separation of variable method for time independent Schrodinger equation: Free particle wave function, wave packets,	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC – XIII : Electromagnetic Theory (32221601)

March	Theory	Application to energy eigen values and stationary states for particle in a box problem. Reflection and transmission across a step and rectangular potential barrier. Unit – IV : Atomic Physics: Beyond the Bohr's Quantum Model: Sommerfeld theory of elliptical orbits; Hydrogen atom energy levels and spectra, emission and absorption spectra; Correspondence principle; X-rays: Method of production, Continuous and Characteristic X-rays, Moseley's law. Lasers: Lifetime of excited states, natural and Doppler width of spectral lines, emission (spontaneous and stimulated) and absorption processes, Einstein's A and B coefficients, principle of detailed balancing, metastable states,	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC – XIII : Electromagnetic Theory (32221601)
	Assignment	Assignments given at regular interval.	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
	Mid-Term Test	Date yet to be declared.	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
April	Theory	Components of a laser and lasing action, working principle of a 4 level laser, e.g. He-Ne lasers; qualitative idea of X-ray free electron lasers. Unit – V : Basic Properties of Nuclei: Introduction (notation, a basic idea about nuclear size, mass, angular momentum, spin, parity, isospin), N-Z graph, nuclear binding energy, semi-empirical mass formula, and basic idea about the nuclear force and meson theory. Radioactivity: Law of radioactivity and secular equilibrium.	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC – XIII : Electromagnetic Theory (32221601)

May	Theory	Accelerators: Accelerator facility available in India: Van-de Graaff generator (Tandem accelerator), linear accelerator, cyclotron (principle, construction, working, advantages and disadvantages), discovery of new elements of the periodic table	B.Sc. (H) Physics IV Sem	DSC-10 : Modern Physics
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC – XIII : Electromagnetic Theory (32221601)

Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr. Narender Kumar

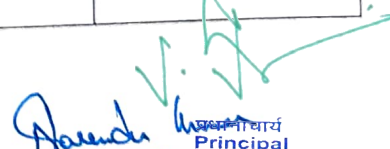
Department: Physics

Semester: IV/ VI Semester

Month		Topics	Course	Paper Code/Name
January	Theory & Tutorial	Maxwell Equations: Review of Maxwell's equations. Displacement Current. Vector and Scalar Potentials. Gauge Transformations: Lorentz and Coulomb Gauge. Poynting's Theorem and Poynting's Vector. Electromagnetic Energy Density. Physical Concept of Electromagnetic Field Energy Density. Momentum Density and Angular Momentum Density. EM Wave Propagation in Unbounded Media: Plane em waves through vacuum and isotropic dielectric medium: transverse nature, refractive index, dielectric constant, wave impedance.	B.Sc. (H) Physics VI Sem	CC-XIII: Electromagnetic Theory (32221601)
	Practical	As Listed in Syllabus.	B.Sc. (H) VI Sem	CC-XIII: Electromagnetic Theory (Lab) (32221601)
	Practical	As Listed in Syllabus.	B.Sc. (H) IV Sem	DSC-10 Modern Physics (Lab)
February	Theory & Tutorial	EM Waves in Bounded Media: Plane em waves through conducting medium: relaxation time, skin depth, attenuation constant. Wave propagation through dilute plasma: electrical conductivity of ionized gases, plasma frequency, refractive index, skin depth. Boundary conditions at a plane interface between two media. Reflection & Refraction of plane em waves at plane interface between two dielectric media-Laws of Reflection & Refraction. Fresnel's Formulae for perpendicular & parallel polarization, Brewster's law. Reflection & Transmission coefficients. Total internal reflection, evanescent waves.	B.Sc. (H) Physics VI Sem	CC-XIII: Electromagnetic Theory (32221601)

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		Metallic reflection (normal Incidence) Plane em waves through vacuum and isotropic dielectric medium: transverse nature, refractive index, dielectric constant, wave impedance.		
	Practical	As Listed in Syllabus.	B.Sc. (H) VI Sem	CC-XIII: Electromagnetic Theory (Lab) (32221601)
	Practical	As Listed in Syllabus.	B.Sc. (H) IV Sem	DSC-10 Modern Physics (Lab)
March	Theory & Tutorial	Polarization of EM Waves: Propagation of em waves in an Anisotropic Media. Symmetric Nature of Dielectric Tensor. Fresnel's Formula. Uniaxial and Biaxial Crystals. Light Propagation in Uniaxial Crystal. Double Refraction. Polarization by Double Refraction. Description of Linear, Circular and Elliptical Polarization. Nicol Prism. Ordinary & extraordinary refractive indices. Optical Rotation. Biot's Laws for Rotatory Polarization. Fresnel's Theory of optical rotation. Calculation of angle of rotation. Experimental verification of Fresnel's theory. Specific rotation. Laurent's half-shade polarimeter.	B.Sc. (H) Physics VI Sem	CC-XIII: Electromagnetic Theory (32221601)
	Practical	As Listed in Syllabus.	B.Sc. (H) VI Sem	CC-XIII: Electromagnetic Theory (Lab)
	Practical	As Listed in Syllabus.	B.Sc. (H) IV Sem	DSC-10 Modern Physics (Lab)
April & May	Theory & Tutorial	Wave Guide: Planar optical wave guides. Planar dielectric wave guide ($-d/2 < x < d/2$). Condition of continuity at interface. Phase shift on total reflection. Eigenvalue equations. Phase and group velocity of guided waves. Field energy and Power transmission. Fibre Optics: Acceptance Angle, Numerical Aperture. Step and Graded Index fibres. Single and Multiple Mode Fibres	B.Sc. (H) Physics VI Sem	CC-XIII: Electromagnetic Theory (32221601)
	Practical	As Listed in Syllabus.	B.Sc. (H) VI Sem	CC-XIII: Electromagnetic Theory (Lab) (32221601)
	Practical	As Listed in Syllabus.	B.Sc. (H) IV Sem	DSC-10 Modern Physics (Lab)


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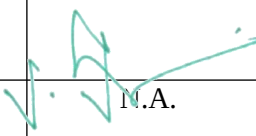
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Prof. ANANT PANDEY

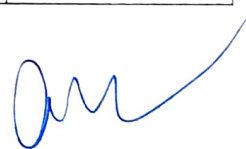
Department: Physics

Semester: Even (2023-24)

Month		Topics	Course	Paper Code/Name
January	Theory	Revisiting concepts of Mathematical Physics that are essential for Electricity and Magnetism, Maxwell's equations	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Tutorial	N.A.	N.A.	N.A.
	Practical	Performing experiments on measurement of self-inductance: Anderson's bridge, Owen's bridge	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
February	Theory	Electrostatics: Electric field and potential, Gauss's law	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Tutorial	N.A.	N.A.	N.A.
	Practical	Performing experiments on measurement of self-inductance: Anderson's bridge, Owen's bridge	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
March	Theory	Boundary value problems in electrostatics, problem solving, method of images, dielectrics	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Tutorial	N.A.	N.A.	N.A.


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	Practical	Performing experiments based on ballistic galvanometer	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Assignment	Numerical problems based on electrostatics	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Mid-Term Test	Conceptual and numerical problems from electrostatics (unit 1 and unit 2 of the syllabus)	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
April	Theory	Magnetostatics, magnetic field and vector potential, magnetic properties of matter	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Tutorial	N.A.	N.A.	N.A.
	Practical	Experiments for measuring current and charge sensitivity, high resistance by leakage method by ballistic galvanometer	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
May	Theory	Electrodynamics, Faraday's law, displacement current	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism
	Tutorial	N.A.	N.A.	N.A.
	Practical	Experiment for determining mutual inductance by Absolute method	B.Sc. (H) Physics II Sem	DSC-5 Electricity and Magnetism


Prof. ANANT PANDEY

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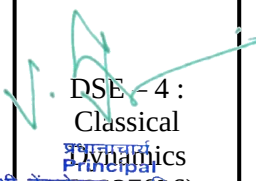


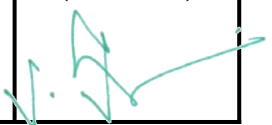
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty : Dr. Ram Lal Awasthi

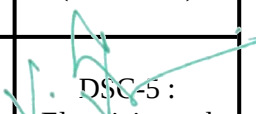
Department : Physics

Semester : II/VI Semester

Month		Topics	Course	Paper Code/Name
January	Theory	UNIT-1 : Classical Mechanics of Point Particles: Review of Newtonian Mechanics; Application to the motion of a charge particle in external electric and magnetic fields- motion in uniform electric field, magnetic field- gyroradius and gyro-frequency, motion in crossed electric and magnetic fields. Degrees of freedom of a system, Generalized coordinates and velocities. Hamilton's Principle, Lagrangian and Lagrange's equations of motion of one- dimensional simple harmonic oscillators, falling body in uniform gravity.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Tutorial	UNIT-1 : Classical Mechanics of Point Particles: Review of Newtonian Mechanics; Application to the motion of a charge particle in external electric and magnetic fields- motion in uniform electric field, magnetic field- gyroradius and gyro-frequency, motion in crossed electric and magnetic fields. Degrees of freedom of a system, Generalized coordinates and velocities. Hamilton's Principle, Lagrangian and Lagrange's equations of motion of one- dimensional simple harmonic oscillators, falling body in uniform gravity.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics II Sem	DSC-5 : Electricity and Magnetism (2222011202)
February	Theory	Cyclic coordinates. Canonical momenta & Hamiltonian. Hamilton's equations of motion. Comparison of Newtonian, Lagrangian and Hamiltonian mechanics. Applications of Hamiltonian mechanics: Hamiltonian for a simple harmonic oscillator, solution of Hamilton's equations for simple harmonic oscillations (1-D), particle in a Central Force Field – conservation of	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)  Dr. Ram Lal Awasthi Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-110021

		angular momentum and energy. UNIT-2 : Small Amplitude Oscillations: Minima of potential energy and points of stable equilibrium, small amplitude oscillations about the minimum, normal modes of longitudinal simple harmonic oscillations (maximum 3 masses connected by 4 springs).		
	Tutorial	Cyclic coordinates. Canonical momenta & Hamiltonian. Hamilton's equations of motion. Comparison of Newtonian, Lagrangian and Hamiltonian mechanics. Applications of Hamiltonian mechanics: Hamiltonian for a simple harmonic oscillator, solution of Hamilton's equations for simple harmonic oscillations (1-D), particle in a Central Force Field – conservation of angular momentum and energy. UNIT-2 : Small Amplitude Oscillations: Minima of potential energy and points of stable equilibrium, small amplitude oscillations about the minimum, normal modes of longitudinal simple harmonic oscillations (maximum 3 masses connected by 4 springs).	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics II Sem	DSC-5 : Electricity and Magnetism (2222011202)
March	Theory	Kinetic energy (T) and potential energy (V) in terms of normal co-ordinates. T and V matrices: finding eigen-frequencies and eigen-vectors using these matrices. UNIT-3 : Special Theory of Relativity: Postulates of Special Theory of Relativity. Lorentz Transformations. Minkowski space. The invariant interval, light cone and world lines. Space-time diagrams: Time-dilation, Length contraction, Simultaneity. Four -vectors: space-like, time-like and light-like.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Tutorial	Kinetic energy (T) and potential energy (V) in terms of normal co-ordinates. T and V matrices: finding eigen-frequencies and eigen-vectors using these matrices. UNIT-3 : Special Theory of Relativity: Postulates of Special Theory of Relativity. Lorentz Transformations. Minkowski space. The invariant interval, light cone and world lines. Space-time diagrams: Time-dilation, Length contraction, Simultaneity. Four -vectors: space-like, time-like and light-like.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626) 

	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics II Sem	DSC-5 : Electricity and Magnetism (2222011202)
	Assignment	Assignments give at regular interval	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Mid-Term Test	Dates to be delcared yet.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
April	Theory	Four-displacement four velocity, four-acceleration four-space. Four-momentum and energy-momentum relation. Doppler effect from a 4-vector perspective. Application to two-body decay of an unstable particle. Metric tensor and alternating tensors and their properties. Unit 4 : Fluid Dynamics: Density ρ and pressure P in a fluid, an element of fluid and its velocity, continuity equation and mass conservation,	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Tutorial	Four-displacement four velocity, four-acceleration four-space. Four-momentum and energy-momentum relation. Doppler effect from a 4-vector perspective. Application to two-body decay of an unstable particle. Metric tensor and alternating tensors and their properties. Unit 4 : Fluid Dynamics: Density ρ and pressure P in a fluid, an element of fluid and its velocity, continuity equation and mass conservation,	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics II Sem	DSC-5 : Electricity and Magnetism (2222011202)


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 धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-110021

May	Theory	Stream lined motion, laminar flow, Poiseuille's equation for flow of a liquid through a pipe. Analogy between liquid flow and current flow, rate of liquid flow through capillaries in series and in parallel combination. Navier Stoke's equation, Reynolds number.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Theory	Stream lined motion, laminar flow, Poiseuille's equation for flow of a liquid through a pipe. Analogy between liquid flow and current flow, rate of liquid flow through capillaries in series and in parallel combination. Navier Stoke's equation, Reynolds number.	B.Sc. (H) Physics VI Sem	DSE – 4 : Classical Dynamics (32227626)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics VI Sem	CC-XIV : Statistical Mechanics (32221602)
	Practical	As listed in the syllabus.	B.Sc. (H) Physics II Sem	DSC-5 : Electricity and Magnetism (2222011202)



Signature of the teacher



प्रधानाचार्य
Principal

श्री वेंकटेश्वर महाविद्यालय
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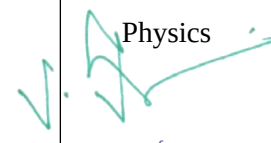
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty : Dr Raghavendra Vemuri

Department : Physics

Semester: II& IV

Month		Topics	Course	Paper Code/Name
January	Theory	Classification of solids as amorphous and crystalline materials, basic understanding of bonding in crystals, closed packed structure and packing fractions, lattice translation vectors, lattice with a basis, types of lattices, Reciprocal lattice and Ewald's construction (geometrical)	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given in syllabus	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Theory	Classical Theory of Raman effect, Pure rotational Raman lines	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-05 Electricity & Magnetism
	Practical	Needs and challenges • Vision of Digital India: DigiLocker, E-Hospitals, e-Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns • Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education	All courses SEM-II	VAC-II Digital Empowerment
	Practical	As per given in syllabus	GE SEM-II	GE-12 Thermal Physics



Principal

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

February	Theory	Brillouin Zones, Diffraction of X-rays: single crystal and powder method. Bragg's Law. Brief discussion on free electron model, success and failure of free electron model, Kronig Penney model. Band gap, direct and indirect band gap, effective mass, concept of mobility. Hall effect (Semiconductor). Lattice Vibrations.	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given in syllabus	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Theory 01 hour per week	Stokes lines and Anti stokes lines comparison with Rayleigh's scattering	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	As per given in syllabus	GE SEM-II	GE-12 Thermal Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-05 Electricity & Magnetism
	Practical	Electronic Communication: electronic mail, blogs, social media • Collaborative Digital platforms • Tools/platforms for online learning • Collaboration using file sharing, messaging, video conferencing	All courses SEM-II	VAC-II Digital Empowerment
March	Theory	monoatomic and diatomic chains, acoustic and optical phonons. Dulong and Petit's Law, Einstein and Debye theories of specific heat of solids. T3 law. Dia-, Para-, Ferri- and Ferromagnetic Materials, Classical Langevin Theory of dia- and paramagnetism, Weiss's Theory of Ferromagnetism	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given in syllabus	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS

				PHYSICS
	Practical	As per given in syllabus	GE SEM-II	GE-12 Thermal Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-05 Electricity & Magnetism
	Theory	List of spin resonance spectroscopy Nuclear magnetic resonance, Electron spin resonance	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	Online security and privacy • Threats in the digital world: Data breach and Cyber Attacks • Blockchain Technology • Security Initiatives by the Govt of India	All courses SEM-II	VAC-II Digital Empowerment
April	Theory	Ferromagnetic Domains, Curie's law, B-H Curve, hysteresis and energy loss, soft and hard material. Polarization, local electric field in solids, depolarization field, electric susceptibility, polarizability, Clausius Mossotti equation, classical theory of electronic polarizability, AC electronic polarizability	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given in syllabus	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given in syllabus	GE SEM-II	GE-12 Thermal Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-05 Electricity & Magnetism

	Practical	Netiquettes • Ethics in digital communication	All courses SEM-II	VAC-II Digital Empowerment
May	Theory	Normal and anomalous dispersion, complex dielectric constant, basic idea of ferroelectricity and PE Hysteresis loop. Experimental results, critical temperature, critical magnetic field, Meissner effect, Type I and type II superconductors	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given in syllabus	BSc (Physics) SEM-IV	DSC - 11: SOLID STATE PHYSICS
	Practical	As per given syllabus	GE SEM-II	GE-12 Thermal Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-05 Electricity & Magnetism
	Theory	Electron spin resonance with few examples' estimation of magnetic field of the sun	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	Ethics in Cyberspace	All courses SEM-II	VAC-II Digital Empowerment

Raghavendray
Signature of the teacher

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr Vivek Panwar

Department: Physics

Semester: II& IV

Month		Topics	Course	Paper Code/Name
January	Theory	Orthogonal Curvilinear Coordinates: Orthogonal Curvilinear Coordinates. Scale factors, element of area and volume in spherical and cylindrical coordinate Systems. Derivation of Gradient, Divergence, Curl and Laplacian in Spherical and Cylindrical Coordinate Systems Fourier Series: Periodic functions, Orthogonality of sine and cosine functions	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Theory	One-electron atoms: Degeneracy of energy levels and selection rules, modes of relaxation of an excited atomic state, line intensities and the lifetimes of excited states, line shapes and widths	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-06 ELECTRICAL CIRCUIT ANALYSIS
	Practical	Needs and challenges • Vision of Digital India: DigiLocker, E-Hospitals, e-Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns • Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education	All courses SEM-II	VAC-II Digital Empowerment
February	Theory	Convergence of Fourier series and Dirichlet Conditions (Statement only), Expansion of periodic functions in a series of sine and cosine functions and determination of Fourier coefficients, Even and odd functions and their Fourier expansions (Fourier Cosine Series and Fourier Sine Series), Parseval's Identity.	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II

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	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Theory	Fine structure of hydrogenic atoms: Shifting of energy levels, splitting of spectral lines, relativistic correction to kinetic energy	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-06 ELECTRICAL CIRCUIT ANALYSIS
	Practical	Electronic Communication: electronic mail, blogs, social media • Collaborative Digital platforms • Tools/platforms for online learning • Collaboration using file sharing, messaging, video conferencing	All courses SEM-II	VAC-II Digital Empowerment
March	Theory	Frobenius Method and series solution of Differential Equations: Singular Points of Second Order Linear Differential Equations and their importance, Frobenius method for finding series solution and its applications	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-06 ELECTRICAL CIRCUIT ANALYSIS

	Theory	spin-orbit term, Darwin term, fine structure spectral lines, Lamb shift (qualitative idea). Atoms in external magnetic fields: Larmor's theorem,	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	Online security and privacy • Threats in the digital world: Data breach and Cyber Attacks • Blockchain Technology • Security Initiatives by the Govt of India	All courses SEM-II	VAC-II Digital Empowerment
April	Theory	Legendre Differential Equations and its solution. Properties of Legendre Polynomials: Rodrigues Formula, Generating Function, Orthogonality of Legendre Polynomials, Simple recurrence relations, Expansion of function in a series of Legendre Polynomials	BSc (Physics) SEM-II	DSC - 4: MATHEMATICAL PHYSICS-II
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC - 4: MATHEMATICAL PHYSICS-II
	Practical	Netiquettes • Ethics in digital communication	All courses SEM-II	VAC-II Digital Empowerment
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-06 ELECTRICAL CIRCUIT ANALYSIS
	Theory	Stern-Gerlach experiment, normal Zeeman effect, Paschen Back effect, anomalous zeeman effect and g factors. Spin multiplicity, singlet and triplet states and selection rules in helium atom, central field approximation, Aufbau and Pauli exclusion principle, Slater determinant,	GE SEM-IV	GE-20 Atomic Molecular Physics
May	Theory	Some Special Integrals: Beta and Gamma Functions and relation between them, Expression of Integrals in terms of Gamma and Beta Functions.	BSc (Physics) SEM-II	DSC - 4: MATHEMATICAL PHYSICS-II

May	Theory	Some Special Integrals: Beta and Gamma Functions and relation between them, Expression of Integrals in terms of Gamma and Beta Functions.	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC - 4: MATHEMATI CAL PHYSICS-II
	Practical	As per given in syllabus	BSc (Physics) SEM-II	DSC-06 ELECTRICAL CIRCUIT ANALYSIS
	Theory	LS and JJ coupling scheme (equivalent and non-equivalent electrons), term symbols and Hund's rule, Lande' interval rule Qualitative Discussion of: Lamb shift and Auger effect.	GE SEM-IV	GE-20 Atomic Molecular Physics
	Practical	Ethics in Cyberspace	All courses SEM-II	VAC-II Digital Empowerment


 Signature of the teacher


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Odd Semester

Name of the Faculty: Dr. M. Anil Kumar

Department: Physics

Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory	Advanced Mathematical Physics-II : Variational Principle, Euler's Equation and its Application to Simple Problems. Geodesics. Calculus of Variations.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Tutorial	Advanced Mathematical Physics-II : Problems related to variational principle and its applications: Geodesics in two and three dimensions	B.Sc. (H) VI Sem	DSE-3 Advanced mathematical physics-II (32227625)
	Practical 1	Analogy Electronics (AEC): . As per the syllabus given.	B.Sc. (H) Physics IV Sem	DSE-12 Analogy Electronics
	Practical 2	Electrical Circuit Analysis: . As per the syllabus given.	B.Sc. (H) Physics II Sem	DSE-6 Electrical Circuit Analysis
	Practical 3	Skill Enhancement Course (SEC). 1. Negotiation Fundamentals 2. Plotting the characteristics for the first order PDE.	All Courses IV Sem	SEC- Negotiation and Leadership skills
February	Theory	Advanced Mathematical Physics-II : Concept of Lagrangian: Generalized coordinates. Definition of canonical moment, Euler-Lagrange's Equations of Motion and its Applications to Simple Problems (e.g., Simple Pendulum and One dimensional harmonic oscillator). Definition of Canonical Momenta. Canonical Pair of Variables. Definition of Generalized Force: Definition of Hamiltonian (Legendre Transformation). Hamilton's Principle. Poisson Brackets and their properties. Lagrange Brackets and their properties.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Tutorial	Advanced Mathematical Physics-II Problems on Euler Lagrange Equation and simple problems in one and two dimensions. Problems related to Hamiltonian equation of motion, Poisson and Lagrange brackets.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Practical 1	Analogy Electronics (AEC): . As per the syllabus given.	B.Sc. (H) Physics IV Sem	DSE-12 Analogy Electronics

	Practical 2	<u>Electrical Circuit Analysis:</u> As per the syllabus given.	B.Sc. (H) Physics II Sem	DSE-6 Electrical Circuit Analysis
	Practical 3	1. Negotiation Fundamentals 2. Negotiation Canvas	All Courses IV Sem	SEC- Negotiation and leadership skills
March	Theory	<u>Advanced Mathematical Physics-II :</u> Review of sets, Mapping and Binary Operations, Relation, Types of Relations. Groups: Elementary properties of groups, uniqueness of solution, Subgroup, Centre of a group, Co-sets of a subgroup, cyclic group, Permutation/Transformation.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Tutorial	<u>Advanced Mathematical Physics-II :</u> Problems on groups	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Practical 1	<u>Analogy Electronics (AEC):</u> As per the syllabus given.	B.Sc. (H) Physics IV Sem	DSE-12 Analogy Electronics
	Practical 2	<u>Electrical Circuit Analysis:</u> As per the syllabus given.	B.Sc. (H) Physics II Sem	DSE-6 Electrical Circuit Analysis
	Practical 3	<u>Skill Enhancement Course (SEC).</u> 1. Types of negotiation approaches used by negotiators Critical moments that can make or break the deal. 2. Effective Communication and Relationship Building.	All Courses IV Sem	SEC- Negotiation and leadership skills
	Assignm ent	<u>Advanced Mathematical Physics-II :</u> Assignments are given according to the class discussions and syllabus.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Mid- Term Test	To be announced		
April	Theory	<u>Advanced Mathematical Physics-II :</u> Homomorphism and Isomorphism of group. Normal and conjugate subgroups, Completeness and Kernel. Some special groups: SO(2), SO(3), SU(2), SU(3). <u>Advanced Mathematical Physics-II :</u> Advanced Probability Theory: Fundamental Probability Theorems. Conditional Probability, Bayes' Theorem, Repeated Trials, Binomial and Multinomial expansions.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Tutorial	<u>Advanced Mathematical Physics-II :</u> Problems on group theory: definition and properties of groups, subgroups, Homomorphism, isomorphism, normal and conjugate groups, representation of groups, Reducible and Irreducible groups <u>Advanced Mathematical Physics-II :</u> Problems on Probability	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)

	Practical 1	<u>Analogy Electronics (AEC):</u> As per the syllabus given.	B.Sc. (H) Physics IV Sem	DSE-12 Analogy Electronics
	Practical 2	<u>Electrical Circuit Analysis:</u> As per the syllabus given.	B.Sc. (H) Physics II Sem	DSE-6 Electrical Circuit Analysis
	Practical 3	<u>Skill Enhancement Course (SEC).</u> 1. Discovering, creating and claiming value 2. Complex Negotiations	All Courses VI Sem	SEC- Negotiation and leadership skills
May	Theory	<u>Advanced Mathematical Physics-II :</u> Random Variables and probability distributions, Expectation and Variance, Special Probability distributions: The binomial distribution, The poisson distribution, Continuous distribution: The Gaussian (or normal) distribution. The principle of least squares.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Tutorial	<u>Advanced Mathematical Physics-II :</u> Various problems on Random variables and probability distributions, Expectation values and variance.	B.Sc. (H) Physics VI Sem	DSC-3 Advanced mathematical physics-II (32227625)
	Practical 1	<u>Analogy Electronics (AEC):</u> As per the syllabus given.	B.Sc. (H) Physics IV Sem	DSE-12 Analogy Electronics
	Practical 2	<u>Electrical Circuit Analysis:</u> As per the syllabus given.	B.Sc. (H) Physics II Sem	DSE-6 Electrical Circuit Analysis
	Practical 3	<u>Skill Enhancement Course (SEC).</u> 1. Legitimacy and Building Commitment 2. Managing Alternatives	All Courses VI Sem	SEC- Negotiation and leadership skills

Dr. M. Anil Kumar

Signature of the teacher

M. Anil Kumar

V. A.

प्रधानाचार्य
Principal

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
January-May 2024: Even Semester

Name of the Faculty: Dr. Main Pal
Department: Physics
Semester : II and IV

Month		Topics Covered	Course	Paper Code/Name
January	Theory	Unit 1: Circuit Analysis: Ideal voltage source, real voltage source, current source, Kirchhoff's current law, Kirchhoff's voltage law, node analysis, mesh analysis, Star and Delta conversion	B.Sc (H) Sem II	DSC-6/ Electrical Circuit Analysis
		Unit – I - Two-terminal devices and their applications IV characteristics of a diode and its application as rectifier (half-wave and full wave rectifier),	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
	Practical	As Listed in Syllabus.	B.Sc. (H) Sem II	DSC-6/ Electrical Circuit Analysis
		As Listed in Syllabus.	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
		As Listed in Syllabus.	Sem-II	SEC-II/ Essentials of Python
February	Theory	DC Transient Analysis: Charging of RC and RL circuits , Charging and discharging with initial charge in RC circuit, RL circuit with initial current, time constant, RL and RC Circuits with source	B.Sc (H) Sem II	DSC-6/ Electrical Circuit Analysis
		Unit 2: AC Circuit Analysis: Sinusoidal voltage and current, Definitions of instantaneous, peak to peak, root mean square and average values, form factor and peak factor (for half-rectified and full-rectified sinusoidal wave, rectangular wave and		
		IV characteristics of a zener diode and its use as voltage regulator, principle, structure and characteristics of (1) LED, (2) Photodiode and (3) Solar Cell	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
	Practical	As Listed in Syllabus.	B.Sc. (H) Sem II	DSC-6/ Electrical Circuit Analysis
		As Listed in Syllabus.	B.Sc. (H) Sem IV	DSC-12/ Analog

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 P. K. Kuan, New Delhi-21

				Electronics
		As Listed in Syllabus.	Sem-II	SEC-II/ Essentials of Python
March	Theory	triangular wave), voltage-current relationship in resistor, inductor and capacitor, phasor, complex impedance, power in AC circuits, sinusoidal circuit analysis for RL, RC and RLC Circuits, resonance in series and parallel RLC Circuits (Frequency Response, Bandwidth, Quality Factor), selectivity, application of resonant circuits	B.Sc (H) Sem II	DSC-6/ Electrical Circuit Analysis
		Unit – II - Bipolar junction transistors n-p-n and p-n-p transistors, IV characteristics of CB and CE configurations, active, cut-off and saturation regions, current gains α and β , relations between α and β , physical mechanism of current flow	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
	Practical	As Listed in Syllabus.	B.Sc. (H) Sem II	DSC-6/ Electrical Circuit Analysis
		As Listed in Syllabus.	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
		As Listed in Syllabus.	Sem-II	SEC-II/ Essentials of Python
April	Theory	Unit 3: Network Theorems: Principal of duality, Superposition theorem, Thevenin theorem, Norton theorem, Their applications in DC and AC circuits with more than one source, Maximum Power Transfer theorem for AC circuits, Reciprocity Theorem, Millman's Theorem, Tellegen's theorem	B.Sc (H) Sem II	DSC-6/ Electrical Circuit Analysis
		Unit – III – Amplifiers and sinusoidal oscillators Load line analysis of transistor, DC load line and Q-point, fixed bias and voltage divider bias, transistor as 2-port network, h-parameter equivalent circuit of a transistor, analysis of a single-stage CE amplifier using hybrid model (input and output impedance, current and voltage gain) Sinusoidal Oscillators: General idea of positive and negative feedback, Barkhausen's criterion for self-sustained oscillations, RC phase shift oscillator, determination of frequency, Hartley and Colpitts oscillators	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
	Practical	As Listed in Syllabus.	B.Sc. (H) Sem II	DSC-6/ Electrical Circuit Analysis
		As Listed in Syllabus.	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
		As Listed in Syllabus.	Sem-II	SEC-II/ Essentials of Python

May	Theory	Two Port Networks: Impedance (Z) Parameters, Admittance (Y) Parameters, Transmission Parameters, Impedance matching	B.Sc (H) Sem II	DSC-6/ Electrical Circuit Analysis
		Unit – IV - Operational Amplifiers (Black Box approach) Characteristics of an ideal and practical Op-Amp (IC 741), open-loop and closed-loop gain, frequency response, CMRR, slew rate and concept of virtual ground Applications of Op-Amps: (1) Inverting and non-inverting amplifiers, (2) Adder, (3) Subtractor, (4) Differentiator, (5) Integrator, (6) Comparator and Zero crossing detector (7) Wein bridge oscillator	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
	Practical	As Listed in Syllabus.	B.Sc. (H) Sem II	DSC-6/ Electrical Circuit Analysis
		As Listed in Syllabus.	B.Sc. (H) Sem IV	DSC-12/ Analog Electronics
		As Listed in Syllabus.	Sem-II	SEC-II/ Essentials of Python

Dr. Main Pal

Main Pal
05/03/24

Main Pal

V.B.
प्रधानाचार्य
Principal
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty : Dr. Ruchi Gupta

Department : Physics

Semester : (II) Semester

Month		Topics	Course	Paper Code/Name
January	Theory	Unit-1: Fundamental basics of Thermodynamic system and variables	General Elective II Sem	GE-12 Thermal Physics
	Tutorial	N.A.	N.A.	N.A.
	Practical	As listed in the syllabus	B.Sc. (H) Physics II Sem	DSC-4 Mathematical Physics II
	Practical	As listed in the syllabus	Value Added Course II Sem	VAC Digital Empowerment
February	Theory	Unit-1: Zeroth law of Thermodynamics and temperature, First law and internal energy, various thermodynamical processes, Applications of First law: general relation between C_p and C_v , work done during various processes, Compressibility and Expansion coefficient, reversible and irreversible processes, Second law: Kelvin-Planck and Clausius statements, Carnot engine.	General Elective II Sem	GE-12 Thermal Physics
	Tutorial	N.A.	N.A.	N.A.
	Practical	As listed in the syllabus	B.Sc. (H) Physics II Sem	DSC-4 Mathematical Physics II
	Practical	As listed in the syllabus	Skill Enhancement Course II Sem	SEC Essentials of Python
	Practical	As listed in the syllabus	Value Added Course II Sem	VAC Digital Empowerment

VAC
Digital Empowerment
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March	Theory	Unit-1: Carnot cycle and theorem, basic concept of Entropy, Entropy changes in reversible and irreversible processes, Clausius inequality, Entropy-temperature diagrams Unit-2: Thermodynamic Potentials: Enthalpy, Gibbs, Helmholtz and Internal Energy functions, Maxwell's relations and applications- Clausius Clapeyron Equation, Expression for $(C_p - C_v)$, C_p/C_v , TdS equations, energy equations for ideal gases. Unit-3: Derivation of Maxwell's law of Distribution of velocities and its experimental verification.	General Elective II Sem	GE-12 Thermal Physics
	Assignment	Assignments given at regular interval	General Elective II Sem	GE-12 Thermal Physics
	Tutorial	N.A.	N.A.	N.A.
	Practical	As listed in the syllabus	B.Sc. (H) Physics II Sem	DSC-4 Mathematical Physics II
	Practical	As listed in the syllabus	Skill Enhancement Course II Sem	SEC Essentials of Python
	Practical	As listed in the syllabus	Value Added Course II Sem	VAC Digital Empowerment
	Mid-Term Test	Dates to be declared yet.	General Elective II Sem	GE-12 Thermal Physics
April	Theory	Unit 3: Mean free path (Zero order only), Transport Phenomena: Viscosity, Conduction and Diffusion (for vertical case) Unit 4: Theory of Radiation: Blackbody radiation, Spectral distribution, Derivation of Planck's law, Deduction of Wien's law, Rayleigh-Jeans law, Stefan Boltzmann Law and Wien's displacement law from Planck's law	General Elective II Sem	GE-12 Thermal Physics
	Tutorial	N.A.	N.A.	N.A.
	Practical	As listed in the syllabus	B.Sc. (H) Physics II Sem	DSC-4 Mathematical Physics II
	Practical	As listed in the syllabus	Skill Enhancement Course	SEC Essentials of Python

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	Practical	As listed in the syllabus	Value Added Course II Sem	VAC Digital Empowerment
May	Theory	Unit-5: Statistical Mechanics: Macrostate and Microstate, phase space, Entropy and Thermodynamic Probability, Maxwell-Boltzmann law, Fermi-Dirac distribution law, Bose Einstein distribution law-comparison of three statistics	General Elective II Sem	GE-12 Thermal Physics
	Tutorial	N.A.	N.A.	N.A.
	Practical	As listed in the syllabus	B.Sc. (H) Physics II Sem	DSC-4 Mathematical Physics II
	Practical	As listed in the syllabus	Skill Enhancement Course II Sem	SEC Essentials of Python
	Practical	As listed in the syllabus	Value Added Course II Sem	VAC Digital Empowerment

Ruchigupta
Signature of the teacher

V. A.
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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr. Aniruddh Singh

Department: Physics

Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory	Vector Spaces as Algebraic Structures: Definition and examples of groups, rings, fields and vector spaces. Real and Complex fields, Use of ket notation $ \alpha\rangle$ for vectors. Subspaces, Linear combination of vectors.	B.Sc. IV Sem	DSE 3 Advanced Mathematical Physics
	Tutorial	Problems based on Groups Rings and Fields	B.Sc. IV Sem	DSE Advanced Mathematical Physics
	Theory		BSc IV Sem	G IV Atomic and Molecular Physics
Feb	Theory	Linear dependence and independence of vectors, span of a subset of vectors, Bases and dimension of vector space, direct sum of spaces, representation of vectors as column vectors with R^n as example. Inner Product Spaces: Inner product of vectors ($\langle \alpha \beta \rangle$) and norm of a vector, euclidean spaces and unitary spaces. Cauchy-Schwartz inequality, concept of length and distance, metric spaces. Hilbert Space (definition only). Linear functional, dual space, dual basis ($\langle \alpha $ notation); Orthogonality of vectors, orthonormal basis, Gram-Schmidt procedure to construct an orthonormal basis.	B.Sc. IV Sem	DSE-3 Advanced Mathematical Physics
	Tutorial	Problems on vector spaces, basis and dimension, inner product, Gram Schmidt procedure, Cauchy- Schwartz inequality	B.Sc. IV Sem	DSE -3 Advanced Mathematical Physics
	Theory	Molecular Spectra of diatomic molecule: Rotational Spectra (rigid and non-rigid rotor), Vibrational Spectra (harmonic and anharmonic), Vibration-Rotation Spectrum of a diatomic molecule, Isotope effect, Intensity of spectral lines	BSc IV Sem	GE IV Atomic and Molecular Physics
	Practical	Negotiation Fundamentals Key concepts and core vocabulary of	BSc Sem IV	SEC Negotiation and leadership

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		negotiation process, deal- making and dispute resolution, Assumptions and biases that are barriers to effective negotiation, Collaborative approaches, risk & opportunities to achieve win-win outcomes Negotiation Canvas Introduction of a framework for negotiation preparation and how to use it, Elements of negotiation canvas i.e. relationship, alternatives, legitimacy, options, interests among others, Difference between position and interests		
	Practical	Needs and challenges • Vision of Digital India: DigiLocker, E-Hospitals, e-Pathshala, BHIM, e-Kranti (Electronic Delivery of Services), e-Health Campaigns • Public utility portals of Govt. of India such as RTI, Health, Finance, Income Tax filing, Education.	BSc II sem	VAC Digital Empowerment
March	Theory	Linear Transformation: Linear Mappings and Examples, Homomorphism and Isomorphism of vector space, rank and nullity of a linear mapping, Range space and Kernel (null space) of a linear mapping, non-singular transformations, Nilpotent and Idempotent Transformations. Matrices as Representations: Matrix Representation of a Linear transformations, composition of linear transformations and matrix multiplication, linear algebra. Algebra of matrices, determinant and trace of matrix and their properties.	B.Sc. IV Sem	DSE-3 Advanced Mathematical Physics
	Tutorial	Problems based on Linear transformation and Matrix representation of linear transformation.	B.Sc. IV Sem	DSE -3 Advanced Mathematical Physics
	Theory	Vector representation of Orbital and electron spin angular momenta in a diatomic molecule, The Born-Oppenheimer approximation, Concept of Potential energy curve for a diatomic molecule, Morse potential. The Franck-Condon principle	BSc IV Sem	GE IV Atomic and Molecular Physics
	Assignment	One assignment for DSE -3 course and one for GE-IV		
	Mid-Term Test	1 mid-term exam based on the syllabus covered till the exam date.		
	Practical	Managing critical moments Types of negotiation approaches used by negotiators Critical moments that can make or break the deal How to	B.Sc Sem IV	SEC Negotiation and Leadership

		identify these critical moments, Strategies to manage critical moments in the negotiation Effective Communication and Relationship Building Role of communication and relationship in negotiation, Understanding the other party's psychology to understand their interests, build trust and improve the scope of the negotiation, Unconditionally constructive behaviours, Methods of building trust, and empathy, Overcoming communication barriers, difficult behaviours and information asymmetry		
	Practical	Electronic Communication: electronic mail, blogs, social media • Collaborative Digital platforms • Tools/platforms for online learning • Collaboration using file sharing, messaging, video conferencing	Bsc II sem	VAC Digital empowerment
April	Theory	Non-singular matrices. Rank of a matrix and invertibility of matrices. Direct sum and direct product of matrices. Change of basis transformation, similar matrices, trace and determinant as invariants of basis change. Transpose and adjoint of a linear transformation, self-adjoint operators. Symmetric and hermitian matrices. Preservation of norms by orthogonal and unitary transformations.	B.Sc. IV Sem	DSE-3 Advanced Mathematical Physics
	Tutorial	Problems based on matrix properties, basis transformation.	B.Sc. IV Sem	DSE -3 Advanced Mathematical Physics
	Theory	Raman Effect: Classical Theory (with derivation) of Raman effect, pure rotational Raman Lines, Stoke's and Anti-Stoke's Lines, comparison with Rayleigh scattering Idea of spin resonance spectroscopy (Nuclear Magnetic Resonance, Electron Spin Resonance) with few examples, estimation of magnetic field of the Sun.	BSc IV Sem	GE IV Atomic and Molecular Physics
	Practical	Managing Alternatives Concept of BATNA (Best Alternative to Negotiated Agreement), Methods to evaluate alternative options/offers, Management of one's alternatives and other party's alternatives during negotiation. Legitimacy and Building Commitment When to say yes to agreed terms, and when to walk away, Criteria for decision-making on negotiated terms, Assessment of the legitimacy of negotiated terms, Leading all parties to omit to the negotiated agreement, Steps from plan to execution		SEC IV Negotiation and leadership

	Practical	Online security and privacy ● Threats in the digital world: Data breach and Cyber Attacks ● Blockchain Technology ● Security Initiatives by the Govt of India		VAC II Digital empowerment
May	Theory	Eigen-values and Eigenvectors: Eigen-values and eigen vectors of a transformation and corresponding matrix representation. Cayley- Hamilton Theorem (Statement only), its applications like inverse and powers of a matrix. Eigensystems of hermitian and unitary matrices. Diagonalization of matrices. Normal matrices. Simultaneous diagonalizability of two matrices. Use of Matrices in Solving Coupled Linear first order ordinary differential equations with constant coefficients. Minimal Polynomial, Functions of a Matrix.	B.Sc. IV Sem	DSE-3 Advanced Mathematical Physics
	Tutorial	Calculation of Eigen values and Eigen vectors, diagonalization, application of matrices in solving coupled differential equation.	B.Sc. IV Sem	DSE -3 Advanced Mathematical Physics
	Theory	Linear combination of atomic orbitals (LCAO), bonding and antibonding orbitals; 'gerade', 'ungerade', molecular orbitals and the ground state electronic configurations for homo and hetero-nuclear diatomic molecules, classification of molecular excited states of diatomic molecule.	BSc IV Sem	GE IV Atomic and Molecular Physics
	Practical	Discovering, creating and claiming value Methods of value discovery during negotiation, How is value divided and claimed between the negotiating parties?, What are the tradeoffs, mutual gains and contingencies?, Concept of distributive bargaining, equitable solutions, and ZOPA (zone of possible agreement), Biases and enemies of value creation Complex Negotiations Strategies for negotiations are not straightforward, involve several issues, include multiple stakeholders, and /or involve powerful parties, Hofstede's Culture dimensions, Dealing with people with difficult behaviours		SEC IV Negotiation and leadership

	Practical	Netiquettes • Ethics in digital communication • Ethics in Cyberspace		VAC II Digital empowerment
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Signature of the teacher

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr. NAMITA PANDEY**

Department: **Political Science**

Even Semester: **II/IV/VI**

Name of the Paper: **GE: Human Rights, Gender & Environment**

Month		Topic	Course	Paper Code/Name
January	Theory	Unit-1 Understanding Social Inequality a) Caste, Gender, Ethnicity and Class as distinct categories and their interconnection	BA (P) VI SEM	
	Practicals			
	Assignment	Any topic related to the syllabus		
February	Theory	Unit-2 Human Rights a) Human Rights: Meaning and Evolution b) UN Declarations and Covenants c) Human Rights and Citizenship Rights d) Human Rights and the Indian Constitution e) Human Rights, Laws and Institutions in India; the role of the National Human Rights Commission. f) Human Rights of Marginalized Groups: Dalits, Adivasis, Women, Minorities and Unorganized Workers. g) Consumer Rights: The Consumer Protection Act and grievance redressal mechanisms. h) Human Rights Movement in India.		
	Practicals			
	Tutorials			
March	Theory	Unit-3 Gender a) Analysing Structures of Patriarchy b) Gender, Culture and History c) Economic Development and Women d) The issue of Women's Political Participation and Representation in India e) Laws, Institutions and Women's Rights in India f) Women's Movements in India		
	Practicals			


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	Tutorials			
April	Theory	Unit-4 Environment a) Environmental and Sustainable Development b) UN Environment Programme: Rio, Johannesburg and after. c) Issues of Industrial Pollution, Global Warming and threats to Bio – diversity		
	Test	Unit-1 & 2		
	Tutorials			
	Test			
May	Theory	d) Environment Policy in India e) Environmental Movement in India		
	Practicals			
	Tutorials			

Name of the Paper: **Dilemmas in Politics** (Shared with Dr. Haokam Vaiphei)

Month		Topic	Course	Paper Code/Name
January	Theory	Unit-IV Feminism and the Politics of Interpretation	DSC BA (H) VI SEM	
	Practicals			
	Assignment			
February	Theory	Feminist Politics & Human Nature		
	Practicals			
	Tutorials			
March	Theory	Gender		
	Practicals			
	Tutorials			
April	Theory	Feminist Interpretation & Political Theory		
	Test			
	Tutorials			
	Test			
May	Theory	Feminist Interpretation & Political Theory		
	Practicals			
	Tutorials			


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**SEMESTER WISE TEACHING
PLAN (2023-2024)
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr Arup Singh
Thought**

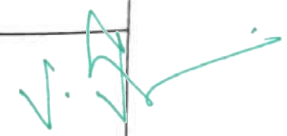
Department: Political

Course: BA (Hons) Political Science 3rd year

Semester: VI

Paper: Indian Political Thought - II

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	1.Introduction to Modern Political Thought 2 Rammohan Roy: Rights		
	Practicals			
	Tutorials	Introduction to Indian Political Thought. Rammohan Roy		
FEBRUARY	Theory:	3. Pandita Ramabai : Gender 4.Vivekananda : Ideal Society		
	Practicals:			
	Tutorials:	Pandita Ramabai . Vivekananda		


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**SEMESTER WISE TEACHING
PLAN (2023-2024)
SRI VENKATESWARA COLLEGE**

**Name of the Faculty: Dr Arup Singh
Thought**

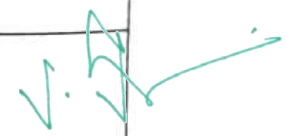
Department: Political

Course: BA (Hons) Political Science 3rd year

Semester: VI

Paper: Indian Political Thought - II

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	1.Introduction to Modern Political Thought 2 Rammohan Roy: Rights		
	Practicals			
	Tutorials	Introduction to Indian Political Thought. Rammohan Roy		
FEBRUARY	Theory:	3. Pandita Ramabai : Gender 4.Vivekananda : Ideal Society		
	Practicals:			
	Tutorials:	Pandita Ramabai . Vivekananda		


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	<u>Assignment :</u>	Vivekananda		
MARCH	Theory:	5 Gandhi: Swaraj .6 Ambedkar: Social Justice		
	Practicals:			
	Tutorials:	Gandhi. Ambedkar		
	<u>Test</u>	Gandhi & Ambedkar		
APRIL	Theory:	7 Tagore: critique of Nationalism 8. Iqbal : Community 9. Savarkar: Hindutva		
	Practicals:			
	Tutorials:	Tagore. Iqbal. Savarkar		



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MAY	Theory:	10. Nehru: Nationalism 11. Lohia: Socialism		
	Practicals:			
	Tutorials:	Nehru, Lohia		

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr. Haokam Vaiphei**

Department: **Political Science**

Even Semester: **II/IV/VI**

Name of the Paper: **Policy and Administration in India, IV SEM (2 classes/week, shared with Dr. Garima)**

Month		Topic	Course	Paper Code/Name
January	Theory	Uni 1: Indian Administration Structure of the Civil Service: Evolution 1. Colonial Legacy 2. Civil Service in the Constitutional Framework: Appointment Training promotion 3. PMO, Cabinet Secretariat 4. Major Initiatives in Administrative Reforms	BA (H) DSC	
	Practicals			
	Assignment	Write a publishable research article on any topic related to the Course. (Group Project) Minimum: 4000 Words		
February	Theory	Unit 2: Decentralization and Local Self Governance: 1. Meaning & Types: Rural & Urban 2. PRIs and implementation of public policies		
	Practicals			
	Tutorials			
March	Theory	Technology & Public Administration in India 1. E-Governance: The Journey of E-Governance in India		


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		2. Models of E-Governance: Case-Study of Digital India Mission		
	Practicals			
	Tutorials			
April	Theory	Unit 6 Issues & Debates in Indian Administration: 1. Ethics in Administration 2. Accountability 3. Relationship between Permanent & Political Executive		
	Practicals			
	Tutorials			
	Test	Test & Presentation		
May	Theory	4. Generalist & Specialists 5. Gender Sensitivity & Gender participation		
	Practicals			
	Tutorials			

Name of the paper: Perspectives on Public Administration III SEM (3 lectures/week)

Month		Topic	Course	Paper Code/Name
January	Theory	Unit 1 Public Administration as a Discipline: Ancient roots of Public Administration: Perspectives from India Modern PA: An overview of the theoretical journey Principles of Public Administration Theorizing Public Administration	BA (H) DSC III Sem	
	Practicals			
	Tutorials			
February	Theory	Unit 2 Mainstream/Traditional		

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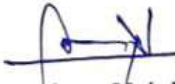
		Theoretical Perspectives: Scientific management (F.W. Taylor) Ideal-type bureaucracy (Max Weber)		
	Assignment	Write a publishable research article on any topic related to the Course. (Group Project) Minimum: 4000 Words		
	Tutorials			
March	Theory	Human relations theory (Elton Mayo) Rational Decision-making (Herbert Simon)		
	Practicals			
	Tutorials			
April	Theory	Ecological Approach Contemporary Theoretical Perspectives: New Public Management, New Public Service Multiple Perspectives on Governance: Good Governance, Collaborative Governance, Network Governance, Digital Governance		
	Practicals			
	Tutorials			
	Test	Test & Presentation		
May	Theory	Gender Perspective on Public Administration: Gender & Governance Gender Sensitivity & participation in administration		
	Practicals			
	Tutorials			

Name of the Paper: **Dilemmas in Politics (DSE) VI SEM (4 classes/week) Shared with Dr. Namita Pandey**

Month		Topic	Course	Paper
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				Code/Name
January	Theory	Unit 1 Moral Economy of Violence Unit 2 Social Exclusion, Capabilities and the Politics of Empowerment	BA (H) SEM VI DSE Paper	
	Practicals			
	Assignment	Write an Academic article on any research topic related to the Course Minimum: 4000 words		
February	Theory	Unit 2 Global Justice & Cosmopolitanism		
	Practicals			
	Tutorials			
March	Theory	Unit 5 Debating Human Rights: The Politics of Humanitarian Intervention		
	Practicals			
	Test			
April	Theory	Unit 6 Ecology & Political Responsibility		
	Practicals			
	Tutorials			
	Test	Internal Test & Presentation		
May	Theory	Ecology & Political Responsibility		
	Practicals			
	Tutorials			


 (Dr. Haokam Vaiphei)
 Assistant Professor
 Department of Political Science

Manish


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SEMESTER WISE TEACHING PLAN
(2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: **Dr. Latika Bishnoi**
Department: **Political Science**
Even Semester: **II/IV/VI**

Name of the Paper: **Modern Political Philosophy, VI SEM (5 classes/week)**

Month		Topic	Course	Paper Code/Name
January	Theory	Modernity and its discourse Kant on Modernity, Faith on Reason, Understanding Nature's Man	Honours Core Discipline Paper- 13	232602
	Practicals			
	Tutorials			
February	Theory	Romantics Jean Jacques Rousseau Critique of Modernity; State of Nature, Origin of inequality, General Will, direct democracy, self-government Mary Wollstonecraft Women and paternalism; critique of Rousseau's idea of education and proposed educational reforms; legal rights and representation		
	Practicals			
	Tutorials			
	Group Project			
March	Theory	Liberal Socialist John Stuart Mill Mill's hedonistic principle of utility; difference with other utilitarian, Liberty, suffrage and change in democracy; rights of minorities; subjection of women		
	Practicals			
	Tutorials			
	Test			
April	Theory			
	Practicals			
	Tutorials			
May	Theory			
	Practicals			
	Tutorials			

Mamilo

Latika Bishnoi
V. B.
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Name of the Paper: GE-Introduction to Indian Constitution, II SEM (2 classes/week)

Month		Topic	Course	Paper Code/Name
January	Theory	Constitutional antecedents and the making of the Constitution of India	GE-2 Paper	2324001202
	Practicals			
	Tutorials			
February	Theory	Constitutional antecedents and the making of the Constitution of India		
	Practicals			
	Tutorials			
	Assignment			
March	Theory	Basic features of the Indian Constitution		
	Practicals			
	Tutorials			
	Internal Test			
April	Theory			
	Practicals			
	Tutorials			
May	Theory			
	Practicals			
	Tutorials			

Name of the Paper: VAC- Culture and Communication, IV SEM (2 classes/week)

Month		Topic	Course	Paper Code/Name
February	Theory	Vasudhaiva Kutumbakam United we Stand, Divided we Fall Ek Bharat, Shresht Bharat	VAC	6967000003
	Practicals			
	Tutorials			
March	Theory	Empathy Adaptability Conserving our natural resources		
	Practicals			
	Tutorials			
	Assignment			
March	Theory	Basic features of the Indian Constitution		
	Practicals			
	Tutorials			
	Internal Test			
April	Theory			
	Practicals			
	Tutorials			
May	Theory			
	Practicals			
	Tutorials			

Mam 6

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ashish Kumar Thakur

Department: Political Science

Semester: B.A. (H) Sem VI

Paper Name: - Human Rights in a Comparative Perspective

Month		Topics	Course	Paper Code/Name
JANUARY		Course objective: The aim of the course is to make students aware about the different strands in the debates on human rights and its evolution through historical and contemporary times. Unit 1 Human Rights: Theory and Institutionalization • J. Hoffman and P. Graham, (2006) 'Human Rights', <i>Introduction to Political Theory</i>, Delhi, Pearson, pp. 436-458. • SAHRDC (2006) 'Introduction to Human Rights'; 'Classification of Human Rights: An Overview of the First, Second, and Third Generational Rights', in <i>Introducing Human Rights</i>, New Delhi: Oxford University Press. • The Constitution of the Republic of South Africa, Chapter 2: Bill of Rights. • The Constitution of India, Chapter 3: Fundamental Rights	B.A.(H) Sem VI	Human Rights in a Comparative Perspective
	Practicals			
	Tutorials			


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APRIL

FEBRUARY		Unit 1 Human Rights: Theory and Institutionalization	B.A.(H) Sem VI	Human Rights in a Comparative Perspective
	Practicals:			
	Tutorials:	Assignment: Question assigned from above topics making up the internal assessment requirement.		
MARCH	Theory:	Unit 2 a. Torture: USA and India M. Lippman, (1979) 'The Protection of Universal Human Rights: The Problem of Torture' <i>Universal Human Rights</i>, Vol. 1(4), pp. 25-55 D. O'Byrne, (2007) 'Torture', in <i>Human Rights: An Introduction</i>, Delhi: Pearson, pp. 164-197.	B.A.(H) Sem VI	Human Rights in a Comparative Perspective
	Practicals:			
	Tutorials:	- Discussion - Previous year questions - Individual doubts - Assignments - Revision		
		b. Surveillance and Censorship: China	B.A.(H)	Human Rights in a Comparative Perspective

V. B.

APRIL	Theory:	and India c. Terrorism and Insecurity of Minorities: USA and India • Gary T, Marx (1999), 'Surveillance Studies' in <i>International Encyclopaedia of the Social and Behavioural Sciences</i>, 2nd Edition, Vol. 23, pp. 733-741. • D. O'Byrne, (2007) 'Censorship', in <i>Human Rights: An Introduction</i>, Delhi: Pearson, pp. 106-138. • U. Singh, (2007) 'The Unfolding of Extraordinariness: POTA and the Construction of Suspect Communities', in <i>The State, Democracy and Anti-terror Laws in India</i>, Delhi: Sage Publications, pp.165-219 Discussion - Previous year questions - Individual doubts - Assignments ➤ Revision	Sem VI	Comparative Perspective
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		
	Theory:	Discussion - Previous year questions - Individual doubts - Assignments Revision		
MAY	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments. Principal Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21		

Mamita

Ashish



SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ashish Kumar Thakur

Department: Political Science

Semester: B.A. (H) Sem II

Paper Name: - Introduction to International Relations: Theories, Concepts and Debates

Month	Topics	Course	Paper Code/Name
JANUARY	Course objective: Comprehensive re-reading of the origin of IR and its mainstream theories and concepts, with basic tools to question statist ontology and reification of eurocentrism. • Appreciation of decolonial accounts that challenge the mainstream and parochial International Relations. • Understanding of the genealogy and contributions of the IR scholarship in India to the disciplinary debates through a re-reading of its classical texts and, contemporary writings. Unit 1: What is IR and, its Contested Origins • David Blaney (2020), "Where, When and What is IR?", in Arlene B. Tickner and Karen Smith (eds.) International Relations from the Global South: World of Difference. Routledge: New York. • Baylis, J. and Smith, S. (eds.) The Globalization of World Politics. An Introduction to International Relations. • Hobsbawm, E. (1995) Age of Extreme: The Short Twentieth Century, 1914—1991. • R. Jackson and G. Sorensen, (2007) Introduction to International Relations: Theories and Approaches • M. Nicholson, International Relations: A Concise Introduction	B.A.(H) Sem II	Introduction to International Relations
Practicals			 प्रधानाचार्य Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

FEBRUARY		Unit 1: What is IR and, its Contested Origins • B. De Carvalho, H. Leira and J. M. Hobson (2011). The Big Bangs of IR: The Myths that Your Teachers Still Tell You about 1648 and 1919. Millennium, 39(3): 735–758. • Kevin Blachford. (2021). 'From Thucydides to 1648: The "Missing" Years in IR and the Missing Voices in World History' International Studies Perspectives, 22:4, pp. 495-508. • Amitav Acharya and Barry Buzan (2019). 'Introduction' in A. Acharya & B. Buzan, The Making of Global International Relations Origins and Evolution of IR at its Centenary, Cambridge University Press: UK. pp. 1–7. • Kanti P. Bajpai and Siddharth Mallavarapu, eds. (2005). "International Relations in India: Bringing Theory Back Home" New Delhi: Orient Longman. Chp.1. pp. 17-38	B.A.(H) Sem II	Introduction to International Relations
	Practicals:			
	Tutorials:	Assignment: Question assigned from above topics making up the internal assessment requirement.		
MARCH	Theory:	UNIT – II Theories of IR • Carr, E.H. (2004) International Relations between the Two World Wars: 1919-1939. • Baylis, J. and Smith, S. (eds.) The Globalization of World Politics. An Introduction to International Relations. • R. Jackson and G. Sorensen, (2007) Introduction to International Relations: Theories and Approaches • Karen A. Mingst, Ivan M. Arreguin-Toft (2019). 'Approaches to International Relations' in Essentials of International Relations (8th edition), Norton: Canada: pp. 3-18. • Milja Kurki and Steve Smith (eds.) International Relations: Theories,	B.A.(H) Sem II	Introduction to International Relations


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		Discipline and Diversity, 3rd Edition, Oxford: Oxford University Press, pp. 94-113.		
	Practicals:			
	Tutorials:	• Discussion - Previous year questions - Individual doubts - Assignments • Revision		

APRIL	Theory:	UNIT – II Theories of IR UNIT – III Concepts • Discussion - Previous year questions - Individual doubts - Assignments ➤ Revision	B.A.(H) Sem II	Introduction to International Relations
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		
MAY	Theory:	UNIT – IV Exploring the Future Trajectories • Acharya (2020) 'Global International Relations', in T. Dunne, M. Kurki, and S. Smith (eds.) International Relations Theories Discipline and Diversity, 4th Ed., Oxford: OUP. pp. 304-321. • Tamara A. Townsell, A.B. Tickner, A. Querejazu, J. Reddekop, G. Shani, K. Shimizu, N.C. Behera and A. Arian, 'Differing about difference: relational IR from around the world', International Studies Perspectives, 22 (1): 25-64. https://doi.org/10.1093/isp/ekaa008		
	Practicals:			
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.		

Navita

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Ashish Kumar Thakur
Department: Political Science

Semester: B.A. (H) Sem IV

Paper Name: - : Concepts in Comparative Political Analysis

Month		Topics	Course	Paper Code/Name
JANUARY		Course objective: To train students in the application of comparative methods to the study of politics. To acquire an understanding of a range of concepts such as nationalism and constitutionalism To learn how to distinguish between different kinds of political systems based on their electoral design and party systems Unit 6 Electoral System Definition and procedures: Types of electoral systems (First Past the Post, Proportional Representation, Mixed Representation) • K. Newton, and J. Deth, (2010) Foundations of Comparative Politics: Democracies of the Modern World. • A. Heywood, (2002) 'Representation, Electoral and Voting', in Politics. • A. Evans, (2009) 'Elections Systems', in J. Bara and M. Pennington, (eds.) Comparative politics.	B.A.(H) Sem IV	Concepts in Comparative Political Analysis
	Practicals			
	Tutorials			

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FEBRUARY		Unit 6 Electoral Systems Unit 5 State and Regime types Capitalist, Welfare, Populist and Security state • Webb, E. (2011) 'Totalitarianism and Authoritarianism', in Ishiyama, J. T. and Breuning, M.(eds.) 21st Century Political Science: A Reference Book. Los Angeles: Sage, pp. 249-257. • Mudde Cas and Kaltwasser Cristóbal Rovira (2017), What is Populism (Ch 1), Populism around the world (Ch 2) in Populism: A Very Short Introduction, OUP • Garland, David (2016) Ch 1, Ch 6, Ch 7, in The Welfare State: A Very Short Introduction, OUP. • Hague, R. and Harrop, M. (2004) 'The state in a global context', in Comparative Government and Politics: An Introduction. London: Palgrave MacMillan, pp. 17-34.	B.A.(H) Sem IV	Concepts in Comparative Political Analysis
	Practicals:			
	Tutorials:	Assignment: Question assigned from above topics making up the internal assessment requirement.		
MARCH	Theory:	Unit 4 Federalism Historical context Federation and Confederation: debates around territorial division of power. • M. Burgess (2006) Comparative Federalism: Theory and Practice. London: Routledge, pp. 135-161. • R. Watts (2008) 'Introduction', in Comparing Federal Systems. Montreal and Kingston: McGill Queen's University Press, pp. 1-27 Unit 7 Party System Historical contexts of emergence of political parties, types of parties and party systems. • A. Cole (2011) 'Comparative Political Parties: Systems and Organizations', in J. Ishiyama, and M. Breuning (eds) 21st Century Political Science: A Reference Book. Los Angeles: Sage Publications, pp. 150-158. • A. Heywood (2002) 'Parties and Party System', in Politics. New York: Palgrave, pp. 247-268.	B.A.(H) Sem IV	Concepts in Comparative Political Analysis


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	Practicals:			
	Tutorials:	• Discussion - Previous year questions - Individual doubts - Assignments • Revision		

APRIL	Theory:	UNIT – II Discourses on Nationalism Civic and Ethnic nationalisms, Ideological basis of anti-colonial nationalism (Gandhi, Mao, Frantz Fanon and Amilcar Cabral) • B. Anderson, Imagined Communities: Reflections on the Origin and Spread of Nationalism, Verso, 2006 (1983). • U. Ozkirimli (2010), Theories of Nationalism: A Critical Introduction, Palgrave Macmillan. UNIT – III Constitutionalism Evolution of the idea of constitutionalism, post-colonial • C. McIlwain (1940 [2007]), Constitutionalism: Ancient and Modern, Cornell University Press. • U. Baxi (2000) 'Postcolonial Legality', in Henry and Sangeeta Ray eds., A Companion to Postcolonial Studies, Blackwell, pp.540-555. Discussion - Previous year questions - Individual doubts - Assignments ➤ Revision	B.A.(H) Sem IV	Concepts in Comparative Political Analysis	
	Practicals:				
	Tutorials:	Discussion around the above topics, answering doubts and other information regarding answer writing with relevant examples and thought experiments.			
MAY	Theory:	UNIT I Socio-Economic Structures Capitalism, Socialism, Colonialism and Neo-liberalism	 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21		
	Practicals:				



**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Ravuru Narasaiah**

Department: **Political Science**

Even Semester: **II, B.A. (Hons).**

Name of the Paper: **Methods and Approaches in Comparative Political Analysis**

Month		Topic	Course	Paper Code/Name
January	Theory	Unit-I: Understanding Comparative Politics a. Nature and Scope b. Why Compare c. Understanding Comparative Method d. Going Beyond Eurocentrism	B.A. (Honours)	DSC
	Practicals			
	Tutorials	Discussion and Presentation by Students		
February	Theory	Unit-II: Approaches to Studying Comparative Politics a. Political System b. Structural Functional Analysis Unit- III: Traditional and Neo-Institutionalism a. Historical Institutionalism b. Rational Choice Theory c. Sociological Institutionalism		
	Practicals			
	Tutorials	Discussion and Presentation by Students		
March	Theory	Unit- IV: Political Culture a. Civic Culture by Sydney Verba b. Subculture by Dennis Kavanagh c. Hegemony by Antonio Gramsci d. Post Materialism by Ronald Inglehart e. Social Capital by R. Putnam		
	Practicals			
	Tutorials	Discussion and Presentation by Students		
April	Theory	Unit- V: Political Economy a. Underdevelopment b. Dependency c. Modernization d. World Systems Theory		
	Practicals			
	Tutorials	Discussion and Presentation by Students		
May	Theory	Unit- VI: Gendering Comparative Politics a. The Gender Lacuna in Comparative Politics b. Political Representation: Women in Government and Politics		
	Practicals			
	Tutorials	Discussion and Presentation by Students		

R. Narasaiah

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Ravuru Narasiah**
Department: **Political Science**
Even Semester: **IV, B.A. (Program)**
Name of the Paper: **Comparative Government and Politics**

Month		Topic	Course	Paper Code/Name
January	Theory	Unit-I: The nature, scope and methods of comparative political analysis	B.A. (Program)	
	Practicals			
	Tutorials	Discussion and Presentation by Students		
February	Theory	Unit-I: The nature, scope and methods of comparative political analysis; Unit-II: Classifications of Political Systems (a). Parliamentary and Presidential (b). Federal and Unitary		
	Practicals			
	Tutorials	Discussion and Presentation by Students		
March	Theory	Unit-III: Electoral Systems (a). First Past the Post (b). Proportional Representation (c) Mixed Systems Unit-IV: Party Systems: Single Party; bi-party and multi-party systems		
	Practicals			
	Tutorials	Discussion and Presentation by Students		
April	Theory	Unit-V: Structures of Power in Society: Classical elitist theory; power elites; pluralism and theory of ruling class. Unit-VI: Comparing Regimes: Democratic, Authoritarian, Welfare, Populism, and Security Regimes		
	Practicals			
	Tutorials	Discussion and Presentation by Students		
May	Theory	Unit-VI: Comparing Regimes: Democratic, Authoritarian, Welfare, Populism, and Security Regimes		
	Practicals			
	Tutorials	Discussion and Presentation by Students		

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V. A.

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**SEMESTER WISE TEACHING PLAN
ODD SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: **Dr. Ravuru Narasiah**

Department: **Political Science**

Even Semester: **VI, B.A. (Program)**

Name of the Paper: **Democracy and Governance (DSE)**

Month		Topic	Course	Paper Code/Name
January	Theory	Unit-I: Structure and Process of Governance a). Indian Model of Democracy	B.A. (Program)	62327602/DSE
	Practicals			
	Tutorials			
February	Theory	Unit-I: Structure and Process of Governance b). Parliament c). Party Politics and Electoral Behaviour d). Federalism		
	Practicals			
	Tutorials			
March	Theory	Unit-I: Structure and Process of Governance e). Supreme Court and Judicial Activism f). Grassroots Democracy g). Political Communication		
	Practicals			
	Tutorials			
April	Theory	Unit-II: Ideas, Interests and Institutions in Public Policy (a). Contextual Orientation of Policy Design (b). Institutions of Policy Making		
	Practicals			
	Tutorials			
May	Theory	Unit-II: Ideas, Interests and Institutions in Public Policy (c). Regulatory Institutions: SEBI, TRAI, Competition Commission of India, Corporate Affairs		
	Practicals			
	Tutorials			

R. Narasiah

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Preeti Singh
Department: Political Science
Even Semester: IV

Name of the Paper: **Understanding International Relations GE Paper**

Month		Topic	Course	Paper Code/Name
JANUARY	Theory	Orientation		
			GENERAL ELECTIVE	Understanding IR
	Tutorials	----		
FEBRUARY	Theory	Unit I Making Sense of the World		
	Tutorials	Making sense of the World		
MARCH	Theory	Unit II State, Nation and Markets		
	Tutorials	State, Nations and Markets		
APRIL	Theory	Unit III Inequalities Unit IV Sites of Conflict and Forms of Violence		
	Tutorials	Unit III and IV		
MAY(till classes are dispersed)	Theory	Unit V Knowing our Virtual and Creative World: The Visual Turn in IR		
	Tutorials	Unit V		

Preeti Singh

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Preeti Singh
Department: Political Science
Even Semester: IV

Name of the Paper: **GLOBAL POLITICS (DSC Paper)**

Month		Topic	Course	Paper Code/Name
January	Theory	Unit I Locating Global Politics		
			BA Homes Political Science	Global Politics
	Tutorials	Unit I		
February	Theory	Unit II Changing Nature of Globalization: Globalization to Deglobalization and Post Globalization; Geo Politics, Geo Economics, Geo Strategy		
	Tutorials	Unit II		
March	Theory	Unit II Changing Nature of Globalization: Territorialisation and De-territorialization; Cultural Frames of Global Politics		
	Tutorials	Unit II		
April	Theory	Unit III Contemporary Global Issues: Ecological Issues, Nuclear Weapons, Global Terrorism, Migration and Human Security		
	Tutorials	Unit III		
May (Till first week)	Theory	Unit IV Global Social Movements		
	Tutorials	Unit IV		

Preeti Singh
Manita

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Preeti Singh
Department: **Political Science**
Even Semester: VI

Name of the Paper: **Conflict and Peace Building (SEC paper)**

Month		Topic	Course	Paper Code/Name
January	Theory	Unit I Concepts: Understanding Conflicts, Conflict Management, Resolution, and Conflict Transformation, Peace Building		
			BA Program	Conflict and Peace Building
	Tutorials	Unit I		
February	Theory	Unit I Concepts: Peace Building		
	Tutorials	Unit I		
March	Theory	Unit II Dimensions of Conflict: Ideology, Resource Sharing Conflict, Socio Cultural Conflict		
	Tutorials	Unit II		
April	Theory	Unit IV Conflict Responses: Skill and Techniques: Negotiations		
	Tutorials	Unit IV		
May (Till first week)	Theory	Unit IV Conflict Responses: Skill and Techniques: Mediation		
	Tutorials	Unit IV		

Preeti Singh
Manita

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Garima Sharma
Department: **Political Science**
Even Semester: **II**

Name of the Paper: **Indian Government and Politics**

Month		Topic	Course	Paper Code/Name
January	Theory			
	Practicals			
	Tutorials			
February	Theory	Unit – VI Political Parties and Party System	1) Theoretical explanation of Parties and Party System 2) Types of Party System	DSC
	Practicals			
	Tutorials	0		
March	Theory	Unit – VIII Social Movements	1) Workers 2) Farmers 3) Environmental 4) Women	DSC
	Practicals			
	Tutorials	0		
April	Theory	Unit- IV Social Structure and Political Power	1) Caste 2) Class 3) Gender	DSC
	Practicals			
	Tutorials	0		
May	Theory	Unit- V Religion and Politics	1) Debates on Secularism and Communalism	DSC
	Practicals			
	Tutorials			

Garima Sharma

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Garima Sharma
Department: **Political Science**
Even Semester: **VI**

Name of the Paper: **Democracy and Governance**

Month		Topic	Course	Paper Code/Name
January	Theory			
	Practicals			
	Tutorials			
February	Theory	Unit - III Contemporary Political Economy of Development in India	1) Policy Debates over Models of Development in India	DSE
	Practicals			
	Tutorials	0		
March	Theory	Unit - III Contemporary Political Economy of Development in India	1) Recent Trends of Liberalization in Indian Economy in Different Sectors 2) E-Governance	DSE
	Practicals			
	Tutorials	0		
April	Theory	Unit- IV Dynamics of Civil Society	1) New Social Movements and various interests	DSE
	Practicals			
	Tutorials	0		
May	Theory	Unit- IV Dynamics of Civil Society	1) Role of NGO's , Understanding the Political Significance of Media and Popular Culture	DS
	Practicals			
	Tutorials			

Garima Sharma

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Garima Sharma
Department: **Political Science**
Even Semester: **IV**

Name of the Paper: **Public Administration in India**

Month		Topic	Course	Paper Code/Name
January	Theory			
	Practicals			
	Tutorials			
February	Theory	Unit - III Budget	1) Concept of Budget and Budget Cycle in India	DSC
	Practicals			
	Tutorials	0		
March	Theory	Unit - III Budget	1) Types of Budgets: Line Budget, Performance Planning Budget, Zero Based Budget 2) Budget making: Role of Finance Ministry	DSC
	Practicals			
	Tutorials	0		
April	Theory	Unit- V Social Welfare Policies	1) Education: Right to Education 2) Health: National Health Mission 3) Food- Right to Food Security	DSC
	Practicals			
	Tutorials	0		
May	Theory	Unit- V Social Welfare Policies	1) Employment: MANREGA	DSC
	Practicals			
	Tutorials			

Garima Sharma

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SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr Garima Sharma
Department: **Political Science**
Even Semester: VI

Name of the Paper: **Nationalism in India**

Month		Topic	Course	Paper Code/Name
January	Theory			
	Practicals			
	Tutorials			
February	Theory	Unit - IV Nationalist Politics and Expansion of its Social Base	1) Phases of Nationalist Movement: Liberal constitutionalist, Swadeshi and the Radicals, Formation of Muslim League	General Elective Course
	Practicals			
	Tutorials	0		
March	Theory	Unit - IV Nationalist Politics and Expansion of its Social Base	1) Gandhi and Mass Mobilization: Non-Cooperation, Civil Disobedience and Quit India Movement	General Elective Course
	Practicals	1) Discussion and Presentation by Students. 2) Internal Assessment of Students.		
	Tutorials	0		
April	Theory	Unit - IV Nationalist Politics and Expansion of its Social Base	1) Revolutionaries, Socialists and Communists 2) Communalism in Indian Politics	General Elective Course
	Practicals	1) Discussion and Presentation by Students. 2) Internal Assessment of Students.		
	Tutorials	0		
May	Theory	Unit - IV Nationalist Politics and Expansion of its Social Base	1) Two-Nation Theory 2) Negotiations over partition	General Elective Course
	Practicals			
	Tutorials			

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**SEMESTER WISE TEACHING PLAN
EVEN SEMESTER (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr Garima Sharma

Department: **Political Science**

Even Semester: **IV**

Name of the Paper: **Understanding International Relations**

Month		Topic	Course	Paper Code/Name
January	Theory			
	Practicals			
	Tutorials			
February	Theory	Unit - I Making Sense of the World	1) What is IR? 2) Understanding Space: How do we sense our planet 3) Ways of Knowing and Being: Peoples, Histories, and Civilizations	Generic Elective Course
	Practicals			
	Tutorials	0		
March	Theory	Unit- II States, Nations and Markets	1) State and Diffusion of authority power 2) Nations and Nationalism 3) States and Markets	Generic Elective Course
	Practicals	1) Discussion and Presentation by Students. 2) Internal Assessment of Students.		
	Tutorials	0		
April	Theory	Unit- III Inequalities Unit-IV State of Conflicts and Forms of Violence	1) Politico-military inequalities: Big states, poor states 2) Economic inequalities: rich states, poor states 3) Climate Change: Global commons and differentiated responsibilities 4) Changing Landscape/Nature of Conflict 5) Forms of Violence	Generic Elective Course
	Practicals	1) Discussion and Presentation by Students.		
	Tutorials	0		
May	Theory	Unit-V Knowing our Virtual and Creative World : The Visual Turn in IR	1) Internet 2) Museums 3) Cinemas	Generic Elective Course
	Practicals			
	Tutorials			

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TEACHING PLAN FOR SEM II, IV, and VI

Mitalee Mahapatra
Guest, Political Science

DSE VI Sem- Understanding Globalisation

GE II Sem -Introduction to the Indian Constitution (Shared)

SEC IV Sem - Leadership and Negotiation (shared)

SEC VI Sem - Conflict and Peace Building

DSE VI Sem

February 2024	1. Meaning of the term Globalisation 2. Debates around Globalisation 3. Technological and Economic Dimension of Globalisation 4. Cultural Globalisation
March 2024	1. Political dimension of globalisation 2. UN- structure and functions 3. Peace keeping and Peace building 4. WTO - Structure and Functions
April 2024	1. WTO debates 2. Anti - Globalisation movements 3. Global warming 4. Biodiversity loss 5. International efforts to address Global warming and biodiversity loss
May 2024	1. International Terrorism 2. Poverty and Inequality

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Mitalee

GE II Sem

February 2024	1. What are rights? 2. Part 3 Fundamental rights Art 13-16
March 2024	1. Fundamental Rights Art 17- 35
April 2024	1. Decentralisation
May 2024	1. Centre-State Relations

SEC VI Sem

February 2024	1. Levels of Conflicts- general overview 2. Case study - Local Level conflict
March 2024	1. International level conflict Case study Isis and and Russia-Ukraine conflict
April 2024	1. Methods of conflict resolution 2. Gandhian approach to peacebuilding
May 2024	3. 1. Track I, Track II and Multi Track Diplomacy

SEC IV Sem

February 2024	1. Concept of BATNA 2. Methods to evaluate alternative options
March 2024	1. Managing complex negotiations: Discovering Values

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	2.	Creating and claiming values
April 2024	1.	Methods of Value discovery during negotiations
	2.	Concept of Distributive bargaining, equitable solutions, Zopa
May 2024	1.	Hofstede's Culture Dimensions

Notes

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	Practicals			
	Tutorials			
MARCH	Theory:	Basic features of the Indian Constitution. Fundamental Rights Caste and Race: South Africa and India. Gender and Violence: India and Pakistan Business Cases and Presentations, Letters within the Organizations, Letters from Top Management, Circulars and Memos, Business Presentations to Customers and other stakeholders, presenting a Positive Image through Verbal and Non-verbal Cues, Preparing and Delivering the Presentations, Use of Audio-visual Aids, Report Writing Negotiation Canvas Introduction of a framework for negotiation preparation and how to use it, Elements of negotiation canvas i.e relationship, alternatives, legitimacy, options, interests among others, Difference between position and interests	GE-IV BA(H)- 6th sem SEC-II SEC-IV	Introduction to the Indian Constitution Human Rights in a Comparative Perspective PERSONALITY DEVELOPMENT AND COMMUNICATION Negotiation and Leadership
	Practicals:			
	Tutorials:			

	Assignment :	Question assigned from above topics making up the internal assessment requirement		
APRIL	Theory:	Obligations of State and Duties of Citizens. Organs of Constitutional Governance- Legislature, Executive and Judiciary Adivasis/Aboriginals and the Land Question: Australia and India Barriers to Communication, Improving Communication Skills, Preparation of Promotional Material, Non-verbal communication, Body language, Postures and gestures, Value of time, Organizational body language, Importance of Listening, Emotional Intelligence. Working individually and in a team, Leadership skills, Leadership Lessons, Team work and Team building, Feedback, Feed forward Interpersonal skills – Delegation, Humour, Trust, Expectations, Values, Status, Compatibility and their role in building team – work Conflict Management – Types of conflicts, how to cope with conflict. Effective Communication and Relationship Building Role of communication and relationship in negotiation, Understanding the other party's psychology to understand their interests, build trust and improve the scope of the negotiation, Unconditionally constructive behaviours, Methods of building trust, and empathy, Overcoming	GE-IV BA(H)- 6th sem SEC-II SEC-IV	Introduction to the Indian Constitution Human Rights in a Comparative Perspective PERSONALITY DEVELOPMENT AND COMMUNICATION Negotiation and Leadership


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		communication barriers, difficult behaviours and information asymmetry		
	Practicals:			
	Tutorials:			
	Test	Internal Test in examination setting with choice given within questions based on the syllabus		
MAY	Theory:	Centre state relations and decentralization Terrorism and Insecurity of Minorities: USA and India Negotiation Skills, Types of Negotiation, Negotiation Strategies, Selling skills – Selling to customers, Selling to Superiors Selling to peer groups, team mates and subordinates, Conceptual selling, Strategic selling, Selling skills – Body language. Managing critical moments Types of negotiation approaches used by negotiators Critical moments that can make or break the deal How to identify these critical moments, Strategies to manage critical moments in the negotiation	GE-IV BA(H)- 6th sem SEC-II SEC IV	Introduction to the Indian Constitution Human Rights in a Comparative Perspective PERSONALITY DEVELOPMENT AND COMMUNICATION Negotiation and Leadership


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Practicals:				
Tutorials:				

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Durgesh Kumar

Department: **Political Science**

Even Semester: **II/IV/VI**

Name of the Paper: **India's Foreign Policy**

Month		Topic	Course	Paper Code/Name
January	Theory	India's Foreign Policy: Meaning, Determinants and Evolution 1. Domestic and International Determinants of India's Foreign Policy		DSC B2
	Practicals			
	Assignment			
February	Theory	2. Objectives and Principles 3. Non-Alignment and Beyond: Concepts, Policy and Relevance		
	Practicals			
	Tutorials			
March	Theory	Changing Relations with the Global Powers from Cold War to the Post-Cold War Era 1. India and USA 2. India and Russia 3. India and China 4. India and EU		
	Practicals			
	Tutorials			
April	Theory	India and the Neighbourhood: Issues and Challenges 1. Border Disputes 2. Migration and Refugee Issues 3. Cross-border Terrorism		

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	Practicals			
	Tutorials			
	Test	Internal Test on 2 nd April		
May	Theory	India in the Contemporary Multipolar World 1. India's Engagements in Multilateral Forums: Negotiations on Trade and Climate Change 2. India as a Global Power: Prospects and Challenges		
	Practicals			
	Tutorials			

Name of the Paper: **India's National Security: Major Challenges and Strategic Thinking**

Month		Topic	Course	Paper Code/Name
January	Theory	Understanding India's National Security 1. India's Security Policy: A Historical Perspective		DSE2B
	Practicals			
	Assignment			
February	Theory	2. Contemporary Dimensions of India's National Security Framework 3. Conceptualizing India's National Security		
	Practicals			
	Tutorials			
March	Theory	Intellectual Foundations of India's Strategic Thinking		


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		1. Textual Traditions: Ramayana & Mahabharata 2. Kautilya 3. Non-Textual Conceptualizations: Swaraj, Martial Culture		
	Practicals			
	Tutorials			
April	Theory	India's Strategic Culture 1. Evolution and conceptualization 2. Contemporary Trends India's National Security Challenges External Challenges 1. India's Neighbourhood (Cross-border terrorism, securitised borders, water sharing conflicts and nuclearization) 2. Maritime Security Internal Challenges 1. Maoism/Naxalist Challenge 2. Separatist Movements (J&K and the Northeast) 3. Cyber Warfare		
	Practicals			
	Tutorials			
	Test	Internal Test on 05 th April		
May	Theory	India's Strategic Responses 1. Non-Alignment 2. Strategic Partnerships 3. Military Responses 4. Multilateral Alliances		
	Practicals			
	Tutorials			

Name of the Paper: **Introduction to the Indian Constitution**

Month		Topic	Course	Paper Code/Name
January	Theory			GE 2
	Practicals			
	Assignment			
February	Theory	1. Constitutional antecedents and the making of the Constitution of India		
	Practicals			
	Tutorials			
March	Theory	2. Basic features of the Indian Constitution 3. Fundamental Rights		
	Practicals			
	Tutorials			
April	Theory	4. Obligations of State and Duties of Citizens 5. Organs of Constitutional Governance- Legislature, Executive and Judiciary		
	Practicals			
	Tutorials			
	Test	Internal Test on 05 th April		
May	Theory	6. Centre-State Relations and Decentralization		
	Practicals			
	Tutorials			

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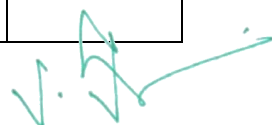
Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: VI / 18 January – 10 May, 2024

Name of the Paper: Colonialism and Nationalism in India- BA(Hons)-(DSE)

Month		Topic	Course	Paper Code/Name
January	Theory	1. Main perspectives on Colonialism: Liberalism, Marxism, Post-colonialism, 2. Approaches to the Study of Nationalism in India: Nationalist, Imperialist, Marxist, and Subaltern	DSE Paper	
	Tutorials	Explanation of Liberalism, Marxism, Post-colonialism, Nationalist, Imperialist and Subaltern theories		
Feb	Theory	3. Constitutional Developments and the Colonial State 4. Colonial Ideology of Civilizing Mission: Utilitarians and Missionaries 5. Impact on Agriculture, Land Relations, Industry and Ecology		
	Tutorials	Framework of the Indian Constitution Idea of Missionaries Vs Utilitarians in the field of education Various Land Title Acts		
March	Theory	6. The 1857 war of Independence 7. Major Social and Religious Movements		
	Tutorials	Causes and Consequences of the 1857 war Emergence of the Social and Religious Movements in 19 Century Reforms Vs Reviving Movements in India		
		Internal Test	04/04/2024	
April	Theory	8a. Education Policies in the Colonial State 8b. The Rise of the New Middle Class during the Colonial Period 9. Social Movements: Peasants, Tribal		
	Tutorials	Educational initiative acts and Industrial development acts in India Importance of Tribal and Peasant Movements		
May	Theory	10. Workers and Women's Movement 11. Anti Caste Movement		
	Tutorials	Women Empowerment to lead the movements against the Colonial State and Emergence of Anti Caste Movements in India		


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Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: II/ February – May, 2024

Name of the Paper: Gandhi and Education (VAC-II)

Month		Topics	Course	Paper
February	Theory	1a. Gandhi's Philosophy on education 1b. Education for character building and moral development 1c. Education relating to health, hygiene, heritage, and handicraft	VAC-II	
	Practical/Continuous Assessment	Explaining the Policies related to Swachha Bharat and Clean India	-	-
March	Theory	2a. Gandhi's educational ideas on use of Indian Language as a medium of Instruction, Text Book and Teacher. 2b. Gandhi's educational thought on Elementary and Adult Education.	-	
	Practical/Continuous Assessment	Field Visit of Their own place during the Semester Break regarding the explained policies.	-	-
Internal Test(19/03/2024)				
April	Theory	2c. Gandhi's vision on Higher Education 3a. Rural development through Skill and Local Need Based education 3b. Skill education in NEP 2020 and Gandhi	-	
	Practical/Continuous Assessment	Group Discussion and Debates on Skill Education and Importance of NEP2020	-	-
May	Theory	3c. Gandhi's Idea on Self-reliance (Swavalambi Shiksha) and its reflection in contemporary educational policy	-	
	Practical/Continuous Assessment	Students can share their experiences in the form of a Field Report.	-	-

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	Internal Assignment	Group Presentations on Gandhi Ideas and Thoughts which were mentioned in the syllabus		
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Name of the Faculty: YERUVA LAKSHMIREDDY

Department: Political Science

Semester: IV/ 18 January – 10 May, 2024

Name of the Paper: Public Institutions in India-BA Program (DSC Paper)

Month		Topic	Course	Paper Code/Name
January	Theory	1. Studying Public Institutions * Why There is a Need to study Public Institutions? * History and Evolution * Types of Public Institutions in India * Major Challenges for Public Institutions in India	DSC Paper	
	Tutorials	Role of Public Institutions in Policy making Approaches to understand the Public Institutions		
Feburary	Theory	2. Framing Public Policy- NITI Aayog * Objectives and Characteristics of NITI Aayog * Functions and role of NITI Aayog * Why did NITI Aayog replace Planning Commission 3. Conducting Elections- Election Commission of India (ECI) * Constitutional Provisions of Election Commission * Structure and Functions of Election Commission * Regulatory response of ECI		
	Tutorials	Need of Central Institution in 21 st Century Major Challenges of Planning Commission Conduct of Election & Model Code of Conduct, Technological Innovations of ECI		
March	Theory	4. Securing Citizens -The Police * Police Organization in Ancient & Colonial period * British Policing Initiatives and contemporary challenges * The Nexus of Politicization and Centralization * Class & Rank Distinctions and performance Measurement * Analysis of India's Policing Structure * Challenges in Policing * Accountability Challenges		
	Tutorials	The Crime Rates in India Issues with Police Investigations Rules versus Discretion Fifth Report of Second ARC Human Rights and Policing in India		
Internal Test				
April	Theory	5. Ensuring Rights National Human Rights Commission of India (NHRC) * Historical Context of Human Rights in India * Need for Institutional Arrangement for Human Rights		 प्रधानाचार्य Principal

		* Constitutional Provisions for Human Rights * State Human Rights Commission 6. Regulatory Institutions Reserve Bank of India (RBI) * Organizational Importance of Central Banks * Functions of RBI * Advancing Financial Inclusion * Monetary Policy by RBI		
	Tutorials	Administrative Functioning of the NHR Commission Composition of Central and Local Boards Qualitative Tools employed by the RBI		
		Internal Assignment		
May	Theory	7. Transparency and Accountability Comptroller and Auditor General (CAG) * introduction and Responsibility of CAG * Functions of CAG * Constitutional and Contemporary status of CAG Central Vigilance Commissioner (CVC) * introduction of Transparency and Accountability * Corruption and Anti- Corruption Measures * Historical Development of CVC		
	Tutorials	Role of Ministry of Finance to Monitor RBI Key Functions of CVC Various acts related to bring Accountability and Transparency in India		

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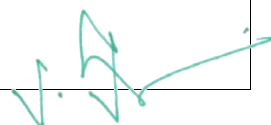
**SEMESTER WISE TEACHING
PLAN (2023-2024)
SRI VENKATESWARA COLLEGE**

Name of the Faculty: Dr. Kanwar Singh

Department: Sanskrit

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	UNIT I: MEDICAL SCIENCES AND BOTANY	B.A. 1 ST YEAR (H)	DSC-6 CRITICAL SURVEY OF SASTRIC LITERATURE
		UNIT I: SVATANTRYASAMBHAVAM	B.A. 2 ND YEAR (H)	DSC-10 MODERN SANSKRIT LITERATURE
		UNIT I: VIBHAKTYARTHA, VOICE AND KRT	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	Tutorials	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	Theory:	UNIT I CONTINUED UNIT II: MUSIC, DANCE, ICONOGRAPHY AND PAINTING	B.A. 1 ST YEAR (H)	DSC-6 CRITICAL SURVEY OF SASTRIC LITERATURE
		UNIT I: BHIMAYANAM UNIT II: SATAPARVIKA	B.A. 2 ND YEAR (H)	DSC-10 MODERN SANSKRIT LITERATURE


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		UNIT II: SELECTIONS FROM KRT PRAKARANA	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



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MARCH	Theory:	UNIT III: VIMANASATRA, ASVASASTRA, GAJASASTRA AND AYUDHAVVIJANA	B.A. 1 ST YEAR (H)	DSC-6 CRITICAL SURVEY OF SASTRIC LITERATURE
		UNIT II: SARDULA- SAKATAM	B.A. 2 ND YEAR (H)	DSC-10 MODERN SANSKRIT LITERATURE
		UNIT III: TRANSLATION AND COMMUNICATION UNIT IV: COMMUNICATIVE SANSKRIT	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
	Practicals/ Project Work:	PRCTICALS/ PROJECT WORK WILL BE ASSIGNED AND MARKED ACCORDINGLY.		
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<u>Assignment:</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
APRIL	Theory:	UNIT IV: KAUSHASASTRA, CHANDHASASTRA, NIRUKHTASASTRA AND VYAKARANASASTR A	B.A. 1 ST YEAR (H)	DSC-6 CRITICAL SURVEY OF SASTRIC LITERATURE
		UNIT III: OTHER GENRES	B.A. 2 ND YEAR (H)	DSC-10 MODERN SANSKRIT LITERATURE


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		UNIT V: ESSAY (TRADITIONAL SUBJECTS)	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
		UNIT III: TRADITIONAL CHARACTERS UNIT IV: RASA	B.A. 3 RD YEAR (H)	DSE-3 THEATRE AND DRAMATURGY IN SANSKRIT
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	Test:	TESTS WILL BE TAKEN TIMELY.		



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MAY	Theory:	UNIT IV CONTINUED	B.A. 1 ST YEAR (H)	DSC-6 CRITICAL SURVEY OF SASTRIC LITERATURE
		UNIT IV: GENERAL SURVEY	B.A. 2 ND YEAR (H)	DSC-10 MODERN SANSKRIT LITERATURE
		UNIT VI: ESSAY (MODERN SUBJECTS)	B.A. 3 RD YEAR (H)	C-14 SANSKRIT COMPOSITION AND COMMUNICATION
		UNIT V: DEVELOPMENT OF PLOT	B.A. 3 RD YEAR (H)	DSE-3 THEATRE AND DRAMATURGY IN SANSKRIT
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		



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**SEMESTER WISE TEACHING
PLAN (2023-2024) Even
Semester
SRI VENKATESWARA COLLEGE**

Name of the Faculty: M. Krishna Rao

Department: Sanskrit

Semester: II/IV/VI

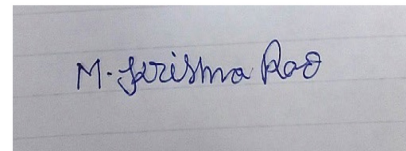
Month		Topics	Course	Paper Code/Name
January	Theory	Unit:1 Science of inquiry (ānvīkṣikī) & its importance, Growth of Discussant (vādī), Opponent (prativādī), Judge (madhyastha/prāśnika).ānvīkṣikī into art of	B.A. (H) 3 rd year 6 th Sem	DSE-1 Indian System of Logic and Debate (12137901)
		Unit:1 Form of God, Mode of worship, Bhakta as a morally evolved person	B.A. (P) 3 rd Year 6 th Sem	Philosophy, Religion and Culture in Sanskrit Tradition (62137905)
		MA IN Sankrit	. MA 2 nd Year 4 th Sem	TUTORIALS has been taken
		MA IN Sankrit	MA 1 st Year 2 nd Sem	TUTORIALS has been taken)
	Tutorials	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
February	Theory:	Unit:2 The Method of debate (Sambhāṣāvidhi/Vādaavidhi) & its utility, Types of debate - congenial debate (anuloma sambhāṣā) & hostile debate (vigrhya sambhāṣā), The expedience of	B.A. (H) 3 rd year 6 th Sem	DSE-1 Indian System of Logic and Debate (12137901)
		Unit:2 Dharma – ten fold dharma and its versions, definitions of satya, ahimsā, asteya, aparigraha, pañcha mahā yajña; theory of three debts.	B.A. (P) 3 rd Year 6 th Sem	Philosophy, Religion and Culture in Sanskrit Tradition (62137905)
		AEC 1: SKT (C) Unit: 1 Shabdarup	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003
		MA IN SANSKRIT	MA 1 ST Year 2 nd Sem	TUTORIALS has been taken
		MA IN SANSKRIT	MA 2 nd Year 4 th Sem	TUTORIALS has been taken
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		

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	<u>Assignment:</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE		
March	Theory:	Unit:3 anumāna and its various types, hetu bhed and different terminology	B.A. (H) 3 rd year 6 th Sem	DSE-1 Indian System of Logic and Debate (12137901)
		Unit: 3 Man's initiative and God's design; God's līlā and Kṛpā, Daiva versus puruṣakāra, adṛṣṭa, three types of karma – saṁchita, kriyamāṇa and prārabdha, karma.	B.A. (P) 3 rd Year 6 th Sem	Philosophy, Religion and Culture in Sanskrit Tradition (62137905)
		Unit:6 Tradition and History of Indian Theatre.	B.A. (H) 3 rd year 6 th Sem	Theatre and Dramaturgy in Sanskrit (12137903)
		AEC 1: SKT (C) Unit: 1 Shabdarup & Dhaturup	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003
		MA IN SANSKRIT	MA 1 ST Year 2 nd Sem	TUTORIALS has been taken
		MA IN SANSKRIT	MA 2 nd Year 4 th Sem	TUTORIALS has been taken
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	<u>Test</u>	TESTS WILL BE TAKEN TIMELY		
April &	Theory:	Unit:4 &5 Tarka, nature and types of tarka – vyāghāta, ātmāśraya, anyonyāśraya, chakraka, pratibandhi kalpanā, kalpanā gaurava, kalpanā lāghava, utsarga, apavāda, vaijātya. Chala, siddanta, katha.	B.A. (H) 3 rd year 6 th Sem	DSE-1 Indian System of Logic and Debate (12137901)
		Unit: 4 & Process of acculturation – importance of Saṁskāra, Aim of human life – theory of Puruṣārtha	B.A. (P) 3 rd Year 6 th Sem	Philosophy, Religion and Culture in Sanskrit Tradition (62137905)
		Unit:6 Tradition and History of Indian Theatre	B.A. (H) 3 rd year 6 th Sem	Theatre and Dramaturgy in Sanskrit (12137903)
		AEC 1: SKT (C) Unit: 1 kaaraka Unit:II Vakya Rachana & Shabda koSha	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003

	Theory:	AECC/SEC: Yoga sutra of Patanjali Unit:1 (Samadhi pada Su.21-29)	B.A. 3 rd YEAR (P) 5 th Sem	AECC/SEC: Yoga sutra of Patanjali (62136938)
		MA IN SANSKRIT	MA 1 ST Year 2 nd Sem	TUTORIALS has been taken
		MA IN SANSKRIT	MA 2 nd Year 4 th Sem	TUTORIALS has been taken
	Tutorials: & Practical	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN. & Practical exam happens		
May	Theory:	Unit:5 &6 vaada, jalpa, vitanda Analogue (jāti) and its important kinds (only first four, i.e. sādharmyasama, vaidharmyasama, utkarṣasama & apakarṣasama);	B.A. (H) 3 rd year 6 th Sem	DSE-1 Indian System of Logic and Debate (12137901)
		Unit:6 An ‘amoral’ person – svadharma and karmayoga, sthita prajna in the Gita (Chapter II).	B.A. (P) 3 rd Year 6 th Sem	Philosophy, Religion and Culture in Sanskrit Tradition
		Unit:6 Tradition and History of Indian Theatre	B.A. (H) 3 rd year 6 th Sem	Theatre and Dramaturgy in Sanskrit (12137903)
		AEC 1: SKT (C) Unit: 1 kaaraka Unit:II Vakya Rachana & Shabda koSha	BA (H) BA (P) B.Sc(H) B.com(P) B.com(H) 1 st Year 1 st Sem	AEC 1: (C) Introduction to Sanskrit Language 2131001003
		MA IN SANSKRIT	MA 1 ST Year 2 nd Sem	TUTORIALS has been taken
		MA IN SANSKRIT	MA 2 nd Year 4 th Sem	TUTORIALS has been taken

Signature
M Krishna Rao




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SEMESTER WISE TEACHING PLAN (2023-24)
SRI VENKATESWARA COLLEGE
 EVEN SEMESTER- 2023-2024

Name of the Faculty: **Dr. Ravi Kumar Meena**

Department: **Sanskrit**

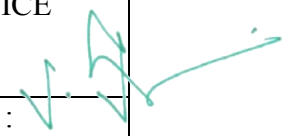
Semester: **II/IV/VI**

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	UNIT I: Introduction and History of Machine Translation, History and survey of Machine Translation System.	B.A./B.Sc. 1 st YEAR (Prog.+Hons.) Semester- II	GE-6 : Machine Translation : Tools and Techniques
		UNIT I: List of Major MT System for Indian Languages : Google Translate and Bing by Microsoft.	B.A./B.Sc. 1 st YEAR (Prog.+Hons.) Semester- II	GE-6 : Machine Translation : Tools and Techniques
		Unit-I: Concept of Dharma Society and Norms, Normative Social Institutions, Dharma as normative and ethical element in ancient India.	B.A. 2 nd YEAR (Prog.) Semester- IV	DSC –7 Dharmashastra Studies
		UNIT I : Brief Introduction to Chandaśāstra.	B.A. 3 rd YEAR (P) Semester - VI	GE –I Sanskrit Meter and Music (62131101)
	Tutorials:	TUTORIALS AND PRACTICAL REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 st and 2 nd Year (also)		
FEBRUARY	Theory:	UNIT II : Theoretical Concepts of Machine Translation: - Human vs Computer translation of language. - Basics of Machine Translation.	B.A./B.Sc. 1 st YEAR (Prog.+Hons.) Semester- II	GE-6 : Machine Translation : Tools and Techniques

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		- Tools and Techniques of Machine Translation. - Source and Target Language.		
		Unit-I: Survey of Dharmashastra texts. Sutra literature, Smriti literature, commentaries and Nibandha texts, Kautilyarthshastra, Ramayana, Mahabharata, Puranas. Unit-II: Content of Dharmashastra: Three major categories, Achara, Vyavahara, Prayashchitta. Achara: Structure of the society in the form of Varna system, managing individual life through Ashrama system, bringing balance in the society with the thought of	B.A. 2 nd YEAR (Prog.) Semester- IV	DSC –7 Dharmashastra Studies
		UNIT I : Brief Introduction to Chandaśāstra Unit: II Classification and Elements of Sanskrit Meter: Syllabic verse (aksaravitta): Syllabo-quantitative verse (Varnavitta) Quantitative verse (mātrāvytta)	B.A. 3 rd YEAR (P) Semester - VI	GE –I Sanskrit Meter and Music (62131101)
		UNIT-I Yoga: Asana, Prāṇāyāma and Dhyana * History of Yoga * Significance of Asana * Effect of Pranayama * Importance of Dhyana	B.A. 2 nd Year (P) Semester - IV	VAC 1: Yoga : PHILOSOPHY AND PRACTICE
	Tutorials:	TUTORIALS, PRACTICE AND PRACTICAL REGARDING THE TOPICS WILL BE TAKEN. M.A. 1st and 2nd Year (also)		 प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-21

MARCH	Theory:	UNIT III : Machine Translation (MT) Approaches -Rule Base MT -Transfer Based MT -Interlingual and Dictionary Based -Statistical MT -Example Based MT -Hybrid MT	B.A./B.Sc. 1 st YEAR (Prog.+Hons.) Semester- II	GE-6 : Machine Translation : Tools and Techniques
		Unit-II: Purushartha chatushtya, Education and Marriage as ways of setting civilized society, Concept of performing yajna and sharing resources (Daana) for sensitive and collective efforts in the society. Code of Conduct for the members of society.	B.A. 2 nd YEAR (Prog.) Semester- IV	DSC –7 Dharmashastra Studies
		Unit: IV Analysis of Selected Vedic Meter and their Lyrical Methods(गान पद्धति); Definition, Example, Analysis and Lyrical Methods of following Meters: gaayatri, ushnik, anustup..	B.A. 3 rd YEAR (P) Semester - VI	GE –I Sanskrit Meter and Music (62131101)
		UNIT-II Patanjali's Yogasūtra and Chakra Patanjali's Yogasūtra: a summary * First sutra * Second sutra * Chakras (psychic centres)	B.A. 2 nd Year (P) Semester - IV	VAC 1: Yoga : PHILOSOPHY AND PRACTICE
	Tutorials:	TUTORIALS, PRACTICE AND PRACTICAL REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 st and 2 nd Year (also)		
APRIL		UNIT III : -Statistical MT -Example Based MT -Hybrid MT Unit IV : Evaluation of MT -Evaluation of MT -Challenges in Machine	B.A./B.Sc. 1 st YEAR (Prog.+Hons.) Semester- II	GE-6 : Machine Translation : Tools and Techniques प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-21

	Translation -Ambiguity and Acceptability		
	Unit-III Vyavahara and Polity: Vyavahara Ancient Indian Legal system various types of disputes, Courts, Legal administration, Civil and Criminal Law, Legal Procedure, Evidences, Penal code, Judgement. Polity: Monarchic Rulers, acquisition and protection of the State, Good Governance, Seven elements of State, essential qualification for the King and ministers, Internal and International affairs. Mandala theory. Shadgunya, four Upayas,	B.A. 2 nd YEAR (Prog.) Semester- IV	DSC –7 Dharmashastra Studies
	Unit: IV Analysis of Selected Vedic Meter and their Lyrical Methods(गान पद्धति); Brahati, pamkti, tristup and jagati. Unit: VI Analysis of Selected Classical Meter and their Musical Rendering (गान पद्धति) Definition Example. Analysis and Lyrical Methods of following Meters malini, shikharni, vasantailakā, mandākirāntā, sragdhara.	B.A. 3 rd YEAR (P) Semester - VI	GE –I Sanskrit Meter and Music (62131101)
	UNIT-III Understanding Asana and Pranayama Asana: the basics SuryaNamaskara Nadishodhana Pranayama	B.A. 2 nd Year (P) Semester - IV	VAC 1: Yoga : PHILOSOPHY AND PRACTICE
	UNIT-II Basic principles of Food and Nutrition and Ayurveda * Understanding rich sources of nutrients * Concept of Doshas &	B.A. 1 ST Year (H/P) Semester - Ii	VAC 1 : AYURVEDA AND NUTRITION  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College विश्वविद्यालय / University of Delhi ब्लॉक कुआन, नई दिल्ली / Dhula Kuan, New Delhi-21

		assessment * Ayurvedic Principles of food habits and factors determining quality of food (Ahara vidhi visheshaayatana) * FSSAI regulations on Ayurvedic Aahar		
	<u>Tutorials:</u>	TUTORIALS, PRACTICE AND PRACTICAL REGARDING THE TOPICS WILL BE TAKEN. M.A. 1 st and 2 nd Year (also)		
	<u>Assignments:</u>	ASSIGNMENTS WILL BE GIVEN REGARDING THE TOPICS.		
	<u>Tests:</u>	TESTS WILL BE TAKEN TIMELY.		
MAY	<u>Theory:</u>	Unit IV : Ambiguity and Acceptability	B.A./B.Sc. 1 st YEAR (Prog.+Hons.) Semester- II	GE-6 : Machine Translation : Tools and Techniques
		Unit-IV Prayashchitta: Types of Sins, various Penances in the form of Fasting, sharing (Daana). Yajya, Pilgrimage, Shraddha	B.A. 2 nd YEAR (Prog.) Semester- IV	DSC –7 Dharmashastra Studies
		Unit: VI Analysis of Selected Classical Meter and their Musical Rendering (गान पद्धति) Definition Example. Analysis and Lyrical Methods of following Meters sragdhara and Sārdūlvikridita.	B.A. 3 rd YEAR (P) Semester - VI	GE –I Sanskrit Meter and Music (62131101)
		UNIT-III Understanding Asana and Pranayama Asana: the basics SuryaNamaskara Nadishodhana Pranayama	B.A. 2 nd Year (P) Semester - IV	VAC 1: Yoga : PHILOSOPHY AND PRACTICE
		UNIT-III Ayurvedic Diets * Principles of Diet: Aharavidhi vidhan, Sattvic, Rajasi, Tamasic foods	B.A. 1 st Year (H/P) Semester - Ii	VAC 1 : AYURVEDA AND NUTRITION

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		* Incompatible food (Viruddha Ahara), Pathya; Apathya; Viprita Ahaar * Lifestyle Management with Dincharya and Ritucharya • Application of Ayurvedic diets to stress linked food behaviour		
	<u>Tutorials:</u>	TUTORIALS, PRACTICE AND PRACTICAL REGARDING THE TOPICS WILL BE TAKEN.		



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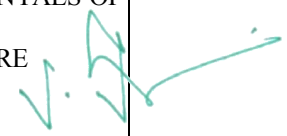
SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sunita Atal

Department: Sanskrit

Semester: II/IV/VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	UNIT -3 Sanskrit Kavya In World Literature	B.A.(H) 2nd year DEC-11	SANSKRIT AND WORLD LITERATURE
		UNIT-1 Introduction to Buddhism	B.A.(H)2 ND year GE-10	FUNDAMENTALS OF BUDDHIST LITERATURE
		UNIT-1 Origin and development of stage in different ages; pre-historic, Vedic age, Epic-Puranic age	B.A.(PROG.)3 RD YEAR, AEEC	INDIAN THEATRE
		UNIT-1 Brief Introduction to Chandasastra	B.A.(PROG.)3 RD YEAR, GE	SANSKRIT METER AND MUSIC
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
FEBRUARY	Theory:	UNIT -2 Indian Philosophical thought and Its Global Spread	B.A.(H) 2nd year DEC-11	SANSKRIT AND WORLD LITERATURE
		UNIT-2 Life of Buddha	B.A.(H)2 ND year GE-10	FUNDAMENTALS OF BUDDHIST LITERATURE


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		UNIT-3 Theatre; Types and Construction UNIT4 Acting; Angika, Vacika, Sattvika, Aharya	B.A.(PROG.)3 RD YEAR, AEEC	INDIAN THEATRE
		UNIT-6 Analysis of Selected Classical Meter and their Musical Rendering	B.A.(PROG.)3 RD YEAR, GE	SANSKRIT METER AND MUSIC
		UNIT-1 Essence of Indian Culture	B.A (Prog.)2 nd year AEC;2	SANSKRIT –C CULTURE AND SOCIETY



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MARCH	Theory:	UNIT -2	B.A.(H) 2nd year DEC-11	SANSKRIT AND WORLD LITERATURE
		Indian philosophical thought and Its Global Spread		
		UNIT-3 Buddhist Philosophy	B.A.(H)2 ND year GE-10	FUNDAMENTALS OF BUDDHIST LITERATURE
		UNIT-6 Actor, Rasa	B.A.(PROG.)3 RD YEAR, AEEC	INDIAN THEATRE
		UNIT-6 Analysis of Selected Classical Meter and their Musical Rendering	B.A.(PROG.)3 RD YEAR, GE	SANSKRIT METER AND MUSIC
		UNIT-1 Essence of Indian Culture	B.A (Prog.)2 nd year AEC;2	SANSKRIT –C CULTURE AND SOCIETY
		UNIT-2 Introduction to Geeta; Background, Purpose	B.A (Prog.) 1st year AEC-1	SANSKRIT –C INTRODUCTORY UPANISAD AND GITA
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
APRIL	Theory:	UNIT -3	B.A.(H) 2nd year DEC-11	SANSKRIT AND WORLD LITERATURE
		Sanskrit Studies across the World		


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	UNIT-4 Buddhist Ethics	B.A.(H)2 ND year GE-10	FUNDAMENTALS OF BUDDHIST LITERATURE
	UNIT-5 Drama; Subject - Matter	B.A.(PROG.)3 RD YEAR, AECC	INDIAN THEATRE
	UNIT-6 Analysis of Selected Classical Meter and their Musical Rendering	B.A.(PROG.)3 RD YEAR, GE	SANSKRIT METER AND MUSIC
	UNIT-2 Indian Social Thinkers	B.A (Prog.)2 nd year AEC;2	SANSKRIT –C CULTURE AND SOCIETY
	UNIT-2 Introduction to Geeta; Background, Purpose	B.A (Prog.) 1st year AEC-1	SANSKRIT –C INTRODUCTORY UPANISAD AND GITA
	UNIT-2 Basic Principles of Food and Nutrition and Ayurveda	B.A (Hons.)2 nd year VAC-1	VAC-1 AYURVEDA AND NUTRITION
	UNIT-1 Origin and Development of Niti-kavya; Kathasaritsagar, Panchtantra, Hitopadesh, Chanakyaniti	B.A (Hons.)1st year VAC-1	ADVANCE NITI LITERATURE IN SANSKRIT


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MAY	INTERNAL ASSESSMENT EXAM	INTERNAL ASSESSMENT / PROJECT /PRESENTATION WILL BE TAKEN		
	Tutorials:	TUTORIALS REGARDING THE TOPICS WILL BE TAKEN.		
	Theory:	UNIT -1 General Survey	B.A.(H) 2nd year DEC-11	SANSKRIT AND WORLD LITERATURE
		UNIT-4 Buddhist Philosophy	B.A.(H)2 ND year GE-10	FUNDAMENTALS OF BUDDHIST LITERATURE
		UNIT-2 Types of Theatre	B.A.(PROG.)3 RD YEAR, AEEC	INDIAN THEATRE
		UNIT-6 Analysis of Selected Classical Meter and their Musical Rendering	B.A.(PAROG.)3 RD YEAR, GE	SANSKRIT METER AND MUSIC
		UNIT-2 Indian Social Thinkers	B.A (Prog.)2 nd year AEC;2	SANSKRIT –C CULTURE AND SOCIETY
		UNIT-2 Introduction to Geeta; Background, Purpose	B.A (Prog.) 1st year AEC-1	SANSKRIT –C INTRODUCTORY UPANISAD AND GITA
		UNIT-2 Basic Principles of Food and Nutrition and Ayurveda	B.A (Hons.)2 nd year VAC-1	VAC-1 AYURVEDA AND NUTRITION

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 धौला कुआँ, नई दिल्ली / Dhola Kuan, New Delhi-21

Teaching plan

Dr. Vedanidhi

Assistant Professor

Sanskrit Department

Duration :18-01-2024 to 19-03 2024

Papers:

Sem-2

Dsc-5 Sanskrit Epic

18th to 31st January

Unit 3.

भगवद्गीता अध्याय २ पद्य ११ से २५ तक (शाङ्करभाष्य)

1st to 29th February

Unit 2

Ramayana as the source of Sanskrit literature

i. Ramayana as the source book for Indian values – ideal king, ideal family, Ideal

Polity, ideal society, ideal character

ii. Valmiki Ramayana as the source book for Sanskrit literature – Epics, Dramas,

Lyric poetry, Adhyātma Ramayana, Adbhuta Ramayana.

1st to 19th March

Unit 4:

Mahabharata as the source book

i. Mahabharata as the source book for Indian knowledge and values

ii. Sanskrit literary works based on the Mahabharata – Dramas, long poems

(Mahakavyas)



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Sem-6

DSE-3

Theatre and Dramaturgy in Sanskrit

18th to 31st January

Unit: I

Types of theatre: vikṛṣṭa (oblong), caturasra (square), tryasra (triangular), jyeṣṭha (big), madhyama (medium), avara (small). bhūmiśodhana (Examining the land) and māpa (measurement of the site), mattavāraṇī (raising of pillars), raṅgapīṭha and rangaśīrṣa (stage), dārukarma (wood-work), nepathya -gṛha (greenhouse), prekṣopaveśa (audience-hall).

1st to 29th February

Unit 2

Definition of drama and its various names - drśya, rūpa, rūpaka , abhineya; abhinaya and its types: āṅgika (gestures), vācika(oral), sāttvika (representaion of the sattva), āhārya (dresses and make-up).

1st to 19th March

Unit :2

Vastu: (subject-matter) : ādhikārika (principal), prāsaṅgika (subsidiary), Five kinds of arthaprakṛti, kāryāvasthā (stages of the action of actor) and sandhi (segments), arthopakṣepaka (interludes),

Sem-2

AEC 1:

Sanskrit A: Advance Neeti Literature in Sanskrit

1st to 29th February

Unit: I

Origin and development of Nītikāvya: Kathāsaritsāgara, Pañcatantra, Hitopadeśa,

1st to 19th March

Unit: II

Pancatantra, introduction First Story, Verses: 1-10



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Sem-2

VAC 1: AVURVEDA AND NUTRITION

19th to 29th February

UNIT- I

Introduction to Ayurvedic Nutrition

- Ayurveda and Indian food cultures
- Nutrition and lifestyle transition over the years

1st to 19th March

UNIT- II

- Lifestyle Management with Dincharya and Ritucharya

Sem-4

VAC : Yoga: PHILOSOPHY AND PRACTICE

19th to 29th February

UNIT- I

- Patanjali's Yogasutra: a summary • First sutra

1st to 19th March

UNIT- II

- History of Yoga • Significance of Asana



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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Nabanipa Bhattacharjee

Department: Sociology

Semester: BA (Program/MDC), Semester II

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	Introduction to sociology of religion; meaning and scope; Andre Beteille and Peter Berger	DSC 04	Religion and Society
	Practical	NA	NA	NA
	Tutorial (for CA through class presentations)	Approaching religion through sociological lens; main reading is Andre Beteille.	DSC 04	Religion and Society
FEBRUARY	Theory	Sociology of religion's nature and scope contd.; sacred and profane; Emile Durkheim	DSC 04	Religion and Society
	Practical	NA	NA	NA
	Tutorial (for CA through class presentations)	Approaching religion through sociological lens; main reading is Peter Berger; sacred and profane	DSC 04	Religion and Society
MARCH	Theory	Religion and rationalization; Max Weber; Religion as a cultural system; Clifford Geertz	DSC 04	Religion and Society

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	Practical	NA	NA	NA
	Tutorial (for CA through class presentations)	Myth, ritual and the body; readings to be discussed are: C.J. Fuller, Robert Hertz and JPS Uberoi	DSC 04	Religion and Society
	Assignment	Sociology and theology have different approaches towards the study of religion. Discuss with reference to Beteille and Berger	DSC 04	Religion and Society
APRIL	Theory	Myth, ritual and the body contd.; readings to be discussed are: Cyrus Pangborn, Akos Ostor and M.N.Srinivas	DSC 04	Religion and Society
	Practical	NA	NA	NA
	Tutorial (for CA through class presentations)	Contemporary issues in religion; main readings are: Jeremy Stolow and T.N. Madan; Class Presentations I	DSC 04	Religion and Society
	<u>Mid-Sem Test</u>	Topics: sacred and profane & religion and rationalization	DSC 04	Religion and Society
MAY	Theory	Contemporary issues in religion contd; main readings are: Jeremy Stolow and T.N. Madan	DSC 04	Religion and Society
	Practical	NA	NA	NA
	Tutorial (for CA through class presentations)	Class Presentations II	DSC 04	Religion and Society



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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Nabanipa Bhattacharjee

Department: Sociology

Semester: BA (Program), Semester VI

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Introducing economic sociology; economy as an embedded process; substantivist and formalist approaches	Generic Elective 02 (GE 02)	Economy and Society
	Practical		NA	NA
	Tutorial	Discuss Karl Polanyi's contribution to economic sociology	Generic Elective 02 (GE 02)	Economy and Society
FEBRUARY	Theory	Functionalist approach in economic sociology; domestic mode of production; introduction to peasant economy	Generic Elective 02 (GE 02)	Economy and Society
	Practical	NA	NA	NA
	Tutorial	With reference to Marshall Sahlins define and discuss the features of domestic mode of production	Generic Elective 02 (GE 02)	Economy and Society

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MARCH	Theory	Understanding peasant economy with the help of Eric Wolf's work; socialist economies of eastern Europe; examining capitalism and its mode of production	Generic Elective 02 (GE 02)	Economy and Society
	Practical	NA	NA	NA
	Tutorial	Write an essay on socialist mode of production and the reasons for its failure	Generic Elective 02 (GE 02)	Economy and Society
	<u>Assignment (10 Marks)</u>	Write an essay on the debate between substantivism and formalism in economic anthropology	Generic Elective 02 (GE 02)	Economy and Society
APRIL	Theory	Globalization as an economic and cultural process; Mcdonaldization as a process; cross-cultural consumption; theories of economic development	Generic Elective 02 (GE 02)	Economy and Society
	Practical		NA	NA
	Tutorial	Cross-cultural consumption is a reality in the modern word. Elaborate.	Generic Elective 02 (GE 02)	Economy and Society
	<u>Mid-Sem Test (10 Marks)</u>	Topics: Domestic mode of production; peasant economy	Generic Elective 02 (GE 02)	Economy and Society



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MAY	Theory	Theories of development [contd.]	Generic Elective 02 (GE 02)	Economy and Society
	Practical	NA	NA	NA
	Tutorial	Revision of the entire syllabus depending on student feedback and demand.	Generic Elective 02 (GE 02)	Economy and Society



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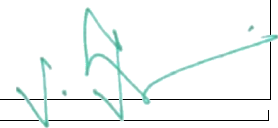
SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Padma Priyadarshini

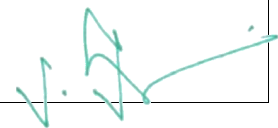
Department: Sociology

Semester: II

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	1.Plurality of sociological perspectives	Core Course- 4	Sociological Perspectives
	Practical	NA	NA	NA
	Tutorial	Assignment on Socratic Reasoning : “The Sociological perspectives	Core Course-4	Sociological Perspectives
FEBRUARY	Theory	2. Functionalism: Turner 3. Durkheim: Rules of Sociological Method 4. Conflict: Sanderson	Core Course-4	Sociological Perspectives
	Practical	NA	NA	NA
	Tutorial	Discussion on the Sociology of Death, Marriage, Birth.	Core Course-4	Sociological Perspectives
MARCH	Theory	5. Conflict: Marx and Engels 6. Interpretive Sociology: Freund Julien	Core Course-4	


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	Practical	NA	NA	NA
	Tutorial	Flipped Class Room Technique. Presentation on Interactionism	Core Course- 4	Sociological Perspectives
	Mid Sem Exam	MCQ and short answer questions on Sociological Perspectives, Functionalism and Conflict.	Core Course- 4	Sociological Perspectives
APRIL	Theory	7. Interpretive: Weber 8. Interactionism: Giddens 9. Interactionism: Goffman	Core Course- 4	Sociological Perspectives
	Practical	NA	NA	NA
	Tutorial	.Discussion on Conflict and Interpretive perspectives	Core Course- 4	Sociological Perspectives
	Assignment (Lecture)	Write up on what is Interactionism : Giddens and Goffman.	Core Course- 4	Sociological Perspectives
MAY	Theory	Feminist Perspective: Jackson and Scott	Core Course- 4	Sociological Perspectives
	Practical	NA	NA	NA
	Tutorial	Exam Paper Discussion and Assignment Reports.	Core Course-4	Sociological Perspectives


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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Padma Priyadarshini
Department: Sociology
Semester: IV (January – May 2024)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	1.What is Economic Sociology? 2. The Fundamental Assumptions.	DSC - 11	Economic Sociology.
	Practical	NA	NA	NA
	Tutorial	Economic sociology and how it is distinct from mainstream sociology.	DSC - 11	Economic Sociology
FEBRUARY	Theory	3. Perspectives: Polanyi 4. Granovetter : Embeddedness	DSC - 11	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Flipped Classroom: Hunting and Gathering Pesantry Capitalism (Sahlins, Scott and Wallerstein)	DSC - 11	Economic Sociology


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MARCH	Theory	5. Distribution and its reach : Mauss 6. Patterson: Redistribution	DSC - 11	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Research on different types of markets.	DSC - 11	Economic Sociology
	<u>Assignment</u>	Group Presentations on the Markets	DSC - 11	Economic Sociology
APRIL	Theory	7. Weiss: Coffee Breaks and Connections 8. Informal Economy: Light, Donald	DSC - 11	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Relevance of both formal and Informal economy to the study of Environmental Sociology	DSC - 11	Economic Sociology
	<u>Mid-Semester Exam</u>	<u>Topics:</u> 1. Economic Sociology 2. Perspectives	DSC - 11	Economic Sociology


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MAY	Theory	Platform Society (Dijck, Jose Van)	DSC - 11	Economic Sociology
	Practical	NA	NA	NA
	Tutorial	Discussion on H and G societies, Peasantry and Capitalistic modes of production.	DSC - 11	Economic Sociology
	Assignment (Lecture)	Write up on the above mentioned topics.	DSC - 11	



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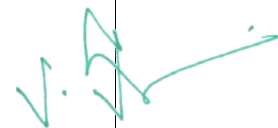
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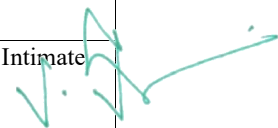
Department: Sociology

Semester: II

Month		Topics(s)	Course	Paper Code/Name
JANUARY	Theory	1.Intimacy an Introduction Jamieson Lynn	GE 05	Sociology of Intimate Life
	Practical	NA	NA	NA
	Tutorial	Discussion on : What is intimacy	GE 05	Sociology of Intimate Life
	<u>Assignment</u>		GE 05	Sociology of Intimate Life
FEBRUARY	Theory	2.Institutions and Intimacies (Coontz) 3Deinstitutionalization of Marriages (Cherlin)	GE 05	Sociology of Intimate Life
	Practical	NA	NA	NA


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MARCH	Tutorial	Discussion on the historical evolution of Love.	GE 05	Sociology of Intimate Life
	Assignment	Write up on what students perceptions are on the gendered division of labor at home.	GE 05	Sociology of Intimate Life
	Theory	4. Gender, Sexuality and Intimacy 5. Invention of Heterosexuality 6. Stacey Judith : Love, marriage and family values	GE 05	Sociology of Intimate Life
	Practical	NA		
APRIL	Tutorial	Discussion on the institution of marriage and how it has evolved over the years	GE 05	Sociology of Intimate Life
	Assignment (Lecture)	Write up on Institutions and Intimacies	GE 05	Sociology of Intimate Life
	Theory	7. Weston: Families based on choice 8. Raheja et al: Erotic imagination in Rajasthani womens' songs.	GE 05	Sociology of Intimate Life
	Practical	NA		
	Tutorial	Discussion on straight families and LGBTQ +	GE 05	Sociology of Intimate Life
	Assignment (Tutorial)	1. Flipped classroom Intimacy and Care 2. Intimacy and Democracy	GE 05	Sociology of Intimate Life
	Mid Sem Exams	Intimacy, Love and Marriage	GE 05	Sociology of Intimate Life


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MAY

Theory	Intimacy and Love: Lamb Hochschild: Commercialization of Intimate life	GE 05	Sociology of Intimate Life
Practical	NA	GE 05	Sociology of Intimate Life
Tutorial	Group discussion on the normal chaos of love	GE 05	Sociology of Intimate Life
Assignment (Tutorial)	Write up on Intimacy of care and Intimacy of democracy	GE 05	Sociology of Intimate Life



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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Satheesh Perumalla

Department: Sociology

Semester: VI

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	G S Ghurye: Caste and Race. D P Mukerji: Tradition and Modernity, Middle Class	BA (H) Sociology	Discipline Specific Elective 06 : Indian Sociological Traditions
	Practical			
	Tutorial			
FEBRUARY	Theory	Verrier Elwin: The Ethnographies. Elwin, The Religion of an Indian Tribe. Verrier Elwin and Tribal Development. Veena Das: Introduction	BA (H) Sociology	Discipline Specific Elective 06: Indian Sociological Traditions
	Practical			
	Tutorial			
MARCH	Theory	M. N. Srinivas: Indian Anthropologists and the study of Indian Society. Social Change in Modern India, On Living in a Revolution and Other Essays,	BA (H) Sociology	Discipline Specific Elective 06: Indian Sociological Traditions

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	Practical			
	Tutorial			
	Mid-Term Test (10 Marks)	Assessment test on GS Ghurye and D P Mukherjee reading.		
APRIL	Theory	Irawati Karve: The Life and Work of Irawati Karve”, Kinship Organization in India. Leela Dube: Caste, Class and Power, Anthropological Explorations in Gender: Intersecting Field	BA (H) Sociology	Discipline Specific Elective 06: Indian Sociological Traditions
	Practical			
	Tutorial			
	<u>Assignment (10 Marks)</u>	Presentations and Assignments on Various topics of Indian Sociological traditions		
MAY	Theory			
	Practical			
	Tutorial			

P. Sathish

Signature of the teacher

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Satheesh Perumalla

Department: Sociology

Semester: Semester IV

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	. 'The conception and definition of economic sociology' - Martinelli, Alberto. 2023	B.A (Prog) Sociology Semester IV	Core Course (DSC) 08 Economic Sociology
	Practical			
	Tutorial	Discussions on topics covered.		
FEBRUARY	Theory	The Assumptions That Ground the Field'-- Portes, Alejandro. 'Economy as an Instituted Process'- Polanyi, Karl. The Problem of Embeddedness- Granavettor	B.A (Prog) Sociology Semester IV	
	Practical			
	Tutorial	Discussions on topics covered.		
MARCH	Theory	The Original Affluent Society' in Stone Age- Sahlins, Marshall The Economics and Sociology of Subsistence Ethics- James Scott The Commodification of Everything- Wallerstein, Immanuel	B.A (Prog) Sociology Semester IV	

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C	Practical			
	Tutorial	Discussions on topics covered.		
	Mid-Term Test (10 Marks)	First Four readings		
APRIL	Theory	'The Gifts and Obligation of Return Gift-- Mauss, Marcel 'Distribution and Redistribution-- Patterson, Thomas C The Lived Experience of a Commodity in Tanzanian - Weiss, Brad 'From Migrant Enclaves to Mainstream- Light, Donald W	B.A (Prog) Sociology Semester IV	
	Practical			
	Tutorial	Discussions on topics covered.		
	<u>Assignment (10 Marks)</u>	Presentations and Assignments on different topics of the Syllabus		
MAY	Theory	The Platform Society as a Contested Concept- Dijck, Jose Van	B.A (Prog) Sociology Semester IV	
	Practical			
	Tutorial	Discussions on topics covered.		

P. Sattar

Signature of the teacher

V. A.

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Satheesh Perumalla

Department: Sociology

Semester: Semester II

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	. <i>Changing India</i> - Stern, Robert	B.A (Prog) Sociology Semester II	Core Course (DSC) 08 Economic Sociology
	Practical			
	Tutorial	Discussions on topics covered.		
FEBRUARY	Theory	Mason, P-Unity and Diversity Castes in India: Their Mechanism- Ambedkar A Note on Sanskritization and Westernization- Mn Srinivas	B.A (Prog) Sociology Semester II	
	Practical			
	Tutorial	Discussions on topics covered.		
MARCH	Theory	Xaxa, V. Tribes in India The Model of Agrarian Classes in India- Dhanagare, D.N., The Centrality of Middle Class- Despande Rural Sociology- Desai, A. R.	B.A (Prog) Sociology Semester II	

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	Practical			
	Tutorial	Discussions on topics covered.		
	Mid-Term Test (10 Marks)	First Four readings		
APRIL	Theory	The Myth of Self Sufficiency of the Indian Village- M N Srinivas and Am Shah Nation and Village: Images of Rural India- Jodka Plurality and Pluralism- T N Madan	B.A (Prog) Sociology Semester IV	
	Practical			
	Tutorial	Discussions on topics covered.		
	<u>Assignment (10 Marks)</u>	Presentations and Assignments on different topics of the Syllabus		
MAY	Theory	The Contemporary Women's Movement- Radha Weiner, Myron. Migration,	B.A (Prog) Sociology Semester IV	
	Practical			
	Tutorial	Discussions on topics covered.		

P. Sattar

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V. A.

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Urmi Bhattacharyya

Department: Sociology

Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory	Introducing Visual Cultures and the Process of 'Seeing': -Mitchell, W.J.T. 'Showing Seeing' -Berger, John. Ways of Seeing	B. A. (H) Sociology – DSE	Visual Culture
	Tutorial	Showing seeing – a pedagogical exercise Ways of seeing – historical analysis	B. A. (H) Sociology – DSE	Visual Culture
	Practical	NA		
February	Theory	The Spectacles of Modernity -Guy Debord -Ella Shohat -Roma Chatterjee	B. A. (H) Sociology – DSE	Visual Culture
	Tutorial	Discussions on modernity and media; On postcolonialism and local media	B. A. (H) Sociology – DSE	Visual Culture
	Practical	NA		
March	Theory	Power, Knowledge and gaze -Foucault -Nicholas Mirzoeff -Bernard Cohn -John Tagg Visual Contestations -Umberto Eco -Mikhail Bakhtin	B. A. (H) Sociology – DSE	Visual Culture


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	Tutorial	Analysing visuality and countervisuality, colonial visuality and domination, technical modernity and modern discipline	B. A. (H) Sociology – DSE	Visual Culture
	Practical	NA		
	Assignment	Write a note on the notion of spectacle and the possibility of multitemporality.	B. A. (H) Sociology – DSE	Visual Culture
	Mid-Term Test	Seventeenth century disciplinary techniques to the development of the Panopticon – elaborate on the modern idea of discipline.	B. A. (H) Sociology – DSE	Visual Culture
April	Theory	Visual Contestations -Lynn Mally -Jacques Ranciere Visual Practices and Identity Formation -Sanjay Srivastava -David MacDougall	B. A. (H) Sociology – DSE	Visual Culture
	Tutorial	Photographic representations, visuality in urban spaces and the construction of identity	B. A. (H) Sociology – DSE	Visual Culture
	Practical	NA		
May	Theory	Visual Culture of the everyday life -Michel de Certeau -Christopher Pinney -Carolyn de la Pena	B. A. (H) Sociology – DSE	Visual Culture
	Tutorial	Everyday life and visuality Globalization, visual consumption and identity	B. A. (H) Sociology – DSE	Visual Culture
	Practical	NA		

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SRI VENKATESWARA COLLEGE
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2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Urmi Bhattacharyya
Department: Sociology
Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory	Understanding Gender -Jackson and Scott -Barbara Risman	B. A. (H) Sociology – Core	Sociology of Gender
	Tutorial	How do we understand the gendering of sociology? Analyzing gender as a social structure	B. A. (H) Sociology – Core	Sociology of Gender
	Practical	NA	B. A. (H) Sociology – Core	Sociology of Gender
February	Theory	Gender, Power and Resistance -Susie Tharu and Tejaswini Niranjana -Abu Lughod	B. A. (H) Sociology – Core	Sociology of Gender
	Tutorial	What are the problems involved in theorising gender Understanding cultural relativism and difference	B. A. (H) Sociology – Core	Sociology of Gender
	Practical	NA	B. A. (H) Sociology – Core	Sociology of Gender
March	Theory	Negotiations and Resistance -Deniz Kandiyoti -And Sara Ahmed -stratification and difference Sylvia Walby Sharmila Rege	B. A. (H) Sociology – Core	Sociology of Gender
	Tutorial	How do we define patriarchy and how can we understand patriarchal bargain? Rethinking feminist theory and bringing it home Gender, class and stratification	B. A. (H) Sociology – Core	Sociology of Gender


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	Practical	NA	B. A. (H) Sociology – Core	Sociology of Gender
	Assignment	Write a note on the social construction of gender	B. A. (H) Sociology – Core	Sociology of Gender
	Mid-Term Test	Elaborate on the gendering of sociology	B. A. (H) Sociology – Core	Sociology of Gender
April	Theory	Work and Household - A. Whitehead -Rajni Palriwala Production of masculinity and femininity	B. A. (H) Sociology – Core	Sociology of Gender
	Tutorial	Household consumption and gender How is masculinity and femininity produced?	B. A. (H) Sociology – Core	Sociology of Gender
	Practical	NA	B. A. (H) Sociology – Core	Sociology of Gender
May	Theory	Culture and Sexuality -Sherry Ortner -Leela Dube -Gayle Rubin	B. A. (H) Sociology – Core	Sociology of Gender
	Tutorial	Nature/culture debate Theories of sexuality	B. A. (H) Sociology – Core	Sociology of Gender
	Practical	NA	B. A. (H) Sociology – Core	Sociology of Gender



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SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Urmi Bhattacharyya

Department: Sociology

Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory	Mass Society and Mass Media: an introduction -George Ritzer Julian Matthews	B. A. (H) Sociology – DSE	Sociology of Media
	Tutorial	Mass culture, modernity and the notion of mass society	B. A. (H) Sociology – DSE	Sociology of Media
	Practical	NA		Sociology of Media
February	Theory	Mass Society and Mass Media: an introduction -Sara Dickey Sociological Theories of Media -the dominant paradigm (Gillian Todd)	B. A. (H) Sociology – DSE	Sociology of Media
	Tutorial	Understanding how the discipline of sociology interpreted media and its relation to society	B. A. (H) Sociology – DSE	Sociology of Media
	Practical	NA		Sociology of Media
March	Theory	Critical Media Theories -Tony Bennett -David Miller Semiotics, cultural studies and post-modernism -Roland Barthes -Stuart Hall	B. A. (H) Sociology – DSE	Sociology of Media
	Tutorial	Theories of media- theories of society Media power and class power	B. A. (H) Sociology – DSE	Sociology of Media

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	Practical	NA		Sociology of Media
	Assignment	How did the development of cultural studies influence the interpretation of media?	B. A. (H) Sociology – DSE	Sociology of Media
	Mid-Term Test	What is the dominant paradigm in media sociology?	B. A. (H) Sociology – DSE	Sociology of Media
April	Theory	Semiotics, cultural studies and post-modernism -Laura Mulvey -Jean Baudrillard	B. A. (H) Sociology – DSE	Sociology of Media
	Tutorial	Media encoding/ decoding The implosion of the social in the media	B. A. (H) Sociology – DSE	Sociology of Media
	Practical	NA		Sociology of Media
May	Theory	Regulation, Representation, Reception, New Media -Raminder Kaur -Ella Shohat -Sonia Livingstone and Daniel Miller	B. A. (H) Sociology – DSE	Sociology of Media
	Tutorial	Stereotypes and Realism The changing nature of the audience Social media	B. A. (H) Sociology – DSE	Sociology of Media
	Practical	NA	B. A. (H) Sociology – DSE	Sociology of Media



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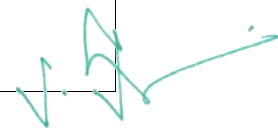
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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Niharika Jaiswal
Department: Sociology
Semester: I

Month		Topics	Course	Paper Code/Name
JANUARY	Theory	Talcott Parsons: Social Actions Turner (1987) Parsons (1951)	DSC 07	Post Classical sociological Thinkers
	Practicals			
	Tutorials	Give an account of the Parsonian interpretation of Social Action		
FEBRUARY	Theory:	Erving Goffman: Dramaturgy Goffman (1956) Presentation of Self in Everyday Life Goffman (1979) Gender Advertisement	DSE 07	Post Classical Sociological Thinkers
	Practicals:			
	Tutorials:	Discuss in detail the dramaturgical approach.		


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	<u>Assignment :</u>	Explain the significance of pattern variables in Parsonian scheme of social actions		
MARCH	Theory:	Berger, Luckmann: Social Constructionism Berger and Luckmann (1991) Giddens and Suttons (2022)	DSE 07	Post Classical Sociological Thinkers
	Practicals:			
	Tutorials:			
	<u>Test</u>	Highlight the important concepts used in Goffman's understanding of 'self'.		
APRIL	Theory:	Herbert Marcuse: Critical Theory Marcuse (1964)	DSC 07	Post classical Sociological Thinkers
	Practicals:			
	Tutorials:	Analyse the important tenets of critical theory		


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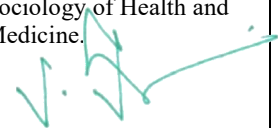
SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Niharika Jaiswal

Department: Sociology

Semester: VI

Month		Topic(s)	Course	Paper Code/Name
January	Theory	1. Introduction to the sociology of health and medicine 2. Conceptualizing disease sickness and illness	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine
		3. Social and cultural Dimension of Illness and Medicine		
	PRACTICAL	NA		
	Tutorial	Trace the origin and development of modern medicine in arriving at an understanding of sickness, disease and illness.	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine
February	Theory	Theoretical Orientation in Health and Illness Political economy of health Systems approach Health as a power discourse Feminist approach	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine
	Practical	NA	NA	NA
	Tutorial	examine how the concept of 'sick role' encapsulates the functional aspect of medicine as a social system	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine.
March	Theory	Negotiating Health and Illness - Health behaviours	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine.


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	Practical	NA	NA	NA
APRIL	Theory	Negotiating Health and Illness Health systems and Health Policies	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine
	Tutorial	evaluate the ways in which biomedicine has 'overmedicalized' women's health issues.	Discipline Specific Elective	DSE 05 Sociology of Health and Medicine.
ASSIGNMENTS QUESTIONS	1. WRITE A RESEARCH PAPER ON THE LIVED EXPERIENCE OF COVID 19 INTERTWINED WITH QUESTIONS OF IDENTITIES. a. To select 3/4 case studies and conduct detailed telephonic interviews with reflect their lived experiences of negotiating with the illness and present a paper of 4000 words on the same. 2. TO BRIEFLY ANALYSE ANY ONE OF THE FOLLOWING WITH RESPECT TO ITS RELEVANCE IN CONTEMPORARY TIMES: a. Nichter, Mark and Mimi Nichter (1996) Popular Perceptions of Medicine: A South Indian Case Study. b. Qadeer, Imrana (2013). Universal Health Care in India: Panacea for whom? Indian Journal of Public Health Volume 57 Issue 4 October-December 2013 pp 225-229 c. Baru, Rama (2003). Privatisation of Health Services: A South Asian Perspective. <i>Economic and Political Weekly</i>. 38(42) 4433-4437			

N. Anisha

V. A.

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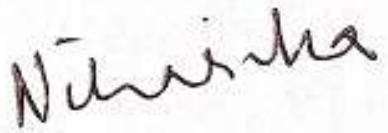


SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Niharika Jaiswal
Department: Sociology
Semester: VI

Month		Topic(s)	Course	Paper Code/Name
January	Theory	Understanding Social Stratification Mills (1963) Berreman (1972) Grusky(2008)	Discipline Core Course 05	Social Stratification
	PRACTICAL	NA		
	Tutorial	Quiz on Berreman 'Race, Caste and Other Invidious Distinctions in Social Stratification.	Discipline Core Course 05	Social Stratification
February	Theory	Social Stratification: Axes and Issues Gupta (1991) Deliege (1999)	Discipline Core Course 05	Social Stratification
	Practical	NA	NA	NA
	Tutorial	Examine different aspects of caste with reference to contemporary times.	Discipline Core Course 05	Social Stratification
March	Theory	Class Joyce (1995) Gupta (1991) Ethnicity Hutchinson (1996)	Discipline Core Course 05	Social Stratification


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	Practical	NA	NA	NA
APRIL	Theory	Gender Mulling (1988) Collins (1993) Race Back (2009) Grusky (2008) Social Mobility Keister (2012) Already (2008)	Discipline Core Course 05	Social Stratification
	Tutorial	What is sexual stratification a unique case for social stratification	Discipline Specific Elective	Social stratification
				



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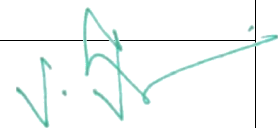
Name of the Faculty: Garima Rath

Department: Sociology

Semester: VI

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	1. Talcott Parsons Action Systems Pattern Variables	Sociology Honors, 6 th semester	Sociological Thinkers-II/ Core Course 13
	Practical	N/A		
	Tutorial	N/A		
FEBRUARY	Theory	1. G.H. Mead The Interactional Self 2. Erving Goffman Impression Management	Sociology Honors, 6 th semester	Sociological Thinkers-II/ Core Course 13
	Practical	N/A		
	Tutorial	N/A		
MARCH	Theory	1. Berger and Luckmann Social Construction of Reality 2. Horkheimer and Adorno The Dialectic of Enlightenment (half)	Sociology Honors, 6 th semester	Sociological Thinkers-II/ Core Course 13

	Practical	N/A		
	Tutorial	N/A		


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	Assignment (10 Marks)	Describe Parsons' action system theory with reference to pattern variables.		
APRIL	Theory	1. Horkheimer and Adorno The Dialectic of Enlightenment 2. H. Marcuse One Dimensional Man 3. P. Bourdieu Outline of a theory of Practice (introduction)	Sociology Honors, 6 th semester	Sociological Thinkers-II/ Core Course 13
	Practical	N/A		
	Tutorial	N/A		
	<u>Mid Sem</u> (10 Marks)	Self is different than the body. Explain		
MAY	Theory	P. Bourdieu Outline of the theory of Practice.	Sociology Honors, 6 th semester	Sociological Thinkers-II/ Core Course 13
	Practical	NA		
	Tutorial	NA		



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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Garima Rath

Department: Sociology

Semester: VI

Month		Topic(s)	Course	Paper Code/Name
JANUARY	Theory	1. Emile Durkheim a. Social Fact	Sociology Honors, 4th semester	Sociological Thinkers-I/ DSC 10
	Practical	N/A		
	Tutorial	Continuation of Social Fact		
FEBRUARY	Theory	1. Emile Durkheim Rules of Sociological Method How to determine social causes and types in Suicide	Sociology Honors, 4th semester	Sociological Thinkers-I/ DSC 10
	Practical	N/A		
	Tutorial	Durkheim's Mechanical Solidarity		
MARCH	Theory	1. Organic Solidarity by Durkheim 2. Max Weber The Theory of Social and Economic Organization The Protestant Ethic and Spirit of Capitalism- Ch 1&2	Sociology Honors, 4th semester	Sociological Thinkers-I/ DSC 10  प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi घौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

	Practical	N/A		
	Tutorial	Beginning of Presentations for Continuous Assessment- Durkheim by Group 1 & 2		
	Assignment (12 Marks)	Highlight the rules outlined by Durkheim for the study of social fact with specific reference to Suicide		
APRIL	Theory	1. Max Weber Protestant Ethic and Spirit of Capitalism Ch 3&5 2. Talcott Parsons Action Systems	Sociology Honors, 4th semester	Sociological Thinkers-I/ DSC 10
	Practical	N/A		
	Tutorial	Presentation by Group 3,4,5		
	<u>Mid Sem (12 Marks)</u>	Describe the importance of punishments in maintaining Social Solidarity		
MAY	Theory	Talcott Parsons Pattern Variables	Sociology Honors, 4th semester	Sociological Thinkers-I/ DSC 10
	Practical	NA		
	Tutorial	Presentation by Group 6		

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SRI VENKATESWARA COLLEGE
SEMESTERWISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Dr. Saba Firdaus

Department: Sociology

Semester: II

Month		Topic(s)	Course	Paper Code/Name
January	Theory	Understanding Personal and Professional Self; Professional Ethics (responsibility, accountability, competence); Goal setting and time management.	SEC	WORKING WITH PEOPLE
	Practical	Group Project: Assessing Personal and Professional self.	SEC	WORKING WITH PEOPLE
	Tutorial	N/A		
February	Theory	Strategizing and planning for fieldwork; Rapport building, initiating dialogues and sustaining communication; Thematic learning modules for targeted populations: children, adolescent, youth and elderly	SEC	WORKING WITH PEOPLE
	Practical	Field trip	SEC	WORKING WITH PEOPLE
	Tutorial	N/A		
March	Theory	Documentation in Field Work: case records, group work records, and community profile	SEC	WORKING WITH PEOPLE



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	Practical	Report writing workshop	SEC	WORKING WITH PEOPLE
	Tutorial	N/A		
	Mid-Term Test (10 Marks)	How to make a field-based research design		
April	Theory	Application of Skills and Techniques: Understanding Self—Johari Window, Strength and Weakness—SWOT Analysis; Mobilizing Community Support: Networking, Advocacy and Public relation	SEC	WORKING WITH PEOPLE
	Practical	Community outreach		
	Tutorial	N/A		
	<u>Assignment (10 Marks)</u>	Significance of ethics in culture		
May	Theory	Remedial classes, group discussions	SEC	WORKING WITH PEOPLE
	Practical	Presentations		
	Tutorial	N/A		

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**SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)**

Name of the Faculty: Dr. Saba Firdaus

Department: Sociology

Semester: II

Paper: Families and Intimacies

Month		Topics	Course	Paper Code/Name
January	Theory	An Invitation to Families and Intimacy: Sociological Concepts of Marriage and Family, Is Family Universal	B.A Hons	DSC 06 Families and Intimacies
	Tutorial	Assignments and Presentations on Nayar Family and marriage and Family in India		
	Practical	N.A		
February	Theory	Feminist Questions on the Family, Household and Family in India, Population Gender and Politics		
	Tutorial	Presentations on A, M shah 's Work, Veena Das		
	Practical	N.A		
March	Theory	Familial Worlds: Women and Kinship, Companionate Marriage and the Desire for Intimacy		
	Tutorial	Presentations and assignments covered on the above topics		
	Practical	N.A		


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	Assignment			
	Mid-Term Test			
April	Theory	Comparative Perspectives on Gender in South and South-East Asia. Aging, Gender and Body in North India		
	Tutorial	Presentations and Assignments covered on the above topics		
	Practical	N.A		
May	Theory	Intimacies and Marriage, Intimacy as a Concept, Marriage in South Asia, Surfing for Spouses		
	Tutorial	Presentation s and Assignments to be covered on the above topics		
	Practical	N.A		

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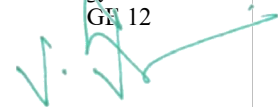
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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Rahul Jha
Department: Sociology
Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory	Unit 1: Fashion: Between History and Sociology	GE IV th Semester (Hons)	Sociology of Fashion/ GE 12
	Tutorial	Elizabeth Wilson, Roland Barthes		
	Practical	N.A		
February	Theory	Unit 1: Fashion : Between History and Sociology (cont.) Unit 2: Making and meanings of Fashion a) Sociality and Material Culture	GE IV th Semester (Hons)	Sociology of Fashion/ GE 12
	Tutorial	G. Simmel, Laura Bovone		
	Practical	N.A		
March	Theory	Unit 2 b) Commodity and Consumption Unit 2 c) Identity and Change	GE IV th Semester (Hons)	Sociology of Fashion/ GE 12


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	Tutorial	Thorstein Veblen, Kate Fletcher		
	Practical	N.A		
	Assignment	Magazine on dacadal approach to fashion & presentation.		
	Mid-Term Test	Internal Test on first two units, 2nd unit till 2 (b)		
April	Theory	Unit 2(c) Identity and Change Unit 3: Fashion in a Global Society	GE IV th Semester (Hons)	Sociology of Fashion/ GE 12
	Tutorial	Fred Davis, Angela McRobbie Emma Tarlo, M. Maynard		
	Practical	N.A		
May	Theory	Unit III Fashion and Cultural Studies	GE IV th Semester (Hons)	Sociology of Fashion/ GE 12
	Tutorial	Kaiser		
	Assignment	Paper on selected readings (tba)		
	Practical	N.A		

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Rahul Jha
Department: Sociology
Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory	Unit 1: Introduction to Negotiation	SEC	Negotiation and Leadership/
	Tutorial	N.A		
	Practical	N.A		
February	Th	Negotiation Fundamentals, Negotiation Canvas	SEC	Negotiation and Leadership/
	Tutorial	N.A		
	Practical	Game: Prisoner's Dilemma, Battle of Sexes, Coordination Problem based activities		
March	Th	Unit 2: Managing critical Moments, Effective Communication and Relationship Building Leadership : Theory	SEC	Negotiation and Leadership/
	Tutorial	N.A		

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	Pr	Case Studies based on Text and Topics, Group presentations		
	Assignment	Solving case study, writing negotiation experience via activity participation in class		
	Mid-Term Test	Internal Test on first two units		
April	Theory	Unit 3: Discovering Creating and Claiming Value Unit 4: Managing Alternatives Leadership Types	SEC	Negotiation and Leadership/
	Tutorial	N.A		
	Practical	Case Study presentations, BATNA discussion		
May	Theory	Unit 4: Legitimacy and Building Commitment	SEC	Negotiation and Leadership/
	Tutorial	N.A		
	Practical	Case based- discussions Role Play of Leader		

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: Rahul Jha

Department: Sociology

Semester: IV

Month		Topics	Course	Paper Code/Name
January	Theory	Brief Introduction to Indian Culture and Communication	VAC	Culture and Communication / 6967000003
	Tutorial	N.A		
	Practical	None		
February	Th	Aurobindo on Gita Chankya Niti General Introduction to Indian Culture: Philosophical Schools, Lang., S& T in Ancient India, Literature, Art	VAC	Culture and Communication / 6967000003
	Tutorial	N.A		
	Practical	Case study based on Ch. 2 Gita and lessons on Chanakya		
March	Th	Ramanujan, Dhanavel, Sudha Murty	VAC	Culture and Communication / 6967000003
	Tutorial	N.A		


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	Practical	Case Studies, Scenarios, Role Play		
	Assignment	Essay on Indian Culture, field visit		
	Mid-Term Test	Internal Test on readings as covered earlier.		
April	Th	Wole Soyinka, Hira Basonde A recap of Gita by Aurobindo, and Chankya Niti with emphasis on its relevance in modern times	VAC	Culture and Communication / 6967000003
	Tutorial	N.A		
	Practical	Case study based discussions, values that we can learn from ancient Indian Wisdom, social activity discussion		
May	Th	Sudha Murthy, Discussion on Vasudeva Kutumbakam, Satyameva Jayate	VAC	Culture and Communication / 6967000003
	Tutorial	N.A		
	Practical	Practical file discussion, Discussing cases that help debate and enrich our understanding of Culture and heritage		

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SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: KANCHAN BISWAS

Department: SOCIOLOGY

Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory	Unit 1. Doing Social Research	B.A. (hons)	RESEARCH METHODS II
	Tutorial	Discussion on Field (Issues and Context)		
	Practical	N/A		
February	Theory	Unit 2. Methods of Data Collection	B.A. (hons)	RESEARCH METHODS II
	Tutorial	Discussion of Participant and non-participant observation in daily lives		
	Practical	N/A		
March	Theory	Unit 2. Methods of Data Collection	B.A. (hons)	RESEARCH METHODS II
	Tutorial	Discussion on Interview as a market research technique.		

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	Practical	N/A		
	Assignment	Essay on Research Design/ writing a research proposal.		
	Mid-Term Test	Class test on first two units.		
April	Theory	Unit 3. Statistical Methods	B.A. (hons)	RESEARCH METHODS II
	Tutorial	Diagrams and Chart analysis in Statistics.		
	Practical	N/A		
May	Theory	Unit 4. Research Projects	B.A. (hons)	RESEARCH METHODS II
	Tutorial	N/A		
	Practical	N/A		

Kanchan Biswas

V. A.

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN
2023-2024 (EVEN SEM)

Name of the Faculty: KANCHAN BISWAS
Department: SOCIOLOGY
Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory	Social Stratification: Concepts and Approaches	B.A. (Prog)	Social Stratification
	Tutorial	Discussion on racial stereotypes		
	Practical	N/A		
February	Theory	Forms of Stratification	B.A. (Prog)	Social Stratification
	Tutorial	Discussion of Caste Practices		
	Practical	N/A		
March	Theory	Forms of Stratification	B.A. (Prog)	Social Stratification
	Tutorial	Discussion on Gender discrimination		
	Practical	N/A		
	Assignment	Essay on Intersectionality of any two forms of stratification.		
	Mid-Term Test	Class test on first unit.		


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April	Theory	Social Mobility	B.A. (Prog)	Social Stratification
	Tutorial	<i>Discussions on Aspirations and Attainment</i>		
	Practical	N/A		
May	Theory	Class Presentations	B.A. (Prog)	Social Stratification
	Tutorial	Perspectives on Mobility		
	Practical	N/A		

Kamchan Biswas

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V. Venkateswara

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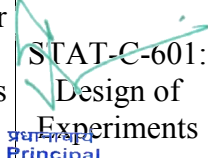
Jan., May 2024

Name of the Faculty: Prof. Veena Budhraj

Department: Statistics

Semester: VI

Month		Topics	Course	Paper Code/Name
January	Theory:	Experimental designs: Role, historical perspective, terminology, experimental error, basic principles, uniformity trials, fertility contour maps, choice of size and shape of plots and blocks. Basic designs: Completely Randomized Design (CRD), Randomized Block Design (RBD),	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
	Practicals:	Analysis of a CRD with equal and unequal replicates. Analysis of RBD. Analysis of LSD	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
February	Theory:	Latin Square Design (LSD) -layout, model and statistical analysis, relative efficiency, analysis with missing observations, Incomplete Block Designs: Balanced Incomplete Block Design (BIBD)-parameters, relationships among its parameters	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
	Practicals:	Analysis of RBD with one missing observation. Analysis of LSD with one missing observation	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
March	Theory:	incidence matrix and its properties, Symmetric BIBD, Resolvable BIBD, Affine Resolvable BIBD, Intra Block analysis, complimentary BIBD, Residual BIBD, Dual BIBD, Derived BIBD.	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
	Practicals:	Intra block analysis of BIBD. Intra block analysis of a symmetric BIBD. Factorial	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments


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		experiments: Concepts, notations and advantages, 2^2 , $2^3 \dots 2n$ and 3^2 factorial experiments, design and analysis	Statistics (Hons.)	Experiments
	<u>Assignment</u>	Based on Intra block analysis of BIBD.	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
April	Theory	Total and Partial confounding for 2^n ($n \leq 5$), 3^2 and 3^3 . Factorial experiments in a single replicate. Fractional factorial experiments: Construction of one-half and one-quarter fractions of 2^n	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
	Practicals:	Analysis of 2^2 and 2^3 factorial in CRD, RBD and LSD. Analysis of a 3^2 factorial in CRD and RBD. Analysis of a completely confounded two level factorial design in 2 blocks. Analysis of a completely confounded two level factorial design in 4 blocks. Analysis of a partially confounded two level factorial design	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
	<u>Mid Term Test</u>	Unit-II and Unit-III	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
May	Theory:	Fractional factorial experiments: Alias structure, Resolution of a design	Bachelor of Statistics (Hons.)	STAT-C-601: Design of Experiments
	Practicals:	Analysis of a single replicate of a $2n$ design. Analysis of one half fraction of $2n$ factorial design. Analysis of one quarter fraction of $2n$ factorial design.	Bachelor of Statistics (Hons.)	



(Prof. Veena Budhraj)



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

EVEN SEMESTER 2023-24

Name of the Faculty: Prof. Mukti Kanta Sukla

Department: Statistics

Semester: II

Month		Topic	Course	Paper Code/Name
January	Theory	A review of theorems related to matrices, triangular, symmetric and skew symmetric matrices, idempotent matrices, Hermitian and skew Hermitian matrices, orthogonal matrices, singular and non-singular matrices and their properties, Trace of a matrix, unitary, Involutory and nilpotent matrices.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
	Practical	Question based on matrices. Construction of idempotent matrix and study its properties, construction of orthogonal matrix.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
February	Theory	Definition, properties and application of determinants for third and higher orders, Evaluation of determinants of order 3 and more using transformations. Symmetric and skew symmetric determinants, Circulant determinants, Jacobi's Theorem, the product of determinants. Use of determinants in solution to the system of linear equations.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
	Practical	Problems based on Determinants,	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
March	Theory	Adjoint and inverse of a matrix and related properties, Partitioning of matrices and simple properties. Row reduction and echelon forms, the matrix equations $AX=B$, solution sets of linear equations, Applications of linear equations, inverse of a matrix. Vector spaces, subspaces, sum of spaces, span of a set, Linear dependence and independence, dimensions and basis, Gram Schmidt Orthogonal Process. Assignment I on topics covered.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
	Practical	Computation of inverse of matrix by partitioning, Practical on Gram Schmidt Orthogonal Process.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
April	Theory	Rank of a matrix, row rank, column rank, standard theorems on rank, rank of sum and product of two matrices. Generalized inverse (concept, properties with illustration), Characteristics roots and vectors, Properties of characteristics Roots and vector, Cayley Hamilton theorem and application, Spectral decomposition. Quadratic forms, derivatives of linear functions and quadratic forms. Derivatives of linear functions and quadratic forms.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
	Practical	Practical on Cayley Hamilton theorem, Quadratic form, Generalized inverse	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
May	Theory	Linear orthogonal transformation and their diagonalization.	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics
	Practical	Problems session	B.Sc. (H) Statistics, Sem II	DSC-VI -Algebra of Statistics

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Teaching Plan

Name of the Faculty: Prof.M.K.Sukla

Department: Statistics

Semester: II

Paper Name: Introductory Probability

Month		Topics	Course	Paper Code/Name
February	Theory	Probability: Introduction, random experiments, sample space, events and algebra of events, Definitions of Probability – classical, statistical, and axiomatic, Conditional Probability. laws of addition and multiplication.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
	Practical	Application problems based on conditional probability, Application problems based on addition law of probability.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
March	Theory	Bayes theorem and its applications.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
	Practical	Problems based on Bayes theorem and related problems	B.Sc. (H) Statistics, Semester II	Introductory Probability
April	Theory	Random Variables: Discrete and Continuous Random Variables, Probability Mass Function, Probability Density Function, Cumulative Distribution Function.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Application problems based on Expectation of random variable. Problems based on discrete random variable and continuous random variable Problems based on relationships between moments about origin and central moments.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Assignment	Probability and Random Variable	B.Sc. (H) Statistics, Semester II	Introductory Probability

	Mid-Term Test	-----	-----	-----
	Theory	Illustrations of random variables and its properties. Expectation, variance, moments and moment generating function.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Computing moment generating function and how it helps in finding moments. Computing cumulative distribution function for discrete and continuous random variables drawing its graph	B.Sc. (H) Statistics, Semester II	Introductory Probability
May	Theory	Negative Binomial Distribution, Hypergeometric Distribution, Uniform Distribution, Normal Distribution, Exponential Distribution, Beta Distribution, Gamma Distribution. De-Moivre Laplace and Lindeberg-Levy Central Limit Theorem (C.L.T.) (Only Statements)	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Computing probabilities using Microsoft Excel functions binomdist(), poisson(), normsdist(), normsinv(), normdist(), and norminv(). Computing Binomial probabilities for large n and small p using Microsoft Excel functions binomdist() and poisson(). Computing Binomial probabilities for large n and $p \in (0.4, 0.6)$ using Microsoft Excel functions binomdist() and normdist().	B.Sc. (H) Statistics, Semester II	Introductory Probability

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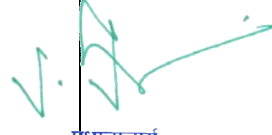
Jan., May 2024

Name of the Faculty: Dr. Ramesh Kumar

Department: Statistics

Semester: IV, VI

Month		Topics	Course	Paper Code/Name
January	Theory:	Concepts of parameter, statistic, sampling distribution of a statistic, standard error. Sampling distribution of sample mean, standard errors of the sample mean, sample variance, and sample proportion, Null and alternative hypotheses, level of significance, Type I and Type II errors, their probabilities and critical region, determination of sample size, confidence intervals, and p-value	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Bivariate Normal Distribution (BVN): pdf of BVN, properties of BVN, marginal and Conditional pdf of BVN. Multivariate Data: Random Vector: Probability mass/density functions, Distribution Function, Mean vector, Dispersion matrix, Marginal distributions, Conditional distributions	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
	Practicals:	Practical based on Sampling distribution of sample mean, standard errors of the sample mean, sample variance, and sample proportion	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Bivariate Normal Distribution and its properties. Multivariate Normal Distribution and its properties. Partial Correlation Coefficient. Multiple Correlation Coefficient. Plane of Regression.		STAT-C-602: Multivariate Analysis and Non-Parametric Methods
February	Theory:	Tests of significance and confidence intervals for - single proportion, difference of two proportions, single mean, difference of two means, and difference of two standard deviations. Chi-Square distribution: Definition and derivation of the probability distribution of Chi-square distribution with n degrees of freedom, nature of the curve for different degrees of freedom, mean, mode, variance, moment generating function, cumulant generating function, additive property, and limiting form of the Chi-square distribution, Applications of Chi-Square distribution	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions


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		Sequential Analysis: Sequential probability ratio test (SPRT) for simple v/s simple Hypotheses. Fundamental relations among α , β , A and B, determination of A and B in Practice. Wald's	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-
	Practicals:	Testing of significance and confidence intervals for single proportion and difference of two proportions. Testing of significance and confidence intervals for single mean and difference of two means. Testing of significance and confidence intervals for the difference of two standard deviations.	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		SPRT Procedure and Graphical representation of decision lines, acceptance and rejection regions ASN function and ASN curve. OC function and OC curve	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
March	Theory:	Student's t-statistic and Fishers t-statistic: definition and derivation of their sampling distributions, nature and characteristics of graph of t distribution, moments, limiting form and applications of the t distribution	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Nonparametric Tests: Introduction and Concept, Test for randomness based on total number of runs, Empirical distribution function, Kolmogorov Smirnov test for one sample, Sign tests- one sample and two samples, Wilcoxon-	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
	Practicals:	Testing of significance and confidence intervals for the population variance has a specific value. Testing for the goodness of fit. Testing of significance for the independence of attributes. Testing based on a 2 x 2 contingency table without and with Yates' corrections	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Test for randomness based on total number of runs. Kolmogorov Smirnov test for one sample. Sign test: one sample, two sample, large samples. Wilcoxon-Mann-Whitney U – test.	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
	Assignment	Assignment based on testing of significance	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Assignment based on Bivariate Normal	Bachelor	STAT-C-602:

April	Theory	F-statistic: Definition and derivation of the sampling distribution, the graph of F distribution, moments, and applications of the F distribution. Relationship between t, F, and Chi-square distributions, Convergence in probability, convergence with probability one, convergence in the mean square, convergence in distribution – definitions and relations between the various modes. Chebyshev's inequality, Weak Law of Large Numbers (WLLN), and Strong Law of Large Numbers (SLLN) along with examples and applications.	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Multivariate Normal distribution and its properties. Sampling distribution for mean vector and variance-covariance matrix. Multiple and partial correlation coefficient and their properties. Introduction to discriminant Analysis,	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
	Practicals:	Testing of significance and confidence intervals for single mean and difference of two means and paired t-test. Testing of significance and confidence intervals of an observed sample correlation coefficient. Testing and confidence intervals of equality of two population variances	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Kruskal - Wallis test. Wald- Wolfowitz test. Median Test	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
	<u>Mid Term Test</u>	Unit-II and Unit-III		DSC 10: Sampling Distributions
		Unit-III and Unit-IV		STAT-C-602: Multivariate Analysis and Non-Parametric Methods

May	Theory:	Basic idea and relevance of Central Limit Theorem (CLT), De-Moivre Laplace theorem, Lindeberg Levy theorem, Liapunov Theorem (only statement), and applications of CLT.	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Principal Components Analysis and Factor Analysis	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods
	Practicals:	Test of significance and confidence intervals based on F distribution	Bachelor of Statistics (Hons.)	DSC 10: Sampling Distributions
		Principal Component Analysis. Discriminant analysis. Factor Analysis	Bachelor of Statistics (Hons.)	STAT-C-602: Multivariate Analysis and Non-Parametric Methods



(Dr. Ramesh Kumar)



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

EVEN SEMESTER 2023-24

Name of the Faculty: Dr. Kalpana Yadav

Department: Statistics

Semester: II, IV and VI

Month		Topic	Course	Paper Code/Name
January	Theory	Introduction to investments and markets: Cashflows-deterministic and random, Definition of Arbitrage, Risk Aversion.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		Introduction to index numbers, Construction of price and quantity index numbers by simple Aggregate Method and Weighted aggregate Method, Comparison and interpretation. Index number based on average of Price relatives. Introduction, Sources of collecting vital statistics, Errors in census and registration data, Uses of Vital Statistics.	B.Sc. (H) Statistics, Sem II	DSC 5-Applied Statistics
		Estimation Theory: Estimation: Parameter space, sample space, point estimation, requirement of a good estimator, consistency, unbiasedness.	B.A (P)-Sem-IV	DSC IV-Elements of Statistical Inference
	Practical	To compute NPV and IRR for given cashflow streams, and also taking inflation into account.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		Construction of price and quantity index number by Laspeyre's, Paasche's formula, Marshall-Edgeworth's formula, Fisher's formula.	B.Sc. (H) Statistics, Sem II	DSC 5-Applied Statistics
		Practical on Unbiased estimators and consistent estimators, Efficient estimators and relative efficiency of estimators.	B.A (P)-Sem-IV	DSC IV-Elements of Statistical Inference
February	Theory	Effective Interest rate, Nominal Interest rate, Compounding interest rate, Present Value and Future Values of streams, Bonds and Yields, Term structure of interest of interest rates, Forward rates. Assignment-I based on topic covered.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		Criteria of a good index number, Construction of wholesale price index numbers, fixed base index numbers and consumer price index numbers with interpretation. Uses and limitations of index numbers. Measurements of mortality: Crude death rate (CDR), Age specific death rate (ASDR), Standardized death rates and Infant mortality rate. Life table: Assumptions, description and construction of Complete life table. Definition of Abridged life table. Assignment-I based on topic covered.	B.Sc. (H) Statistics, Sem II	Applied Statistics
		efficiency, sufficiency, MVUE, Factorization theorem, Fisher- Neyman Criterion: statement and applications, C-R inequality: statement and application, MVB estimators and their applications, Statement of Rao-Blackwell theorem and Lehmann-Scheffe theorem.	B.A (P)-Sem-IV	DSC IV-Elements of Statistical Inference
	Practical	To calculate the yield of the bonds and also to	B.Sc. (H)	DSE-IV -Financial

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		compute Forward rates.	Statistics, Sem VI	Statistics
		To test the goodness of an index number using Time Reversal Test and Factor Reversible Test, To Construct price index numbers based on Average of Price relatives, construct CPI number using Aggregate Expenditure method and Family Budget method and compare, To Construct Chain base index, Base shifting, Splicing and Deflating of Index Numbers. Practical questions based on CDR and STDR.	B.Sc. (H) Statistics, Sem II	DSC 5-Applied Statistics
		Practical on Sufficient estimators and factorization theorem, Cramer- Rao inequality and MVB estimators.	B.A (P)- Sem-IV	DSC IV-Elements of Statistical Inference
March	Theory	Mean Variance portfolio Theory, Inclusion of a risk-free asset. Introduction to Stochastic Calculus, Brownian Motion.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		Measurements of fertility: CBR, GFR, ASFR and TFR. Introduction to Indian Official Statistics, Present official statistical system in India.	B.Sc. (H) Statistics, Sem II	Applied Statistics
		Methods of estimation: Maximum likelihood, least squares and minimum variance, Properties of maximum likelihood estimators (illustration), Interval Estimation: confidence interval and confidence limits for the parameters of normal distribution, confidence intervals for large samples. Assignment-I based on topic covered.	B.A (P)- Sem-IV	DSC IV-Elements of Statistical Inference
	Practical	Practice questions Based on Wiener Process	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		To find Standardized death rate by Direct and Indirect method, to construct a complete life table, To fill in the missing entries in a life table.	B.Sc. (H) Statistics, Sem II	DSC 5-Applied Statistics
		Practical based on Method of maximum likelihood estimation, Method of least squares and minimum variance, Confidence interval and confidence limits for the parameters of normal distribution, Confidence intervals in case of large samples.	B.A (P)- Sem-IV	DSC IV-Elements of Statistical Inference
April	Theory	Stochastic Integration, Stochastic differential equations and their solutions; Ito's Lemma. Black-Scholes differential equation, Black-Scholes formula for European.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		Measurements of population growth: Crude rate of natural increase, Pearle's vital index, GRR, NRR. Statistical offices at the Centre, Statistical offices in the States, Methods of collection of official statistics on population.	B.Sc. (H) Statistics, Sem II	Applied Statistics
		Test of significance Principles of test of significance: Null and alternative hypotheses, simple and composite, Type-I and Type-II errors, critical region, level of significance, power of the test, best critical region, most powerful test.	B.A (P)- Sem-IV	DSC IV-Elements of Statistical Inference
	Practical	Practice questions Based on Wiener Process and Black Scholes Differential Equation.	B.Sc. (H) Statistics,	DSE-IV -Financial Statistics

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			Sem VI	
		To Calculate CBR, GFR, AFSR and TFR for a given set of data.	B.Sc. (H) Statistics, Sem II	DSC 5-Applied Statistics
		Practical based on Type I and Type II errors, power of the test.	B.A (P)-Sem-IV	DSC IV-Elements of Statistical Inference
May	Theory	Black- Scholes for American options.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		Methods of collection of official statistics on price (retail as well wholesale).	B.Sc. (H) Statistics, Sem II	Applied Statistics
		uniformly most powerful test, uniformly most powerful unbiased critical region (UMPU), Neyman- Pearson Lemma: statement and its applications to construct most powerful test.	B.A (P)-Sem-IV	DSC IV-Elements of Statistical Inference
	Practical	Revision of all the practical.	B.Sc. (H) Statistics, Sem VI	DSE-IV -Financial Statistics
		To calculate Crude rate of Natural Increase and Pearle's Vital Index, to calculate GRR and NRR for a given set of data and compare them.	B.Sc. (H) Statistics, Sem II	Applied Statistics
		Practical based on Most powerful critical region (NP Lemma).	B.A (P)-Sem-IV	DSC IV-Elements of Statistical Inference

Signature of the teacher

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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

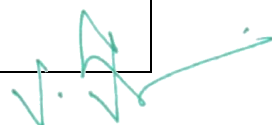
EVEN SEMESTER 2023-24

Name of the Faculty: Dr. Dipika

Department: Statistics

Semester: II, VI

Month		Topic	Course	Paper Code/ Name
January	Theory	Survival Analysis: Functions of survival times, survival distributions and their applications-exponential, gamma, Weibull, Rayleigh, lognormal, death density function for a distribution having bath-tub shaped hazard function	B.Sc. (H) Statistics,	STAT-DSE-3(B) Biostatistics and Survival Analysis
		Random variables: Discrete and continuous random variables, pmf, pdf	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods
	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	STAT-DSE-3(B) Biostatistics and Survival Analysis
February	Theory	Censoring Schemes: Type I, Type II and progressive or random censoring with biological examples. Estimation of mean survival time and variance of the estimator for Type I and Type II censored data with numerical examples. Non-parametric methods: Actuarial and Kaplan-Meier methods for estimating survival function and variance of the Estimator.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-3(B) Biostatistics and Survival Analysis
		cdf, illustrations of random variables and its properties, expectation of random variable and its properties. Variance, covariance and their properties with illustrations. Moments and cumulants, moment generating function with properties, cumulants generating function and characteristic function.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods


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	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	STAT-DSE-3(B) Biostatistics and Survival Analysis
		Practicals based on topic covered in the classes.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods
March	Theory	Competing Risk Theory: Indices for measurement of probability of death under competing risks and their inter-relations. Estimation of probabilities of death using maximum likelihood principle and modified minimum Chi-square methods. Theory of independent and dependent risks. Bivariate normal dependent risk model.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-3(B) Biostatistics and Survival Analysis
		Bivariate probability distributions, marginal and conditional distributions, independence of variates (only general idea to be given). Transformation in univariate and bivariate distributions.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods
	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics Semester VI	STAT-DSE-3(B) Biostatistics and Survival Analysis
April	Internal exam	Internal exam will be based on the syllabus covered till mid term break	Semester II and Semester VI	DSCC-II Statistical Methods
	Assignment	Will be based on unsolved problems and practical applications of the theoretical concepts		STAT-DSE-3(B) Biostatistics and Survival Analysis

	Theory	Stochastic Epidemic Models: Simple epidemic models, general epidemic model definition and concept (without derivation). Duration of an epidemic. Statistical Genetics: Introduction, concepts- Genotype, Phenotype, Dominance, Recessiveness, Linkage and Recombination, Coupling and Repulsion.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-3(B) Biostatistics and Survival Analysis
		Discrete probability distributions – Binomial, Poisson- measures of central tendency, dispersion, skewness and kurtosis, recurrence relations based on moments, moment generating function, cumulant generating function, characteristic function, additive property, fitting of distribution and examples.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	STAT-DSE-3(B) Biostatistics and Survival Analysis
	Practical	Practicals based on topic covered in the classes.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods
May	Theory	Mendelian laws of Heredity, Random mating, Gametic Array relation between genotypic array and gametic array under random mating. Distribution of genotypes under random mating. Clinical Trials: Planning and design of clinical trials, Phase I, II and III trials. Blinding: Single, Double, Triple.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-3(B) Biostatistics and Survival Analysis
		Continuous Probability distribution - Normal - measures of central tendency, dispersion, skewness and kurtosis, recurrence relations based on moments, moment generating function, cumulant generating function, characteristic function, additive property and examples. Exponential distribution – moment generating function and lack of memory. Gamma distribution – moment generating function, cumulant generating function and additive property.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods

	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	STAT-DSE-3(B) Biostatistics and Survival Analysis
		Practicals based on topic covered in the classes.	B.A (P) With Statistics as non- major Semester II	DSCC-II Statistical Methods



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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Name of the Faculty: Dr.M.S.RAVIKUMAR

Department: STATISTICS

Semester: IV

Paper Name: Skill Enhancement Course (SEC): IT Skills and Data Analysis-II

Month		Topics	Course	Paper Code/Name
February	Theory	Definition and graphical representation of a function, vertical line test Polynomial functions: linear, quadratic and cubic functions	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
	Practical	Graphical representation of a function, vertical line test Graphical representation of linear, quadratic and cubic functions	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
March	Theory	Reciprocal, exponential and logarithmic functions Concept of slope of a function through graphical representation Scatter diagrams Correlation analysis : measure and interpretation of correlation coefficient and coefficient of determination	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
	Practical	Graphical representation of exponential and logarithmic functions Graphical representation of slope Graphical representation of Scatter diagram Correlation coefficient and coefficient of determination	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
April	Theory	Hypotheses, model specification and testing Bi-variate regression analysis: method of least squares, curve of best fit as a Model for prediction Project Doing	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
	Practical	Hypotheses, model specification and testing Bi-variate regression analysis: method of least squares, curve of best fit as a model for prediction Project Doing	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
	Assignment	Data sets to apply all the statistical measures as per syllabus	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
	Mid-Term Test	-----	-----	प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

May	Theory	Project Presentation and Viva	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II
	Practical	Project Presentation and Viva	B.Sc. (H) Statistics, Semester IV	IT Skills and Data Analysis-II

Signature of the teacher



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Name of the Faculty: Dr.M.S.RAVIKUMAR

Department: STATISTICS

Semester: IV

Paper Name: GE-IV: Basics of Statistical Inference

Month		Topics	Course	Paper Code/Name
February	Theory	Parameter space, sample space, point estimation, requirement of a good estimator, consistency, unbiasedness, efficiency, sufficiency, Minimum variance unbiased estimators, Factorization theorem, Fisher- Neyman Criterion: statement and applications, Cramer-Rao inequality: statement and application.	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
	Practical	1. Unbiased estimators and consistent estimators. 2. Efficient estimators and relative efficiency of estimators. 3. Sufficient estimators and factorization theorem.	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
March	Theory	MVB estimators and their applications, Statement of Rao- Blackwell theorem and Lehmann-Scheffe theorem. Methods of estimation: maximum likelihood, least squares and minimum variance, Properties of maximum likelihood estimators (illustration),	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
	Practical	4. Cramer- Rao inequality and MVB estimators. 5. Method of maximum likelihood estimation. 6. Method of least squares and minimum variance.	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
April	Theory	Interval Estimation: confidence interval and confidence limits for the parameters of normal distribution, confidence intervals for large samples. Principles of test of significance: Null and alternative hypotheses, simple and composite, Type-I and Type-II errors, critical region, level of significance, power of the test, best critical region, most powerful test,	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
	Practical	7. Confidence interval and confidence limits for the parameters of normal distribution. 8. Confidence intervals in case of large samples. 9. Type I and Type II errors, power of the test.	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
	Assignment	All Definitions.	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
	Mid-Term Test	-----	-----	प्रधानाचार्य Principal श्री वेंकटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhaula Kuan, New Delhi-21

May	Theory	Uniformly most powerful test, uniformly most powerful unbiased critical region (UMPU), Neyman- Pearson Lemma: statement and its applications to construct most powerful test.	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference
	Practical	10. Most powerful critical region (NP Lemma).	B.Sc. (H) Statistics, Semester IV	GE-IV: Basics of Statistical Inference

Signature of the teacher



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Name of the Faculty: Dr.M.S.RAVIKUMAR

Department: STATISTICS

Semester: VI

Paper Name: CBCS – Actuarial Statistics

Month		Topics	Course	Paper Code/Name
February	Theory	Uncertainty of age at death, survival function, time-until-death for a person, curate future lifetime, force of mortality, life tables with examples	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
	Practical	10. To derive the pdf of $S=X_1+X_2+X_3$. 11. To calculate the value of Θ . 12. To calculate the value of Θ .	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
March	Theory	Deterministic survivorship group, life table characteristics, assumptions for fractional age, some analytical laws of mortality.	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
	Practical	13. To calculate the retention limit that minimizes the probability that the company's retained claims plus cost of reinsurance exceeds 8,25,000. 14. To calculate the expected value of the claims provided by a stop-loss reinsurance coverage.	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
April	Theory	Models for insurance payable at the moment of death, insurance payable at the end of the year of death and their relationships. Life annuities. Continuous life annuities.	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
	Practical	15. To evaluate $2p_{30}$, $5p_{30}$, $1q_{31}$, $3q_{31}+1$. 16. To compute the probabilities $1.5p_0$ $2.5 q_0$ $3.4 2q_0$ $4.p_1$ $5.q_2$ 17. To identify the survival function.	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
	Assignment	All the Units Examples.	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
	Mid-Term Test	-----	-----	-----
May	Theory	Life annuities with periodic payments. Continuous and discrete premiums.	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics
	Practical	18. To compute density function and distribution function	B.Sc. (H) Statistics, Semester VI	CBCS – Actuarial Statistics

Signature of the teacher


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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Teaching Plan

Name of the Faculty: Dr.Nagendra Kumar Kalaparathi

Department: STATISTICS

Semester: IV

Paper Name: GE-IV Statistical Computation using R

Month		Topics	Course	Paper Code/Name
February	Theory	Overview of the R language Installing R and R studio; working on R studio, scripts and text editors, creating and saving R workspaces, installing packages and loading libraries. Data types in R: Numeric, Integer, Character, Logical, and Complex. Data structures in R: Vector, Matrix, Data frames, List. Mathematical operators, Relational Operators, and Logical.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Practical's based on the data structures, arrays vectors and operators	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
March	Theory	Operators and use of functions: class(), names(), head(), tail(), rbind(), cbind(), rownames(), colnames() etc. Learn how to load data, importing a data file viz. .xlsx. handling missing data in R.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Graphical representation of data with bar-plot, pie-chart, and boxplot. Histogram with equal and unequal class intervals, frequency polygon, Less than and more than Ogives. Fitting of curve linear, quadratic, exponential functions. Scatter plots, correlation	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R


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April	Theory	Generate automated reports giving detailed descriptive statistics mean, median, mode, variance, skewness, five-point summary , frequency table. Statistical/mathematical functions, scan(), summary(), str(), table(), cut(),cumsum(), cumprod(), etc	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Linear and multiple regression, Drawing sample using SRSWR, SRSWOR. Drawing sample using stratified under proportion allocation and systematic sampling. functions(r,d,p,q) for discrete distributions viz. Binomial, Poisson.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Assignment	Data types, Data structures, Vectors and Operations, Data visualization and Basic Statistical techniques, Distribution functions(r,d,p,q) for Binomial, Poisson, Exponential, and Normal . Data distribution: qqplot(), qqnorm().	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Mid-Term Test	-----	-----	-----
	Theory	Decision-making and distributions Introduction to flow control: if, if-else, while, and for loops, simple coding. Distribution functions(r,d,p,q) for Binomial, Poisson, Exponential, and Normal . Data distribution: qqplot(), qqnorm()	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R

	Practical	Functions(r,d,p,q) for discrete distributions viz. Binomial, Poisson. Functions(r,d,p,q) for continuous distribution viz. Uniform, Exponential, and Normal Single, paired and independent samples t-test. Components of a time series data. decomposition(), and smoothing() under time series data	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
May	Theory	Testing of Hypothesis and Time series Basics of statistical inference in order to understand hypothesis testing, and compute p-values and confidence intervals. Applications on t-test, F-test, and Chi-square test with the interpretation of results. Time series analysis, components of a time series data, time series model, ts(), decomposition(), and smoothing with the interpretation of results.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Test the goodness of fit for Binomial, Poisson distribution. Chi- Square test for independence of attributes. Components of a time series data. decomposition(), and smoothing() under time series data	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R

K. Nagendra Kumar

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

Teaching Plan

Name of the Faculty: Dr.Nagendra Kumar Kalaparathi

Department: Statistics

Semester: II

Paper Name: Introductory Probability

Month		Topics	Course	Paper Code/Name
February	Theory	Probability: Introduction, random experiments, sample space, events and algebra of events, Definitions of Probability – classical, statistical, and axiomatic, Conditional Probability. laws of addition and multiplication.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
	Practical	Application problems based on conditional probability, Application problems based on addition law of probability.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
March	Theory	Bayes theorem and its applications.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
	Practical	Problems based on Bayes theorem and related problems	B.Sc. (H) Statistics, Semester II	Introductory Probability
April	Theory	Random Variables: Discrete and Continuous Random Variables, Probability Mass Function, Probability Density Function, Cumulative Distribution Function.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Application problems based on Expectation of random variable. Problems based on discrete random variable and continuous random variable Problems based on relationships between moments about origin and central moments.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Assignment	Probability and Random Variable	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Mid-Term Test	-----	-----	-----

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	Theory	Illustrations of random variables and its properties. Expectation, variance, moments and moment generating function.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Computing moment generating function and how it helps in finding moments. Computing cumulative distribution function for discrete and continuous random variables drawing its graph	B.Sc. (H) Statistics, Semester II	Introductory Probability
May	Theory	Negative Binomial Distribution, Hypergeometric Distribution, Uniform Distribution, Normal Distribution, Exponential Distribution, Beta Distribution, Gamma Distribution. De-Moivre Laplace and Lindeberg-Levy Central Limit Theorem (C.L.T.) (Only Statements)	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Computing probabilities using Microsoft Excel functions binomdist(), poisson(), normdist(), norminv(), normdist(), and norminv(). Computing Binomial probabilities for large n and small p using Microsoft Excel functions binomdist() and poisson(). Computing Binomial probabilities for large n and $p \in (0.4, 0.6)$ using Microsoft Excel functions binomdist() and normdist().	B.Sc. (H) Statistics, Semester II	Introductory Probability

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Teaching Plan

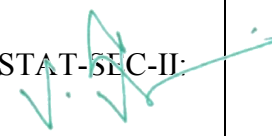
Name of the Faculty: Dr. Nagendra Kumar Kalaparthi

Department: Statistics

Semester: II

Paper Code: STAT-SEC-II & Paper Name: Statistical Software Packages (SSP)

Month	Theory/ Practical	Topic	Course	Paper Code/ Paper Name
February	Theory	Getting started with the Software: Introduction: Data Entry, Storing and Retrieving Files, Generating New Variables; Managing Data – Listing cases, replacing missing values, computing new variables, recoding variables, selecting cases, sorting cases, merging files, Graphs – Creating and editing graphs and charts; Descriptive Statistics Procedures: Frequencies, Descriptive, Explore, Cross Tabulation..	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
	Practical	Practical's based on Draw histogram for equal/unequal width class interval, Stem and Leaf plot, Box plot frequency polygon, pie chart, bar graphs, line charts, Ogive. Construct frequency table using recode (having equal and unequal interval) and visual binning. Compute descriptive statistics for raw data and grouped data and interpret by computing coefficient of variation, skewness and kurtosis and count, compute, compute with if and rank feature.	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
March	Theory	Hypothesis Testing for Means T-tests: One sample test, Independent samples and paired samples t-test; ANOVA – Oneway analysis of variance with post hoc analysis, Two-way analysis of variance	B.Sc.(H)	STAT-SEC-II:
	Practical	Practical's based on T-tests: One sample test, Independent samples and paired		


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		samples t-test; ANOVA – Oneway analysis of variance with post hoc analysis, Two-way analysis of variance	Statistics, Semester II	Statistical Software Packages (SSP)
April	Theory	Testing for Association between Variables Chi-square Test of Independence; Bivariate Correlation Analysis: Simple Scatter Plot; Correlation Coefficient: Pearson, Spearman Rho and Kendall Tau Coefficient. Factor analysis.	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
	Practical	Practical's based on Testing for Association between Variables Chi-square Test of Independence; Bivariate Correlation Analysis: Simple Scatter Plot; Correlation Coefficient: Pearson, Spearman Rho and Kendall Tau Coefficient. Factor analysis		
May	Theory	Linear Regression: Simple Linear Regression, Multiple regression analysis with matrix scatterplot. Multiple Regression: Standard (Enter) and Stepwise Method. Binary Logistic Regression..	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
	Practical	Practical's based on Linear Regression: Simple Linear Regression, Multiple regression analysis with matrix scatterplot. Multiple Regression: Standard (Enter) and Stepwise Method. Binary Logistic Regression.	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
2023-24 Even Semester

Teaching Plan

Name of the Faculty: Dr.Nagendra Kumar Kalaparthi

Department: STATISTICS

Semester: IV

Paper Name: GE-IV Statistical Computation using R

Month		Topics	Course	Paper Code/Name
February	Theory	Overview of the R language Installing R and R studio; working on R studio, scripts and text editors, creating and saving R workspaces, installing packages and loading libraries. Data types in R: Numeric, Integer, Character, Logical, and Complex. Data structures in R: Vector, Matrix, Data frames, List. Mathematical operators, Relational Operators, and Logical.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Practical's based on the data structures, arrays vectors and operators	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
March	Theory	Operators and use of functions: class(), names(), head(), tail(), rbind(), cbind(), rownames(), colnames() etc. Learn how to load data, importing a data file viz. .xlsx. handling missing data in R.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Graphical representation of data with bar-plot, pie-chart, and boxplot. Histogram with equal and unequal class intervals, frequency polygon, Less than and more than Ogives. Fitting of curve linear, quadratic, exponential functions. Scatter plots, correlation	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R


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April	Theory	Generate automated reports giving detailed descriptive statistics mean, median, mode, variance, skewness, five-point summary , frequency table. Statistical/mathematical functions, scan(), summary(), str(), table(), cut(), cumsum(), cumprod(), etc	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Linear and multiple regression, Drawing sample using SRSWR, SRSWOR. Drawing sample using stratified under proportion allocation and systematic sampling. functions(r,d,p,q) for discrete distributions viz. Binomial, Poisson.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Assignment	Data types, Data structures, Vectors and Operations, Data visualization and Basic Statistical techniques, Distribution functions(r,d,p,q) for Binomial, Poisson, Exponential, and Normal . Data distribution: qqplot(), qqnorm().	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Mid-Term Test	-----	-----	-----
	Theory	Decision-making and distributions Introduction to flow control: if, if-else, while, and for loops, simple coding. Distribution functions(r,d,p,q) for Binomial, Poisson, Exponential, and Normal . Data distribution: qqplot(), qqnorm()	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R

	Practical	Functions(r,d,p,q) for discrete distributions viz. Binomial, Poisson. Functions(r,d,p,q) for continuous distribution viz. Uniform, Exponential, and Normal Single, paired and independent samples t-test. Components of a time series data. decomposition(), and smoothing() under time series data	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
May	Theory	Testing of Hypothesis and Time series Basics of statistical inference in order to understand hypothesis testing, and compute p-values and confidence intervals. Applications on t-test, F-test, and Chi-square test with the interpretation of results. Time series analysis, components of a time series data, time series model, ts(), decomposition(), and smoothing with the interpretation of results.	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R
	Practical	Test the goodness of fit for Binomial, Poisson distribution. Chi- Square test for independence of attributes. Components of a time series data. decomposition(), and smoothing() under time series data	B.Sc. (H) Statistics, Semester IV	GE-IV Statistical Computation using R

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Teaching Plan

Name of the Faculty: Dr.Nagendra Kumar Kalaparathi

Department: Statistics

Semester: II

Paper Name: Introductory Probability

Month		Topics	Course	Paper Code/Name
February	Theory	Probability: Introduction, random experiments, sample space, events and algebra of events, Definitions of Probability – classical, statistical, and axiomatic, Conditional Probability. laws of addition and multiplication.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
	Practical	Application problems based on conditional probability, Application problems based on addition law of probability.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
March	Theory	Bayes theorem and its applications.	B.Sc. (H) Statistics, Semester II	GE-II Introductory Probability
	Practical	Problems based on Bayes theorem and related problems	B.Sc. (H) Statistics, Semester II	Introductory Probability
April	Theory	Random Variables: Discrete and Continuous Random Variables, Probability Mass Function, Probability Density Function, Cumulative Distribution Function.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Application problems based on Expectation of random variable. Problems based on discrete random variable and continuous random variable Problems based on relationships between moments about origin and central moments.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Assignment	Probability and Random Variable	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Mid-Term Test	-----	-----	-----

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	Theory	Illustrations of random variables and its properties. Expectation, variance, moments and moment generating function.	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Computing moment generating function and how it helps in finding moments. Computing cumulative distribution function for discrete and continuous random variables drawing its graph	B.Sc. (H) Statistics, Semester II	Introductory Probability
May	Theory	Negative Binomial Distribution, Hypergeometric Distribution, Uniform Distribution, Normal Distribution, Exponential Distribution, Beta Distribution, Gamma Distribution. De-Moivre Laplace and Lindeberg-Levy Central Limit Theorem (C.L.T.) (Only Statements)	B.Sc. (H) Statistics, Semester II	Introductory Probability
	Practical	Computing probabilities using Microsoft Excel functions binomdist(), poisson(), normdist(), norminv(), normdist(), and norminv(). Computing Binomial probabilities for large n and small p using Microsoft Excel functions binomdist() and poisson(). Computing Binomial probabilities for large n and $p \in (0.4, 0.6)$ using Microsoft Excel functions binomdist() and normdist().	B.Sc. (H) Statistics, Semester II	Introductory Probability

K. Nagendra Kumar

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Teaching Plan

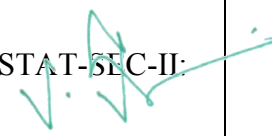
Name of the Faculty: Dr. Nagendra Kumar Kalaparthi

Department: Statistics

Semester: II

Paper Code: STAT-SEC-II & Paper Name: Statistical Software Packages (SSP)

Month	Theory/ Practical	Topic	Course	Paper Code/ Paper Name
February	Theory	Getting started with the Software: Introduction: Data Entry, Storing and Retrieving Files, Generating New Variables; Managing Data – Listing cases, replacing missing values, computing new variables, recoding variables, selecting cases, sorting cases, merging files, Graphs – Creating and editing graphs and charts; Descriptive Statistics Procedures: Frequencies, Descriptive, Explore, Cross Tabulation..	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
	Practical	Practical's based on Draw histogram for equal/unequal width class interval, Stem and Leaf plot, Box plot frequency polygon, pie chart, bar graphs, line charts, Ogive. Construct frequency table using recode (having equal and unequal interval) and visual binning. Compute descriptive statistics for raw data and grouped data and interpret by computing coefficient of variation, skewness and kurtosis and count, compute, compute with if and rank feature.	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
March	Theory	Hypothesis Testing for Means T-tests: One sample test, Independent samples and paired samples t-test; ANOVA – Oneway analysis of variance with post hoc analysis, Two-way analysis of variance	B.Sc.(H)	STAT-SEC-II:
	Practical	Practical's based on T-tests: One sample test, Independent samples and paired		


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		samples t-test; ANOVA – Oneway analysis of variance with post hoc analysis, Two-way analysis of variance	Statistics, Semester II	Statistical Software Packages (SSP)
April	Theory	Testing for Association between Variables Chi-square Test of Independence; Bivariate Correlation Analysis: Simple Scatter Plot; Correlation Coefficient: Pearson, Spearman Rho and Kendall Tau Coefficient. Factor analysis.	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
	Practical	Practical's based on Testing for Association between Variables Chi-square Test of Independence; Bivariate Correlation Analysis: Simple Scatter Plot; Correlation Coefficient: Pearson, Spearman Rho and Kendall Tau Coefficient. Factor analysis		
May	Theory	Linear Regression: Simple Linear Regression, Multiple regression analysis with matrix scatterplot. Multiple Regression: Standard (Enter) and Stepwise Method. Binary Logistic Regression..	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)
	Practical	Practical's based on Linear Regression: Simple Linear Regression, Multiple regression analysis with matrix scatterplot. Multiple Regression: Standard (Enter) and Stepwise Method. Binary Logistic Regression.	B.Sc.(H) Statistics, Semester II	STAT-SEC-II: Statistical Software Packages (SSP)

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SRI VENKATESWARA COLLEGE
SEMESTER WISE TEACHING PLAN (2023-2024)

Teacher Name: Dr Chetan
Semester: Even Semester

Department: Statistics

First Year Semester II

Paper Name: DSC IV: Theory of Probability Distributions (NEP)

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	Discrete probability distribution – Binomial, Poisson- measures of central tendency, dispersion, skewness and kurtosis, recurrence relations based on moments, moment generating function, cumulant generating function, characteristic function, additive property, fitting of distribution, and examples based on application. Continuous Probability distribution - Normal - measures of central tendency, dispersion, skewness and kurtosis, recurrence relations based on moments, moment generating function, cumulant generating function, characteristic function, additive property fitting of distribution and examples based on application, Uniform distribution – moments, mgf, mean deviation and examples based on bivariate transformations.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
	Practical	Problems based on applications of Binomial distribution. Practical based on fitting of Binomial distribution (when parameters are given & when parameters are not given). Practical based on calculation of area under the normal curve. Practical based on calculation of ordinates given area under the normal curve. Practical based on fitting of the normal curve when parameters are not given. Practical based on use of normal approximation to the binomial	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions

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		distribution.		
	Tutorials	--	--	--
	Numerical Assignment	Numerical Based on above topics in the form of Assignment.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
II^{ed} Month	Theory	Properties of various measures of correlation and regression using expectation, Correlation Ratio, Intra-class correlation, Partial and multiple correlations – definition, Yule's notation, the plane of regression, properties of residuals, multiple and partial correlation coefficients and their properties, the relationship between multiple, partial and total correlations and examples based on them.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
	Practical	Practical based on regression lines and properties of regression coefficients. Practical based on Correlation ratio. Practical based on Intra-class correlation. Practical based on multiple correlation coefficients. Practical based on partial correlation coefficient. Practical based on planes of regression.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
	Tutorials	--	--	--
	Assignment cum Numerical Assignment	Assignments will be given on different topics related with above topics.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
III^{ed} Month	Theory	Mathematical Expectation: Conditional expectations and its properties. Bivariate transformations with illustrations. Moments, moment generating function and its properties. Cumulants, cumulant generating function and its properties. Characteristic function and its properties. Inversion theorem along with applications.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
	Practical	Numerical Based on above topics.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
	Tutorials	--	--	--
	Assignment cum Numerical Assignment	Numerical Based on above topics in the form of Assignment.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
IVth Month	Theory	Some inequalities involving expectation - Cauchy Schwartz Inequality, Jensen's inequality. Two-dimensional random variables: Joint probability mass function/ Joint probability density function, marginal and conditional probability mass function/ probability density function,	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions

		independence of random variables, examples based on joint/marginal/conditional pmf/pdf. Conditional expectation and variance, Jacobian of transformation, Bivariate transformation of random variables, and Examples based on bivariate transformation.		
	Practical	Numerical Based on above topics.	B.Sc. (Hons.) Statistics	DSC IV: Theory of Probability Distributions
	Tutorials	--	--	--
	Revision/Doubt Classes	Revision/Doubt Classes will be conducted on different topics related with curriculum.		

Paper Name: VAC: Swachh Bharat (NEP)

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	Introduction to Swachh Bharat Abhiyan (SBA) Gandhian philosophy of Cleanliness Swachh Bharat Abhiyan {SBA} Hygiene, Sanitation & Sustainable Waste Management Agencies and nodal Ministries for SBA	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Practical	Identify plastic and e-waste in and around the institution and suggest innovative technologies to minimize wastage. Identify events/fests that generate maximum waste and ways to minimize it. Visit canteen/shops and track the lifecycle of wet/dry waste in and around the institution and document the findings in the form of a Project Report.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Tutorials	--	--	--
II^{ed} Month	Theory	Different phases of the SBA and its evaluation Citizens' Responsibilities: Role of Swacchagrahi		VAC: Swachh Bharat
	Practical	Visit canteen/shops and track the lifecycle of wet/dry waste in and around the institution and document the findings in the form of a Project Report. Conduct interviews of stakeholders to understand the level of awareness. Conduct a Clean Audit of the Institution and identify areas for action.		VAC: Swachh Bharat


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	Tutorials	--	--	--
	Assignment	Practical assignments will be given on different topics.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
III^{ed} Month	Theory	Swachh Bharat: Rural and Urban Facets: Indicators for Swachh Bharat Sanitation coverage across households (2014 vs. 2022), Open Defecation Free (ODF) Villages: Parameters, ODF plus model: Key indicators. Sustainable sanitation, Waste/water and solid waste management, Garbage Free Cities.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Practical	Conduct cleanliness drives. Organise Swachhata Pakhwada meetings, rallies, and mobilization camps within the identified communities. Students may participate in the Swachh Bharat Internship programme.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Tutorials	--	--	--
	Assignment	Practical assignments will be given on different topics.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
IVth Month	Theory	Prospects and Challenges: Prospects and Challenges, Operational and Financial issues, Monitoring & Supervision, Community Mobilization.	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Practical	If required students can share their experiences in the form of a Project Report. Any other Practical/Practice as decided from time to time	B.Sc. (Hons.) Statistics	VAC: Swachh Bharat
	Assignment	Practical assignments will be given on different topics.		
	Tutorials	--	--	--

Paper Name: DSC V: Applied Statistics I (NEP)

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	--	--	--
	Practical	To calculate Crude rate of Natural Increase and Pearle's Vital Index To calculate GRR and NRR for a given set of data and compare them To Construct price and quantity index numbers by Laspeyre's, Paasche's, Marshall-Edgeworth, Drobish -Bowley, Walsch and Fisher's Formula. To test the goodness of an Index number	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R

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		using Time Reversible Test and Factor Reversible Test To Construct price index numbers based on Average of Price Relatives		
	Tutorials	--	--	--
II^{ed} Month	Theory	--	--	--
	Practical	To calculate CDR and ASDR for a given set of data To find Standardized death rate by Direct and Indirect method To construct a complete life table To fill in the missing entries in a life table	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R
	Tutorials	--	--	--
III^{ed} Month	Theory	--	--	--
	Practical	To calculate CBR and GFR for a given set of data To calculate ASFR for a given set of data To calculate TFR for a given set of data	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R
	Tutorials	--	--	--
IVth Month	Theory	--	--	--
	Practical	To Construct Chain base index numbers Base shifting, Splicing and Deflating of Index Numbers To construct Consumer price index number using Aggregate Expenditure method and Family Budget method and compare	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R
	Tutorials	--	--	--

Third Year Semester VI

Paper Name: STAT-DSE-3(A): Actuarial Statistics (CBCS)

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	Introductory Statistics and Insurance Applications: Discrete, continuous and mixed probability distributions. Insurance applications, sum of random variables.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Practical	Risk computation for different utility models.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Assignment cum Numerical Problems	Numerical Based on above topics.		
	Tutorials	--	--	--
II^{ed} Month	Theory	Utility theory: Utility functions, expected utility criterion, types of utility function, insurance and utility theory.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Practical	Discrete and continuous risk calculations.	B.Sc.	STAT-DSE-3(A): Actuarial Statistics

			(Hons.) Statistics	3(A): Actuarial Statistics
	Tutorials	--	--	--
	Assignment cum Numerical Problems	Numerical Based on above topics.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
III^{ed} Month	Theory	Principles of Premium Calculation: Properties of premium principles, examples of premium principles.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Practical	Calculation of aggregate claims for collective risks.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Tutorials	--	--	--
	Revision/Doubt Classes	Revision/Doubt Classes were conducted on different topics related with curriculum.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
IVth Month	Theory	Individual risk models: models for individual claims, the sum of independent claims, approximations and their applications.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Practical	Calculation of aggregate claim for individual risks.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Revision/Doubt Classes	Revision/Doubt Classes were conducted on different topics related with curriculum.	B.Sc. (Hons.) Statistics	STAT-DSE-3(A): Actuarial Statistics
	Tutorials	--	--	--

Second Year Semester IV

Paper Name: GE IV Statistical Computing using R (NEP)

Month		Topics	Course	Paper Code/Name
Ist Month	Theory	--	--	--
	Practical	Graphical representation of data with bar-plot, pie-chart, and boxplot. Histogram with equal and unequal class intervals, frequency polygon Less than and more than Ogives. Fitting of curve linear, quadratic, exponential functions.	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R
	Tutorials	--	--	--
II^{ed} Month	Theory	--	--	--
	Practical	Scatter plots, correlation Linear and multiple regression Drawing sample using SRSWR, SRSWOR Drawing sample using stratified under proportion allocation and systematic	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R

		sampling.		
	Tutorials	--	--	--
III^{ed} Month	Theory	--	--	--
	Practical	Functions (r,d,p,q) for discrete distributions viz. Binomial, Poisson. Functions (r,d,p,q) for continuous distribution viz. Uniform, Exponential, and Normal . Test the goodness of fit for Binomial, Poisson distribution. Chi- Square test for independence of attributes.	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R
	Tutorials	--	--	--
IVth Month	Theory	--	--	--
	Practical	Single, paired and independent samples t-test. Components of a time series data. Decomposition (), and smoothing () under time series data.	B.Sc. (Hons.) Statistics	GE IV: Statistical Computing using R
	Tutorials	--	--	--

Note: In addition to Teaching Plan, Mentor Mentee Contact Classes (MMCC) will also be taken with the allotted students.

Dr Chetan
Assistant Professor (Statistics)



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SEMESTER WISE TEACHING PLAN

SRI VENKATESWARA COLLEGE

EVEN SEMESTER 2023-24

Name of the Faculty: Dr. Tanuja Sriwastava

Department: Statistics

Semester: II, IV, VI

Month		Topic	Course	Paper Code/ Name
January	Theory	Introduction to derivatives, Tools Needed for Option Pricing: Forward contracts, spot price, forward price, future price, Call and put options Zero-coupon bonds and discount bonds, Pricing derivatives	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Introduction to Times series data and its applications. Components of a time series and its decomposition. Estimation of trend component by all four methods and effect of elimination of trend on other components of the Time-series. Estimation of the seasonal component under fixed and changing seasonal patterns, Deseasonalization of data.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
February	Theory	Arbitrage relations and perfect financial markets, Pricing futures, Put-call parity for European and American options Relationship between strike price and option price.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Financial Planning and Financial Products	Semester IV	VAC 1: Financial Literacy
		Simple sinusoidal model; Periodogram, and Harmonic Analysis. Variate-difference method. Time series, and Stochastic process; Stationarity. Autocorrelation; meaning, definition, causes, consequence, and test for autocorrelation	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis


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		Definition of demography and its various components, Major sources of demographic data collection and errors therein	Semester IV	DSC-2C: Demography
	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
		Practicals based on topic covered in the classes.	Semester IV	VAC 1: Financial Literacy
March	Theory	Discrete Stochastic Processes: Binomial processes, General random walks, Geometric random walks, Binomial models, Trinomial models	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Banking and Digital Payments	Semester IV	VAC 1: Financial Literacy
		Stochastic Models: White noise Process, Random walk. MA, AR, ARMA, and their properties using correlogram, ACF, and PACF, Yule walker equations, Fitting of AR(1), AR(2), MA(1), MA(2), and ARMA(1,1) process. Non-Stationary models: ARIMA and SARIMA models.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
	Practical	Coverage and content errors, Rate of population change, Population density, Population potential, Population composition,	Semester IV	DSC-2C: Demography
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
		Practicals based on topic covered in the classes.	Semester IV	VAC 1: Financial Literacy
April	Assignment	The assignment will be based on unsolved problems.	Semester II, IV and VI	DSC-2C: Demography, STAT-DSE-4(A): Financial Statistics, DSC-12: Time Series Analysis and VAC 1: Financial Literacy
	Test	Internal examination will be based on the syllabus covered till mid term break		

	Theory	Binomial Model for European options: Cox-Ross-Rubinstein approach to option pricing. Discrete dividends, Trinomial model for American options	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Investment Planning and Management	Semester IV	VAC 1: Financial Literacy
		Dicky Fuller test, Augmented DickeyFuller testWold's Decomposition Theorem Non-linear time series models: ARCH and GARCH Process. Principles of Forecasting; Performance Evaluation. Extrapolation of Trend Curves. Exponential smoothing;	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
		Scale of urbanization and scale of population concentration, Concept of Stationary and stable populations, Nature and scope of population studies and its relationship with other disciplines	Semester IV	DSC-2C: Demography
	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
		Practicals based on topic covered in the classes.	Semester IV	VAC 1: Financial Literacy
May	Theory	Hedging portfolios: Delta, Gamma and Theta hedging.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Holt-Winter's. Box- Jenkins' Methodology.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
		Personal Tax	Semester IV	VAC 1: Financial Literacy
		Balancing equations and its uses.	Semester IV	DSC-2C: Demography
	Practical	Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester VI	STAT-DSE-4(A): Financial Statistics
		Practicals based on topic covered in the classes.	B.Sc. (H) Statistics, Semester IV	DSC-12: Time Series Analysis
		Practicals based on topic covered in the classes.	Semester IV	VAC 1: Financial Literacy



SEMESTER WISE TEACHING PLAN **SRI VENKATESWARA COLLEGE**

Jan., May 2024

Name of the Faculty: Dr. Alok Kumar Singh

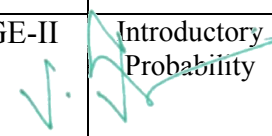
Department: Statistics

Semester: II, IV

Month		Topics	Course	Paper Code/Name
January	Theory:	Quality: Definition, dimensions of quality, its concept, application, and importance. Brief historical perspective of quality control and improvements, Quality Gurus, and Quality Hall of Fame. Quality system and standards	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		Definition of demography and its various components, Major sources of demographic data collection and errors therein; Coverage and content errors, Rate of population change, Population density, Population potential	Bachelor of Statistics (Hons.)	DSE 2C: Demography
		Probability: Introduction, random experiments, sample space, events and algebra of events. Definitions of Probability – classical, statistical, and axiomatic	GE-II	Introductory Probability
	Practicals:	Construction and interpretation of statistical control charts for $\bar{X}$ and R-chart for known parameters. $\bar{X}$ and R-chart with revised control limits for unknown parameters. $\bar{X}$ and s-chart np-chart	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		To find the Population density of a place. To find Population Potential.		DSE 2C: Demography


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February	Theory:	Introduction to ISO quality standards, Quality registration. Introduction to Process and Product Control, Statistical Process Control - Seven tools of SPC, Chance and Assignable causes of quality variation. Statistical Control Charts- Construction and Statistical basis of 3- σ Control charts,. Control charts for variables: X-bar & R-chart, X-bar & s-chart. Rational Sub-grouping, Revised and Modified Control Limits. Control charts for attributes: np-chart, p-chart, c-chart and u-chart.	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		Population composition, Scale of urbanization and scale of population concentration, Concept of Stationary and stable populations, Nature and scope of population studies and its relationship	Bachelor of Statistics (Hons.)	DSE 2C: Demography
		Conditional Probability, laws of addition and multiplication, independent events, theorem of total probability, Bayes' theorem and its applications	GE-II	Introductory Probability
	Practicals:	p-chart with fixed sample size p-chart with variable sample size. c-chart u-chart	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		To find Rate of population change To find Age Dependency ratio	Bachelor of Statistics (Hons.)	DSE 2C: Demography
March	Theory:	Comparison between control charts for variables and control charts for attributes. Analysis of patterns on a control chart, estimation of process capability. Acceptance sampling plan: Principle of acceptance sampling plans. Single and Double sampling plans, their Operating Characteristic (OC), Acceptance Quality Level (AQL), Lot Tolerance Percent Defective (LTPD), Average Outgoing Quality (AOQ), Average Outgoing To find Aged Child ratio. To find Child Dependency ratio Quality Limit (AOQL),	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		Inter-censal and post-censal estimates by mathematical and component method ; Population Projection by the mathematical method	Bachelor of Statistics (Hons.)	DSE 2C: Demography
		Random Variables: Discrete and continuous random variables, pmf, pdf, cdf. Illustrations of random variables and its properties. Expectation, variance, moments and moment generating function	GE-II	Introductory Probability
	Practicals:	Construction and interpretation of OC, AQL, LTPD, ASN, ATI, AOQ, and AOQL curves	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management

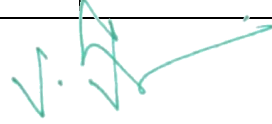

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		under a Single sample inspection plan	Statistics (Hons.)	Management
		To find Aged Child ratio. To find Child Dependency ratio	Bachelor of Statistics (Hons.)	DSE 2C: Demography
	<u>Assignment</u>	Based on Quality control	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		Based on Child Dependency ratio	Bachelor of Statistics (Hons.)	DSE 2C:
April	Theory	Average Sample Number (ASN), and Average Total Inspection (ATI) functions with graphical interpretation, use, and interpretation of Dodge and Romig's sampling inspection plan tables. Overview of Six Sigma, Lean Manufacturing, and Total Quality Management (TQM). Organizational Structure and Six Sigma training plans- Selection Criteria for Six Sigma roles and training plans.	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		Logistic curve and its fitting by Pearl and Reed method and Rhodes method. Graduation of mortality rates:	Bachelor of Statistics (Hons.)	DSE 2C: Demography
		Standard probability distributions: Binomial, Poisson, Geometric, Negative Binomial, Hypergeometric, Uniform, Normal, Exponential, Beta, Gamma.	GE-II	Introductory Probability
	Practicals:	Construction and interpretation of OC, AQL, LTPD, ASN, ATI, AOQ, and AOQL curves under a Single sample inspection plan for varying acceptance numbers. Calculation of process capability and comparison of 3-sigma control limits with specification limits.	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management

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		To Construct Abridged Life Table by Greville's method. To fit Logistic curve by Pearl and Reed method. To fit Logistic curve by Rhode's method	Bachelor of Statistics (Hons.)	
	<u>Mid Term Test</u>	Unit-I and Unit-I		DSC 11: Total Quality Management
		Unit-I		DSE 2C: Demography
May	Theory:	Voice of customers (VOC): Importance and VOC data collection. Critical to Quality (CTQ), Introduction to DMAIC (Define-Measure-Analyze-Improve-Control)	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		Makeham's and Gompertz graduation formula. Fitting of Makeham's formula.	Bachelor of Statistics (Hons.)	DSE 2C: Demography
		De-Moivre Laplace and Lindeberg-Levy Central Limit Theorem (C.L.T.)	GE-II	Introductory Probability
	Practicals:	Plan a single sampling plan using Dodge and Romig sampling inspection tables.	Bachelor of Statistics (Hons.)	DSC 11: Total Quality Management
		To fit Makeham's formula by the method of Four Selected Points. To fit Makeham's formula by the method of Partial Sums.		DSE 2C: Demography

(Dr. Alok Kumar Singh)


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Sri Venkateswara College

Semester wise Teaching Plan
2023-2024 Even Semester

Name of the Faculty: Dr. T. SATHEESH

Department: Telugu

Semester: II, IV, VI

Month	Theory/ Practical/Test	Topics	Course	Paper Code/Name
January	Theory	Kumarastravidya Sandarsanamu by Nannaya	B.A. (Prog.) VI Sem	DSE-601 Classical and Medieval Telugu poetry
	Theory	Dravidian Languages and Telugu	B.A. (Prog.) II Sem	DSC-2 History of Telugu Language
	Theory	Telugu Sathaka sahithyam: An Introduction	Comm. (Prog.) IV Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Introduction to Telugu Vowel & Consonant sounds & along with the sound-image	Comm. (Prog.) II Sem	AEC (B)-I Basic Telugu
	Theory	Compound verbs Making compound sentences in Telugu using conjunction	Comm. Prog. IV sem	AEC (B)-II Intermediate Telugu
February	Theory	Vindhya garvabhangam by Srinatha	B.A. (Prog.) VI Sem	DSE-601 Classical and Medieval Telugu poetry
	Theory	Evolution of Telugu Script, Mentions of Telugu, Tenugu and Andhramu Mentions of Telugu, Tenugu and Andhramu	B.A. (Prog.) II Sem	DSC-2 History of Telugu Language
	Theory	Features of Sathakam Categories in Sathaka sahithyam	Comm. (Prog.) IV Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Script introduction Introduction of Numerals (up to 70+30)	Comm. (Prog.) II Sem	AEC (B)-I Basic Telugu
	Theory	Making complex sentences in Telugu	Comm. Prog. III sem	AEC (B)-II Intermediate Telugu

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धौला कुआँ, नई दिल्ली / Dhoola Kuan, New Delhi-21

March	Theory	Vairagya keertanalu by Annamayya Vinura Vema by Vemana	B.A. (Prog.) VI Sem	DSE-601 Classical and Medieval Telugu poetry
	Theory	Evolution of Telugu Language: B.C.200 to A.D. 1100 Phonological, Morphological and syntactic changes: A.D.1100 to 1900	B.A. (Prog.) II Sem	DSC-2 History of Telugu Language
	Theory	Sumati Sathakam (1-20 Poems)	Comm. (Prog.) IV Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Introduction to Telugu Noun & Pronoun, its Subjunctives Telugu qualifiers/object	Comm. (Prog.) II Sem	AEC (B)-I Basic Telugu
	Theory	Reading comprehension	Comm. Prog. IV sem	AEC (B)-II Intermediate Telugu
	Mid-Term Test	Questions from the topics	B.A. (Prog.) II Sem B.A. (Prog.) III Sem	DSC-2 History of Telugu Language GE-2 Telugu Sathaka Sahithyam
April	Theory	Divyadrishti by Muddupalani Seetaa Vivaasamu by Kankanti paparaju	B.A. (Prog.) VI Sem	DSE-601 Classical and Medieval Telugu poetry
	Theory	Semantic changes	B.A. (Prog.) II Sem	DSC-2 History of Telugu Language
	Theory	Bhaskara Sathakam (1-20 Poems)	B.A. (Prog.) IV Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Telugu prepositions Conjunctions and their usage	Comm. (Prog.) II Sem	AEC (B)-I Basic Telugu
	Theory	Paragraph and letter Writing Conversation writing	Comm. Prog. IV sem	AEC (B)-II Intermediate Telugu
May	Theory	Seetaa Vivaasamu by Kankanti paparaju	B.A. (Prog.) VI Sem	DSE-601 Classical and Medieval Telugu poetry
	Theory	Dialects in Telugu	B.A. (Prog.) II Sem	DSC-2 History of Telugu Language
	Theory	Sathakam (1-20 Poems)	Comm. (Prog.) IV Sem	GE-2 Telugu Sathaka Sahithyam
	Theory	Making simple sentences in Telugu (basic syntactical rules)	Comm. (Prog.) II Sem	AEC (B)-I Basic Telugu

	Theory	Translation from English to Telugu Translation from Telugu to English	Comm. Prog. IV sem	AEC (B)-II Intermediate Telugu
	Assignment	Questions from the topics Origin and Development of Telugu short story Telugu Sathaka Sahithyam	B.A. (Prog.) IV Sem B.A. (Prog.) III Sem	DSC-2 History of Telugu Language GE-2 Telugu Sathaka Sahithyam



Signature of the Teacher



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Sri Venkateswara College

Semester wise Teaching Plan

2023-2024 Even Semester

Name of the Faculty: Dr. Dattaiah Attem

Department: Telugu

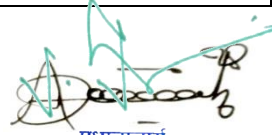
Semester: II, IV

Month	Theory/Practical/Test	Topics	Course	Paper Code/Name
January	Theory	Pre-Nannaya Literature.	B.A. (Prog.) IV Sem	DSC-8 History of Telugu Literature (15th to 18th Century)
	Theory	Kavitrayam (Nannaya, Tikkana, Errana): An Introduction	Comm. (Prog.) II Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation and Interpretation: An Introduction	Comm. (Prog.) II Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	Beginnings of Communication Era, Early Telugu Journals and Editors Print, Electronic and New Media Editor and Editorial department, Journalist	Comm. Prog. IV sem	AEC (A)-II Journalistic Writings in Telugu
February	Theory	Nannaya Era	B.A. (Prog.) IV Sem	DSC-8 History of Telugu Literature (15th to 18th Century))
	Theory	Kavitrayam (Nannaya, Tikkana, Errana): An Introduction	Comm. (Prog.) II Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation and Interpretation: An Introduction	Comm. (Prog.) II Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	News, News collection and writing, Lead, Body, Column writing and Feature writing, Editor and Editorial, Interview and Reporting Investigation	Comm. Prog. IV sem	AEC (A)-II Journalistic Writings in Telugu
	Assignment	Questions from the topics	-	-

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March	Theory	Sivakavi Yugam and Ramayana Poets	B.A. (Prog.) IV Sem	DSC-8 History of Telugu Literature (15th to 18th Century)
	Theory	Ramayana Poets (Ranganatha, Bhaskara, Molla): An Introduction	B.A. (Prog.) II Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION)
	Theory	Translation Theories, Methods and Problems of translation	Comm. (Prog.) II Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	news covering, editing and giving suitable titles Elements and stages of journalistic	Comm. Prog. IV sem	AEC (A)-II Journalistic Writings in Telugu
	Mid-Term Test	Questions from the topics	-	-
April	Theory	Tikkana Yugam	B.A. (Prog.) IV Sem	DSC-8 History of Telugu Literature (15th to 18th Century)
	Theory	Prabandha poets or Asta Diggaja poets and their: An Introduction	B.A. (Prog.) II Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Translation Theories, Methods and Problems of translation	Comm. (Prog.) II Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	Journalistic writing and reporting from the field Conducting Interviews and debates with a demonstration Analysis of both evil and sound samples of writing for the media	Comm. Prog. IV sem	AEC (A)-II Journalistic Writings in Telugu
May	Theory	Srinatha Yugam	B.A. (Prog.) IV Sem	DSC-8 History of Telugu Literature (15th to 18th Century)
	Theory	History of Telugu people: An Introduction	B.A. (Prog.) II Sem	GE-I TELUGU LITERATURE AND HISTORY: AN INTRODUCTION
	Theory	Practical and Machine Translation and Interpretation practice	Comm. (Prog.) II Sem	AEC (A)-I Translation and Interpretation in Telugu
	Theory	Freelancing: scope and worthwhileness of the topic Editing and Proof-reading Laws and ethics in Journalistic writings Writing and reporting: Practical components	Comm. (Prog.) IV Sem	AEC (A)-II Journalistic Writings in Telugu


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SEMESTER WISE TEACHING PLAN (2023-24)
January 2024-May 2024, SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Sumit Raj

Department: Zoology

Semester: Even (II/IV/VI)

Month		Topics	Course	Paper Code/ Name
January, 2024	Theory:	Unit IV: Forces of Evolution: Natural Selection as a guiding force, its attribute and action. Basic Characteristics of Natural Selection, Coloration, Camouflage and Mimicry.	B.Sc. (H) Biological Sciences Semester VI	BS-DSE Evolutionary Biology
		Unit IV: Forces of Evolution: Natural Selection as a guiding force, its attribute and action. Basic Characteristics of Natural Selection, Coloration, Camouflage and Mimicry.	B.Sc. (H) Zoology Semester VI	Evolutionary Biology
		Unit III: Early Embryonic Development: Gametogenesis: Spermatogenesis and oogenesis in mammals, Types of Eggs and egg membranes, Fertilization: External (amphibians) and Internal	B.Sc. (H) Zoology Semester VI	Development Biology
	Practical (4+4 Periods)	■ Preparation of haemin crystals and haemochromogen crystals	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch II and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
February, 2024	Theory:	Unit IV: Forces of Evolution: Co-adaptation and co-evolution, Man-made causes of change, Industrial melanism, antibiotic resistance. Modes of selection, artificial selection, Polymorphism, Heterosis and Balanced lethal system	B.Sc. (H) Biological Sciences Semester VI	BS-DSE Evolutionary Biology


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	Theory	Unit III: Molecular: Neutral Theory of Molecular Evolution, Molecular Clock, Example of Globin Gene family, rRNA/cytc, Phylogenetic Trees: Types,	B.Sc. (H) Zoology Semester VI	Evolutionary Biology
			B.Sc. (H) Zoology Semester VI	Development Biology
	Practical (4+4 Periods)	■ Estimation of WBC and RBC count of blood. ■ Estimation of haemoglobin using Sahli's haemoglobinometer. ■ Determination of Blood Pressure by Auscultatory method.	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch II and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical		B. Com (P) Sem II B.Com (H) Sem II	VAC: Digital Empowerment
March, 2023	Theory:	Unit IV: Forces of Evolution: Hardy-Weinberg's Law of Genetic Equilibrium. Genetic Drift (Sewall Wright effect) as a stochastic/random force: Its attributes and action. Basic Characteristics of drift; selection vs drift, Bottleneck effect, Founder principle. Alteration in gene frequency	B.Sc. (H) Biological Sciences Semester VI	Evolutionary Biology

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	Theory	Unit VI: Forces of Evolution: Hardy-Weinberg's Law of Genetic Equilibrium. Genetic Drift (Sewall Wright effect) as a stochastic/random force: Its attributes and action. Basic Characteristics of drift; selection vs drift, Bottleneck effect, Founder principle. Alteration in gene frequency (when selection operates). Migration and Mutation	B.Sc. (H) Zoology Semester VI	Evolutionary Biology
	B.Sc. (H) Zoology Semester VI	Development Biology	B.Sc. (H) Zoology Semester VI	Development Biology
	Practical (4+4 Periods)	■ Lung function tests using Spirometry (Determination of Vital Capacity, Peak Expiratory Flow Rate. Lung Volumes and Capacities). ■ Measurement of oxygen saturation by pulse oximetry before and after exercise. ■ Experiments on superficial (plantar) and deep (knee jerk) reflex.	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical		B. Com (P) Sem II B.Com (H) Sem II	VAC: Digital Empowerment
		Mid Term Exam of DSE 2 Wildlife Biology and Conservation (B.Sc. Hons Biological Sciences Sem VI)		
April, 2023	Theory:	Unit IV: Forces of Evolution: Calculation based on Selection Coefficient and fitness. Fluctuations in gene frequency (when drift operates): Calculation based on standard deviation.	B.Sc. (H) Biological Sciences Semester VI	BS-DSE Evolutionary Biology
		Unit 4: Raw material for Evolution: Variations: Heritable variations and their role in evolution	B.Sc. (H) Zoology Semester VI	प्रधानाचार्य Principal श्री वैकुण्ठेश्वर महाविद्यालय दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ / Dhoola Kuan, New Delhi-21 Evolutionary Biology

			B.Sc. (H) Zoology Semester VI	Development Biology
	Practical (4+4 Periods)	■ Study of permanent histological sections of mammalian pituitary, thyroid, pancreas, adrenal gland, duodenum, liver, lung, kidney, bone, cartilage. ■ Project on Family planning devices. ■ Revision and Mock Test	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical		B. Com (P) Sem II B.Com (H) Sem II	VAC: Digital Empowerment
May, 2023	Theory:	• . Assignment • . Student Assessments	B.Sc. (P) Life Sciences Semester II	Zoo-LS-DSC-06 Cell and Developmental Biology of Animals
	Practical (4+4 Periods)	• . Project Report • . Student Assessments	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical		B. Com (P) Sem II B.Com (H) Sem II	VAC: Digital Empowerment
		Mid-Term Exam and assignment for Evolutionary Biology and Developmental Biology		

SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
January-May, 2024

Name of the Faculty: Dr. Preeti Khandelwal

Department: Zoology

Semester: Even – II, IV and VI

Subjects:

THEORY: B.Sc. (Hons) Zoology Sem II: **Fundamentals of Biomolecules**

VAC- Yoga: Philosophy and Practice

DSE: Fish and Fisheries

PRACTICAL: DSE: Fish and Fisheries

B.Sc. (Hons) Zoology Sem II-**Fundamentals of Biomolecules**

VAC- Yoga: Philosophy and Practice

GE: Lifestyle Disorders

Month		Topics	Course	Paper Code/Name
January	Theory:	Unit III: Proteins Amino acids; Structure, Classification and general properties of alpha amino acids; physiological importance of essential and non-essential amino acids; proteins; bonds stabilizing protein structure; levels of organization in protein motifs and domains; Denaturation	B.Sc. (Hons) Zoology Sem II:	Fundamentals of Biomolecules
		Unit 2: Morphology, Physiology and behaviour Types of fins and their modifications, locomotion in fishes, hydrodynamics, types of scales, gills and gas exchange	DSE, semester IV	Fish and Fisheries
		Unit 3: Understanding Asana and Pranayama *Asana: the basics *Surya Namaskar *Nadishodhana Pranayama	VAC, semester IV	Yoga: Philosophy and Practice


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	Practical:	*Identification of the functional groups by qualitative tests: a) Carbohydrates b) Proteins c) Lipids	B.Sc. (Hons) Zoology Sem II:	Fundamentals of Biomolecules
		- Surya Namaskar - Selected Asana - Pranayama	VAC, semester IV	Yoga: Philosophy and Practice

		*Study of specimens: <i>Gambusia</i> , <i>Heteropneustes</i> , <i>Labeo</i> .	DSE, semester IV	Fish and Fisheries
		* Calculation of BMI, waist to hip ratio, skin fold test.	GE, Semester II	Lifestyle Disorders
February	Theory:	Unit III: Proteins Bonds stabilising protein structure; levels of organization in protein motifs and domains; Denaturation	B.Sc. (Hons) Zoology Sem II:	Fundamentals of Biomolecules
		Unit 2: Morphology, Physiology and behaviour Swim bladder, types and role in respiration, buoyancy, osmoregulation in elasmobranchs, schooling, parental care, migration	DSE, semester IV	Fish and Fisheries
		Unit 2: Patanjali's Yogasutra and Chakra *Patanjali's yogasutra: a summary *First sutra *Second sutra *Chakras (Psychic centres)	VAC, semester IV	Yoga: Philosophy and Practice
	Practical	*Demonstration of setting up of a fish aquarium And its management/ maintenance *Demonstration of Induced Breeding in fishes and hatchery management (video/ visit to fisheries institute or fish farms).	DSE, semester IV	Fish and Fisheries


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		*Separation of Amino acids by paper chromatography. * Study the action of Salivary Amylase under optimum conditions. *Study the effect of pH and inhibitors on the action of salivary amylase.	B.Sc. (Hons) Zoology Sem II:	Fundamentals of Biomolecules
		- Relaxation Exercises for eyes (7eyes) - Pranayama - Concentration on Bhramadhyana Project work : Effect of everyday concentration on breath for 15 minutes.	VAC, semester IV	Yoga: Philosophy and Practice
		* Project Work based on case studies related to risk factors of any one lifestyle disorder studied.	GE, Semester II	Lifestyle Disorders
March	Theory:	Unit II: Lipids Structure and Significance: Physiologically important saturated and unsaturated fatty acids, tri-acylglycerols, phospholipids, glycolipids, steroids	B.Sc. (Hons) Zoology Sem II	Fundamentals of Biomolecules
		Unit 1: Yoga, Asana, Pranayama and Dhyana *History of Yoga *Significance of Asana *Effect of Pranayama * Importance of Dhyana	VAC, semester IV	Yoga: Philosophy and Practice

		Unit 4: Aquaculture Sustainable aquaculture, extensive, semi-intensive and intensive culture of fish, pen and cage culture, poly culture, composite fish culture, brood stock management	DSE, semester IV	Fish and Fisheries
	Practical	*Understanding the structures of Biomolecules through ball and stick models. *Separation of Amino acids by paper chromatography. *Study the effect of temperature on the action of salivary amylase.	B.Sc. (Hons) Zoology Sem II	Fundamentals of Biomolecules
		- Surya Namaskar - Selected Asana - Pranayama - Relaxation Exercises for neck (4 steps) - Concentration on Bhramadhyana	VAC, semester IV	Yoga: Philosophy and Practice
		Estimation of blood glucose (GOD/POD) by kit.	GE, semester II	Lifestyle Disorders

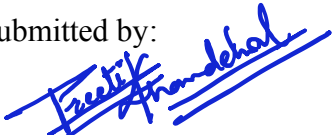

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	Assignment	*Study of different types of scales by preparing a temporary/ permanent mount.	DSE, semester IV	Fish and Fisheries
		History of Yoga	VAC, semester IV	Yoga: Philosophy and Practice
		Previous years' question papers	B.Sc (Hons.) Zoology Semester II	Fundamentals of Biomolecules
		Parental care in fish	DSE, semester IV	Fish and Fisheries
	Mid Term Test	Unit 3	B.Sc (Hons.) Zoology Semester II	Fundamentals of Biomolecules
		Unit 2	DSE, semester IV	Fish and Fisheries
April	Theory	Unit IV: Nucleic Acids Structure: Purines and Pyrimidines, nucleosides, nucleotides, Nucleic acids.	B.Sc (Hons.) Zoology Semester II	Fundamentals of Biomolecules
		Unit 4: Aquaculture Induced breeding of fish, management of fin fish hatcheries, preparation of compound diets for fish, role of water quality in aquaculture, post harvest handling techniques and fishery byproducts.	DSE, semester IV	Fish and Fisheries
		Unit 1: Yoga, Asana, Pranayama and Dhyana * Importance of Dhyana Unit 2: Patanjali's Yogasutra and Chakra *Second sutra	VAC, semester IV	Yoga: Philosophy and Practice
	Practical	*Understanding the structures of Biomolecules through ball and stick models. *To understand the preparation and roles of two important biological buffer systems: Phosphate and Biocarbonate; Preparation of buffers and determination of pH.	B.Sc (Hons.) Zoology Semester II	Fundamentals of Biomolecules
		* Imaging techniques for cancer diagnosis: CT scan, MRI, PET- CT scan, Confirmatory biopsy	GE, semester II	Lifestyle disorders


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		Pranayama Practice of Asanas Chakra system	VAC, semester IV	Yoga: Philosophy and Practice
		*Study of different methods of fish tagging.	DSE, semester IV	Fish and Fisheries
May	Theory	Revision	B.Sc (Hons.) Zoology Semester II	Fundamentals of Biomolecules
		Revision	VAC, semester IV	Yoga: Philosophy and Practice
		Revision	DSE, semester IV	Fish and Fisheries
May	Practical	Mock test and revision	B.Sc (Hons.) Zoology Semester II	Fundamentals of Biomolecules
		Mock test and revision	DSE, semester IV	Fish and Fisheries
		Mock test and revision	GE, semester II	Lifestyle disorders
		Mock test and revision	VAC, semester IV	Yoga: Philosophy and Practice

Submitted by:


Dr. Preeti Khandelwal
Assistant Professor
Department of Zoology
Sri Venkateswara Collection


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Name of the Faculty: Dr. Priya Singh

Department: ZOOLOGY

Semester: Even (II/IV/VI)

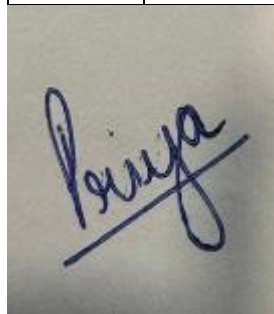
Month		Topics	Course	Paper Code/Name
January, 2024	Theory:	Unit 2: Evaluation and management of wild life habitat Physical parameters: Topography, geology and water	DSE 4- Wildlife conservation and management	DSE 4- Wildlife conservation and management
		Unit 3 : Population Estimation Geographical Information System, Global Positioning System, Remote Sensing	B.Sc. (H) Biosciences Semester- VI	DSE 4 – Wildlife Biology and Conservation
		Unit 4: Diversity of Chordates Introduction to biodiversity, types of biodiversity	B.Sc. (H) Biosciences Semester II	DSC 5 -Diversity of Life Forms-II
		Unit 1 : Introduction to Lifestyle	Semester II	G.E, Lifestyle disorders
	Practicals	Study of Aphrodite, Nereis, Heteronereis, Sabella, Serpula,	B.Sc. (H) Zoology Semester II	DSC 1 – Non-Chordates Protists to Pseudocoelomates
		Study of following specimens: Balanoglossus, Amphioxus, Petromyzon, Pristis, Hippocampus, Labeo,	B.Sc. (H) Biosciences Semester II	DSC 5 -Diversity of Life Forms-II
		Preparation of haemin crystals and haemochromogen crystals	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
February, 2024	Theory:	Unit 2: Evaluation and management of wild life habitat Biological parameters : Food , cover, forage, browse and cover estimation	DSE 4- Wildlife conservation and management	DSE 4- Wildlife conservation and management
		Unit 2: Evaluation and management of wild life habitat Physical parameters: Topography, geology and water Biological parameters : Food , cover	B.Sc. (H) Biosciences Semester- VI	DSE 4 – Wildlife Biology and Conservation

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		Unit 4: Diversity of Chordates Protochordata, Aganatha, Pisces,	B.Sc. (H) Biosciences Semester II	DSC 5 -Diversity of Life Forms-II
		Unit 2 : Diabetes and Obesity	Semester II	G.E, Lifestyle disorders
	Practical:	Study of Chaetopterus, Pheretima, Hirudinaria, Trochophore larva Study of T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm. Study of Ichthyophis/Uraeotyphlus, Salamander, Draco, Naja, any two common birds. Estimation of WBC and RBC count of blood. Estimation of haemoglobin using Sahli's haemoglobinometer. Determination of Blood Pressure by Auscultatory method.	B.Sc. (H) Zoology Semester II B.Sc. (H) Bioscience Semester II B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	DSC 1 – Non- Chordates Protists to Pseudocoelomates DSC 5 -Diversity of Life Forms-II Zoo-LS-DSC-12: Fundamentals of Human Physiology
March, 2024	Theory:	Unit 2: Evaluation and management of wild life habitat Standard evaluation Procedures : RS and GIS Unit 6: Challenges in wildlife management Poaching, Illegal trading, conflict management and shifting from extraction to preservation, Unit 4: Diversity of Chordates Amphibia, Reptilia, Aves, Mammals Unit 2 : Diabetes and Monitoring	DSE 4- Wildlife conservation and management B.Sc. (H) Biosciences Semester- VI B.Sc. (H) Biosciences Semester II Semester II	DSE 4- Wildlife conservation and management DSE 4 – Wildlife Biology and Conservation DSC 5 -Diversity of Life Forms-II G.E, Lifestyle disorders
	Practical:	Study of Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta, termite, Apis, Musca. Study of Peripatus	B.Sc. (H) Zoology Semester II	DSC 1 – Non- Chordates Protists to Pseudocoelomates 

April, 2024		Slide/ Virtual demonstration of Placoid, Ctenoid and Cycloid scales	B.Sc. (H) Bioscience Semester II	DSC 5 -Diversity of Life Forms-II
		Lung function tests using Spirometry (Determination of Vital Capacity, Peak Expiratory Flow Rate. Lung Volumes and Capacities).	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
		Measurement of oxygen saturation by pulse oximetry before and after exercise.		
		Experiments on superficial (plantar) and deep (knee jerk) reflex.		
	Theory:	Unit 7 : Protected Areas Tiger conservation and Management	DSE 4- Wildlife conservation and management	DSE 4- Wildlife conservation and management
		Unit 6: Challenges in wildlife management Effect of extinction of a species on ecosystem, Human animal conflict, Ecotourism	B.Sc. (H) Biosciences Semester- VI	DSE 4 – Wildlife Biology and Conservation
		Unit 5 : Biogeography Zoogeographical realms and distribution of vertebrates	B.Sc. (H) Biosciences Semester II	DSC 5 -Diversity of Life Forms-II
		Unit 6 : WHO Global action Plan and Monitoring	Semester II	G.E, Lifestyle disorders
	Practical:	Study of Chiton, Dentalium, Pila, Doris, Helix, Unio, Patella, Ostrea, Pinctada, Sepia, Octopus, Nautilus.	B.Sc. (H) Zoology Semester-II	DSC 1 – Non-Chordates Protists to Pseudocoelomates
		Study of Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria, Antedon; Any two larval forms.		
		Identification and classification of one endangered amphibian, reptile, bird and mammal of any one zoogeographical region in Indian	B.Sc. (H) Bioscience Semester II	DSC 5 -Diversity of Life Forms-II
		Study of permanent histological sections of mammalian pituitary, thyroid, pancreas, adrenal gland,	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I	Zoo-LS-DSC-12: Fundamentals of Human Physiology

		duodenum, liver, lung, kidney, bone, and cartilage. Project on Family planning devices.	and Batch III)	
May, 2024	Theory:	Revision and PYQs	DSE 4- Wildlife conservation and management	DSE 4- Wildlife conservation and management
		Revision and PYQs	B.Sc. (H) Biosciences Semester- VI	DSE 4 – Wildlife Biology and Conservation
		Revision and PYQs	B.Sc. (H) Biosciences Semester II	DSC 5 -Diversity of Life Forms-II
		Revision and PYQs	Semester II	G.E, Lifestyle disorders
	Practicals	Mock exam and File Marking	B.Sc. (H) Zoology Semester II	DSC 1 – Non-Chordates Protists to Pseudocoelomates
		Mock exam and File Marking	B.Sc. (H) Biosciences Semester II	DSC 5 -Diversity of Life Forms-II
		Mock exam and File Marking	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology




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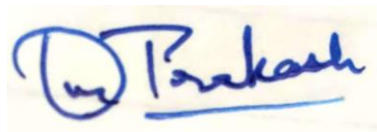
SEMESTER WISE TEACHING PLAN (JANUARY 2024- MAY 2024)
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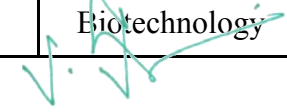
Faculty Name: Prof. Om Prakash, Department: Zoology; Semester: VI (EVEN Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JAN	THEORY	UNIT- 3 Antigens Antigens and immunogens, antigenicity and immunogenicity	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	1. ABO blood group determination. 2. Ouchterlony's double immunodiffusion method	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	To demonstrate following techniques: (Optional) Southern/ Northern/Western blotting (Any one) PCR DNA fingerprinting DNA Sequencing (Sanger's Method)	B.Sc. Hons. Zoology Semester VI	DSE Animal Biotechnology
FEBRUARY	THEORY	UNIT- 3 Antigens Factors affecting immunogenicity, Antigenic determinants (B and T cell epitopes), Concept of antigen recognition by B and T-cells, Adjuvants and haptens.	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	1. Preparation of stained blood film to study different types of blood cells 2. Demonstration of ELISA and Immunelectrophoresis	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	1. Demonstration of Restriction digestion of Plasmid/Lambda DNA. 2. Construction of circular and linear restriction map from the data provided.	B.Sc. Hons. Zoology Semester VI	DSE Animal Biotechnology

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MARCH	THEORY	Unit4: Immunoglobulins 10hrs Structure, different classes and function of antibodies, Antigenic determinants on immunoglobulins,	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	1. Demonstration of lymphoid organs 2. Histological studies of lymph nodes, spleen , thymus through slides and photographs	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	3. Calculation of transformation efficiency from calcium chloride method. Genomic DNA isolation from <i>E.coli</i> 2. Plasmid DNA isolation (pUC 18/19) from <i>E.coli</i>	B.Sc. Hons. Zoology Semester VI	DSE Animal Biotechnology
APRIL	THEORY	Antigen-antibody interactions as tools for research and diagnosis (precipitation reaction, agglutination, immunofluorescence and ELISA) Polyclonal sera, Hybridoma technology for monoclonal antibodies in therapeutics and diagnosis.	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	Revision of Practicals, Evaluation for Internal assessment	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	Revision of Practicals, Evaluation for Internal assessment Project report on animal cell culture OR on a visit to any	B.Sc. Hons. Zoology Semester VI	DSE Animal Biotechnology
MAY	THEORY	REVISION AND DOUBTS CLARIFICATION	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	FILE CHECKING and MOCK	B.Sc Life Sciences SEMESTER VI	LS DSE-II IMMUNOLOGY
	PRACTICAL	FILE CHECKING and MOCK	B.Sc. Hons. Zoology Semester VI	DSE Animal Biotechnology




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**SEMESTER WISE TEACHING PLAN (JANUARY 2024- MAY 2024) SRI
VENKATESWARA COLLEGE**

Faculty Name: Dr Sukrat Sinha, Department: Zoology; Semester: VI (EVEN Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JAN	THEORY	UNIT- 2- CELLS AND ORGANS OF IMMUNE SYSTEM HAEMOTOPOESIS, CELLS OF IMMUNE SYSTEM, PRIMARY AND SECONDARY LYMPHOID ORGANS	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY
		UNIT 1Introduction to Public health and Hygiene Significance of Public health and Hygiene, Nutrition and health, Classification of foods, Major nutritional Deficiency diseases- Protein Energy Malnutrition (Kwashiorkor and Marasmus), Vitamin deficiency disorders, Iron deficiency disorders, Iodine deficiency disorders	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE
	PRACTICAL	1. ABO blood group determination. 2. Ouchterlony's double immunodiffusion method	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY

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		1. Calculate the BMI of students and analyse the results with suitable statistical tools. 2. Measure the blood pressure using sphygmomanometer.	B.Sc (P)Life Sciences SEMESTER VI	LS SEC PUBLIC HEALTH AND HYGIENE
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FEBRUARY	THEORY	UNIT- 2- CELLS AND ORGANS OF IMMUNE SYSTEM HAEMOTOPOESIS, CELLS OF IMMUNE SYSTEM, PRIMARY AND SECONDARY LYMPHOID ORGANS	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY
		UNIT 1 Introduction to Public health and Hygiene Significance of Public health and Hygiene, Nutrition and health, Classification of foods, Major nutritional Deficiency diseases- Protein Energy Malnutrition (Kwashiorkor and Marasmus), Vitamin deficiency disorders, Iron deficiency disorders, Iodine deficiency disorders UNIT 2 Environment and Health hazards Environmental degradation, Environmental Pollution – Air, water, soil and noise; Associated health hazards	B.Sc (P)Life Sciences SEMESTER VI	LS SEC PUBLIC HEALTH AND HYGIENE

	PRACTICAL	1. Preparation of stained blood film to study different types of blood cells 2. Demonstration of ELISA and Immunelectrophoresis	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY
		1.Study of household pests following with reference to public health. 2. Testing potability of water for human consumption by MPN method	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE

MARCH				
	THEORY	UNIT 8: Immune system in health and disease Hypersensitivity, Gell and Coomb Classification, Autoimmunity, Immunedysfuctions and Immunedeficiency MID SEM EXAM	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY


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		Unit 3: Communicable Diseases 6hrs Different types of communicable diseases and their control measures – Tuberculosis, Measles, Dengue, Leprosy <i>Chapter 5: Park K.</i> Unit 4: Life Style Related Non Communicable Diseases 6hrs Different types of Life style related non communicable diseases - Hypertension, Coronary Heart diseases, Stroke, Diabetes mellitus, Obesity and Mental ill-health - their causes and prevention through dietary and lifestyle modifications	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE
	PRACTICAL	1. Demonstration of lymphoid organs 2. Histological studies of lymph nodes, spleen , thymus through slides and photographs	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY
		1. Estimation of blood glucose level 2. To determine the content of different pollutants in soil/water samples.	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE

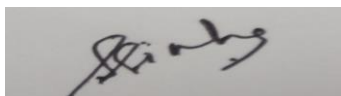
APRIL				
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	THEORY	REVISION AND DOUBTS CLARIFICATION	B. Sc.(P) LIFE SCIENCES SEMESTER VI	LS DSE IMMUNOLOGY
		Unit 4: Life Style Related Non Communicable Diseases 6hrs Different types of Life style related non communicable diseases - Hypertension, Coronary Heart diseases, Stroke, Diabetes mellitus, Obesity and Mental ill-health - their causes and prevention through dietary and lifestyle modifications	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE
	PRACTICAL	FILE CHECKING and MOCK	B.Sc Life Sciences SEMESTER VI	LS DSE IMMUNOLOGY
MAY		PROJECT REPORT	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE
	THEORY	ASSIGNMENT ASSESSMENT	B.Sc Life Sciences SEMESTER VI	LS DSE IMMUNOLOGY


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THEORY	REVISION	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE
PRACTICAL	REVISION AND TEST	B.Sc Life Sciences SEMESTER VI	LS DSE IMMUNOLOGY
PRACTICAL	REVISION AND TEST	B.Sc (P)Life Sciences SEMESTERVI	LS SEC PUBLIC HEALTH AND HYGIENE




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SEMESTER WISE TEACHING PLAN (JANUARY 2024- MAY 2024)
SRI VENKATESWARA COLLEGE

Faculty Name: Dr. Amarjeet Singh, **Department:** Zoology; **Semester:** VI (Even Semester)

MONTH		TOPICS	COURSE	PAPER CODE/NAME
JAN, 2024	THEORY	UNIT-I Annelida General Characteristics and Classification	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		UNIT I: Historical review of Evolutionary Concept Pre-Darwinian Ideas: List of contributors influencing Darwin indicated as a <i>timeline</i>	B.Sc. (H) Biological Sciences Sem VI	BS C-14 Evolutionary Biology
	PRACTICAL	Study of <i>Aphrodite, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria</i>, Trochophore larva	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		Study of various developmental stages in the life Cycle of <i>Drosophila</i> using stock culture/permanent slides/ photomicrograph	B.Sc. (P) Life Sciences Sem II Batch I	DSC-06 Cell and Developmental Biology of Animals

		Study of various developmental stages in the life Cycle of <i>Drosophila</i> using stock culture/ permanent slides/photomicrograph	B.Sc. (P) Life Sciences Sem II Batch III	DSC-06 Cell and Developmental Biology of Animals
FEB, 2024	THEORY <i>Amarjeet Singh</i>	Unit-I Annelida: Excretion in Annelida; Evolution of coelom and metamerism Unit-II Arthropoda and Onychophora: General characteristics and classification (Special reference to Insecta up to order)	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates Principal श्री वेङ्कटेश्वर महाविद्यालय Sri Venkateswara College दिल्ली विश्वविद्यालय / University of Delhi धौला कुआँ, नई दिल्ली / Dhula Kuan, New Delhi-21

		UNIT I: Historical review of Evolutionary Concept: Lamarckism: Merits and demerits, Darwinism: Merits and demerits, Post Darwinian Era: Modern Synthetic Theory	B.Sc. (H) Biological Sciences Sem VI	BS C-14 Evolutionary Biology
		Unit 2: Historical Review of Evolutionary Concepts: Lamarckism, Darwinism	B.Sc. (H) Zoology Sem VI	ZH Core Course XIV: Evolutionary Biology
	PRACTICAL	- Study of T.S. through pharynx, gizzard and typhlosolar intestine of earthworm - Study of Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, periplaneta, termite, Apis, Musca	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		- Study of the various stages of meiosis through permanent slides. - Frog-Study of developmental stages- whole mounts and sections through permanent slides cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. (P) Life Sciences Sem II Batch I	DSC-06 Cell and Developmental Biology of Animals
		- Study of various stages of meiosis through permanent slides. - Frog-Study of developmental stages WM and sections through permanent slides cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. (P) Life Sciences Sem II Batch III	DSC-06 Cell and Developmental Biology of Animals

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MARCH, 2024	THEORY	Unit-II Arthropoda and Onychophora: Vision and Respiration in Arthropoda, Metamorphosis in insects, Social life of bees and termite, Evolutionary Significance of Onychophora	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		UNIT I: Historical review of Evolutionary Concept: Biomathematics and the theory of population genetics leading to Neo-Darwinism Unit II: History of Life: Chemogeny: An overview of pre-biotic conditions and events experimental proofs to abiotic origin of micro and macro molecules. Current concepts of chemogeny;RNA first hypothesis	B.Sc. (H) Biological Sciences Sem VI	BS C-14 Evolutionary Biology
		Unit 2: Historical Review of Evolutionary Concepts: Neo Darwinism Unit 1: Life's Beginning: Chemogeny	B.Sc. (H) Zoology Sem VI	ZH Core Course XIV: Evolutionary Biology
	PRACTICAL	- Study of Peripatus - Study of <i>Chiton</i>, <i>Dentalium</i>, <i>Pila</i>, <i>Doris</i>, <i>Helix</i>, <i>Unio</i>, <i>Patella</i>, <i>Ostrea</i>, <i>Pinctada</i>, <i>Sepia</i>, <i>Octopus</i>, <i>Nautilus</i> - Study of <i>Pentaceros/Asterias</i>, <i>Ophiura</i>, <i>Clypeaster</i>, <i>Echinus</i>, <i>Cucumaria</i>, <i>Antedon</i>, any two larval forms	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		Chick – Study of Whole Mounts of developmental stages of Chick through permanent slides (HH stages)- 13 hrs, 18hrs, 24hrs, 28hrs, 33hrs, 36hrs, 48hrs, 72hrs and 96hrs	B.Sc. (P) Life Sciences Sem II Batch I	DSC-06 Cell and Developmental Biology of Animals

		Chick – Study of Whole Mounts of developmental stages of Chick through permanent slides (HH stages)- 13 hrs, 18hrs, 24hrs, 28hrs, 33hrs, 36hrs, 48hrs, 72hrs and 96hrs	B.Sc. (P) Life Sciences Sem II Batch III	DSC-06 Cell and Developmental Biology of Animals
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APRIL, 2024	THEORY	Unit III Mollusca: General characteristics and classification, Respiration in Mollusca, Torsion and detorsion in Gastropoda, Pearl Formation in Bivalves Unit IV Echinodermata: General characteristics and classification	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		Unit II: History of Life: Biogeny: Cellular evolution based on proto-cell models (coacervates and proteinoid microspheres), origin of photosynthesis, evolution of oxygen and ozone build up	B.Sc. (H) Biological Sciences Sem VI	BS C-14 Evolutionary Biology
		Unit 1: Life's Beginning: RNA World, Biogeny, Origin of Photosynthesis	B.Sc. (H) Zoology Sem VI	ZH Core Course XIV: Evolutionary Biology
	MID TERM INTERNAL TEST APRIL, 2024			
	PRACTICAL	- Study of mouthparts, digestive system and nervous system of Periplaneta - Study of digestive system of Pheretima - Project Report on different on the larval forms in different phyla: Annelida, Arthropoda, Onychophora, Mollusca, Echinodermata	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates

		- Study of the different types of placenta along with its function through permanent slides/photomicrograph. - Visit to IVF centre/ Poultry Farm.	B.Sc. (P) Life Sciences Sem II Batch I	DSC-06 Cell and Developmental Biology of Animals
		- Study of the different types of placenta along with its function through permanent slides/photomicrograph. - Visit to IVF centre/ Poultry Farm.	B.Sc. (P) Life Sciences Sem II Batch III	DSC-06 Cell and Developmental Biology of Animals
MAY, 2024	THEORY	Unit IV Echinodermata: Water Vascular system in Asteroidea Revision	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		Unit II: History of Life: Evolution of eukaryotes from prokaryotes, multicellularity, Cambrian explosion and timeline and plant and animal evolution in the phanerozoic eon	B.Sc. (H) Biological Sciences Sem VI	BS C-14 Evolutionary Biology
		Unit 1: Life's Beginning: Endo-symbiotic theory Revision	B.Sc. (H) Zoology Sem VI	ZH Core Course XIV: Evolutionary Biology
	PRACTICAL	Mock Test and Revision	B.Sc. (H) Zoology, Sem II	DSC 4: Non Chordata: Coelomates
		- Project report on IVF Centre/ Poultry farm. - Mock Test and Revision	B.Sc. (P) Life Sciences Sem II Batch I	DSC-06 Cell and Developmental Biology of Animals
		- Project report on IVF Centre/ Poultry farm. - Mock Test and Revision	B.Sc. (P) Life Sciences Sem II Batch III	DSC-06 Cell and Developmental Biology of Animals

Anand Singh

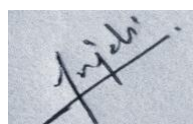
SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Even Semester 2024 (Jan-April)

Name of the Faculty: **Dr. Anjali S. Nawani**

Department: Zoology

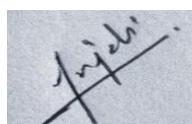
Semester: II/IV/VI

MONTH	COURSE	PAPER/ PAPER CODE	TOPICS
JANUARY	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO-ORDINATING SYSTEMS (DSC-06)	THEORY: Hormones secreted by the glands, their physiological action and the disorders related to their secretion. PRACTICALS: Classification, structure and functions of tissues: epithelial, connective, muscular and nervous tissue. Structure, histology, types and function of bones and cartilage.
	B.Sc.(H) ZOOLOGY SEMESTER II	FUNDAMENTALS OF BIOMOLECULES (DSC-05)	THEORY: Nomenclature and classification, cofactors; specificity of enzyme action, Isozymes, Mechanism of enzyme action
	GE-ZOOLOGY SEMESTER II	LIFESTYLE DISORDER	INTRODUCTORY CLASSES
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES	INTRODUCTORY CLASSES
FEBRUARY	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO-ORDINATING SYSTEMS (DSC-06)	THEORY: Classification of hormones and their regulation; Mode of hormone action- Signal transduction pathways for peptide and steroid hormones. PRACTICAL: Classification and histological structure of muscle; ultrastructure of striated muscle. Preparation of temporary mounts: Squamous epithelium, Striated muscle fibres, Nerve cells.
	B.Sc.(H) ZOOLOGY SEMESTER II	FUNDAMENTALS OF BIOMOLECULES (DSC-05)	THEORY: Enzyme kinetics; factors affecting rate of enzyme-catalysed reactions; derivation of Michaelis-Menten equation, concept of K_m and V_{max} , Lineweaver-Burk plot.



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			multi-substrate reactions, enzyme inhibition; Allosteric enzymes and their kinetics; Regulation of enzyme reaction.
	GE-ZOOLOGY SEMESTER II	LIFESTYLE DISORDER (GE 4)	THEORY: Risk factors, complications (brain, heart, eye and kidney) and management of hypertension. PRACTICALS: Estimation of blood glucose (GOD/POD) by kit. Blood pressure measurement using a sphygmomanometer.
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES (GE-10)	THEORY: Brief introduction to carriers and vectors (mechanical and biological vector); Insect reservoirs; Host-vector relationship; Vectorial capacity; Host Specificity; Modes of disease transmission - vertical and horizontal transmission. Insects as vectors: General adaptations in insects to act as vectors. PRACTICALS: Study of insect vectors through permanent slides or photographs: Mosquitoes (<i>Aedes</i> , <i>Culex</i> , <i>Anopheles</i>), lice [head, body (<i>Pediculus</i>), pubic (<i>Phthirus</i>)], Flea (<i>Xenopsylla cheopis</i>), sand fly (<i>Phlebotomus</i>), house fly (<i>Musca domestica</i>)
MARCH	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO-ORDINATING SYSTEMS (DSC-06)	THEORY: Physiology of male and female reproduction– spermatogenesis, oogenesis, follicular development, steroidogenesis, implantation, PRACTICALS: Study of permanent slides of Mammalian Skin, Spinal cord, Hypothalamus, Pineal, Pituitary, Thyroid, Parathyroid, Pancreas, Adrenal, Testis and Ovary. Permanent slide preparation from various tissues: Tissue fixation, block preparation, tissue sectioning, H&E staining, microscopy.



	B.Sc.(H) ZOOLOGY SEMESTER II	FUNDAMENTALS OF BIOMOLECULES (DSC-05)	THEORY: Structure and biological importance: with emphasis on aldose, ketose, chiral centre, polarised Light, Fischer nomenclature, Haworth projection formula, mutarotation of glucose, anomers, pyranose, furanose, glycosidic linkage; reducing and non-reducing sugars: monosaccharides, disaccharides, polysaccharides and glycoconjugates.
	GE-ZOOLOGY SEMESTER II	LIFESTYLE DISORDER (GE 4)	THEORY: Coronary atherosclerosis-Coronary artery disease, Causes-Fat and lipid, Alcohol Abuse- Diagnosis, Electrocardiograph, Echocardiograph, Treatment, Exercise and Cardiac rehabilitation. PRACTICALS: Calculation of BMI, waist to hip ratio, skin fold test. Study of cardiac rehabilitation- thrombolytic agents and balloon angioplasty.
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISORDER (GE 10)	THEORY: Fleas as insect vectors; Study of flea borne diseases – Plague, typhus fever; Control and prevention/cure of diseases caused by fleas. PRACTICALS: Study of different kinds of mouth parts and legs of insects through slides/specimens
INTERNAL ASSESSMENT TEST (APRIL)			
APRIL	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO-ORDINATING SYSTEMS (DSC- 06)	THEORY: Pregnancy, and mammary gland development. PRACTICAL: Demonstration of the unconditioned reflex action (Deep tendon reflex such as knee jerk reflex). Recording of simple muscle twitch with electrical stimulation (Interpretation/ Virtual).

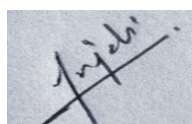
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	B.Sc.(H) ZOOLOGY SEMESTER II	FUNDAMENTALS OF BIOMOLECULES (DSC-05)	THEORY: Cot Curves: Base pairing, Denaturation and Renaturation of DNA; Types of DNA and RNA.
	GE-ZOOLOGY SEMESTER II	LIFESTYLE DISORDER (GE 4)	THEORY: Introduction to Cancer and general diagnostic methods to detect cancer; Lung Cancer, Mouth Cancer: associated lifestyle choices, symptoms and treatment. PRACTICALS: Imaging techniques for cancer diagnosis. CT Scan, MRI, PET-CT scan. Confirmatory Biopsy.
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES (GE 10)	THEORY: Human louse (head, body and pubic louse) as disease vectors; study of louse borne diseases – Typhus fever, relapsing fever, vagabond's disease, phthiriasis; Control of human louse and prevention/cure of diseases caused by them. PRACTICALS: Study of different diseases transmitted by above insect vectors using photographs. Project report on any one disease transmitted by insect vector. (PRESENTATIONS)
MAY	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO-ORDINATING SYSTEMS (DSC-06)	THEORY: REVISION DOUBT SESSIONS PRACTICALS: MOCK TEST
	B.Sc.(H) ZOOLOGY SEMESTER II	FUNDAMENTALS OF BIOMOLECULES (DSC-05)	THEORY: Steroids. REVISION DOUBT SESSIONS
	GE-ZOOLOGY SEMESTER II	LIFESTYLE DISORDER (GE 4)	THEORY: REVISION DOUBT SESSIONS

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			PRACTICALS: MOCK TEST REVISION
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES (GE 10)	THEORY: REVISION DOUBT SESSIONS PRACTICALS: MOCK TEST REVISION




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SEMESTER WISE TEACHING PLAN January -May, 2024

Name of the Faculty: Dr. Mohita Bhagat

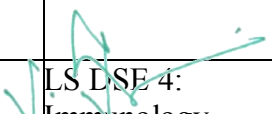
Department: Zoology

Semester: Even (II/IV/VI)

Month		Topics	Course	Paper Code/Name
January, 2024	Theory	Unit 1 Cell Division and Differentiation Cell cycle regulation	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
		Unit 2: Overview of the Immune System Historical perspective, early theories of immunology, clonal selection theory. Innate immunity: defensive barriers of innate immunity	B.Sc. (P) Life Sciences Semester VI	LS DSE 4: Immunology
	Practical	Study of various developmental stages in the life Cycle of Drosophila using stock culture/ permanent slides/ photomicrograph.	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
		- Preparation of stained blood film to study various types of blood cells. - Oüchterlony's double immuno-diffusion method.	B.Sc. (P) Life Sciences Semester VI	LS DSE 4: Immunology
February, 2024	Theory	Unit 1 Cell Division and Differentiation Types of animal cells and tissues, Mitosis, meiosis, Cell-cell communication	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
		Unit 2: Overview of the Immune System Cell types and molecules involved in innate immunity. Adaptive immune system: attributes of acquired immunity. Humoral and cellular mediated immunity, active and passive immunity	B.Sc. (P) Life Sciences Semester VI	LS DSE 4: Immunology

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	Practical	- Study of the various stages of meiosis through permanent slides. - Frog - Study of developmental stages - whole mounts and sections through permanent slides cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
		- ABO blood group determination. - Demonstration of ELISA and Immunoelectrophoresis	B.Sc. (P) Life Sciences Semester VI	LS DSE 4: Immunology
March, 2024	Theory	Unit 1: Cell Division and Differentiation Stem cells, Differential gene expression. Unit 6: Post Embryonic Development Metamorphic events and its hormonal regulation in amphibians	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
		Unit 2: Overview of the Immune System Primary and secondary cellular response, cells and molecules involved in adaptive immunity.	B.Sc. (P) Life Sciences Semester VI	LS DSE 4: Immunology
	Practicals	Chick – Study of Whole Mounts of developmental stages of Chick through permanent slides (HH stages)- 13 hrs, 18hrs, 24hrs, 28hrs, 33hrs, 36hrs, 48hrs, 72hrs and 96hrs	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
		- Demonstration of lymphoid organs. - Histological study of spleen, thymus and lymph nodes through slides/photographs	B.Sc. (P) Life Sciences Semester VI	LS DSE 4: Immunology


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April, 2024	Theory	Internal Assesment	B.Sc. (P) Life Sciences	LS DSC: Cell and Developmental Biology of Animals
		Unit 4: Late Embryonic Development Fate of Germ Layers, Formation of neural tube, Extra embryonic membranes in bird	Semester II	
	Practical	Unit 5: Major Histocompatibility Complex (MHC I and II) Structure and functions of MHC	B.Sc. (P) Life Sciences	LS DSE 4: Immunology
			Semester VI	
	Practical	- Study of the different types of placenta along with its function-through permanent slides/photomicrograph. - Visit to IVF centre/ Poultry Farm - Project Report	B.Sc. (P) Life Sciences	LS DSC: Cell and Developmental Biology of Animals
		- Mock - Viva - Revision		LS DSE 4: Immunology
May, 2024	Theory	Discussion of Mid term Test paper and previous year question papers, Revision of topics	B.Sc. (P) Life Sciences	LS DSC: Cell and Developmental Biology of Animals
			B.Sc. (P) Life Sciences	LS DSE 4: Immunology
			Semester II	
			Semester VI	

M. Bhagat

V. A.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
January -May 2024, (Session 2023-24)

Name of the Faculty: Dr. Rajendra Phartyal

Department: Zoology

Semester: VI: Theory: B.Sc. H . Biological Science Sem VI(Evolutionary Biology), B.Sc. (H) Zoology Sem VI (Evolutionary Biology), B.Sc. H . Biological Science Sem VI(Wildlife biology and Conservation)

Practicals: B.Sc. H . Biological Science Sem VI(Evolutionary Biology), B.Sc. (H) Zoology Sem VI (Evolutionary Biology), B.Sc. H . Biological Science Sem VI(Wildlife biology and Conservation)

Month		Topics	Course	Paper Code/Name
JANUARY	Theory:	Evolutionary Biology Paleobiological: Concept of Stratigraphy and geological timescale; fossil study (types, formation and dating methods). Anatomical: Vestigial organs; Homologous and Analogous organs (concept of parallelism and convergence in evolution). Taxonomic: Transitional forms/evolutionary intermediates; living fossils	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology Speciation: Micro-evolutionary changes (inter-population variations, clines, Ring species, races), Isolating mechanisms, Modes of speciation, Adaptive radiation/macroevolution, Phyletic gradualism and punctuated equilibrium	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Mortality, Natality, Population Size	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation

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	Practicals:	Evolutionary Biology - Living fossils - Eg. <i>Limulus</i>, <i>Peripatus</i>, <i>Latimeria</i>, <i>Sphaenodon</i> - Study of types of fossils (e.g. Body fossils, trails, casts and moulds and others) and Index fossils of Palaeozoic era - Vestigial, Analogous and Homologous organs using photographs, models or specimen - Connecting links/transitional forms - Eg. <i>Euglena</i>, <i>Neopilina</i>, <i>Balanoglossus</i>, <i>Chimaera</i>, <i>Tiktaalik</i>, <i>Archaeopteryx</i>, <i>Ornithorhynchus</i>	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology - Study of fossils from Models/ Pictures. - Study of homology and analogy from suitable specimens.	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Familiarization and study of animal evidences in the field: Identification of animals through pug marks, hoof marks, scats, pellet groups, nest and antlers Identification of Big Cats (Lion, Tiger, Panther, Cheetah, Leopard and Jaguar); Birds of Prey (Eagle, Kite, Vulture, Falcon, Hawk and Owl) and Poisonous snakes (Cobra, Krait, Viper)	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
FEBRUARY	Theory:	Evolutionary Biology Mass-scale extinctions: causes, significance and events. Cretaceous: Tertiary Mass Extinction in detail. . Phylogenetic: a) Fossil based: Phylogeny of horse as a model.	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology Mass extinctions (events, causes and effects), Detailed explanation of K-T extinction Palaeontological: Fossils (formation, types and dating); Geological time scale; Study of horse phylogeny	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Age Pyramids, Ecological and Crude Density; Survey Methods: Quadrat method	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation

	Practicals:	Evolutionary Biology - Simulation experiments using coloured beads/playing cards to understand the effects of Natural selection on allele frequencies Selection Exemplifying Adaptive strategies (Colouration, Mimetic form, Co-adaptation and co-evolution; Adaptations to aquatic, fossorial and arboreal modes of life) using Specimens	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology - Study and verification of Hardy-Weinberg Law by chi square analysis. - Construction of cladograms based on morphological characters.	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Familiarization and study of animal evidences in the field: Identification of animals through pug marks, hoof marks, scats, pellet groups, nest and antlers Identification of Big Cats (Lion, Tiger, Panther, Cheetah, Leopard and Jaguar); Birds of Prey (Eagle, Kite, Vulture, Falcon, Hawk and Owl) and Poisonous snakes (Cobra, Krait, Viper)	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
MARCH	Theory:	Evolutionary Biology Primate characteristics and unique Hominin characteristics. Advantages and adaptations to bipedalism. Primate phylogeny leading to Hominin line.	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology Unique hominin characteristics contrasted with primate characteristics	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Protected Area Network (PAN): Preservation of general genetic diversity: in-situ and ex-situ conservation strategies; National parks, sanctuaries, Biosphere reserves;	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Practicals:	Evolutionary Biology - Simulation experiments using coloured beads/playing cards to understand the effects of Bottleneck effect and Founder effect - Digit reduction in horse phylogeny (study from chart), - Study of horse skull to illustrate key features	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)

		in equine evolution Construction of Phylogenetic tree using morphological characters.		
		Evolutionary Biology - Construction of phylogenetic tree with the help of bioinformatics tools (Clustal X, Phylip, MLK) and its interpretation. - Study of variations in a sample human population: (a) Continuous variation: Height/Weight in relation to age and sex (b) Discontinuous variation: Ability/Inability to taste Phenyl thiocarbamide (PTC).	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses) Trail / transect monitoring for abundance and diversity estimation of mammals and bird	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Assignment	Evolutionary Biology	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Physiology:Life Sustaining Systems	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	TESTS	Evolutionary Biology	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Physiology:Life Sustaining Systems	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
APRIL	Theory	Evolutionary Biology Australopithecines, Homo habilis, Homo erectus, Neanderthal man . Archaic and modern Homo sapiens. Human migration. Theories. Brief reference to molecular analysis of human origin – Mitochondrial DNA and Y-chromosome studies.	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology Variations: Heritable variations and their role in evolution. Primate phylogeny from Dryopithecus leading to Homo sapiens, molecular evidences in human evolution.	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)

		Conservation and community reserve, Important features of protected areas in India; WWN, IUCN, and CITES. Wild life Legislation - Wildlife Protection act (1972), its amendments and implementation.	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Practicals:	Evolutionary Biology - Study of monkey and human skull - A comparison to illustrate common primate and unique Hominin features - Revision and mock practical test - Extension activity if time permits : Teaching Bioinformatic tools and introduction to databases Alignment using clustal X and construction of phylogenetic tree - Visit to Geology/ Anthropology museums, Delhi University if permission is obtained	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		Evolutionary Biology - Demonstration of role of natural selection and genetic drift in changing allelic frequencies using simulation studies. - Mock	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		Demonstration of different field techniques for flora and fauna: PCQM, Quadrat method for diversity: Circular, Square & rectangular plots	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
MAY	Theory	IUCN Red data book and red list categories (only names);	B.Sc. H . Biological Science Sem VI	BS-C14 (Evolutionary Biology)
		REVISION	B.Sc. (H) Zoology Sem VI	CC-14 (Evolutionary Biology)
		REVISION	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Practicals:	Revision, Viva-voce, Report evaluation and Final Examination		BS-C14 (Evolutionary Biology)
		Revision, Viva-voce, Report evaluation and Final Examination		CC-14 (Evolutionary Biology)
		Revision, Viva-voce, Report evaluation and Final Examination		DSE: Wildlife biology and Conservation

Rajendra

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SEMESTER WISE TEACHING PLAN(2023-24)
January 2024-May 2024,
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr.C..Sreenivasa Reddy

Department:Zoology

Semester: Even (II/IV/VI)

Month		Topics	Course	Paper Code/Name
January, 2024	Theory:	UNIT- III: Early Embryonic Development Gametogenesis: Spermatogenesis and Oogenesis in mammals.	B.Sc. (P)LifeSciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical:	Study of various developmental stages in the life Cycle of Drosophila using stock culture/ permanent slides/ photomicrograph.	B.Sc. (P)LifeSciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical	1. Calculate the BMI of students and analyse the results with suitable statistical tools. 2. Measure the blood pressure using sphygmomanometer.	B.Sc.(P) Life Science Semester VI	LS SEC Public Health and Hygiene
	Theory:	Bio telemetry :Common diseases of wild animals:Zoonosis :Ebola and Salmonellosis.	B.Sc.(H)Biological Sciences Semester VI	DSE-6 Wild life biology and conservation.
	Theory:	Bio- telemetry; Care of injured and diseased animal	B.Sc. (H) Zoology Semester VI	DSE- IV Wild life conservation and management.
February, 2024	Theory:	Types of Eggs and Egg membranes Fertilization: External (amphibians) and Internal (mammals)	B.Sc. (P)LifeSciences Semester II	DSC-06 Cell and developmental biology of Animals

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	Practical:	1. Study of the various stages of meiosis through permanent slides. 2. Frog - Study of developmental stages - whole mounts and sections through permanent slides cleavage stages, blastula, gastrula, neurula, tail bud stage, tadpole external and internal gill stages.	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical	1. Study of household pests following with reference to public health. 2. Testing potability of water for human consumption by MPN method	B.Sc. (P) Life Science Semester VI	LS SEC Public Health and Hygiene
	Theory:	Rabies, Foot and mouth disease and Tuberculosis	B.Sc. (H) Biological Sciences Semester VI	DSE-6 Wild life biology and conservation.
	Theory:	Quarantine; Common diseases of wild animals: Zoonosis (Ebola and Salmonellosis), Rabies,	B.Sc. (H) Zoology Semester VI	DSE- IV Wild life conservation and management.
March, 2024	Theory:	Fast and slow blocks to Polyspermy; Types and Patterns of cleavage; Types of morphogenetic movements;	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical:	3. Chick – Study of Whole Mounts of developmental stages of Chick through permanent slides (HH stages)- 13 hrs, 18hrs, 24hrs, 28hrs, 33hrs, 36hrs, 48hrs, 72hrs and 96hrs	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical	1. Estimation of blood glucose level 2. To determine the content of different pollutants in soil/water samples.	B.Sc. (P) Life Science Semester VI	LS SEC Public Health and Hygiene
	Theory:	rescue, rehabilitation and reintroduction. Tiger conservation - Tiger reserves in India;	B.Sc. (H) Biological Sciences Semester VI	DSE-6 Wild life biology and conservation.

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		Management challenges in Tiger reserve; Objectives and activities of Project Elephant		
	Theory:	Foot and Mouth Disease, Mycobacterium TB, Bovine and Avian Flu	B.Sc. (H) Zoology Semester VI	DSE- IV Wild life conservation and management.
April, 2024	Theory:	Early development of frog and chick up to gastrulation. Fate maps. UNIT- II: Scope and History of Developmental Biology 03 Hours Historical perspective including contributions by eminent scientists and landmark experiments in the field of Developmental Biology,	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical:	4. Study of the different types of placenta along with its function- through permanent slides /photomicrograph. Visit to IVF centre/ Poultry Farm.	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical	PROJECT REPORT	B.Sc.(P) Life Science Semester VI	LS SEC Public Health and Hygiene
	Theory:	Project Crocodile. Population Viability Analysis (PVA)	B.Sc.(H) Biological Sciences Semester VI	DSE-6 Wild life biology and conservation.
	Theory:	Preservation of general genetic diversity; Restoration of degraded habitats.	B.Sc. (H) Zoology Semester VI	DSE- IV Wild life conservation and management.
May 2024	Theory:	Concepts of Epigenesis, Preformation, Von Baer laws. Revision.	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical:	Project report on IVF Centre/ Poultry farm.	B.Sc. (P) Life Sciences Semester II	DSC-06 Cell and developmental biology of Animals
	Practical	Revision and Practice to final practices.	B.Sc. (P) Life Science Semester	LS SEC Public Health and Hygiene

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			VI	
	Theory:	Revision	B.Sc. (H) Biological Sciences Semester VI	DSE-6 Wild life biology and conservation.
	Theory:	Revision	B.Sc. (H) Zoology Semester VI	DSE- IV Wild life conservation and management.

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Even Semester 2024 (Jan-May)

Name of the Faculty: Dr. P.Jayaraj

Department: Zoology

Semester: IV/VI

Month		Topics	Course	Paper Code/Name
January	Theory	DEVELOPMENTAL BIOLOGY Unit 2: Early Embryonic Development Fate maps (including Techniques), Early development of frog and chick up to gastrulation; Embryonic induction and organizers	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
	Theory	DSC-Developmental biology UNIT- 1: Introduction Historical perspectives and basic concepts: Phases of development, Pattern formation, Differentiation and growth, Cytoplasmic determinants.	B.Sc (H) Zoology II year IV semester (SZH) UGCF	IV-NEP
	Practicals	DEVELOPMENTAL BIOLOGY • Study of whole mounts and sections of developmental stages of frog through permanent slides: Cleavage stages, blastula, gastrula, neurula, tail-bud stage, tadpole (external and internal gill stages)	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		DSC-Developmental biology • Study of whole mounts and sections of developmental stages of frog through permanent slides: Cleavage stages, blastula, gastrula, neurula (Neural plate, Neural fold and Neural tube stages), tail-bud stage, tadpole (external and internal gill stages)	B.Sc (H) Zoology II year IV semester (SZH) UGCF	IV-NEP
February	Theory	DEVELOPMENTAL BIOLOGY	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		DEVELOPMENTAL BIOLOGY Unit 3: Late Embryonic Development Fate of Germ Layers; Extra-embryonic membranes in birds. Implantation of embryo in humans, Placenta (Structure, types and functions of placenta)		
		DSC-Developmental biology UNIT- 2: Early Embryonic Development Gametogenesis: oogenesis, spermatogenesis; Types of eggs, Egg membranes; Fertilization (External and Internal), Blocks to polyspermy; Planes and patterns of cleavage; Types of Blastula; Fate maps; Gastrulation in frog and chick, Embryonic induction and organizers	B.Sc (H) Zoology II year IV semester (SZH) UGCF	IV-NEP
	Practicals:	DEVELOPMENTAL BIOLOGY • Study of whole mounts of developmental stages of chick through permanent slides: Primitive streak (13 and 18 hours), 21, 24, 28, 33, 36, 48, 72, and 96 hours of	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII

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		incubation (Hamilton and Hamburger stages)		
		DSC-Developmental biology Study of whole mounts of developmental stages of chick through permanent slides (Hamburger and Hamilton Stages): Stage 3 (Intermediate Streak)-13 hours, Stage 4 (Definitive Streak)-18 hours, Stage 5 (Head Process)-21 hours, Stage 7- 24 hours, Stage 8-28 hours, Stage 10-33 hours, Stage 11-40 hours, Stage 13-48 hours, Stage 19- 72 hours and Stage 24-96 hours of incubation	B.Sc (H) Zoology II year IV semester (SZH) UGCF	IV-NEP
March	Theory	Unit 4: Post Embryonic Development Metamorphosis: Changes, hormonal regulations in amphibians and insects; Regeneration: Modes of regeneration, epimorphosis, morphallaxis and compensatory regeneration (with one example each); Ageing: Concepts and Theories	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		DSC-Developmental biology UNIT- 3: Late Embryonic Development Fate of Germ Layers; Extra-embryonic membranes in birds; Implantation of embryo in humans, structure, types, and functions of placenta. UNIT- 4: Post Embryonic Development Metamorphosis and its hormonal regulation in amphibians and insects; Regeneration: Modes of regeneration, epimorphosis, morphallaxis and compensatory regeneration (with one example each); Ageing: concepts and theories.	B.Sc (H) Zoology II year IV semester (SZH) UGCF	IV-NEP
	Practical	DEVELOPMENTAL BIOLOGY Study of the developmental stages and life cycle of Drosophila from stock culture	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII
		DSC-Developmental biology - in vivo study of chick embryo development by windowing and candling methods. (Demonstration only) - Study of indirect development and metamorphosis by rearing any one insect. - Project report on Drosophila or any insect culture/Visit to Poultry Farm/IVF Centre	B.Sc (H) Zoology II year IV semester (SZH) UGCF	IV-NEP
	Assignment	DEVELOPMENTAL BIOLOGY To Solve and submit questionnaire for the topics covered before mid semester break	B.Sc (H) Zoology III year VI semester (TZH)	CORE COURSE XIII


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MAY	Theory	Discussion of Mid-term Test paper and previous year question papers, Revision of topics Final examination	B.Sc (H) Zoology II year IV semester (SZH) UGCF B.Sc (H) Zoology III year VI semester (TZH)	ZH Core-XIII:
	Practical	Revision, Viva-voce, Report evaluation and Final Examination	B.Sc (H) Zoology II year IV semester (SZH) UGCF B.Sc (H) Zoology III year VI semester (TZH)	IV-NEP

NAME : Dr. P.Jayaraj
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SRI VENKATESWARA COLLEGE (DU), NEW DELHI
SEMESTER WISE TEACHING PLAN
JANUARY - MAY, 2024
(EVEN SEMESTER)

Name of the Faculty : Dr. OBAIAH JAMAKALA

Department : Zoology

Semester : Even (II/IV/VI)

Month		Topics	Course	Paper Code/Name
January, 2024	Theory (2+2 Periods)	Unit - I: Nerve and Muscle - Structure of a neuron - Types of neurons - Resting membrane potential - Graded potential, - Action potential	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Section A and Section B)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4+4 Periods)	Preparation of haemin crystals and haemochromogen crystals	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4 Periods)	Study of whole mounts and sections of developmental stages of frog through permanent slides: Cleavage stages, blastula, gastrula, neurula, tail-bud stage, tadpole (external and internal gill stages)	B.Sc., (H) Zoology - LOCF Semester VI	ZH Core Course- XIII: Developmental Biology
February, 2024	Theory (2+2 Periods)	Unit - I: Nerve and Muscle - Origin of action potential and its propagation in myelinated and non-myelinated nerve fibres, - Ultrastructure of skeletal muscle, - Molecular and chemical basis of muscle contraction. Unit- 2: Digestion - Physiology of digestion in the alimentary canal; - Absorption of carbohydrates, proteins and lipids.	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Section A and Section B)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4+4 Periods)	- Estimation of WBC and RBC count of blood. - Estimation of haemoglobin using Sahli's haemoglobinometer. - Determination of Blood Pressure by Auscultatory method.	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology

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	Practical (4 Periods)	Study of whole mounts of developmental stages of chick through permanent slides: Primitive streak (13 and 18 hours), 21, 24, 28, 33, 36, 48, 72 and 96 hours of incubation (Hamilton and Hamburger stages)	B.Sc., (H) Zoology - LOCF Semester VI	ZH Core Course- XIII: Developmental Biology
March, 2024	Theory (2+2 Periods)	Unit- 3: Respiration - Pulmonary ventilation, - Respiratory volumes and capacities, - Transport of Oxygen and carbondioxide in blood Unit- 4: Excretion - Structure of nephron, - Mechanism of urine formation, - Counter-current Mechanism	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Section A and Section B)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4+4 Periods)	- Lung function tests using Spirometry (Determination of Vital Capacity, Peak Expiratory Flow Rate. Lung Volumes and Capacities). - Measurement of oxygen saturation by pulse oximetry before and after exercise. - Experiments on superficial (plantar) and deep (knee jerk) reflex.	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4 Periods)	Study of the developmental stages and life cycle of Drosophila from stock culture	B.Sc., (H) Zoology - LOCF Semester VI	ZH Core Course- XIII: Developmental Biology
April, 2024	Theory (2+2 Periods)	Unit- 5: Cardiovascular system - Structure of Heart, - Origin and conduction of the cardiac impulse, - Cardiac cycle Unit- 6: Reproduction and Endocrine Glands - Physiology of male reproduction: hormonal control of spermatogenesis; - Physiology of female reproduction: hormonal control of menstrual cycle. - Structure and function of pituitary, thyroid, Parathyroid, pancreas and adrenal glands ➤ Internal Assessment Test ➤ Student Assignments	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Section A and Section B)	Zoo-LS-DSC-12: Fundamentals of Human Physiology

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	Practical (4+4 Periods)	- Study of permanent histological sections of mammalian pituitary, thyroid, pancreas, adrenal gland, duodenum, liver, lung, kidney, bone, cartilage. - Project on Family planning devices. Revision and Mock Test	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4 Periods)	- Study of different sections of placenta (photomicrograph / slides) - Submission of project report on Drosophila culture/chick embryo development Revision and Mock Test	B.Sc., (H) Zoology - LOCF Semester VI	ZH Core Course- XIII: Developmental Biology
May, 2024	Theory (2+2 Periods)	Revision and display of Internal Assessment Marks Student assessments	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Section A and Section B)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4+4 Periods)	Project Report Student Assessments	B.Sc., (P) Life Sciences - UGCF Semester IV (Both Batch I and Batch III)	Zoo-LS-DSC-12: Fundamentals of Human Physiology
	Practical (4 Periods)	Project Report Student Assessments	B.Sc., (H) Zoology - LOCF Semester VI	ZH Core Course- XIII: Developmental Biology



(Dr. OBAIAH JAMAKALA)



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SEMESTER WISE TEACHING PLAN (2023-24)
January 2024-May 2024,
SRI VENKATESWARA COLLEGE

Name of the Faculty: Dr. Namita Nayyar

Department: Zoology

Semester: Even (IV/VI)

Month		Topics	Course	Paper Code/Name
January, 2024	Theory (2+2=4)	UNIT 3: Circulatory System: General plan of circulation; Evolution of heart and aortic arches.	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates
		Unit 1: Introduction Concept and scope of biotechnology	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
	Practical: (4+4+4=12)	Instructions for maintaining records, Introduction to Comparative anatomy of Vertebrates practical exercises	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates
		• Study of whole mounts and sections of developmental stages of frog through permanent slides: Cleavage stages, blastula, gastrula, neurula (Neural plate, Neural fold and Neural tube stages), tail-bud stage, tadpole (external and internal gill stages)	B.Sc. (H) Zoology Semester IV	Developmental Biology
		Introductory Class and overview of exercises	B.Sc. (H) Biological Science Sem IV	Animal Physiology
February, 2024	Theory:	UNIT 8: Urinogenital System: Succession of kidney; Evolution of urinogenital ducts; Types of uteri in mammals. UNIT 4: Respiratory System: Skin, gills, lungs, accessory respiratory organs in fishes, air sacs. UNIT 5: Skeletal System: Outline of axial and appendicular skeleton; Concept of neurocranium, dermatocranium and splanchnocranium	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates

nanita

V. A.

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		Unit 4: Genetically Modified Organisms: Production of cloned and transgenic animals: Nuclear Transplantation, Retroviral Method, DNA microinjection; Applications of transgenic animals: Production of pharmaceuticals, production of donor organs, knock out mice.	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
	Practical:	Study of the disarticulated skeleton of Frog, Varanus, Fowl, Rabbit (Vertebral Column, Sternum, Girdles, Ribs, Limb bones)	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates
		Study of whole mounts of developmental stages of chick through permanent slides (Hamburger and Hamilton Stages): Stage 3 (Intermediate Streak)-13 hours, Stage 4 (Definitive Streak)-18 hours, Stage 5 (Head Process)-21 hours, Stage 7-24 hours, Stage 8-28 hours, Stage 10-33 hours, Stage 11-40 hours, Stage 13-48 hours, Stage 19-72 hours and Stage 24-96 hours of incubation	B.Sc. (H) Zoology Semester IV	Developmental Biology
		Effect of isotonic, hypotonic and hypertonic saline solutions on erythrocytes Preparation of temporary mounts: nerve cells and blood smear Enumeration of Differential Leucocyte Count (D.L.C)	B.Sc. (H) Biological Science Sem IV	Animal Physiology
March, 2024	Theory:	UNIT 5: Skeletal System: Structure of a typical vertebra and its classification based on centrum; Jaw suspensorium; General plan of girdles and limbs. UNIT 7: Sense Organs: Classification of receptors; Structure and function of mammalian eye and ear. UNIT 2: Digestive System: Alimentary canal and associated glands; Dentition	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates
		Unit 4: Genetically Modified Organisms: Production of transgenic plants: Agrobacterium mediated transformation. Applications of transgenic plants: insect and herbicide resistant plants.	B.Sc. (H) Zoology Semester VI	Animal Biotechnology

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narula

	Practical:	Study of the vertebrate Skull (i) one herbivorous and one carnivorous animal skull; (ii) one monocondylic and one dicondylic skull Study of different types of feathers of birds Study of carapace and plastron of turtle/tortoise	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates
		In vivo study of chick embryo development by windowing and candling methods. (Demonstration only) • Study of indirect development and metamorphosis by rearing any one insect. • Project report on Drosophila or any insect culture/Visit to Poultry Farm/IVF Centre	B.Sc. (H) Zoology Semester IV	Developmental Biology
		Study of permanent slides of nephridia of earthworm and mammalian oesophagus, stomach, ileum, rectum, liver, trachea, lung, kidney, spinal cord Effect of temperature on action of salivary amylase	B.Sc. (H) Biological Science Sem IV	Animal Physiology
		Mid Term Exam Assignment		
April, 2024	Theory:	UNIT 1: Integumentary System: Structure and derivatives of integument UNIT 6: Nervous System: Comparative account of brain; Cranial nerves in mammals.	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates
		Unit 5: Applications of Genetic Engineering Molecular diagnosis of genetic diseases (Cystic fibrosis, Sickle cell anemia), Recombinant DNA in medicines: Recombinant insulin and human growth hormone, Gene therapy	B.Sc. (H) Zoology Semester VI	Animal Biotechnology
	Practical:	Study of the digestive, circulatory and urinogenital system of frog/rat through videos on dissection or through virtual dissections.	B.Sc. (H) Zoology Semester IV	Comparative Anatomy of Vertebrates

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		- Study of different sections of placenta (photomicrographs/slides). - Student Presentation: Power point presentation on any topic related to developmental biology.	B.Sc. (H) Zoology Semester IV	Developmental Biology
		Study of mouth parts and digestive system of Periplaneta	B.Sc. (H) Biological Science Sem IV	Animal Physiology
May, 2024	Theory:	Discussion of Mid-term Test paper and previous year question papers, Revision of topics Final examination	B.Sc. (H) Zoology Semester IV, B.Sc. (H) Zoology Semester VI	Comparative Anatomy of Vertebrates, Animal Biotechnology
	Practical	Revision, Viva-voce, Report evaluation and Final Examination	B.Sc. (H) Zoology Semester IV B.Sc. (H) Zoology Semester IV B.Sc. (H) Biological Science Sem IV	Comparative Anatomy of Vertebrates; Developmental Biology; Animal Physiology

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SEMESTER WISE TEACHING PLAN
SRI VENKATESWARA COLLEGE
Academic Planner: Even Semester 2024 (Jan-May)

Name of the Faculty: **PROF. ANITA VERMA**

Department: Zoology

Semester: II/IV/VI

MONTH	COURSE	PAPER/ PAPER CODE	TOPICS
JANUARY	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO- ORDINATING SYSTEMS (DSC-06)	THEORY: Structure of neuron, resting membrane potential, origin and conduction of action potential across the myelinated and unmyelinated nerve fibers PRACTICALS: Classification, structure and functions of tissues: epithelial, connective, muscular and nervous tissue. Structure, histology, types and function of bones and cartilage.
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES	PRACTICALS: INTRODUCTORY CLASSES
	B. SC. (H) BIOLOGICAL SCIENCES 2 ND YEAR SEM IV	6792012402/ ANIMAL PHYSIOLOGY	THEORY: Introduction to Animal Physiology and overview of topics PRACTICALS: Introductory Class and overview of exercises
FEBRUARY	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO- ORDINATING SYSTEMS (DSC-06)	THEORY: Types of synapses, synaptic transmission, Neuromuscular junction. PRACTICAL: Classification and histological structure of muscle; ultrastructure of striated muscle. Preparation of temporary mounts: Squamous epithelium, Striated muscle fibres, Nerve cells.
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES (GE- 10)	PRACTICALS: Study of insect vectors through permanent slides or photographs: Mosquitoes (<i>Aedes</i> , <i>Culex</i> , <i>Anopheles</i>), lice [head, body (<i>Pediculus</i>), pubic (<i>Phthirus</i>)], Flea (<i>Xenopsylla cheopis</i>), sand fly (<i>Phlebotomus</i>), house fly (<i>Musca domestica</i>)

Anita

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	B. SC. (H) BIOLOGICAL SCIENCES 2 ND YEAR SEM IV	6792012402/ ANIMAL PHYSIOLOGY	THEORY: Feeding patterns found in different animals; Intracellular and extracellular digestion, cellulose digestion in animals: invertebrates, ruminants, non-ruminants and coprophagy, Physiology of aquatic and terrestrial breathing PRACTICALS: Effect of isotonic, hypotonic and hypertonic saline solutions on erythrocytes Preparation of temporary mounts: nerve cells and blood smear Enumeration of Differential Leucocyte Count (D.L.C)
MARCH	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO- ORDINATING SYSTEMS (DSC-06)	THEORY: Mechanism of muscle contraction; Characteristics of muscle twitch. PRACTICALS: Study of permanent slides of Mammalian Skin, Spinal cord, Hypothalamus, Pineal, Pituitary, Thyroid, Parathyroid, Pancreas, Adrenal, Testis and Ovary. Permanent slide preparation from various tissues: Tissue fixation, block preparation, tissue sectioning, H&E staining, microscopy.
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISORDER (GE 10)	PRACTICALS: Study of different kinds of mouth parts and legs of insects through slides/specimens
	B. SC. (H) BIOLOGICAL SCIENCES 2 ND YEAR SEM IV	6792012402/ ANIMAL PHYSIOLOGY	THEORY: Respiratory organs in aquatic and terrestrial organisms: respiration in insects: terrestrial, aquatic and cyclic respiration, respiration in fishes: ventilation, water pumping and counter current flow, respiration in birds: air sacs, lung function and crosscurrent flow PRACTICALS: Study of permanent slides of nephridia of earthworm and mammalian oesophagus, stomach, ileum, rectum, liver, trachea, lung, kidney, spinal cord Effect of temperature on action of salivary amylase

Alena

INTERNAL ASSESSMENT TEST (APRIL)			
APRIL	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO- ORDINATING SYSTEMS (DSC-06)	THEORY: Motor unit, summation, and tetanus. PRACTICAL: Demonstration of the unconditioned reflex action (Deep tendon reflex such as knee jerk reflex). Recording of simple muscle twitch with electrical stimulation (Interpretation/Virtual).
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES (GE 10)	PRACTICALS: Study of different diseases transmitted by above insect vectors using photographs. Project report on any one disease transmitted by insect vector. (PRESENTATIONS)
	B. SC. (H) BIOLOGICAL SCIENCES 2 ND YEAR SEM IV	6792012402/ ANIMAL PHYSIOLOGY	THEORY: An overview of neuronal structure and function; general principles of sensory physiology chemoreceptors (gustatory and olfactory); mechanoreceptors (statocyst in invertebrates and lateral line system of fishes); sonar system in bats; electroreceptors (electric organs in fishes); thermoreceptors PRACTICALS: Study of mouth parts and digestive system of <i>Periplaneta</i>
MAY	B.Sc.(H) ZOOLOGY SEMESTER II	HUMAN PHYSIOLOGY: CONTROL AND CO- ORDINATING SYSTEMS (DSC-06)	THEORY: REVISION DOUBT SESSIONS PRACTICALS: REVISION TEST FINAL EXAMINATION
	GE-ZOOLOGY SEMESTER IV	INSECT VECTOR AND DISEASES (GE 10)	PRACTICALS: REVISION TEST FINAL EXAMINATION
	B. SC. (H) BIOLOGICAL SCIENCES 2 ND YEAR SEM IV	6792012402/ ANIMAL PHYSIOLOGY	THEORY: REVISION DOUBT SESSIONS PRACTICALS: REVISION TEST FINAL EXAMINATION

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE
January-May, 2024

Name of the Faculty: Prof. Vartika Mathur

Department: Zoology

Semester: IV, VI (Even)

Month		Topics	Course	Paper Code/Name
January	Theory: (1+1)	Introduction to Wildlife and overview of topics	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Introduction to Wildlife and overview of topics	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Practicals: (4+4+4=12)	Instructions for maintaining records, Introduction to Wildlife Conservation and Management practical exercises	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Instructions for maintaining records, Introduction to Wildlife biology and Conservation exercises Identification and study of five mammalian, avian and herpeto fauna through direct and indirect evidences	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
		Instructions for maintaining records, Introduction to Animal Behavior and overview of exercises	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
February	Theory: (1+1)	Values of wildlife - positive and negative; Conservation ethics; Importance of conservation, Setting back succession, Grazing logging	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Values of wildlife; Ethics of wildlife conservation; Causes of depletion; Importance of Conservation	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Practicals: (4+4+4=12)	Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses) Identification of big cats: Lion, tiger, panther, cheetah, leopard and jaguar	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Familiarization and study of animal evidences in the field: Identification of animals through pug marks, hoof marks, scats, pellet groups, nest and antlers	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
		Identification of Big Cats (Lion, Tiger, Panther, Cheetah, Leopard and Jaguar); Birds of Prey (Eagle, Kite, Vulture, Falcon, Hawk and Owl) and Poisonous snakes (Cobra, Krait, Viper)		
		To study nests and nesting behaviour of the birds and social insects. To study the behavioural responses of wood lice to dry and humid conditions To study geotaxis behaviour in earthworm	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
March	Theory: (1+1)	Mechanical treatment; Advancing the successional process: Cover construction, Faecal analysis of ungulates and carnivores	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Setting back succession, Grazing logging, Mechanical treatment; Advancing the successional process: Cover construction, Faecal analysis of ungulates and carnivores: Hair, antler, pug marks and hoof marks identification	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation

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April	Practicals (4+4+4=12)	Identification and study of five mammalian, avian and herpeto fauna through direct and indirect evidences, Familiarization and study of animal evidences in the field: Identification of animals through pug marks, hoof marks, scats, pellet groups, nest and antlers Visit to a Biodiversity Park	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses)	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
		Trail / transect monitoring for abundance and diversity estimation of mammals and bird		
		Tools, techniques and methods used in studying animal behavior Construction of ethogram using suitable data to study animal behaviour Visit to Delhi Zoo	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
	Mid Term Test	University pattern Test questions of covered topics	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		University pattern Test questions of covered topics	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
April	Theory: (1+1)	Faecal samples, slide preparation, and Hair identification; Pug marks and Census methods	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Trail/transect monitoring, Quadrat method, Census method	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
	Practicals: (4+4+4=12)	Demonstration of different field techniques for flora and fauna: PCQM, Quadrat method for diversity: Circular, Square & rectangular plots.	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Trail / transect monitoring for abundance and diversity estimation of mammals and bird		
		Demonstration of different field techniques for flora and fauna: PCQM, Quadrat method for diversity: Circular, Square & rectangular plots	B. Sc. (H) Biological Sciences 3 rd year Sem VI	DSE: Wildlife biology and Conservation
		To study the phototaxis behaviour in insect larvae To study different types of animal behaviour such as habituation, social life, courtship behaviour in insects and birds, and parental care from short videos/movies	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
May	Theory (1+1)	Discussion of Mid-term Test paper, Revision of topics Final examination	B. Sc. (H) Zoology 3 rd year Sem VI, B. Sc. (H) Biological Sciences 3 rd year Sem VI	Wildlife Conservation & Management, Wildlife biology and Conservation
	Practicals (4+4+4=12)	Revision, Viva-voce, Report evaluation and Final Examination	B. Sc. (H) Zoology 2 nd year Sem IV, B. Sc. (H) Zoology 3 rd year Sem VI, B. Sc. (H) Zoology 3 rd year Sem VI	Animal Behaviour, Wildlife Conservation & Management, Wildlife biology and Conservation

Vaidik Pathak

V. A.

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SEMESTER WISE TEACHING PLAN (2023-2024)
SRI VENKATESWARA COLLEGE
January-May, 2024

Name of the Faculty: Dr. Richa Misra

Department: Zoology

Semester: IV, VI (Even)

Month		Topics	Course	Paper Code/Name
January	Theory: (1+2+1)	Introduction to Animal Physiology, Overview of topics	B. Sc. (H) Biological Sciences 2 nd year Sem IV	6792012402/ Animal Physiology
		Introduction to Animal Behavior, Overview of topics	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Introduction to Wildlife Conservation & Management, Overview of topics	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
	Practicals: (4+4+4=12)	Instructions for maintaining records, Introduction to Wildlife Conservation and Management practical exercises	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation and Management
		Instructions for maintaining records, Introduction to Animal Behavior and overview of exercises	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Instructions for maintaining records, Introduction to Comparative anatomy of Vertebrates practical exercises	B. Sc. (H) Zoology 2 nd year Sem IV	2232012401/Comparative anatomy of Vertebrates
February	Theory: (1+2+1)	Regulatory Physiology: Homeostasis in animals: regulation of water and solutes in aquatic and terrestrial animals; osmoconformers and osmoregulators; physiology of osmoregulation in marine invertebrates, elasmobranchs and bony fishes (freshwater and marine); water balance in terrestrial animals: kangaroo rat. Osmoregulation: Regulation of Water and solutes in aquatic and terrestrial animals	B. Sc. (H) Biological Sciences 2 nd year Sem IV	6792012402/ Animal Physiology
		Origin and history of ethology; Pioneers of modern ethology: Karl von Frisch, Ivan Pavlov, Konrad Lorenz, Niko Tinbergen; Proximate and ultimate causes of behavior, Mechanisms of Behaviour: Innate behaviour, Instinct, Stimulus filtering, Sign stimuli, Code breakers; Patterns of Behaviour: Orientation, Taxis, Communication, Social Behaviour	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Causes of Wildlife depletion; World conservation strategies: WCS, CBD, Agenda 21, National parks and sanctuaries; Biosphere reserves; Conservation and Community reserve;	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
		Demonstration of basic equipment needed in wildlife studies use, care and maintenance (Compass, Binoculars, Spotting scope, Range Finders, Global Positioning System, Various types of Cameras and lenses)	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation and Management
	Practicals: (4+4+4=12)	Identification of big cats: Lion, tiger, panther, cheetah, leopard and jaguar		
		To study nests and nesting behaviour of the birds and social insects. To study the behavioural responses of wood lice to dry and humid conditions To study geotaxis behaviour in earthworm	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Study of the disarticulated skeleton of Frog, Varanus, Fowl, Rabbit (Vertebral Column, Sternum, Girdles, Ribs, Limb bones)	B. Sc. (H) Zoology 2 nd year Sem IV	2232012401/Comparative anatomy of Vertebrates

Richa Misra

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March	Theory: (1+2+1)	Regulatory Physiology: Patterns of thermoregulation: heat exchange with the environment. Ectotherms: tolerance to high temperature (lethal temperature), tolerance to cold and freezing temperature (freeze tolerant and intolerant animals). Endotherms: thermogenesis and regulation of body temperature.	B. Sc. (H) Biological Sciences 2 nd year Sem IV	6792012402/ Animal Physiology
		Social Behaviour, Altruism, Inclusive fitness, Hamilton's rule, Associative learning, Classical and operant conditioning, Habituation, Imprinting	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Important features of protected areas in India, Management Planning of Wildlife in Protected Areas: Estimation of carrying capacity; Human-wildlife conflict	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
	Practicals (4+4+4=12)	Identification and study of five mammalian, avian and herpeto fauna through direct and indirect evidences, Familiarization and study of animal evidences in the field: Identification of animals through pug marks, hoof marks, scats, pellet groups, nest and antlers Visit to a Biodiversity Park	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation and Management
		Tools, techniques and methods used in studying animal behavior Construction of ethogram using suitable data to study animal behaviour Visit to Delhi Zoo	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Study of the vertebrate Skull (i) one herbivorous and one carnivorous animal skull; (ii) one monocondylic and one dicondylic skull Study of different types of feathers of birds Study of carapace and plastron of turtle/tortoise	B. Sc. (H) Zoology 2 nd year Sem IV	2232012401/Comparative anatomy of Vertebrates
	Assignment	Topics for presentation assigned to students related to the syllabus and a new discovery related to the topic	B. Sc. (H) Biological Sciences 2 nd year Sem IV	6792012402/ Animal Physiology
		Topics for presentation assigned to students related to the syllabus and a new discovery related to the topic	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Topics for presentation assigned to students related to the syllabus and a new discovery related to the topic	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
April	Mid Term Test	University pattern Test questions of covered topics	B. Sc. (H) Biological Sciences 2 nd year Sem IV	6792012402/ Animal Physiology
		University pattern Test questions of covered topics	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		University pattern Test questions of covered topics	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
April	Theory: (1+2+1)	Regulatory Physiology: Structural and functional adaptations to temperature stress (taking examples of arctic fox, penguins, and camels) Bulk Transport (Circulation concepts, Cardiac Output)	B. Sc. (H) Biological Sciences 2 nd year Sem IV	6792012402/ Animal Physiology
		Sexual Behaviour: Sexual dimorphism concept, sexual selection, Courtship, sexual conflict in Parental care	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Eco tourism / wild life tourism in forests; Climax communities: characteristics and theories; Ecology of perturbation	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation & Management
	Practicals: (4+4+4=12)	Demonstration of different field techniques for flora and fauna: PCQM, Quadrat method for diversity: Circular, Square & rectangular plots. Trail / transect monitoring for abundance and diversity estimation of mammals and bird	B. Sc. (H) Zoology 3 rd year Sem VI	32237911/Wildlife Conservation and Management

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		To study the phototaxis behaviour in insect larvae To study different types of animal behaviour such as habituation, social life, courtship behaviour in insects and birds, and parental care from short videos/movies	B. Sc. (H) Zoology 2 nd year Sem IV	2232012403/Animal Behaviour
		Study of the digestive, circulatory and urinogenital system of frog/rat through videos on dissection or through virtual dissections.	B. Sc. (H) Zoology 2 nd year Sem IV	2232012401/Comparative anatomy of Vertebrates
May	Theory (1+2+1)	Discussion of Mid-term Test paper and previous year question papers, Revision of topics Final examination	B. Sc. (H) Biological Sciences 2 nd year Sem IV, B. Sc. (H) Zoology 2 nd year Sem IV, B. Sc. (H) Zoology 3 rd year Sem VI	Animal Physiology, Animal Behaviour, Wildlife Conservation & Management
	Practicals (4+4+4=12)	Revision, Viva-voce, Report evaluation and Final Examination	B. Sc. (H) Zoology 2 nd year Sem IV, B. Sc. (H) Zoology 3 rd year Sem VI	Animal Behaviour, Wildlife Conservation & Management, Comparative anatomy of Vertebrates

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