N.V.P. MANDAL'S,

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(Dr. Dinesh Naik)
PRINCIPAL

Programme Specific Outcomes and Course Outcomes

Department of Chemistry

Program Specific Outcomes:

Sr. No	Course Program	Program Objectives	Program Specific Outcomes
1.	F.Y. B.Sc. Chemistry	- To provide in-depth knowledge of scientific and technological aspects of Chemistry · - To familiarize with current and recent scientific and technological developments - To enrich knowledge through problem-solving, hand-on activities, study visits, projects, etc. - To train students in skills related to research, education, industry, and market. - To create the foundation for research and development in Chemistry - To develop analytical abilities towards real-world problems - To help students build-up a progressive and successful career in Chemistry.	**SPO1**:After completion of the program, students will be able to have in depth knowledge of basic concepts in Chemistry **SPO2**: Students will be able to apply the laws of Chemistry in real-life situations to solve the problems. **SPO3:** Students develop the aptitude of researching by undertaking small projects. **SPO4:** The student will have set his foundation to pursue higher education in Chemistry. **SPO5:** After completing the program student will have developed an interdisciplinary approach and can pursue higher studies in subjects other than Chemistry.

Courses offered – Undergraduate Chemistry

Sr. No	Class	Course	Course Outcomes
1.	F.Y.B.Sc. Chemistry	CH-101-Paper I Physical	**CO1**: This particular course enables students to understand and apply thermodynamic principles to

	(Semester Pattern) Semester-I	Chemistry	physical and chemical process 2. Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy 3. Variation of enthalpy with temperature–Kirchoff's equation 4. Third law of thermodynamic and its applications. **CO2**: Students are made aware about Chemical equilibrium will make students to understand 1. The relation between Free energy and equilibrium and factors affecting on equilibrium constant. 2. Exergonic and endergonic reaction 3. Gas equilibrium, equilibrium constant and molecular interpretation of equilibrium constant 4. Van't Haff equation and its application. **CO3**: The ionic equilibria chapter will lead students to understand 1. The concept of the ionization process occurred in acids, bases, and pH scale 2. Related concepts such as Common ion effect hydrolysis constant, ionic product, solubility product 3. Degree of hydrolysis and pH for different salts, buffer solutions
		CH- 102 Paper-II Organic Chemistry	**CO1:** Students are made aware of fundamental concepts of organic chemistry that govern the structure, bonding, properties, structural effects, acid-base theories, preparation methods, reactivity, functional groups, and stereochemistry of organic molecules. Further, students are expected to understand the fundamentals, principles, and recent developments in the subject area. **CO2**: It is expected to inspire and boost the interest of the students towards chemistry as the main subject. **CO1**3. To familiarize me with current and recent developments in Chemistry. **CO4**: To create a foundation for research and development in Chemistry.
		CH 103-Paper III Practical chemistry	CO1-Importance of chemical safety and Lab safety while performing experiments in laboratory CO2-. Determination of thermo chemical parameters and related concepts CO3-. Techniques of pH measurements, Preparation of buffer solutions, Elemental analysis of organic compounds (non-instrumental), Chromatographic Techniques for separation of constituents of mixtures.
	Semester-II	CH 201- Inorganic Chemistry	1. Atomic Structure 1. Various theories and principles applied to revel atomic structure 2. Origin of quantum mechanics and its need to understand the structure of hydrogen atom 3. Schrodinger equation for hydrogen atom 4. The radial and angular part of the hydrogenic wave function 5. Significance of quantum numbers 6. Shapes of orbitals 2. Periodicity of Elements 1. Explain rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Hund's rule of maximum multiplicity 2. Discuss the electronic configuration of an atom and

| | | | anomalous electronic configurations. 3. Describe the stability of half-filled and completely filled orbitals. 4. Discuss the concept of exchange energy and relative energies of atomic orbitals 5. Design Skeleton of the long form of the periodic table. 6. Describe Block, group, modern periodic law, and periodicity. 7. Classification of elements as the main group, transition and inner transition elements 8. Write the name, symbol, electronic configuration, trends and properties. 9. Explain periodicity in the following properties in detail: a. Effective nuclear charge, shielding or screening effect; some numerical problems. b. Atomic and ionic size. c. Crystal and covalent radii d. Ionization energies e.Electronegativity- definition, trend, Pauling electronegativity scale. f. The oxidation state of elements 3. Chemical Bonding 1. Attainment of stable electronic configurations. 2. Define various types of chemical bondsIonic, covalent, coordinate, and metallic bond 3. Explain characteristics of an ionic bond, types of ions, energy consideration in ionic bonding, lattice and solvation energy and their importance in the context of stability and solubility of ionic compounds 4. Summarize the Born-Lande equation and BornHaber cycle, 5. Define Fajan's rule, bond moment, dipole moment and percent ionic character. Describe the VB approach, Hybridization with an example of the linear, trigonal, square planer, tetrahedral, TBP, and octahedral. 7. Discuss assumptions and needs of the VSEPR theory. 8. Interpret the concept of different types of valence shell electron pairs and their contribution in bonding. 9. Application of non-bonded lone pairs in the shape of molecule 10. Basic understanding of geometry and effect of lone pairs with examples such as ClF_3, Cl_2O, BrF_5, XeO_3, and $XeOF_4$. |
| | | CH - 202:Analytical Chemistry | Students are able to know- 1. Introduction to Analytical Chemistry i. Analytical Chemistry –a branch of chemistry ii. Perspectives of analytical Chemistry iii. Analytical problems 2. Calculations used in Analytical Chemistry i. Calculations of mole, molar concentrations and various units of concentrations which will be helpful for the preparation of solution ii. The relation between molecular formula and empirical formula iii. Stoichiometric calculation iv. Define term mole, millimole, molar concentration, molar equilibrium concentration and Percent Concentration. v. SI units, the distinction between mass and weight vi. Units such as parts per million, parts per billion, parts per |

			thousand, solutiondilatant volume ratio, function density and a specific gravity of solutions. 3 Qualitative Analysis of Organic Compounds Basics of type determination, characteristic tests, and classifications, reactions of different functional groups. i. Separation of binary mixtures and analysis ii. Elemental analysis -Detection of nitrogen, sulfur, halogen and phosphorous by Lassiagen's test. iii. Purification techniques for organic compounds. 4. Chromatographic Techniques – Paper and Thin layer Chromatography i. Basics of chromatography and types of chromatography ii.Theoretical background for Paper and Thin Layer Chromatography 5. pH meter i. pH meter and electrodes for pH measurement ii. Measurement of pH iii. Working on pH meter iv. Applications of pH meter
	Second semesters	Chemistry Practical course CH- 203	Student should able to know about an Inorganic Estimations using volumetric analysis 2. Synthesis of Inorganic compounds 3. Analysis of commercial products 4. Purification of organic compounds 5. Preparations and mechanism of reactions involved

S.Y.B.Sc.Chemistry

Sr. No	Course Program	Program Objectives	Program Specific Outcomes
1.	S.Y. B.Sc. Chemistry	1. To understand basic concept/principles of Physical, Analytical, Organic and Inorganic chemistry. 2. To impart practical skills and learn basics behind experiments. 3. To prepare background for advanced and applied studies in chemistry	**SPO1**:After completion of the program, students will be able to have complete knowledge of basic concepts and principles in Chemistry **SPO2**: Students will be able to acquire skills while working in the laboratory. **SPO3:** Students develop the advanced knowledge for further carrier in Chemistry.

Sr. No	Class	Course	Course Outcomes
1.	S.Y.B.Sc. Chemistry (Semester Pattern) Semester-III	CH-301-Paper I Physical and Analytical Chemistry	Students should know the 1. Definition and explaining concept of kinetics, terms used, rate laws, molecularity, order. 2. Explain factors affecting rate of reaction. 3. Explain / discuss / derive integrated rate laws, characteristics, expression for half-life and examples of zero order, first order, and second order reactions. 4. Determination of order of reaction by integrated rate equation method, graphical

			method, half-life method and differential method.
			5. Explain / discuss the term energy of activation with the help of energy diagram.
			6. Explanation for temperature coefficient and effect of temperature on rate constant k.
			7. Derivation of Arrhenius equation and evaluation of energy of activation graphically.
			8. Derivations of collision theory and transition state theory of bimolecular reaction and comparison.
			9. Solve / discuss the problem based applying theory and equations.
			II.
			Adsorption, classification of given processes into physical and chemical adsorption.
			1.Discuss factors influencing adsorption, its characteristics, differentiates types as physisorption and Chemisorption
			2. Classification of Adsorption Isotherms, to derive isotherms.
			3. Explanation of adsorption results in the light of Langmuir adsorption isotherm, Freundlich's adsorption Isotherm and BET theory.
			4. Apply adsorption process to real life problem.
			5. Solve / discuss problems using theory.
			III
			1. Meaning of accuracy and precision.
			2. Apply the methods of expressing the errors in analysis from results.
			3. Explain / discuss different terms related to errors in quantitative analysis.
			4. Apply statistical methods to express his / her analytical results in laboratory.
			5. Solve problems applying equations.
			IV
			1.Different terms in volumetric analysis such as units of concentration, indicator, equivalence point, end point, standard solutions, primary and secondary standards, complexing agent, precipitating agent, oxidizing agent, reducing agent, redox indicators, acid base indicators, metallochome indicators, etc.
			2. Perform calculations involved in volumetric analysis.
			3. Explain why indicator show colour change

				and pH range of colour change. 4. To prepare standard solution and perform standardization of solutions. 5. To construct acid – base titration curves and performs choice of indicator for particular titration. 6. Explain / discuss acid-base titrations, complexometric titration / precipitation titration / redox titration. 7. Apply volumetric methods of analysis to real problem in analytical chemistry / industry.
2.			CH-302: Inorganic and Organic Chemistry	Students are able to know – I. 1. Molecular orbital theory (AO, MO, sigma bond, pi bond, bond order, magnetic property of molecules, etc). 2. Explain and apply LCAO principle for the formation of MO's from AO's. 3. Explain formation of different types of MO's from AO's. 4. Distinguish between atomic and molecular orbitals, bonding, anti-bonding and non-bonding molecular orbitals. 5. Draw and explain MO energy level diagrams for homo and hetero diatomic molecules. Explain bond order and magnetic property of molecule. 6. Explain formation and stability of molecule on the basis of bond order. 7. To apply MOT to explain bonding in diatomic molecules. II. 1. Different terms related to the coordination chemistry (double salt, coordination compounds, coordinate bond, ligand, central metal ion, complex ion, coordination number, magnetic moment, crystal field stabilization energy, types of ligand, chelate effect, etc.) 2. Explain Werner's theory of coordination compounds. Differentiate between primary and secondary valency. Correlate coordination number and structure of complex ion. 3. Apply IUPAC nomenclature to coordination compound III. 1 Identify and draw the structures aromatic hydrocarbons from their names or from structure name can be assigned. 2. Synthesis of aromatic hydrocarbons. 3. The mechanism of reactions involved.

			4. To know an important reactions of aromatic hydrocarbon. 5. To correlate reagent and reactions. IV. 1.To Identify and draw the structures alkyl / aryl halides from their names or from structure name can be assigned. 2. To explain / discuss synthesis of alkyl / aryl halides. 3. Write / discuss the mechanism of Nucleophilic Substitution (SN_1, SN_2 and SNi) reactions. 4. Explain /Discuss important reactions of alkyl / aryl halides. 5. To correlate reagent and reactions. 6. Give synthesis of expected alkyl / aryl halides V. 1. To Identify and draw the structures alcohols / phenols from their names or from structure name can be assigned. 2. Able to differentiate between alcohols and phenols 3. To explain / discuss synthesis of alcohols / phenols. 4.To discuss the mechanism of various reactions involved. 5. Explain /Discuss important reactions of alcohols / phenols. 6. To correlate reagent and reactions of alcohols / phenols 7. Give synthesis of expected alcohols / phenols.
3.		CH-303: Practical Chemistry-III	Students are able perform practical's rightly 1. To verify theoretical principles experimentally. 2. To interpret the experimental data on the basis of theoretical principles. 3. Correlate theory to experiments. Understand/verify theoretical principles by experiment observations; explain practical output / data with the help of theory. 4. Understand systematic methods of identification of substance by chemical methods. 5. Write balanced equation for the chemical reactions performed in the laboratory. 6. Perform organic and inorganic synthesis and is able to follow the progress of the chemical reaction by suitable method (colour change, ppt. formation, TLC). 7. Set up the apparatus / prepare the solutions -

			properly for the designed experiments. 8. Perform the quantitative chemical analysis of substances explain principles behind it. 9. Systematic working skill in laboratory would impart in student.
4.	Semester-IV	CH-401: Physical and Analytical Chemistry	Students are able to know 1. The terms in phase equilibria such as- system, phase in system, components in system, degree of freedom, one / two component system, phase rule, etc. 2. Explain meaning and Types of equilibrium such as true or static, metastable and unstable equilibrium. 3. Discuss meaning of phase, component and degree of freedom. 4. Derive of phase rule. 5.Explain of one component system with respect to: Description of the curve, Phase rule relationship and typical features for i) Water system ii) Carbon dioxide system iii) Sulphur system II. To know various terms, laws, differentiate ideal and no-ideal solutions. 2. Discuss / explain thermodynamic aspects of Ideal solutions-Gibbs free energy change, Volume change, Enthalpy change and entropy change of mixing of Ideal solution. 3. Differentiate between ideal and non-ideal solutions and can apply Raoult's law. 4. Interpretation of i) vapour pressure–composition diagram ii) temperature-composition diagram. 5. Explain distillation of liquid solutions from temperature – composition diagram. 6. Explain / discuss azeotropes, Lever rule, Henrys law and its application. 7.To discuss / explain solubility of partially miscible liquids- systems with upper critical. Solution temperature, lower critical solution temperature and having both UCST and LCST. 8.Explain / discuss concept of distribution of solute amongst pair of immiscible solvents. 9.Derive distribution law and its thermodynamic

				proof.
				10. Apply solvent extraction to separate the components of from mixture interest.
				11.Solve problem by applying theory. III. 1.Different terms in conductometry such as electrolytic conductance, resistance, conductance, Ohm's law, cell constant, specific and equivalent conductance, molar conductance, Kohlrausch's law, etc.
				2. Discuss / explain Kohlrausch's law and its Applications, Conductivity Cell, Conductivity Meter, Whetstone Bridge.
				3.Explain / discuss conductometric titrations.
				4. Apply conductometric methods of analysis to real problem in analytical laboratory.
				5.Solve problems based on theory / equations.
				6.Correlate different terms with each other and derive equations for their correlations. IV. 1.Different terms in Colorimetry such as radiant power, transmittance, absorbance, molar, Lamberts Law, Beer's Law, molar absorptivity 2.Discuss / explain / derive Beer's law of absorptivity.
				3.Explain construction and working of colorimeter.
				4. To apply colorimetric methods of analysis to real problem in analytical laboratory.
				5.Solve problems based on theory / equations.
				6.Correlate different terms with each other and derive equations for their correlations V. 1.Different terms in column chromatography such as stationary phase, mobile phase, elution, adsorption, ion exchange resin, adsorbate, etc.
				2. Explain properties of adsorbents, ion exchange resins, etc.
				3. Discuss / explain separation of ionic substances using resins.
				4. Discuss / explain separation of substances using silica gel / alumina.

				5.Apply column chromatographic process for real analysis in analytical laboratory
5.			CH -402: Inorganic and Organic Chemistry	Students are able to know- 1.Isomerism in coordination complexes 2. Explain different types of isomerism in coordination complexes. 3. Apply principles of VBT to explain bonding in coordination compound of different geometries. 4. Correlate no of unpaired electrons and orbitals used for bonding. 5. Identify / explain / discuss inner and outer orbital complexes. 6. Explain / discuss limitation of VBT 7. Principle of CFT. 8. Apply crystal field theory to different type of complexes (Td, Oh, Sq. Pl complexes) 9. Explain: i) strong field and weak field ligand approach in Oh complexes ii) Magnetic properties of coordination compounds on the basis of weak and strong ligand field ligand concept. iii) Origin of colour of coordination complex. 10. Calculate field stabilization energy and magnetic moment for various complexes. 11. To identify Td and Sq. Pl complexes on the basis of magnetic properties / unpaired electrons. 12. Explain spectrochemical series, tetragonal distortion / Jahn-Teller effect in Cu(II) Oh complexes only. II. 1.To Identify and draw the structures aldehydes and ketones from their names or from structure name can be assigned. 2. To explain / discuss synthesis of aldehydes and ketones. 3. Write / discuss the mechanism reactions aldehydes and ketones. 4. Explain /Discuss important reactions of aldehydes and ketones. 5. To correlate reagent and reactions of aldehydes and ketones 6. Give synthesis of expected aldehydes and ketones. 7. Perform inter conversion of functional groups. 8. Identify and draw the structures carboxylic acids and their derivatives from their names or from structure name can be assigned. 9. Explain / discuss synthesis of carboxylic acids and their derivatives.

			10. Write / discuss the mechanism reactions carboxylic acids and their derivatives. 11. Explain /Discuss important reactions of carboxylic acids and their derivatives. 12. Correlate reagent and reactions of carboxylic acids and their derivatives 13. Give synthesis of expected carboxylic acids and their derivatives. 14. Perform inter conversion of functional groups. 15. Identify and draw the structures amines from their names or from structure name can be assigned. 16. Explain / discuss synthesis of carboxylic amines. 17. Write / discuss the mechanism reactions carboxylic amines. 18. Explain /Discuss important reactions of carboxylic amines. 19. To correlate reagent and reactions of carboxylic amines. 20. Give synthesis diazonium salt from amines and reactions of diazonium salt. 21. Perform inter conversion of functional groups. 22. Structures of different conformations of cyclohexane. 23. Define terms such as axial hydrogen, equatorial hydrogen, confirmation, substituted cyclohexane, etc. 24. Convert one conformation of cyclohexane to another conformation and should able to identify governing structural changes. 25. Explain / discuss stability with respect to potential energy of different conformations of cyclohexane. 26. Draw structures of different conformations of methyl / t-butyl monosubstituted cyclohexane (axial, equatorial) and 1, 2 dimethyl cyclohexane. 27. Identify cis- and trans-isomers of 1, 2 dimethyl substituted cyclohexane and able to compare their stability.
6.		CH- 403Chemistry Practical course	Student should able to know and Verify theoretical principles experimentally. 1.To Interpret the experimental data on the basis of theoretical principles. 2. Correlate the theory to the experiments. Understand / verify theoretical principles by experiment or explain practical output with the help of theory. 3. Understand systematic methods of

identification of substance by chemical methods.
4. Write balanced equation for all the chemical reactions performed in the laboratory.
5. Perform organic and inorganic synthesis and able to follow the progress of the chemical reaction.
6. Set up the apparatus properly for the designed experiments.
7. Perform the quantitative chemical analysis of substances and able to explain principles behind it.

T.Y.B.Sc. Chemstry

Sr. No	Class	Course	Course Outcomes
1.	T.Y.B.Sc. Chemistry (Semester Pattern Semester-V	CH-501-Paper I Physical Chemistry	Students should 1. To know historical development of quantum mechanics in chemistry. 2. Understand and explain the differences between classical and quantum mechanics. 3. Understand the idea of wave function 4. Understanding of De Broglie hypothesis and the uncertainty principle 5. Understanding the operators: Position, momentum and energy 6. Solving Schrodinger equation for 1D, 2D and 3D model 7. Physical interpretation of the ψ and $\psi2$ and sketching the wave function 8. Applications to conjugated systems, zero-point energy and quantum tunnelling, Numerical Problems II. 1.To understand the term additive and constitutive properties. 2. Understand the term specific volume, molar volume and molar refraction. 3. Understand the meaning of electrical polarization of molecule, induced and orientation polarization. 4. Dipole moment and its experimental determination by temperature variation method. 5. Electromagnetic spectrum, Nature of wave and its characteristics such as wavelength, wave number, frequency and velocity, Energy level diagram, 6. Classification of molecules on the basis of moment

			of Inertia,
			7. Rotational spectra of rigid diatomic molecules, selection rules, nature of spectral lines.
			8. Simple Harmonic oscillator model, Born-Oppenheimer approximation. Vibrational spectra of diatomic molecules selection rules, nature of spectral lines.
			9. Explain the difference between Rayleigh, Stokes and anti-Stokes lines in a Raman spectrum.
			10. Justify the difference in intensity between Stokes and anti-Stokes lines.
			11. Draw the Stokes and anti-Stokes lines in a Raman spectrum
			12. Raman spectra: Concept of polarizability,
			13. Pure rotational Raman spectra of diatomic molecules, Energy Expression, Selection rule, Rotational energy level diagram, Rotational Raman spectrum and Problems
			III.
			1.To know difference between thermal and photochemical processes.
			2. photochemical laws: Grothus - Draper law, Stark-Einstein law,
			3. Quantum yield and reasons for high and low quantum yield,
			4. factors affecting the quantum yield,
			5. Experimental method for the determination of quantum yield
			6. Photochemical reactions: photosynthesis, photolysis, photocatalysis, photosensitization
			7. Various photochemical phenomena like fluorescence and phosphorescence, Chemiluminescence
2.		CH-502: Analytical Chemistry- I	Students are able to know – 1.Definition of the basic terms in gravimetry, spectrophotometry, qualitative analysis and parameters in instrumental analysis. Such as: Gravimetry, precipitation, solubility product, ionic product, common ion effect, precipitating agent, washing of ppt., drying and ignition of ppt., linearity range, detection limit, precision, accuracy, Sensitivity, Selectivity, Robustness and Ruggedness, electromagnetic radiations, spectrophotometry, Beers law, absorbance, transmittance, molar absorptivity,

			monochromator, wavelength of maximum absorbance, metal ligand ration, qualitative analysis, group reagent, dry tests, wet test, confirmatory test, precipitation, thermogravimetry, thermogram, percent wt. loss, differential thermal analysis, etc.
			2. Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration in particular analysis (gravimetry, spectrophotometry, thermogravimetry), reagent for particular analysis, reaction condition to convert analyte into measurable form, drying and ignition temperature for ppt in gravimetry, heating rate thermogravimetry, wavelength in spectrophotometry, group reagent, removal borate and phosphate in qualitative analysis, etc.
			3. Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis.
			4. Perform quantitative calculations depending upon equations student has studied in the theory. Furthermore, student should able to solve problems on the basis of theory.
			5. Discuss / Describe procedure for different types analyses included in the syllabus.
			6. Select particular method of analysis if analyte sample is given to him.
			7. Differentiate / distinguish / Compare among the different analytical terms, process and analytical methods.
			8. Demonstrate theoretical principles with help of practical.
			9. Design analytical procedure for given sample.
			10. Apply whatever theoretical principles he has studied in theory during practical session in laboratory.
3.		CH-503: Physical Chemistry Practical - I	Students are able perform practical's rightly 1)To determine the specific refractivity's of the given liquids A and B and their mixture and hence determine the percentage composition their mixture C. 2) To determine the molecular refractivity of the given liquids A, B, C and D. 3) To titrate Cu^{2+} ions with EDTA photometrically. 4) To determine the indicator constant of methyl red indicator 5) To estimate of Fe^{3+} ions by thiocyanate method

			6)Titration of a mixture of weak acid and strong acid with strong alkali.
			7) To determine the velocity constant of hydrolysis of ethyl acetate by NaOH solution by conduct metric method.
			8) To determine the normality of citric acid in given fruit by titrating it against standard NaOH solution by conductometric method.
			9) To determine $\lambda\infty$ of strong electrolyte (NaCl or KCl) and to verify Onsager equation
			10) To determine the molecular weight of a high polymer by using solutions of different concentrations.
4.		CH-504: Inorganic Chemistry - I	Students are able to know
			i. Electroneutrality principle and different types of pi bonding.
			ii. Able to explain Nephelauxetic effect towards covalent bonding.
			iii. Explain MOT of Octahedral complexes with sigma bonding.
			iv. Able to explain Charge Transfer Spectra.
			v. Able to compare the different approaches to bonding in Coordination compounds
			vi. To understand about inert and labile complexes and stability of complexes in aqueous solutions
			vii. Classification of reactions of coordination compounds
			viii. The basic mechanisms of ligand substitution reactions.
			ix. Substitution reactions of square planer complexes.
			x. Tran's effect and applications of Trans effect
			xi. Stereochemistry of mechanism and to gain the knowledge of inorganic reaction mechanisms available in the literature to solve chemical problems.
			xii. To know position of d-block elements in periodic table
			xiii. To know the general electronic configuration & electronic configuration of elements.
			xiv. To know trends in periodic properties of these elements w.r.t. size of atom and ions, reactivity, catalytic activity, oxidation state, complex formation ability, color, magnetic properties, non-stoichiometry, density, melting point, boiling point
			xv. The meaning of term f-block elements, Inner transition elements, lanthanides, actinides.
			xvi. Electronic configuration of lanthanides and

			actinides.	
			xvii.	Oxidation states of lanthanides and actinides and common oxidation states.
			xviii.	Separation lanthanides by modern methods.
			xix.	Lanthanide contraction and effects of lanthanide contraction on post-lanthanides. Use of lanthanide elements in different industries. Transuranic elements. Preparation methods of transuranic elements. Nuclear fuels and their applications
			xx.	The meaning of metal & semiconductor.The difference between metal, semiconductor and insulator. Metallic bond on the basis of band theory.
			xxi.	Insulators on the basis of band theory. The difference between Na, Mg, and Al in terms of valence electrons and conductivity. Meaning of super conductors and their structure. o. Discovery and applications of superconductors.
5.		CH-505: Industrial Chemistry - I	Students are able to know and to learn about -	
			i.	Importance of chemical industry. Meaning of the terms involved. Comparison between batch and continuous process. Knowledge of various industrial aspects.
			ii.	Concept of basic chemicals. Their uses and manufacturing process. They should also know the physico-chemical principals involved in manufacturing process.
			iii.	Importance of sugar industry. Manufacture of direct iii. Consumption (plantation white) sugar with flow diagram.Cane juice extraction by various methods.Clarification by processes like carbonation. Sulphitation. Phosphatation, etc. Concentration of juice by using multiple effect evaporator system. Crystallization of sucrose by using vacuum pan.
			iv.	Importance. Basic requirement of fermentation process. Manufacturing of ethyl alcohol by using molasses and fruit juice.
			v.	Different types of soap products, Chemistry of soap. Raw materials required for soap manufacture. Meaning of the term's Surfactants, Types of surfactants .Raw materials for detergents. Detergent builders, additives .Washing action of soap and detergents.
			vi.	Dyes. Dye intermediates. Structural features of a dye; Classification of dyes, Synthesis,

			Structures, properties and applications of dyes Pigments: Students should know about Classification and general properties of pigment Production processes of zinc oxide and iron oxide
6.		CH-506: Inorganic Chemistry Practical - I	Student should able to know and Verify theoretical principles experimentally. 1 Gravimetric estimation of Fe as Fe2O3. 2. Gravimetric estimation of Ba as $BaSO_4$ using homogeneous precipitation method. 3. Gravimetric estimation of Nickel as Ni – DMG. 4. Analysis of sodium bicarbonate from mixture by thermal decomposition method 5. Preparation of hexamminenickel(II) chloride, $[Ni(NH_3)_6]Cl_2$. 6. Preparation of Potassium trioxalatoferrate(III), $K_3[Fe(C_2O_4)_3]$. 7. Preparation of Potassium dioxalatocuprate(II),$[Cu(C_2O_4)_2]^{2-}$. 8.To know Inorganic Qualitative analysis.
7.		CH-507: Organic Chemistry - I	Student should learn after studying the polynuclear and heteronuclear aromatic compounds 1. Define and classify polynuclear and hetreonuclear aromatic hydrocarbons. 2. Write the structure, synthesis of polynuclear and hetreonuclear aromatic hydrocarbons. 3. Understand the reactions and mechanisms 4. Explain the reactivity of polynuclear and hetreonuclear aromatic hydrocarbons. 5. Describe the synthesis of chemical reactions of polynuclear and hetreonuclear aromatic Hydrocarbons. 2) Active Methylene Compounds : Students should be able to understand 1. Meaning of active methylene group 2. Reactivity of methylene group, 3. Synthetic applications ethyl acetoacetate and malonic ester 4. To predict product with panning or supply the reagent/s for these reactions 3) Molecular Rearrangements 1. What is rearrangement reaction? 2. Different types of intermediate in rearrangement reactions. 3. To write the mechanism of some named rearrangement reactions and their applications 4. Electrocyclic rearrangement with their mechanisms. 4) Elimination Reactions: Students should be familiar with 1. 1,1 and 1,2 elimination 2. E1, E2 and E1cB mechanism with evidences of these reactions 4

			3. Understand stereochemistry by using models and learn reactivity of geometrical isomers 4. Orientation and reactivity in E1 and E2 elimination 5. Hoffmann and Saytzeff's Orientation 6. Effect of factors on the rate elimination reactions
8.		CH-508: Chemistry of Biomolecules	1. To understanding of Cell types, Difference between a bacterial cell, Plant cell and animal cell. Biological composition and organization of cell membrane, structure and function of various cell organelles of plant and animal cell. Concepts of biomolecules, Bonds that link monomeric units to form macromolecules 2. Carbohydrates: The student will understand the types of carbohydrates and their biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates. 3. Lipids: The student needs to know the types of lipids with examples, structure of lipids, properties of lipids 4. Amino acids and proteins: To understand the structure and types of amino acids. Reactions of amino acids. Properties of amino acids. Peptide bond formation. Types of proteins. Structural features in proteins. Effect of pH on structure of amino acid, Determination of N and C terminus of peptide chain. 5. Enzymes: The students know the classes of enzymes with subclasses and examples. Enzyme specificity, Equations of enzyme kinetics Km and its significance, features of various types of enzyme inhibitions, industrial applications of enzymes. 6. Basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones.
9.		CH-509: Organic Chemistry Practical-I	Student should able to know and Verify theoretical principles experimentally 1.Perform the quantitative chemical analysis of binary mixture, explain principles behind it. 2. Separate, purify and analyse binary water insoluble mixture. 3. Separate, purify and analyse binary water-soluble mixture. 4. Understand the techniques involving drying and recrystallization by various method. 5. Familiarize the test involving identification of special elements. 6. Learn the confirmatory test for various functional groups. **Students able to**

			1. Systematic working skill in laboratory 2. Learn the basic principles of green and sustainable chemistry. 3. Synthesis of various organic compounds through greener approach. 4. Do and understand stoichiometric calculations and relate them to green process metrics. 5. Learn alternative solvent media and energy sources for chemical processes. 6. Learn the preparations of derivative various functional groups aspects of electrical experiments. 7. Understand the techniques involving drying and recrystallization by various method 8. Expertise the various techniques of preparation and analysis of organic substances 9. Understand principle of Thin Layer Chromatographic techniques. 10. Understand the purification technique used in organic chemistry
10		CH-510 (A) : Introduction to Medicinal Chemistry	Student shall be able to understand, 1. The basics of medicinal chemistry, biophysical properties, overview of basic concepts of traditional systems of medicine. 2. Over view of the overall process of drug discovery, and the role played by medicinal chemistry in this process. 3. Biological activity parameters and importance of stereochemistry of drugs and receptors. 4. Knowledge of mechanism of action of drugs belonging to the classes of infectious and non-infectious diseases. 5. Enhancement of practical skills in synthesis, purification and analysis.
11		CH-511 (A) : Environmental Chemistry	Student shall be able to know and understand, 1. Importance and conservation of environment. 2. Importance of biogeochemical cycles 3.Water resources Hydrological Cycle Organic and inorganic pollutants Water quality parameters
12	Semester-VI	CH-601 : Physical Chemistry-II	Student shall be able to know and understand 1.Electrochemical cells: Explanation of Daniell cell, Conventions to represent electrochemical cells 2. Thermodynamic conditions of reversible cell, Explanations of reversible and irreversible electrochemical cell with suitable example, 3. EMF of electrochemical cell and its measurement.

			4. The Weston standard cell
			5. The primary reference electrode: The standard hydrogen electrode (SHE) with reference to diagram, Construction, representation, working and limitation,
			6. Secondary reference electrodes: (a) The calomel electrode, (b) The glass electrode (c) The silver-silver chloride electrode. Understanding of these electrodes with reference to diagram, representation, Construction, working 7. Nernst Equation for theoretical determination of EMF
			8. Types of Reversible electrodes: Metal-metal ion electrodes, Amalgam electrodes, Gas electrodes, Metal-metal insoluble salt electrodes, Oxidation-reduction electrodes with respect to examples, diagram, representation, construction, working (electrode reactions) and electrode potential.
			9. Sign convention for electrode potentials and Electrochemical series
			10. Standard electrode potentials,
			11. Types of concentration cells: Concentration cells without and with transference Concentration cells with liquid junction potential
			12. Liquid junction potential and salt bridge
			13. Applications of emf measurements: 1. Determination of pH of a solution by using hydrogen electrode, quinhydrone electrode and glass electrodes 2. Potentiometric titrations: i) Acid-base titrations, (ii) Redox titrations and (iii) Precipitation
			14. Primary Batteries: Dry Cells, alkaline batteries with respect to construction, diagram and working
			15. Secondary Batteries: Nickel-cadmium, Lithium-ion batteries, the lead acid battery with respect to construction, diagram and working 16. Applications for Secondary Batteries
			17. Fuel Cells: Types of fuel cells, advantages, disadvantages of these fuels cells, comparison of battery Vs fuel cell II. 1. Distinguish between crystalline and amorphous solids / anisotropic and isotropic solids.
			2. Explain the term crystallography and laws of crystallography.
			3. Weiss and Millers Indices, determination of Miller

			Indices
			4. Bravais lattices, space groups, seven crystal systems and fourteen Bravais lattices;
			5. Cubic lattice and types of cubic lattice
			6. Distance between the planes for 100, 110 and 111 for cubic lattice
			7. Methods of Crystal structure analysis: The Laue method and Braggs method: Derivation of Bragg's equation,
			8. Determination of crystal structure of NaCl by Bragg's method,
			9. X ray analysis of NaCl crystal system and Calculation of d and λ for a crystal system III. 1Radioactivity .Types and properties of radiations: alpha, beta and gamma . Detection and Measurement of Radioactivity: Cloud chamber, Ionization Chamber, Geiger-Muller Counter, Scintillation Counter, Film Badges Types of radioactive decay: α- Decay, β-Decay and γ-Decay .The Group Displacement Law, Radioactive Disintegration Series .Kinetics of Radioactive Decay, Half-life, average life and units of radioactivity. Energy released in nuclear reaction: Einstein's equation, Mass Defect, Nuclear Binding Energy.Application of radioisotopes as a tracer: Chemical investigation-Esterification, Friedel -Craft reaction and structure determination w.r.t PCl_5, Age determination use of tritium and C_{14} dating. Solve the problems based on this topic.
13.		CH-602 : Physical Chemistry-III	Student shall be able to know and understand 1.Meaning of the terms-Solution, electrolytes, nonelectrolytes and colligative properties,
			2. Lowering of vapour pressure of solvent in solution,
			3. Elevation of B.P. of solvent in solution, Landsberger's method,
			4. freezing point depression, Beckmann's method Osmosis and Osmotic pressure, Berkeley and Hartley method,
			5. Application of colligative properties to determine molecular weight of nonelectrolyte, abnormal molecular weight,
			6. Relation between Vant Hoff's factor and degree of dissociation of electrolyte by colligative property II.

			Factors affecting on solid state reactions, Rate laws for reactions in solid state .Applying rate laws for solid state reactions.
			III.
			1.Cohesive Energy of ionic crystals based on coulomb's law and Born Haber Cycle
			2. Correspondence between energy levels in the atom and energy bands in solid
			3. Band structure in solids – Na , Ca and diamond
			4. Conductors and insulators – Its correlation with Extent of energy in energy bands
			5. phenomena of photoconductivity
			6. Semiconductors – Role of impurity in transformation of insulator into semiconductor
			7. Temperature dependant conductivity semiconductors
			8. Cohesive Energy in metals
			9. Numericals based on cohesive energy
			IV.
			1.History of polymers. 2.Classification of polymers
			3 Chemical bonding & Molecular forces in Polymer
			4. Molecular weight of polymers
			5. Practical significance of polymer molecular weights
			6. Molecular weight determination
14.		CH-603 : Physical Chemistry Practical-II	Student should able to know and Verify theoretical principles experimentally
			1) To determine the PKa value of given monobasic weak acid by potentiometric titration.
			2) To determine the formal redox potential of Fe_{2+}/ Fe_{3+} system potentiometrically.
			3) To determine the amount of NaCl in the given solution by potentiometric titration against silver nitrate.
			4) To determine the solubility product and solubility of AgCl potentiometrically using chemical cell.
			5) Estimate the amount of Cl-, Br- and I- in given unknown halide mixture by titrating it against standard AgNO3 solution
			6) To determine the degree of hydrolysis of aniline hydrochloride.
			7) To determine the dissociation constant of oxalic acid by pH-metric titration with strong base.
			8) Determination of Pka of given weak acid by pH metry titration with strong base.

			9)To determine the molecular weight of solute by depression in freezing point method 10)Determination of SO_4^{2-} and Cl^- by turbidimetric method (turbidimetric titration or calibration curve method)
15.		CH-604 : Inorganic Chemistry -II	Students should be able: i. To understand M-C bond and to define organometallic compounds ii. To define organometallic chemistry iii. To understand the multiple bonding due to CO ligand. iv. To know methods of synthesis of binary metal carbonyls. v. To understand the structure and bonding using valence electron count (18 ele. rule) vi. To understand the catalytic properties of binary metal carbonyls. vii. To understand the uses of organometallic compounds in the homogenous catalysis. viii. Chemistry of ferrocene II. Understand the phenomenon of catalysis, its basic principles and terminologies. ii. Define and differentiate homogeneous and heterogeneous catalysis. iii. Give examples and brief account of homogeneous catalysts. iv. Understand the essential properties of homogeneous catalysts-Give the catalytic reactions for Wilkinson's Catalysis, hydroformylation reaction, Monsanto acetic acid synthesis, Heck reaction v. Understand the principle of heterogeneous catalyst and development in it. vi. Give examples of heterogeneous catalysts. vii. Understand the classification and essential properties of heterogeneous catalysts. viii. Give the brief account of Hydrogenation of olefins , Zeolites in catalysis, biodiesel synthesis, Automotive Exhaust catalysts ix. Understand the catalytic reactions used in industries around. III.

			1.Identify the biological role of inorganic ions & compounds.
			ii. Know the abundance of elements in living system and earth crust.
			iii. Give the classification of metals as enzymatic and non-enzymatic.
			iv. Understand the role of metals in non-enzymatic processes.
			v. Know the metalloproteins of iron.
			vi. Explain the functions of hemoglobin and myoglobin in O_2 transport and storage.
			vii. Understand the toxicity of CN- and CO binding to Hb.
			viii. Draw the structure of Vit.B_{12} and give its metabolism IV. 1.know thy types of Inorganic polymers
			ii. comparison with organic polymers
			iii. synthesis, structural aspects of Inorganic polymers
			iv. understand the polymers of Si, B, Si and P
			v. Inorganic polymers and their use. V. 1.To understand Preparation of inorganic solids by various methods,
			ii. Inorganic liquid crystals
			iii. Ionic liquids, their preparations, and their significance w.r.t green chemistry.
			iv. Technological importance of ionic liquids,
16.		CH-605: Inorganic Chemistry -III	A student should: 1. Student learn the concept of acid base and their theories. 2. They also come to know different properties of acids and bases. 3. Strength of various types acids. 4. How acid and base strengths get affected in non-aqueous solvents II. 1.To know the nature of solids. 2.To Know the crystal structures of solids. 3. Draw the simple cubic, BCC and FCC structures. 4. Identify the C.N. of an ion in ionic solid.

				5. Identify the type of void.
				6. Know the effect of radius ratio in determining the crystal structure.
				7. Be able to define Pauling's univalent radius and crystal radius.
				8. Be able to solve simple problems based on Pauling's univalent radii and crystal radii.
				9. Know how to draw Born-Haber cycle.
				10. Be able to solve simple problems based on Born-Haber cycle.
				11. Know the defects in Ionic solids.
				12. Be able to differentiate between the defects III. 1. Different Zeolite Framework Types and their classification 2. Zeolite synthesis and their structure 3. Application of zeolites IV. 1. Various methods of nanoparticle synthesis 2. Stabilization of Nanoparticles in solution 3. Properties and Application of Nanoparticles 4. Know about carbon nanotube and its application V. 1. To know toxic chemical in the environment. 2. To know the impact of toxic chemicals on enzyme. 3. To know the biochemical effect of Arsenic, Cd, Pb, Hg. 4. To explain biological methylation
17.			CH-606: Inorganic Chemistry Practical-II	Student should able to know and Verify theoretical principles experimentally 1. Analysis of Phosphate (PO_4^{3-}) from Fertilizer. 2. Analysis of Iodine from Iodized salt 3. Analysis of Cu from Cu-Fungicide II. Purification of water using cation/anion exchange resin and analysis by qualitative analysis /conductometry. III. Synthesis of Silver nanoparticles IV. Verification of periodic trends using solubility of alkaline earth metal hydroxides $Ca(OH)_2$, $Mg(OH)_2$, $Cr(OH)_2$, $Ba(OH)_2$. V. Determination of the Metal to ligand ratio (M : L) in complexes

18.		CH-607: Organic Chemistry-II	A student should: 1.Organic Spectroscopic Methods in Structure Determination. Students learn the interaction of radiations with matter. They understand different regions of electromagnetic radiations 2. Students will learn the principle of mass spectroscopy, its instrumentation and nature of mass spectrum. 2. Students understand the principle of UV spectroscopy and the nature of UV spectrum. They will learn types of electronic excitations. 3. Students able to calculate maximum wavelength for any conjugated system. And from the value of λ-max they will be able to find out the extent of conjugation in the compound. 4. Students understand the principle of IR spectroscopy, types of vibrations and the nature of IR spectrum. 5. From the IR spectrum, they will be able to find out IR frequencies of different functional groups. And thus, they will be able to find functional groups present in the compound. 6. Students will understand the principle of NMR spectroscopy and will understand various terms used in NMR spectroscopy. They learn measurement of chemical shift and coupling constants. 7. Students able to interpret the NMR data and they will be able to use it for determination of structure of organic compounds. 8. Students able to determine the structure of simple organic compounds on the basis of spectral data such as λ max values, IR frequencies, chemical shift (δ values). II. Students should be able to learn 1. The use of models to draw different types of disubstituted cyclohexanes in chair form 2. The geometrical isomerism in disubstituted cyclohexanes 3. The stability, energy calculations and optical activity of these conformers 4. The use models and to draw different types of conformational isomers of decalin in chair form 5. To know the stability of geometrical isomers of decalin.
19.		CH-608: Organic Chemistry-III	A student should able to know – 1.Retrosynthetic Analysis and Applications 2.Organic Reaction Mechanism and Synthetic Applications 3.Reagents in Organic Synthesis 4.Natural Products
20.		CH-609: Organic	Student should able to know and Verify theoretical principles experimentally 1. Explain "fingerprint region" of an infrared spectrum

		Chemistry Practical-II	can used in the identification of an unknown compound. 2. Identify the functional group or groups present in a compound. 3. Identify the broad regions of the infrared spectrum in which occur absorptions caused by N−H, C−H, and O−H, C≡C and C≡N, C=O, C=N, and C=C. 4. Understand use NMR spectra to determine the structures of compounds. 5. Interpret integration of NMR spectra 6. Calculate coupling constants from 1 H NMR spectra. 7. Interpret elemental analysis technique II. Practical knowledge of handling chemicals. 2. Achieve the practical skills required to estimations of glucose and glycine. 3. Achieve the practical skills required to Saponification value of oil. 4. Determine the molecular weight of given tribasic acids III. Apply the principles of extraction 2. Understand the equipment for extraction. 3. Gain practical hands-on experience of modern Extraction. 4. Develop basic design of extractor 5. Describe the extraction separation process. IV. 1.Explain the processes of a chromatography analysis 2. Describes the types and materials of column. 3. Explains the types of mobile phase and elution. 4. Realize the selection of appropriate mobile phase, column and detector.
21.		CH-610 (A) : Chemistry of Soil and Agrochemicals	Student should able to know 1) To understood various components of soil and soil properties and their impact on plant growth. 2) Understood the classification of the soil. 3) Explores the problems and potentials of soil and decide the most appropriate treatment for land use. 4) Understood the Reclamation and management of soil physical and chemical constraints. 5) Useful in making decisions on nutrient dose, choice of fertilizers and method of application etc. practiced in crop production. 6) Got experience on advanced analytical and instrumentation methods in the estimation of soil. 7) Understood various Nutrient management concepts and Nutrient use efficiencies of major and micronutrients and enhancement techniques. 8) Proper understanding of chemistry of pesticides will be inculcated among the students.

			9) Imparts knowledge on different pesticides, their nature and, mode of action and their fate in soil so as to monitor their effect on the environment.
22.		CH-611(A): Analytical Chemistry-II	1.Define basic terms in solvent extraction, basics of chromatography, HPLC, GC, and AAS and AES. Some important terms are: solvent extraction, aqueous and organic phase, distribution ratio and coefficient, solute remain unextracted, percent extraction, ion association complex, theoretical plate, HETP, retention time, selectivity, resolution, stationary phase, normal and reverse phase, ion exchange, column efficiency, carrier gas, split and spitless injection, packed column, tubular column, atomic absorption and emission spectroscopy, electronic excitation in atoms, nebulization, atomization, reduction of metal ions in flame, absorbance by atoms in flame, flame atomizers, furnace atomizers, interference in AES and FES, HCL, hydride generator, etc. 2. Identify important parameters in analytical processes or estimations. Example: minimum analyte concentration in particular method, reagent concentration for particular analysis, reagent for particular analysis, reaction condition to convert analyte into measurable form, wavelength selection in HPLC with spectrophotometric and fluorometric detector, solvent or carrier gas in HPLC and GC, choice method for the sample preparation in atomic spectroscopic methods, choice of filter and HCL in atomic spectroscopic methods, etc. 3. Explain different principles involved in the analyses using solvent extraction, basics of instrumental chromatography, HPLC, GC, and atomic spectroscopic techniques. 4. Perform quantitative calculations depending upon equations students have studied in the theory. Furthermore, student should able to solve problems on the basis of theory. 5. Discuss / Describe procedure for different types analyses included in the syllabus. 6. Select particular method of analysis if analyte sample is given to him. 7. Differentiate / distinguish / compare among the different analytical terms, process and analytical methods. 8. Demonstrate / explain theoretical principles with help of practical. 9. Design analytical procedure for given sample. 10. Apply whatever theoretical principles he has studied in theory during practical in laboratory.

F.Y.B.Sc. Physics Course Outcome

1) PHY – 111   Mechanics and properties of matter Paper I Sem I

CO_1 Students are able to understand types and laws of motion and their real life

application.

CO_2 They should become aware about applications of surface tension and viscosity.

2) PHY – 112   Physics Principles and Applications Paper II Sem I

CO_1 Students are able to demonstrate an understand of elements, types, sources and

spectrum of electromagnetic waves.

CO_2 They should able to understand the general structure of atom, atomic excitation

and Laser principles.

3) PHY – 121   Heat and Thermodynamics Paper I Sem II

CO_1 Students are able to aware about fundamentals of thermodynamics, applied

Thermodynamics.

CO_2 They should able to understand heat transfer mechanisms and thermometry.

4) PHY – 122   Electricity and Magnetism Paper II Sem II

CO_1 Students are able to demonstrate quantitative problem solving skills in all the

topics covered.

CO_2 Students are able to understand concept of the electric force, electric field and

electric potential for stationary charges.

S.Y.B.Sc. Physics Course Outcome

1) PHY – 231   Mathematical methods in Physics – I Paper I Sem I

CO₁   Students are able to understand the complex Algebra useful in Physics course.

CO₂   They should be able to understand vector algebra useful in Mathematics and Physics.

2) PHY – 232   Electronics Paper II Sem I

CO₁   Students are able to understand the relations in electricity, understand the parameters. Characteristics and working of transistors.

CO₂   They should able to understand Boolean Algebra and Logic circuits.

3) PHY – 241   Oscillations, Waves and Sound Paper I Sem II

CO₁   Students are able to study underlying Principles of oscillations and it's scope in development.

CO₂   They are able to study characteristics of sound, decibel scale and applications.

4) PHY – 242   Optics Paper II Sem II

CO₁   Students are able to acquire the basic concept of wave optics.

CO₂   They should be able to Analyze simple examples of interference and diffraction.

Program Specific outcome: B.Sc. (Botany)	
1.	PSO-1. Students acquire fundamental Botanical knowledge through theory and Practical's.
2.	PSO-2. To explain basis plant of life, reproduction and their survival in nature.
3.	PSO-3. Helped to understand role of living and fossil plants in our life.
4.	PSO-4. Understand good laboratory practices and safety.
5.	PSO-5 To create awareness about cultivation, conservation and sustainable utilization of biodiversity.
6.	PSO-6. To know advance techniques in plant sciences like tissue culture, Phytoremediation, plant disease management, formulation of new herbal drugs etc.
7.	PSO-7 Students able to start nursery, mushroom cultivation, biofertilizer production, fruit preservation and horticultural practices.

Course outcome of subject/ course
1. Plant physiology

CO1. They explain the different mechanisms in plants used for water transport.

CO2. They explain how plants achieve water balance.
CO3.They explain plant disorders occured in mineral deficiency.
CO4. They explain how sugar is translocated throughout plant.

2.Biostatisics

CO1. define the principal concepts about biostatistics.
CO2. recognize the definition of statistics, its subject and its relation with the other sciences.
CO3. restate the principal concepts about biostatistics.
CO4. collect data relating to variable/variables which will be examined and calculate descriptive statistics from data.
3.Lower cryptogams

CO1.Learn about the structure, pigmentation, food reserves and methods of reproduction of algae.
CO2. Learn about the structure, pigmentation, food reserves and methods of reproduction of fungi, Know about the Economic importance of algae, Fungi and lichen.
CO3.Studied some plant diseases with special reference to the causative agents, symptoms, etiology and control measures.

Course Outcomes of B.Sc. (Botany): Semester I

Class	Course title	Outcome
FYBSc-(Paper-III)	Practical based on theory paper I& II	Co-1 Study of anatomy and morphology of different plants Co-2 Know about different types of infloroscences and parts of typical flower Co-3 life cycle of different plant groups i.e., cryptogams and phanerogams Co-4 Study of internal organization of plant
Semester IV		
SYBSc (Paper-I)	Plant Anatomy and Embryology	Co-1Know different tissue systems in plants Co-2Normal secondary growth and different types of anomalous secondary growth Co-3 Study of male and female gametes in angiosperms, Process of fertilization and types of endosperms and structure of embryo.
SYBSc (Paper-III)	Practical based on theory paper I & II	Co-1Know practical knowledge of plant family of angiosperms Co-2Study of different ecological groups and methods to study vegetation's in forests Co-3 Study of Biotechnology

Semester V

Course outcome of subject/ course(T Y B Sc)

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1.Lower cryptogams (Algae and Fungi)

CO1.Learn about the structure, pigmentation, food reserves and methods of reproduction of

algae.

CO2. Learn about the structure, pigmentation, food reserves and methods of reproduction of

fungi, Know about the Economic importance of algae, Fungi and lichen.

CO3.Studied some plant diseases with special reference to the causative agents, symptoms,

etiology and control measures.

2. plant diversity and human health

CO1.Explai about rare, endangered, endemic species and their biodiversity.

CO 2. Create awareness about plants and their biodiversity.

CO 3. realise ecological importance of plants and discus the role of plants in relation of

human welfare.

CO 4. Knowledge through visits to the local ecosystem.

3.Plant Physiology

CO1. They explain the different mechanisms in plants used for water transport.

CO2. They explain how plants achieve water balance.

CO3.They explain plant disorders occured in mineral deficiency.

CO4. They explain how sugar is translocated throughout plant.

4. Biochemistry

CO1. Understand and appreciate that diversity of life evolved over times by bimolecular

process of mutation, selection, genetic change and epigenetics.

CO2. Explain that molecular and macromolecular structure and supermolecular archetichure

determine function and regulation.

Co3. Understand and appreciate that biochemical mechanism and kinetics ensure relative

stability and function under external or internal condition

TYBSc. (BO352Paper-II)	Archegoniate	Co-1 Introduction of Archegoniate ,Systematics and Taxonomy Co-2 Range of thallus organization Co-3 Classification, economic and ecological importance.
TYBSc. (BO356Paper-VI)	Genetics	Co-1Genetics provides knowledge regarding Classical Genetics, Microbial Genetics & Cytogenetics Co-2 Plant Breeding Co-3Evolution provides Information about Darwin theory and Lamark's theory

Semester VI

TYBSc (BO363Paper-III)	Plant Pathology	Co-1 Study scope and importance of plant pathology. Co-2 Know disease cycle and disease development, Co-3 Effect of plant diseases on economy of crops. Co-4 Know the methods of studying plant diseases They can identify the plant diseases like bacterial, nematode, and fungal, disease forecasting. Co-5Study prevention and control measures of plant diseases.
TYBSc (BO3611Paper-IV)	Biofertilizers	Co-1 Understand scope and importance of Biofertilizers. Co-2 Know the processing & importance of various Biofertilizers and scope of Biofertilizers.
TYBSc (BO357Paper-VII)	Practical I	Co-1 Study of Vegetative and Reproductive structure of Algae, Fungi, Bryophytes and Pteridophytes Co-2 Study of stellar evolution in Pteridophytes.

S.Y.B.Sc Code-BO-231

Taxonomy of angiosperms and Plant Ecology

1. This course aims to add to understanding of the students about the diversity of plants, their Description, Identification, Nomenclature and their classification including recent advances in the field

2. The students will know about the systematic position of Generas, Species and, Families.

3. The students develop knowledge about plant nomencleature

4. They will be understood the cosept, types, development and functions of various ecosystems and their communication.

5. The various environmental factors governing these ecosystems are also clearly understood.

T.Y.B.Sc Code-BO 353

Spermatophyte and paleobotany

1. Learn general characters of phanerogams

2: Define fossil and fossil groups.

3: study life cycle of Pinus and Gnetum.

4: Origin of Angiosperm and their theories.

5: Structure & types of various fossils.

6: to study different systems of classification.

7: Study of plant families as per Bentham and Hooker's system

T.Y.B.Sc Code-BO 354

Plant Ecology

1. Define ecology, remote sensing, In situ /ex situ conservation.

2: Elaborate the characterization of biodiversity.

3: Explain environmental crisis& their impact assessment

4: Explain data analysis of remote sensing technique.

5: Illustrate social approach to biodiversity conservation

Department of Zoology

Program Outcome: B.Sc. (Zoology)

1. Demonstrate, solve and an understanding of major concepts in all disciplines of Zoology.

2. Solve the problem and also think methodically, independently and draw a logical conclusion.

3. Understand the evolution, history of phylum.

4. Create an awareness of the impact of Zoology on the environment, society, and development outside the scientific community

5. To study and understand the classification of whole phyla includes in Nonchordates with the help of charts/models/pictures

6. Gain the knowledge of Zoology through theory and practical's.

7. Study and understand the DNA Recombinant technology.

8. Use modern Zoological tools, Models, Charts and Equipment's.

9. Know structure-activity relationship.

10. Understand good laboratory practices and safety.

11. Make aware and handle the sophisticated instruments/equipment.

12. Gain the knowledge of Zoology through theory and practical's.

13. Study and understand the DNA Recombinant technology.

Course specific Outcomes

FYBSc (Zoology): Semester I

Course title - (Paper-I) Animal Diversity I

1. The student will be able to understand classify and identify the diversity of animals.

2. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification.

3. The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life.

Course title - (Paper-II) Animal Ecology

1. The learners will be able to Identify and critically evaluate their own beliefs, values and actions in relation to professional and societal standards of ethics and its impact on ecosystem and biosphere due to the dynamics in population.

2. To understand anticipate, analyse and evaluate natural resource issues and act on a lifestyle that conserves nature. The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community.

3. The learner will be able to link the intricacies of food chains, food webs and link it with human life for its betterment and for non-exploitation of the biotic and abiotic components.

4. The working in nature to save environment will help development of leadership skills to promote betterment of environment.

FYBSc (Zoology): Semester II

Course title - (Paper-I) Animal Diversity II

1. The student will be able to understand classify and identify the diversity of animals.

2. The student understands the importance of classification of animals and classifies them effectively using the six levels of classification.

3. The student knows his role in nature as a protector, preserver and promoter of life which he has achieved by learning, observing and understanding life.

Course title - (Paper-II) Cell Biology

1. The learner will understand the importance of cell as a structural and functional unit of life.

2. The learner understands and compares between the prokaryotic and eukaryotic system and extrapolates the life to the aspect of development.

3. The dynamism of bio membranes indicates the dynamism of life.

4. Its working mechanism and precision are responsible for our performance in life.

5. The cellular mechanisms and its functioning depend on endo-membranes and structures.

6. They are best studied with microscopy.

S.Y.BSc. (Zoology) : Semester I

Course title- Animal systematics and Diversity III

1. Understanding of phylum Arthropoda, Mollusca and Echinodermata with respect to habits and habitats

2. Understanding of morphology and anatomy of starfish

3. Understanding of larval forms of above mentioned phyla

4. Economic importance of Arthropods and molluscs

Course title- Applied zoology I

1. Understanding of application of fishery science

2. Understanding of science of pest control

3. Understanding of different pests and their infestation

S.Y.BSc. (Zoology) : Semester II

Course title- Animal systematics and Diversity IV

1. Understanding of Phylum Chordate and its classes
2. Understanding of general characteristics of reptiles, aves and mammals.
3. Understanding of Scoliodon systems
4. Understanding of adaptations according to their habitat

Course title- Applied zoology II

1. Understanding of apiculture and sericulture
2. Understanding of tools and techniques used in apiculture and sericulture
3. Understanding of enemies of honey bees and silk moths

TYBSc (Zoology): Semester III

Course title- (Paper-I) Animal Systematic and Diversity- V

1. To understand the evolution, history of phylum.
2. To understand about the Non Chordate animals.
3. To study the external as well as internal characters of non chordates.
4. To study the distinguishing characters of non chordates.
5. To understand the economical importance of Molluscs
6. To understand the various internal systems like Digestive system,nervous system with the help of charts.
7. To understand the functions of Gemmules and spicules.
8. To understand the economical importance of Molluscan shells.

Course title- (Paper-II) Mammalian Histology

1. To understand the terms Histology and Physiology
2. To understand the cell, tissue, organ, system and organisms.
3. Study the derivatives of skin- horns, nails, hairs.
4. Study and understand the terms- acidosis, alkalosis, asphexia, hypoxia, anoxia and cyanosis

Course title- (Paper III) Biological Chemistry

1. To understand about the agencies responsible for Production of various products using biochemistry.
2. To understand the term pH, Buffer.
3. To understand the structure and function of carbohydrate, amino acids, proteins, and lipids.
4. To understand the concept Enzymes and also Vitamins and minerals.

5. To understand the Principle role of Vitamins in metabolism and the deficiency diseases.

Course title- (Paper IV) Environmental Biology & Toxicology

1. Know the biotic and abiotic components of ecosystem. Food chain & food web in ecosystem.
2. To understand diversity among various groups of animal kingdom.
3. To understand Animal community & ecological adaptation in animals.
4. To understand Scope , importance and management of biodiversity

Course title- (Paper-V) Parasitology

1. To study and understand the scope and branches of Medical Zoology.
2. To aware the students for various parasites and diseases which spreads in human with the help of study of host-parasite relationship.
3. To increase awareness for the health in students.
4. To understand the various disease causing vectors like Mosquitoes.
5. To aware about the typhoid, cholera likes disease.

Course title- (Paper VI) Cell Biology

1. To understand the Scope of cell biology, because cell is the basic unit of life.
2. To understand the Main distinguishing characters between plant cell and animal cell.
3. To study and understand the whole cell organelles with their structure and function.
4. To understand the cell cycle and know the importance of various cells in body of organisms.
5. To understand the various applications of cells by using cell biology like study of various types of tumor.
6. To understand the Animal cells and various cell organelles by using microphotographs.

TYBSc (Zoology): Semester IV

Course title- (Paper) Biological Techniques

1. To understand the various Applications of Biotechnology.
2. Study and Understand the Hybridoma technology as well as Enzyme biotechnology.
3. Study and understand the DNA Recombinant technology.
4. To understand the industrial and environmental biotechnology.
5. Study and understand the Stem cell biotechnology.
6. To understand the Scope and Significance of Biotechnology.

Course title- (Paper-II) Mammalian Physiology and Endocrinology

1. To understand the Importance of physiology and branches of it.

2. To understand the terms-Osmosis, diffusion, pH and Buffer.

3. To understand the Digestion and Excretion process, by studying the organs of it

4. To understand the process of Metabolism.

5. To understand the term Detoxification.

6. To understand the Circulatory system and Lymphatic system.

7. Study the nervous system.

Course title- (PaperIII) Genetics and Molecular Biology

1. To understand the Molecular biology and molecular biology.

2. To understand the cell divisions and types of mutation.

3. To understand the structure and function of the cells.

4. To understand the term cell signaling.

5. Aware the students for Cancer.

6. To understand the Tools and Techniques in Molecular Biology.

7. To understand the term ELISA technique and DNA finger printing.

Course title- (PaperIV) Organic Evolution

1. To understand Origin of life with respect to prokyariotic and eukaryotic cells.

2. To understand the evidences of organic evolution by anatomical embryological list, paleontological, physiological, genetics and molecular biology evidences.

3. To understand theories of organic evolution, isolation, and speciation.

4. To understand geological time scale, methods and classification of animal distribution and factors affecting animal distribution.

Course title- (Paper-V) General Embryology

1. To understand the terms: Gametogenesis, Fertilization and early development.

2. To understand the Morphogenesis and Organogenesis in animals.

3. To understand the Aging, Apoptosis and Senescence.

Course title- (PaperVI) Medical Entomology

1. To understand the fundamentals of agricultural, forest, medical and veterinary entomology.

2. To understand the Morphology and Anatomy of Insects.

3. To understand intra specific and inter specific relationships among insects.

4. To understand significance of beneficial and harmful insects with reference to their habit and habitat, life cycle, diseases caused by them and their control measures.

Department of Mathematics

Semester I

MT111 Algebra

CO1. Understand basic concepts on sets Relations and Functions.
CO2. Solve various problems on properties of integers and use the basic concepts of divisibility, congruence and their applications in basic algebra.
CO3. Understand basic concepts on Complex Numbers.

MT112 Calculus I

CO1. Identify algebraic and order properties of real numbers.
CO2. Identify and apply the function properties of real number system such as the completeness property.
CO3. Understand basic concepts on sequences.
CO4. Verify the values of limit of a function at a point using the definition of a limit.
CO5. Understand basic concepts on continuity.

Semester II

MT121 Analytical Geometry

CO1. Understand basic concepts on analytical geometry of two dimensions.
CO2. Solve the problems of planes
CO3. Solve the problems of lines in three dimensions.
CO4. Solve the problems of spheres.

MT 122 Calculus II

CO1. Understand use of differentiations in various theorems.
CO2. Identify and apply the intermediate value theorem, Mean value theorem and L"Hospital"s rule
CO3. Make the applications of Taylor's, Maclaurin's theorem.
CO4. Identify types of differential equations and solve differential equations such as Exact, homogeneous, non-homogeneous, and linear and Bernoulli differential equations etc

Semester III
MT231 Calculus of Several Variables

CO1. Students learn limit and continuity of functions of several variables
CO2. Students learn partial derivatives and differentiability.
CO3. Students learn Extreme points of function and their maximum, minimum values at those points.
CO4. Students learn the concepts of multiple integrals and their application to area and volumes.

MT232(A) Numerical Methods and it's Applications

CO1. Students learn how to find the roots of the equation by various methods
CO2. Students learn finite difference operators and their relations.
CO3. Students learn how to find the numerical differentiation and Integration by various methods
 CO4. Students learn how to solve the Ordinary differential equation by various methods

Semester IV

MT241 Linear Algebra

CO1. Define a vector space and state its properties.
CO2. Use the concept of basis and dimension of vector spaces linear dependence and linear independence, to solve problems.
CO3. Use the concept of inner product spaces to find norm of vectors, distance between vectors, and check the orthogonality of vectors, to find the orthogonal and orthonormal basis.
CO4. Apply the properties of linear transformations to linearity of transformations, kernel and rank of linear transformations, inverse transformations to solve the problems of matrix transformations.

MT242(A) Vector Calculus

CO1.Understand vector valued functions and their limits and continuity and use them to estimate velocity and acceleration of particles.
CO2. Set up and evaluate line integrals of functions along curves.
CO3. Students learn surface integrals of vector fields.
CO4. Students learn applications of integrals.

F.Y.B.Com -Business Environment & Entrepreneurship.

CO1. Teaches Basic Life Skills Entrepreneurship education teaches essential life skills such as an innovative approach to solve a problem, resolve real world problems, collaboration and working with a team, and many more.

CO2. Entrepreneurship and Innovation minors will be able to sell themselves and their ideas. Students master oral and visual presentation skills and establish a foundation of confidence in the skills necessary to cause others to act.

CO3. Entrepreneurship and Innovation minors will be able to find problems worth solving. Students advance their skills in customer development, customer validation, competitive analysis, and iteration while utilizing design thinking and process tools to evaluate in real-world problems and projects.

CO4. Entrepreneurship and Innovation minors will be able to mobilize people and resources. Students identify and secure customers, stakeholders, and team members through networks, primary customer research, and competitive and industry analyses in order to prioritize and pursue an initial target market in real-world projects.

S.Y.B.Com Banking & Finance-I (Indian Banking Structure)

CO1. To Understand the Dynamics of Indian Banking Sector.

CO 2. To Analyze the Pertinent Issues in the Banking Sector

CO3. To Familiarize students with the Reforms in the Banking Sector.

CO 4. Comprehend the need, definition, functions and economic significance of financial institutions and markets.

CO 5. To Critically understand the evolving role of Central Banking and Grasp the conduct of

monetary policy

S.Y.B.Com Business Management

CO 1. Identify the applications of management principles

CO 2. Relate theory to practical knowledge of the subject.

CO 3. Apply the basic techniques to real life situations

CO.4. Compare management practices of different organizations

T.Y.B.com Advanced Accounting

CO1: To students will be able to read and interpret financial statements with the help of tools such as ratio analysis.

CO 2: Will get well versed with the use of Excel for accounting

CO3: Will get well versed with the use of Excel for accounting

Department of English

Program Specific Outcomes (PSO): BA ENGLISH

PSO1   Linguistic and Communicative Competencies among the Students will be enhanced.

PSO2 The Students will be introduced to English Literature and Literatures in English.

PSO3 The Students will get sensitized about Various Forms of Literature.

PSO4 Thinking and Critical Abilities will be inculcated in them.

PSO5 Values of Equality, Integrity and Nationalism will be imbibed in students.

FYBA

1. FYBA Compulsory English Sem. I (11011)

CO1 Students will get familiarized with excellent pieces of prose and poetry in English so that they

realize the beauty and communicative power of English.

CO2 They will get exposed to native cultural experiences and situations in order to develop humane

values and social awareness

CO3 The students will develop overall linguistic competence and communicative skills.

2. FYBA Compulsory English Sem. II (11012)

CO1 Students will have acquainted with prose and poem to realize the beauty and communicative power of English.

CO2 They will be exposed to different cultural experiences and developed humane values

 CO3 The students will develop overall linguistic competence and communicative skills.

3. FYBA Optional English Sem. I (11331)

CO1 Students will be exposed to the basics of literature and language

CO2 They will learn about with different types of literature in English, the literary devices and terms

so that they understand the literary merit, beauty and creative use of language.

CO3 To introduce the basic units of language so that they become aware of the technical aspects

and their practical usage.

CO4 Students will go for detailed study and understanding of literature and language.

CO5 They will develop integrated view about language and literature in them

4. FYBA Optional English Sem. II (11332)

CO1 Students will be exposed to the basics of literature and language

CO2 They will learn about with different types of literature in English, the literary devices and terms

so that they understand the literary merit, beauty and creative use of language.

CO3 To introduce the basic units of language so that they become aware of the technical aspects

and their practical usage.

CO4 Students will go for detailed study and understanding of literature and language.

CO5 They will develop integrated view about language and literature in them

SYBA

5. SYBA Compulsory English Sem. III (23001)

CO1. Students will get exposed to the best examples of literature in English and to contribute to their emotional quotient as well as independent thinking.
CO2. Universal human values will be instilled through best pieces of literature in English

CO3. Students will develop effective communication skills by developing ability to use right words in the right context.

6. SYBA Compulsory English Sem. IV (24001)

CO1.Eemployability of the students will be enhanced by developing their basic soft skills

CO2. Universal human values will be instilled through best pieces of literature in English

7. SEC1A SYBA Advanced Study of English Language Sem. III (23333)

CO1. Students will get familiarized with the various components of language.

CO2. They will develop overall linguistic competence.

CO3. Students will be introduced to some advanced areas of language study.

8. SEC2B SYBA Advanced Study of English Language Sem. IV (24333)

CO1. Students will be prepared to go for detailed study and understanding of language.

CO2. Communicative skills of students will be enhanced by developing insight into the working of language

9. DSC 1A Appreciating Drama Sem. III (23331)

CO1. Students will be introduced Drama as a major form of literature

CO2. They will be introduced minor forms of Drama

CO3. The students will be acquaint and get familiarized with the elements and the types of Drama

CO4. They will be acquainted and enlightened students regarding the literary and the performing dimensions of drama

10. DSC 1B Appreciating Drama Sem. IV (24331)

CO1. Students will be able to make a detailed study of masterpieces of English Drama from different parts of the world

CO2. Interest will be developed to appreciate and analyze drama independently among the students

CO3. Students' awareness regarding aesthetics of Drama will evolve and they will be empowered to evaluate drama independently

11. DSC 2A Appreciating Poetry Sem. III (23332)

CO1. Students will be acquainted with elements of poetry like figures of speech and stanza forms

CO2. They will be able to distinguish among the different types of poetry thereby studying poetry with greater insight.

CO3. They will enjoy select masterpieces of English poetry.

12. DSC 2B Appreciating Poetry Sem. IV (24332)

CO1. Students will be acquainted with a few modernist poets and thus be encouraged to read notable poetry of the modernist era.

CO2. They will be introduced to the poetic themes like discrimination, perseverance, empathy etc. enhancing their insight of human values.

CO3. They will be able to comprehend the diverse poetic canvas through some of the poems of Australian, American, and Indian poets.

13. SEC2A Certificate Course in Skill Development Mastering Communication Skills Sem. III (23334)

CO1. Students will be able to improve their overall communication skills

CO2. They will get acquainted with the nuances of verbal and nonverbal communication

CO3. They will get exposure to spoken English in different situations.

14. SEC2B Certificate Course in Skill Development Mastering Communication Skills Sem. IV ((24334)

CO1. Students will acquire basics of soft skills

CO2. They will be able to interact in English

CO3. Students will gain confidence in public speaking

T. Y. B. A. Compulsory English

CO1 To introduce students to the best uses of language in literature.

CO2 To familiarize students with the communicative power of English.

CO3 To enable students to become competent users of English in real life situations

CO4 To expose students to varied cultural experiences through literature.

CO5 To contribute to their overall personality development by improving their

communicative and soft skills

T. Y. B. A. General English (G-3): Advanced Study of English Language and Literature

CO1 To expose students to some of the best samples of Indian English Poetry.

CO2 To make the students see how Indian English poetry expresses the ethos and culture of India.

CO3 To make them understand creative uses of language in Indian English Poetry.

CO4 To introduce students to some advanced areas of language study.

CO5 To prepare students to go for detailed study and understanding of literature and

Language.

CO6 To develop integrated view about language and literature among the students.

T.Y.B.A. Special Paper III (S-3): Appreciating Novel

CO1 To introduce students to the basics of novel as a literary form.

CO2 To expose students to the historical development and nature of novel.

CO3 To make students aware of different types and aspects of novel.

CO4 To develop literary sensibility and sense of cultural diversity in students.

CO5 To expose students to some of the best examples of novel.

T.Y.B.A. Special Paper IV(S-4): Introduction to Literary Criticism

CO1 To introduce students to the basics of literary criticism.

CO2 To make them aware of the nature and historical development of criticism.

CO3 To make them familiar with the significant critical approaches and terms.

CO4 To encourage students to interpret literary works in the light of the critical

Approaches.

PSO1	To develop the listening skills of the students so that they can understand English in a range of contexts.
PSO2	To develop the skills of the students so that they can express their thoughts, opinions, arguments and a range of language functions with sufficient clarity and accuracy of language and pronunciation.
PSO3	To develop the writing skills of the students so as to enable them to express their thoughts, opinions, arguments and a range of language functions in styles appropriate to the tasks.
PSO4	To raise the students' awareness of the English

CO5 To develop aptitude for critical analysis.

Functional English

	language used in *print* and *non-print* media to increase the employment potential of the students.
PSO5	To inculcate in them the spirit of *entrepreneurship*, which would enable them to survive and flourish in the professional world.

FYBA

PAPER – I   An Introduction to English Language and Writing Skills in English (Sem. I 11851 and Sem. II 11951)

1. Students will learn to Speak English

2. Awareness will be created about using language according to the situation/context

3. Anawareness will be created among students about mispronunciation

4. Grammar studied up to std. XII will be reinforced

5. Learners will be helped to acquire the basic skills of effective writing

PAPER- II Oral Communication in English (11852 and 11952)

1. Students will acquire Oral Skills in English

2. Students will acquire basics of computer

3. Students will speak in various conversational situations

SYBA

PAPER –III Advanced Writing Skills and Introduction to Electronic Media (Sem. III 23851 and Sem. IV24851)

• Students' ability will enhance to communicate in written mode

• Students will train in extended writing in different formats

• Awareness about the need to change language according to situations will be developed

•Students will be helped to recognize the need for referencing

• Students will be acquainted with career options in electronic media and equipping them to be prepared for the same

• Students will be aware of change in language use as per the nature of Media

• Students will get exposure to English language through on the job training

• Students will be introduced to various aspects of Blog writing

•Students will initiate into research through scrape book

Paper IV. Oral Communication in English: Intermediate and Key Competency Modules (23852 and 24852)

Confidence will be built in communicative English through active participation
▪ Students Will be enabled to learn through activities
▪ Students will be introduced to a wide variety of conversational situations, both formal and informal
▪ Awareness will be created about what to say and when to say it
▪ Awareness will be created about developing voice quality for effective oral communication
▪ Students will appreciate audio and video programmes
▪ students will become aware of proper use of body language during interaction or in video media
▪Students will lead to overall development of personality through key competency modules
▪ Students will be acquainted with Digital/Online Learning Platforms
▪ Students will become aware about language and etiquettes of Social Media

TYBA Functional English Paper V.

CO1	Acquainting students to new career options and equipping them to be prepared forthe same
CO2	Preparing students for various careers in language like translation, technical writing, writing for mass media, advertising, free lancing
CO3	Creating awareness about language change from one media to the other
CO4	Encouraging students to observe, compare and analyze the language activities of media through exposure
CO5	Providing them with basic data required for skills like translation especially related to media.

T. Y. B. A. Functional English (Paper-VI)

1. Students will able to identify the traits of an entrepreneur
2. They should become aware about the scope, challenges and opportunities in entrepreneurship
3. They will be aware about the basics required for setting up a start-up/ small or medium enterprise
4. They will be able to explore the opportunities in Service Industry Sector
5. They will be proficient in oral and written modes of expression

S. Y. B. Sc. & S. Y. B. Sc. (Computer Science) English

CO1 To develop competence among the students for self-learning.

CO2 To familiarize students with excellent pieces of prose and poetry in English so

that they realize the beauty and communicative power of English.

CO3 To develop students' interest in reading literary pieces.

CO4 To expose them to native cultural experiences and situations in order to develop humane

values and social awareness.

CO5 To develop overall linguistic competence and communicative skills of the

Students.

Programme Outcomes B.A. Hindi

PO1 हिंदी कीविविभिन्न साहित्य विधाओं से छात्र परिचित होंगे।

PO2 हिंदी भाषा द्वारा संवाद कौशल का विकास होगा।

PO3 छात्रों में मौलिक लेखन का विकास होगा।

PO4 छात्रों में विज्ञापन लेखन कौशल विकसित होगा।

PO5 छात्रों में हिंदी भाषा दवारा संवाद कौशल का विकास होगा।

PO6 हिंदी मध्ययुगीन काव्य तथा उपन्यास साहित्यसे छात्र परिचित होंगे।

PO7 छात्र साहित्य कृतियों में प्रस्तुत जीवनमूल्यों से आत्मविस्तृत होंगे।

PO8 हिंदी भाषा-विधि तथा भाषा-व्यवहार से छात्र अवगत होंगे।

PO9 छात्रों में सृजनात्मक लेखन कौशल विकसित होगा।

PO10   छात्र सरकारी कार्यालय में प्रयुक्त की जानेवालीकार्यालयीन हिंदी सेअवगत होंगे।

PO11   छात्र को पत्रकारिता के विभिन्न पहलुओं का ज्ञान प्राप्त होगा।

PO12   छात्रों में अनुवाद करने की कला काविकास होगा।

PO13   हिंदी साहित्य के इतिहास की लेखन परंपरा से छात्र अवगत होंगे।

PO14   छात्रों को हिंदी काव्यशास्त्र ज्ञान होगा।

PO15   छात्रों को भाषाविज्ञान अध्ययन करेंगे।

Course Outcomes B.A. Hindi
बी ए प्रथम वर्ष कला (CBCS-2019)
पेपर कोड : 11091B
पाठ्यचर्या : वैकल्पिक हिंदी प्रश्नपत्र - IA
सेमेस्टर (अयन) : I (प्रथम)

CO1 छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होंगे।

CO2 छात्रों में हिंदी भाषा दवारा संवाद कौशल का विकास होगा।

CO3 छात्रों का मौलिक लेखन की ओर रुझान बढ़ेगा।

CO4 छात्रों में विज्ञापन लेखन कौशल का विकास होगा।

CO5 छात्र अनुवाद संबंधी जानकारी लेंगे।

CO6 छात्र हिंदी कंप्यूटिंग से परिचित होंगे।

बी ए प्रथम वर्ष कला (CBCS-2019)
पेपर कोड : 11092B
पाठ्यचर्या : वैकल्पिक हिंदी प्रश्नपत्र -IIA
सेमेस्टर (अयन) : II (द्वितीय)

CO1 छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होंगे।

CO2 छात्रों में हिंदी भाषा दवारा संवाद कौशल विकसित होगा।

CO3 छात्रों का मौलिक लेखन की ओर रुझान बढ़ेंगा।

CO4 छात्रों में विज्ञापन लेखन कौशल विकसित होगा।

बी. ए. द्वितीय वर्ष कला (CBCS-2019)
पेपर : CC-IC (G-2)
Subject Code:23093
पाठ्यचर्या : आधुनिक काव्य, कहानी तथा व्यावहारिक हिंदी
सेमेस्टर (अयन) : III (तृतीय)

CO1 छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होंगे।

CO2 छात्रों में हिंदी भाषा दवारा संवाद कौशल का विकास होगा।

CO3 छात्रों को हिंदी कारक-व्यवस्था बोध होगा।

CO4 छात्र शब्द युग्म का अर्थ लिखकर प्रत्यक्ष वाक्य में प्रयोग करेंगे।

CO5 छात्रों को संक्षेपण लेखन का प्रत्यक्ष बोध होगा।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : CC-1D (G-2)
Subject Code:24093
पाठ्यचर्या : आधुनिक हिंदी व्यंग्य साहित्य तथा व्यावहारिक हिंदी
सेमेस्टर (अयन) : चतुर्थ अयन (Fourth Semester)

CO1 छात्र काव्य व्यंग्य पाठ से परिचित होंगे।

CO2 छात्रों को कहानी व्यंग्य पाठ का बोध होगा।

CO3 छात्र साक्षात्कार कला से अवगत होंगे।

CO4 छात्र भाषा का मोबाइल तंत्र समझेंगे।

CO5 छात्र पल्लवन कला से अवगत होंगे।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : DSC – 1A (S-1)
Subject Code:23091
पाठ्यचर्या : काव्यशास्त्र (सामान्य)
सेमेस्टर (अयन) : III (तृतीय)

CO1 छात्रों को काव्यशास्त्र का परिचय होगा।

CO2 छात्र काव्य की परिभाषा, तत्व अवगत होंगे।

CO3 छात्र काव्य के तत्व, शब्द – शक्ति से परिचित होंगे।

CO4 छात्रों को रस का स्वरूप, रस के अंगों एवं भेदों कापरिचय होगा।

CO5 छात्रों को भारतीय काव्यशास्त्र में रूचि तथा आलोचनात्मक दृष्टी का विकास होगा।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : DSC-1B (S-1)
Subject Code: 24091
पाठ्यचर्या : साहित्य के भेद
सेमेस्टर (अयन) : चतुर्थ अयन (Fourth Semester)

CO1 छात्र साहित्य के भेद से अवगत होंगे।

CO2 छात्र पद्य भेद से अवगत होंगे।

CO3 छात्र महाकाव्य, खंडकाव्य और मुक्तक काव्य से परिचित होंगे।

CO4 छात्र नाटक का स्वरूप समझेंगे।

CO5 छात्रों में नाट्य अभिनय की रुचि विकसित होंगी।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : DSC-2 A (S-2)
Subject Code: 23092
पाठ्यचर्या : मध्ययुगीन काव्य तथा उपन्यास साहित्य
सेमेस्टर (अयन) : III (तृतीय)

CO1 छात्रों को कबीर के साहित्य का परिचय होगा।

CO2 छात्र मीराबाई के काव्य से अवगत होंगे।

CO3 छात्र भारतीय उपन्यास की अवधारणा से परिचित होंगे।

CO4 छात्रों में उपन्यास कृति का मूल्यांकन कला विकसित होगी।

CO5 छात्र साहित्य कृतियों में प्रस्तुत जीवनमूल्यों से आत्मविस्तृत होंगे।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : DSC-2 B (S-2)
Subject Code: 24092
पाठ्यचर्या : मध्ययुगीन काव्य तथा नाटक साहित्य
सेमेस्टर (अयन) : चतुर्थ अयन (Fourth Semester)

CO1 छात्रों को रहीम के काव्य का बोध होगा।

CO2 छात्र बिहारी की काव्य अभिव्यंजना समझेंगे।

CO3 छात्र हिंदी नाटक और रंगमंच से अवगत होंगे।

CO4 छात्रों में अभिनय गुण विकसित होगा।

CO5 छात्र नाट्यालोचना से अवगत होंगे।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : MIL (HINDI)
Subject Code: 23012
पाठ्यचर्या : हिंदी भाषा शिक्षण
सेमेस्टर (अयन) : III (तृतीय)

CO1 छात्रों में हिंदी भाषा श्रवण कौशल का विकास होगा।

CO2 छात्रों में हिंदी भाषा संवाद कौशल विकसित होगा।

CO3 छात्रों में हिंदी भाषा वाचन कौशल विकसित होगा।

CO4 छात्रों में हिंदी भाषा लेखन कौशल विकसित होगा।

CO5 छात्रहिंदी भाषा-विधि तथा भाषा-व्यवहार से अवगत होंगे।

CO6 छात्रों में लघुकथा सृजन कौशल विकसित होगा।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : MIL (HINDI)
Subject Code: 24012
पाठ्यचर्या : हिंदी भाषा शिक्षण
सेमेस्टर (अयन) : चतुर्थ अयन (Fourth Semester)

CO1 छात्र वाक्य के भेद से अवगत होंगे।

CO2 छात्रों को विशेष प्रकार के वाक्यों से परिचिय होगा।

CO3 छात्रों में हिंदी भाषा श्रवण कौशल विकसित होगा।

CO4 छात्रों में हिंदी भाषा संवाद कौशल विकसित होगा।

CO5 छात्रों में हिंदी भाषा वाचन कौशल विकसित होगा।

CO6 छात्रों में हिंदी भाषा लेखन कौशल विकसित होगा।

CO7 हिंदी भाषा-विधि तथा भाषा-व्यवहार से छात्र अवगत होंगे।

CO8 छात्रों में हिंदी काव्य-गीत सृजन कौशल विकसित होगा।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : SEC 2A
Subject Code: 23096
पाठ्यचर्या : अनुवाद स्वरूप एवं व्यवहार
सेमेस्टर (अयन) : III (तृतीय)

CO1 अनुवाद कौशल से छात्र अवगत होंगे।

CO2 छात्र अनुवाद का स्वरूप समझेंगे।

CO3 छात्र अनुवाद क्षेत्र से परिचित होंगे।

CO4 छात्र हिंदी से मराठी में प्रत्यक्ष अनुवाद कार्य करेंगे।

CO5 छात्रों में अंग्रेजी से हिंदी, मराठी में अनुवाद कौशल विकसित होगा।

बी ए द्वितीय वर्ष कला (CBCS-2019)
पेपर : SEC 2B
Subject Code: 24096
पाठ्यचर्या : माध्यम लेखन
सेमेस्टर (अयन) : चतुर्थ अयन (Fourth Semester)

CO1 छात्र माध्यम लेखन से परिचित होंगे।

CO2 छात्रों में सृजनात्मक लेखन कौशल विकसित होगा।

CO3 छात्र श्रव्य-दृश्य माध्यमों से अवगत होंगे।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021 - 2022 से)
पेपर : Core Course 1E (G3)
Subject Code: 35093
पाठ्यचर्या : कथेतर विधाएँ
सेमेस्टर (अयन) : पंचम अयन (Fifth Semester)

CO1 छात्र संस्मरण साहित्य से अवगत होंगे।

CO2 छात्र रेखाचित्र साहित्य से अवगत होंगे।

CO3 छात्रों में मूल्यांकन की दृष्टि का विकास होगा।

CO4 छात्रों में सभा- इतिवृत्त लेखन कौशल वृद्धि का विकास होगा।

CO5 छात्रों में वार्ता- लेखन कौशल दृष्टि निर्माण होगी।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021 - 2022 से)
पेपर : Core Course 1F (G3)
Subject Code: 36093
पाठ्यचर्या : गजल विधा और पत्राचार
सेमेस्टर (अयन) : षष्ठ अयन (Sixth Semester)

CO1 छात्र गजल साहित्य से अवगत होंगे।

CO2 छात्र गजलकार के व्यक्तित्व से अवगत होंगे।

CO3 छात्रों में मूल्यांकन की दृष्टि का विकास होगा।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021- 2022 से)
पेपर : Discipline Specific Elective 1 C (S3)
Subject Code: 35091

पाठ्यचर्या : हिंदी साहित्य का इतिहास (आदिकाल, भक्तिकाल, रीतिकाल का सामान्य परिचय)

सेमेस्टर (अयन) : पंचम अयन (Fifth Semester)

CO1 छात्र हिंदी साहित्येतिहास लेखन से परिचित होंगे।

CO2 छात्र हिंदी साहित्येतिहास के कालविभाजन तथा नामकरण से परिचित होंगे।

CO3 छात्र आदिकालीन, भक्तिकालीन, रीतिकालीन प्रमुख साहित्यिक प्रवृत्तियों, रचनाकारों और रचनाओं से परिचित होंगे।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021- 2022 से)

पेपर : Discipline Specific Elective 1 D (S3)

Subject Code: 36091

पाठ्यचर्या : हिंदी साहित्य का इतिहास(आधुनिक काल सामान्य परिचय)

सेमेस्टर (अयन) : षष्ठ अयन (Sixth Semester)

CO1 आधुनिक काल की पृष्ठभूमि से छात्र अवगत होंगे।

CO2 भारतेंदु युगीन, द्विवेदी युग के काव्य की विशेषताओं से छात्र अवगत होंगे।

CO3 आधुनिक काल के रचनाकारों और रचनाओं से परिचित होंगे।

CO4 हिंदी गद्य के उद्भव और विकास से छात्र अवगत होंगे।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021- 2022 से)
पेपर : Discipline Specific Elective 2 C (S4)
Subject Code: 35092
पाठ्यचर्या : भाषाविज्ञान (सामान्य परिचय)
सेमेस्टर (अयन) : पंचम अयन (Fifth Semester)

CO1   छात्र भाषाविज्ञान के स्वरूप से परिचित होंगे।

CO2   छात्र छात्रों को भाषाविज्ञान की व्याप्ति से अवगत होंगे।

CO3   छात्र भाषाविज्ञान के अध्ययन की दिशाओं से परिचित होंगे।

CO4   छात्र भाषाविज्ञान के अनुप्रयोगात्मक पक्ष को समझेंगे।

CO5   छात्र साहित्य-अध्ययन में भाषाविज्ञान की उपयोगिता समझेंगे।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021- 2022 से)
पेपर : Discipline Specific Elective 2D (S4)
Subject Code: 36092
पाठ्यचर्या : हिंदी भाषा और उसका विकास
सेमेस्टर (अयन) : षष्ठ अयन (Sixth Semester)

CO1 छात्र भाषाविज्ञान के स्वरूप से परिचित होंगे।

CO2 छात्र छात्रों को भाषाविज्ञान की व्याप्ति से अवगत होंगे।

CO3 छात्र भाषाविज्ञान के अध्ययन की दिशाओं से परिचित होंगे।

CO4 छात्र भाषाविज्ञान के अनुप्रयोगात्मक पक्ष को समझेंगे।

CO5 छात्र साहित्य-अध्ययन में भाषाविज्ञान की उपयोगिता समझेंगे।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021- 2022 से)
पेपर : Skill Enhancement Course 2 C
Subject Code: 35096
पाठ्यचर्या : पटकथा लेखन
सेमेस्टर (अयन) : पंचम अयन (Fifth Semester)

CO1 छात्र स्क्रिप्ट लेखन, अर्थ, परिभाषा से अवगत होंगे।

CO2 छात्र कथा, पटकथा और संवाद से परिचित होंगे।

CO3 छात्र ड्राफ्ट बनाने से परिचित होंगे।

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021- 2022 से)

CO1 छात्र सिनेमा के स्वरूप से परिचित होंगे।

CO2 छात्रहिंदी साहित्य और सिनेमा के अन्तसंबंध से परिचित होंगे।

CO3 छात्रहिंदी उपन्यासों पर आधारित फिल्मों से अवगत होंगे।

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Course Outcomes F.Y. B.Com Hindi
प्रथम वर्ष वाणिज्य (CBCS-2019)
पेपर कोड : 117 C
पाठ्यचर्या : वैकल्पिक हिंदी प्रश्नपत्र –IA

सेमेस्टर (अयन) : I (प्रथम)

CO1 छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होंगे।

CO2 छात्रों में हिंदी भाषा दवारा संवाद कौशल का विकास होगा।

CO3 छात्रों का मौलिक लेखन की ओर रुझान बढ़ेगा।

CO4 छात्रों में विज्ञापन लेखन कौशल का विकास होगा।

CO5 छात्र हिंदी कंप्यूटिंग से परिचित होंगे।

प्रथम वर्ष वाणिज्य (CBCS-2019)
पेपर कोड : 127 C
पाठ्यचर्या : वैकल्पिक हिंदी प्रश्नपत्र –IB
सेमेस्टर (अयन) : II (द्वितीय)

CO1 छात्र हिंदी काव्य तथा कहानी साहित्य से परिचित होंगे।

CO2 छात्रों में हिंदी भाषा दवारा संवाद कौशल का विकास होगा।

CO3 छात्रों का मौलिक लेखन की ओर रुझान बढ़ेगा।

CO4 छात्रों में विज्ञापन लेखन कौशल का विकास होगा।

CO5 छात्र अनुवादस्वरूप से अवगत होंगे।

CO6 छात्र पारिभाषिक शब्दावली से अवगत होंगे।

मराठी विभाग उद्दिष्ट्ये पुढीलप्रमाणे-

PSO1 राजभाषा मराठीबद्दल जागरुकता वाढेल.
PSO2 मराठी भाषा आणि साहित्याच्या समृद्ध आणि गौरवशाली परंपरेची विद्यार्थ्यांना ओळख होईल.
PSO3 विद्यार्थ्यांमध्ये मराठी भाषेची आवड निर्माण होईल.
PSO4 विद्यार्थ्यांचा व्यक्तिमत्वाचा विकास होईल.
PSO5 विद्यार्थ्यांमध्ये जीवनाची मूल्ये रुजतील.
PSO6 अभ्यासक्रम आणि त्याचा जीवनाचा परस्परसंवादी उपयोग यांच्यातील संबंध स्पष्ट करता येईल.

FYBA CC-A (सामान्य स्तर-१) चे Outcomes पुढीलप्रमाणे

Sem-I मराठी साहित्य कथा आणि भाषिक कौशल्यविकास / Sem-II मराठी साहित्य: एकांकिका आणि भाषिक कौशल्यविकास

CO1. मराठी साहित्य, मराठी भाषा आणि मराठी संस्कृती यांचा क्रमशः परिचय करून घेतील.

CO2. मराठी साहित्यासंबंधी रुची निर्माण होईल.

CO3.वाङ्‌मयीन अभिरुचीचा विकास होईल.

CO4. मराठी साहित्यातील भिन्न भिन्न वाङ्‌मयीन प्रवाह व प्रकार लक्षात येतील.

CO5. विविध भाषिक क्षेत्रांतील कौशल्ये विकसित होण्यास मदत होईल.

CO6. मराठी भाषेची उपयोजनात्मक कौशल्ये जाणून घेण्यास मदत होईल.

द्वितीय वर्ष कला (S. Y.B.A.)G2 चे Outcomes पुढीलप्रमाणे

सत्र १ भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : कादंबरी [CC – 1 C (3)] G2/ सत्र २ भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार:ललितगद्य [CC-1D (3)]

CO1. कादंबरी या साहित्यप्रकाराचे स्वरूप, घटक, प्रकार आणि वाटचाल समजून घेता येईल.

CO2. नेमेलेल्या कादंबरीचे आकलन, आस्वाद आणि विश्लेषण करता येईल.

CO3. भाषिक कौशल्यविकास करता येईल.

CO4. ललितगद्य या साहित्यप्रकाराचे स्वरूप, घटक, प्रकार आणि वाटचाल समजून घेता येईल.

CO5. नेमलेल्या अभ्यासपुस्तकातील ललितगद्याचे आकलन, आस्वाद आणि विश्लेषण करता येईल.

CO6. भाषिक कौशल्यविकास करता येईल.

द्वितीय वर्ष कला (S.Y. B.A.) S1 चे Outcomes पुढीलप्रमाणे

सत्र १ आधुनिक मराठी साहित्य : प्रकाशवाटा [DSE 1 A (3)]/सत्र २ मध्ययुगीन मराठी साहित्य: निवडक मध्ययुगीन गद्य,पद्य

CO1. आत्मचरित्र साहित्यप्रकाराचे स्वरूप, संकल्पना समजावून घेईल.

CO2. आत्मचरित्र या साहित्यप्रकाराच्या प्रेरणा आणि वाटचाल यांची ओळख करून घेईल.

CO3. ललित गद्यातील अन्य साहित्यप्रकारांच्या तुलनेत आत्मचरित्राचे वेगळेपण समजावून घेईल.

CO4. नेमलेल्या या आत्मचरित्राचे आकलन, आस्वाद आणि विश्लेषण करेल॰

S2 सत्र १ साहित्यविचार [DSE 1B (3)] / सत्र २ साहित्य समीक्षा [DSE 2 B(3)] चे Outcomes पुढीलप्रमाणे

CO1. भारतीय आणि पाश्चात्य साहित्यविचाराच्या आधारे साहित्याची संकल्पना, स्वरूप आणि प्रयोजनविचार समजून घेता येईल.

CO2. साहित्याची निर्मितिप्रक्रिया समजावून घेता येईल.

CO3. साहित्याची भाषा आणि शैली विषयक विचार समजावून घेणे समजावून घेता येईल.

CO4. साहित्य समीक्षेची संकल्पना, स्वरूप यांचा परिचय करून घेता येईल.

CO5. साहित्य आणि समीक्षा यांचे परस्पर संबंध समजावून घेता व अभ्यासता येईल.

CO6. साहित्यप्रकारानुसार समीक्षेचे स्वरूप समजावून घेता व अभ्यासता येईल.

CO7. ग्रंथ परिचय, परीक्षण व समीक्षण यातील फरक समजावून घेता येईल.

द्वितीय वर्ष कला (S.Y.B.A.)
कौशल्याधिष्ठित अभ्यासक्रम

सत्र १ प्रकाशनव्यवहार आणि संपादन [SEC 24 (2)]/सत्र २ उपयोजित लेखनकौशल्ये [SEC 2 B (2)] चे Outcomes पुढीलप्रमाणे-

CO1.प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त करता येतील.

CO2. प्रकाशनव्यवहार आणि संपादन यासाठी आवश्यक प्रशिक्षण घेता येईल.

CO3. प्रकाशनव्यवहार आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त करता येतील.

CO4. जाहिरात, मुलाखत लेखन आणि संपादन यासाठी आवश्यक कौशल्ये प्राप्त करता येतील.

CO5. जाहिरात, मुलाखतलेखन आणि संपादन यासाठी आवश्यक प्रशिक्षण प्राप्त करता येईल.

CO6.जाहिरात, मुलाखतलेखन आणि संपादन यासाठी प्रात्यक्षिकासह उपयोजनाची कौशल्ये प्राप्त करता येतील.

CO7.प्रकाशन संस्था, जाहिरात संस्था, छापखाने, वृत्तपत्र कार्यालये, वितरण संस्था, ग्रंथ विक्री दुकाने, फ्लेक्सनिर्मिती केंद्र, वार्ताहर यांना भेटी देऊन प्रशिक्षण घेता येईल.

द्वितीय वर्ष कला (S. Y. B.A.)

सत्र १ मराठी भाषिक संज्ञापनकौशल्ये [MIL 2 (2)]/ सत्र २ नवमाध्यमे आणि समाजमाध्यमांसाठी मराठी (MIL 2 (2)] चे Outcomes पुढीलप्रमाणे-

CO1. प्रगत भाषिक कौशल्यांची क्षमता विकसित करता येतील.

CO2. प्रसारमाध्यमांतील संज्ञापनातील स्वरूप आणि स्थान स्पष्ट करता येतील.

CO3. व्यक्तिमत्त्व विकास आणि भाषा यांच्यातील सहसंबंध स्पष्ट करता येतील.

CO4. लोकशाहीतील जीवनव्यवहार आणि प्रसारमाध्यमे यांचे परस्पर संबंध स्पष्ट करता येतील.

CO5. प्रसारमाध्यमांसाठी लेखनक्षमता विकसित करता येतील.

CO6. संज्ञापनातील नवमाध्यमे आणि समाजमाध्यमांचे स्वरूप आणि स्थान स्पष्ट करता येईल.

CO7.भाषा, जीवनव्यवहार आणि नवमाध्यमे, समाजमाध्यमांचे परस्परसंबंध स्पष्ट करता येईल.

CO8. नवमाध्यमे आणि समाजमाध्यमांसाठी लेखनक्षमता विकसित करता येईल.

CO9. नवमाध्यमे आणि समाजमाध्यमांविषयक साक्षरता निर्माण करता येईल.

CO10 नवमाध्यमे आणि समाजमाध्यमांचा वापर आणि परिणाम याबद्दल चर्चा करता येईल.

तृतीय वर्ष कला

सत्र १ कार्यक्रम संयोजनातील भाषिक कौशल्ये : भाग -१ [SEC2 C (2)]/ सत्र २ कार्यक्रम संयोजनातील भाषिक कौशल्ये : भाग २ [SEC2D (2)] चे Outcomes पुढीलप्रमाणे-

CO1. कार्यक्रमांचे स्वरूप आणि प्रकार समजून करेल.

CO2. कार्यक्रम संयोजनातील भाषिक कौशल्ये प्राप्त करेल.

CO3.कार्यक्रम संयोजनातील लेखन कौशल्ये

CO4. कार्यक्रम संयोजनातील लेखन कौशल्ये संपादन करेल.

CO5. कार्यक्रम संयोजनातील भाषिक कौशल्ये प्राप्त करेल.

CO6. आभासी कार्यक्रमांचे भाषिक कौशल्ये संयोजन करेल.

CO7.. निमंत्रणपत्र व निमंत्रणपत्रिका लेखन करता येईल.

तृतीय वर्ष कला (T. Y. B.A.) G3 नियमित अभ्यासक्रम चे Outcomes पुढीलप्रमाणे

सत्र १ भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : प्रवासवर्णन [CC-1E (3)]/ सत्र २ भाषिक कौशल्यविकास आणि आधुनिक मराठी साहित्यप्रकार : कविता [CC-1F (3)]

CO1. मुद्रित माध्यमांसाठी लेखन कौशल्ये आत्मसात करता येईल.

CO2.प्रवासवर्णन या साहित्यप्रकाराचे स्वरूप, प्रेरणा, प्रयोजने, वैशिष्ट्ये आणि वाटचाल समजून घेता येईल.

CO3. नेमलेल्या प्रवासवर्णनाचे आकलन, आस्वाद आणि विश्लेषण करता येईल.

CO4. मराठी साहित्य, भाषिक कौशल्यविकास आणि शासनव्यवहार यांची माहिती घेता येईल.

CO5. कविता या साहित्यप्रकाराचे स्वरूप, वाटचाल, प्रेरणा, प्रवृत्ती आणि वैशिष्ट्ये, समजून घेता येईल.

CO6. नेमलेल्या अभ्यासपुस्तकातील निवडक कवितांचे आकलन, आस्वाद आणि विश्लेषण करता येईल.

CO7.कविता या साहित्यप्रकारातील विविध आविष्कार व भाषा रूपांची अभ्यासपुस्तकातील कवितांच्या आधारे ओळख करून घेता येईल.

तृतीय वर्ष कला (T. Y. B.A.)S3 चे Outcomes पुढीलप्रमाणे-

सत्र १ मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास : प्रारंभ ते इ.स. १६०० [DSE 1 C (3+1)]/ मध्ययुगीन मराठी वाङ्मयाचा स्थूल इतिहास : प्रारंभ ते इ.स. १६०१ ते इ.स. १८१७ [DSE 1 D (3+1)]/

CO1.वाङ्मयेतिहास संकल्पना, स्वरूप, प्रेरणा, प्रवृत्ती समजून घेता येईल.

CO2.मध्ययुगीन कालखंडाची सामाजिक, सांस्कृतिक पार्श्वभूमी समजून घेता येईल.

CO3.मराठी भाषा, साहित्याची कालखंडानुरूप इतिहास समजून घेता येईल.

तृतीय वर्ष कला (T.Y.B.A.) S4 चे Outcomes पुढीलप्रमाणे -

सत्र १ वर्णनात्मक भाषाविज्ञान : भाग १ [DSE 2 C (3)+1]/ सत्र २ वर्णनात्मक भाषाविज्ञान : भाग २ [DSE 2 D (3) +1]

CO1 भाषा स्वरूप, वैशिष्ट्ये व कार्ये समजावून घेता येतील.

CO2 भाषा अभ्यासाची आवश्यकता स्पष्ट करता येतील.

CO3 भाषा अभ्यासाच्या शाखा आणि विविध पद्धतींचा थोडक्यात परिचय करून घेता येईल.

CO4 वागिन्द्रियाची रचना, कार्य आणि स्वनिर्मितीची प्रक्रिया समजावून घेता येईल.

CO5 स्वनविज्ञान, स्वनिमविचार आणि मराठीची स्वनिमव्यवस्था समजावून घेता येईल.

CO6 रूपविन्यास आणि मराठीची रूपव्यवस्था समजावून घेता येईल.

CO7. वाक्यविन्यास आणि वाक्यव्यवस्थेचा मराठी भाषेच्यासंदर्भात परिचय करून देता येईल.

CO8.अर्थविन्यास या संकल्पनेचा भाषावैज्ञानिक अंगाने परिचय करून देता येईल.

तृतीय वर्ष कला

सत्र १ कार्यक्रम संयोजनातील भाषिक कौशल्ये : भाग -१ [SEC2 C (2)]/ सत्र २ कार्यक्रम संयोजनातील भाषिक कौशल्ये : भाग २ [SEC2D (2)] चे Outcomes पुढीलप्रमाणे-

CO1.कार्यक्रमांचे स्वरूप आणि प्रकार समजून घेता येईल.

CO2.कार्यक्रम संयोजनातील भाषिक कौशल्ये प्राप्त करता येईल.

वर्णनात्मक भाषाविज्ञान : भाग २ - ४ [DSE 2 D (3) +1]

CO3.रूपविन्यास आणि मराठीची रूपव्यवस्था समजावून घेता येईल

CO4. अर्थविन्यास या संकल्पनेचा समजावून घेता येईल.

CO5. वाक्यविन्यास आणि वाक्यव्यवस्थेचा भाषावैज्ञानिक अंगाने परिचय घेता येईल.

S. Y. B. Sc. (द्वितीय वर्ष विज्ञान) सत्र १ उपयोजित मराठी (AECC-2A)/ / सत्र २ मराठी साहित्य (AECC - 2 B)(वैचारिक, सामाजिक, विज्ञानविषयक) चे Outcomes पुढीलप्रमाणे-

CO1 मराठी भाषा, साहित्य आणि यांच्या परस्परसंबंधाची जाणीव करून देता येईल.

CO2मराठी भाषेचा परिभाषासापेक्ष आणि शैलीसापेक्ष विकास विद्यार्थ्यांच्या लक्षात तपशील आणून देता येईल.

CO3 मराठी भाषेची उपयोजनात्मक कौशल्ये विकसित करता येतील.

CO4 साहित्यविषयक अभिरूची विकसित करता येईल.
CO5 मराठी भाषा, साहित्य आणि यांच्या परस्परसंबंधाची जाणीव करून देता येईल.
CO6 साहित्यविषयक अभ्यासातून जीवनविषयक समज विकसित करता येईल.
CO7 विज्ञानसाहित्यविषयक आकलनक्षमता वाढवता येईल.

प्रथम वर्ष वाणिज्य (मराठी)

सत्र १ भाषा, साहित्य आणि कौशल्यविकास [११७] /सत्र २ भाषा आणि कौशल्यविकास [११७] चे
Outcomes पुढीलप्रमाणे-
CO1 विविध क्षेत्रातील भाषा व्यवहाराचे स्वरूप व गरज समजावून घेता येईल.
CO2 या व्यवहार क्षेत्रातील मराठी भाषेचे स्थान स्पष्ट करणे व त्यातील मराठीच्या प्रत्यक्ष वापराचा
अभ्यास करता येईल.
CO3 विविध क्षेत्रीय मराठी भाषेच्या वापराची कौशल्ये विकसित करता येईल.
CO4 विविध लेखनप्रकारांचा अभ्यास व प्रत्यक्ष लेखनाची कौशल्ये वापरण्यास सक्षम करता येईल.
CO5 विविध क्षेत्रातील कर्तृत्ववान व्यक्तींच्या कार व विचारांची ओळख करून देता येईल.
CO6 विद्यार्थ्यांमध्ये नैतिक, व्यावसायिक व वैचारिक मूल्यांची जोपासना करता येईल.

Program Specific Outcomes (PSO): B.A.(Marathi) section objectives are as follows-
PSO1Awareness about Rajbhasha Marathi will increase.
PSO2Students will be introduced to the rich and glorious tradition of Marathi language and
literature.
PSO3 students will develop interest in Marathi language.
PSO4 will develop the personality of the students.
PSO5 The values of life will be inculcated in students.
PSO6 The relationship between the curriculum and its interactive use of life can be
explained.

Outcomes of FYBA CC-A (General Level-1) are as under
Sem-I Marathi Literary Stories and Linguistic Skills Development / Sem-II Marathi
Literature: Drama and Linguistic Skills Development
CO1. Will introduce Marathi literature, Marathi language and Marathi culture respectively.
CO2. Interest in Marathi literature will be created.
CO3. Litarary tasted will develop.
CO4. Different streams and types of Marathi literature will be noticed.
CO5. It will help in developing skills in various linguistic fields.
CO6. It will help to know the application skills of Marathi language.

Outcomes of Second Year Art (S. Y.B.A.) G2 are as under
Session 1 Linguistic Skills Development and Modern Marathi Literature Type: Novel [CC -
1 C (3)] G2 / Session 2 Linguistic Skills Development and Modern Marathi Literature Type:
Lalitgadya [CC-1D (3)]
CO1. The nature, elements, genre and movement of this genre of novel can be understood.
CO2. The assigned novel can be assessed, tasted and analyzed.
CO3. Linguistic skills can be developed.
CO4. The nature, composition, type and movement of this type of literature can be
understood.
CO5. Fine prose can be assessed, tasted and analyzed in the designated textbook.

CO6. Linguistic skills can be developed.

Outcomes of Second Year Arts (S.Y. B.A.) S1 are as under
Season 1 Modern Marathi Literature: Prakashvata [DSE 1 A (3)] / Season 2 Medieval Marathi Literature: Selected Medieval Prose, Verse
CO1. The autobiography will explain the nature and concept of the genre.
CO2. The autobiography will introduce the inspiration and movement of this literary genre.
CO3. Fine prose will explain the uniqueness of autobiography as compared to other literary genres.
CO4. Assess, enjoy and analyze this assigned autobiography

Outcomes of S2 Session 1 Literary Thought [DSE 1B (3)] / Session 2 Literature Review [DSE 2 B (3)] are as under
CO1. The concept, form and purpose of literature can be understood on the basis of Indian and Western literary thought.
CO2. The production process of literature can be explained.
CO3. Understanding the language and style of literature can be understood.
CO4. The concept and format of literature review can be introduced.
CO5. The interrelationships between literature and criticism can be understood and studied.
CO6. The nature of the review can be understood and studied according to the type of literature.
CO7. The difference between introduction, examination and review of books can be explained.

Outcomes of Session 1 Publishing and Editing [SEC 24 (2)] / Session 2 Applied Writing Skills [SEC 2 B (2)] are as follows-
CO1. Skills required for publishing and editing can be acquired.
CO2. Necessary training can be taken for publishing and editing.
CO3. Demonstration skills can be acquired along with demonstrations for publishing and editing.
CO4. The skills required for advertising, interview writing and editing can be acquired.
CO5. Necessary training for advertising, interview writing and editing can be obtained.
CO6. Application skills can be acquired with demonstrations for advertising, interview writing and editing.
CO7. Training can be obtained by visiting publishing houses, advertising agencies, printing presses, newspaper offices, distribution agencies, bookstores, flex production centers, newsletters.

Session 1 Marathi Linguistic Communication Skills [MIL 2 (2)] / Session 2 Outcomes of Marathi (MIL 2 (2)) for New Media and Social Media are as follows-
CO1. Ability to develop advanced linguistic skills.
CO2. The nature and place of communication in the media can be clarified.
CO3. The correlation between personality development and language can be explained.
CO4. The interrelationships between the way of life in a democracy and the media can be explained.
CO5. Writing skills can be developed for the media.
CO6. The nature and place of new media and social media in communication can be clarified.

CO7. The interrelationships between language, lifestyles and new media, social media can be explained.
CO8. Writing skills can be developed for new media and social media.
CO9. New media and social media literacy can be created.
CO10. The use and impact of new media and social media can be discussed.

TYBA
Linguistic Skills in Session 1 Program Coordination: Part-1 [SEC2 C (2)] / Linguistic Skills in Session 2 Program Coordination: Outcomes of Part 2 [SEC2D (2)] are as follows-
CO1. Will understand the nature and type of programs.
CO2. The program will gain linguistic skills in combination.

CO3. Writing skills in program combination
CO4. The program will acquire writing skills in combination.
CO5. The program will gain linguistic skills in combination.
CO6. Will combine the linguistic skills of virtual programs.
CO7 .. Invitation card and invitation card can be written.

Outcomes of Third Year Arts (T. Y. B.A.) G3 Regular Course are as follows
Session 1 Linguistic Skills Development and Modern Marathi Literature Type: Travelogue [CC-1E (3)] / Session 2 Linguistic Skills Development and Modern Marathi Literature Type: Poetry [CC-1F (3)]

CO1. Writing skills can be acquired for print media.
CO2. Travelogue The nature, motivation, purpose, features and movement of this type of literature can be understood.
CO3. Designated travelogues can be assessed, tasted and analyzed.
CO4. Information on Marathi literature, linguistic skills development and governance can be obtained.
CO5. The nature, movement, inspiration, tendency and features of this genre of poetry can be understood.
CO6. Selected poems in the designated textbook can be understood, tasted and analyzed.
CO7. Poetry The various inventions in the literary genre and language forms can be identified on the basis of the poems in the textbook.

Outcomes of 3rd year Arts (T. Y. B.A.) S3 are as under-
Session 1 Gross History of Medieval Marathi Literature: Beginning to I.S. 1600 [DSE 1 C (3 + 1)] / Gross History of Medieval Marathi Literature: Beginning to I.S. 1601 to c. 1817 [DSE 1 D (3 + 1)] /
CO1. Literary history can be understood as concept, form, motivation, tendency.
CO2. The social, cultural background of the medieval period can be understood.
CO3. The history of Marathi language and literature can be understood in chronological order.

Outcomes of 3rd Year Art (T.Y.B.A.) S4 are as under -
Session 1 Descriptive Linguistics: Part 1 [DSE 2 C (3) +1] / Session 2 Descriptive Linguistics: Part 2 [DSE 2 D (3) +1]
CO1 language formats, features and functions can be explained.
The need for CO2 language study can be explained.

Branches of CO3 language study and various methods can be briefly introduced.
The structure, function, and self-formation of CO4 can be explained.
CO5 phonology, phonetics and Marathi phonetics can be explained.
CO6 morphology and morphology of Marathi can be explained.
CO7. Syntax and syntax can be introduced in the context of Marathi language.
CO8. Semantics This concept can be introduced by the linguistic organ.

Linguistic Skills in Session 1 Program Coordination: Part-1 [SEC2 C (2)] / Linguistic Skills in Session 2 Program Coordination: Outcomes of Part 2 [SEC2D (2)] are as follows-
CO1. The nature and type of programs can be understood.
CO2. Linguistic skills in program coordination can be acquired.
CO3. The morphology and morphology of Marathi can be explained
CO4. The concept of semantics can be explained.
CO5. Syntax and syntax can be introduced by the linguistic organ.

S. Y. B. Sc. (Second Year Science) Session 1 Applied Marathi (AECC-2A) /
Outcomes of Session 2 Marathi Literature (AECC - 2 B) (Ideological, Social, Science) are as follows-
CO1 Marathi language, literature and their interrelationships can be made aware.
CO2 The development of Marathi language in terms of definition and style can be brought to the notice of the students.
CO3 Marathi language adaptive skills can be developed.
CO4 Literary tastes can be developed.
CO5 Marathi language, literature and their interrelationships can be made aware.
CO6 The study of literature can help in understanding life.
CO7 scientific comprehension can be enhanced.

First Year Commerce (Marathi)
Outcomes of Session 1 Language, Literature and Skill Development [117] / Session 2 Language and Skill Development [117] are as under-
CO1 can explain the nature and need for language communication in different areas.
CO2 The position of Marathi language in the field of can be explained and the actual use of Marathi in it can be studied.
CO3 Skills for use of various regional Marathi language can be developed.
CO4 will enable you to study different writing styles and use actual writing skills.
CO5 can be used to identify the cars and ideas of competent people in various fields.
CO6 Ethical, professional and ideological values can be nurtured in students.

Name of the Programme: B. A. in Economics

2013 Annual Pattern

Initially this is three year programme. The Students having Economics as special subject at second year and studying fallowing **07** papers under this pattern.

PO-1. Students will familiar with the problems and prospects of Indian Economy at first year of
        The degree.

PO-2. Students will able to understand the modern banking system and financial system of India

And world and shall be comprehend the Micro and Macro Economic Theory and its application in real sitituation at the second year of the degree.

Po-3. Student will able to grasp the importance of planning in economic development process of

The country

PO-4. Student will understand the importance and principles of international trade and practices in the development of economy in the globalization era.

PO-5. Students will recognize the role of government in the development of the country by Studying nature, scope, importance and theories of Public Finance

PO-6. Student will able to use their knowledge of economics in competitive examination at the Final year of the degree

2019 CBCS Pattern

Initially CBCS-2019 Pattern is the semester basis. Students having Economics as special subject for their degree they should have mandatory to qualify total 18 papers through Six Semester.

PO-1. Student will able to develop an understanding of the economic environment and the factors affecting economic environment.

PO-2. Student will aware with various new developments in different sectors of an Economy. Ability to develop an understanding of the economic environment and the factors affecting economic environment.

PO-3. Student will able to understand fundamentals of modern financial System as well as recent trends in banking system.

PO-4. Student will understand the role of the Reserve Bank of India in Indian financial system.

PO-5. Student will able to work in Indian Financial System for better financial decision making.

PO-6. Students will understand the behavior of an economic agent and the principle behind price determination process.

CO-7. Students will understand the nature and scope of Micro and Macro Economics.

CO-8. Students knowing the importance of government economic policy in maximum Economics welfare of the society.

CO-9. Student will know, Macro Economic Theory, Roll of money, theoretical framework of consumption and investment functions, inflation, deflation, stagflation, Business Cycle, Role of monetary and fiscal policies.

CO-10. Student will able to demonstrate their understanding of sampling methods and the ability to use Collection of data

CO-11. Student will able to identify the appropriate sample techniques for different kinds of research Questions, appropriate source of data collection and data presentation.

CO-12. Student will recognize the indicators of Economic Development, Human Development, Characteristics of Developing and developed countries and constraint in Economic Development.

CO-13. Student will able to explain process of Economic Planning

CO-14. Student will apply the theories of International Economics and International Trade

CO- 15. Student will understand the concepts of Budget and instrument of fiscal policy.

CO-16. Student will able to work in teams and analyze and interpret data in most logical manner, Able to illustrate finding in the most appealing manner, shall be able leadership in business

CO-17. Student will competent to analyze the concept of revenue and its components, will able to explain nature and scope of public finance.

Course Outcomes

1) Banking & Finance III T.Y.B Com 356- B

1) Banking Occupies a vital role in a nation's economy.

2) Banks, are the backbone of all activities because every transaction where money is involved the banks is the main character.

3) This subject is an attempt to offer to student's a fundamental tool which will enhance their understanding of banking business.

2) Business Regulatory Framework . T.Y.B Com

1) To learn the capacity of contracting Parties.

2) To be able to explain the meaning, kinds and rules relating to consideration.

3) To Study legality of objects and consideration.

4) To be able to explain the reasons and remedies for breach of contract.

5) To Understand the Rights of Unpaid Seller and remedy measures relating to it.

3) Auditing & Taxation T.Y.B Com- 354

1) To acquaint the learner about types of errors and frauds in Auditing.

2) To learn the various classes types of Audit.

3) To understand about Audit Programme, Audit Note book & working paper.

4) To impart knowledge about meaning of internal control, internal check and internal Audit

5) To understand provision for work as Company Auditor as per companies Act 2013.

6) To study enhance Provisions under Income Tax Act,1961 used for conduct of Tax Audit.

4) Financial Accounting   112 F.Y.B. Com.

1) To impart knowledge of Basic Accounting concepts.

2) To create awareness about Application of these concepts in Business World.

3) To impart skill regarding Computerised Accounting.

4) To impart knowledge regarding finalization of Accounts or various establishments.

5) Business Mathematics and Statistics F.Y.B.Com

1) To impart knowledge of Basic Mathematics concepts.

2) To create awareness about Business Mathematics & Statistics.

3) Mathematics is an important subject of student life , that means How to calculate, Interest& different types calculation.

4) Statistics plays a vital role in every fields of human activity.

6) Business Communication S.Y.B.Com

1) To understand the methods of communication.

2) To learn about the channels of communication in business organization.

3) To study the meaning and types of job application letters.

4) To learn the drafting of job application letter.

5) To understand the basic format of bio-data, resume and curriculum vital.

7) Corporate Accounting S.Y.B.Com

1) To acquaint the students with knowledge about various concept, objectives and Applicability or some important Accounting standers associated with to Corporate Accounting.

2) To update the students with knowledge for preparation of final Accounts of a company per Schedule III of the companies Act 2013

3) To empower to students with skills to interpret the financial statements in simple and summarized manner for effective decision-making process.

DEPARTMENT OF PSYCHOLOGY
Programme Outcomes:

B.A Psychology
POS1: Basic understanding of psychology subject and its application for oneself and to others.
POS 2: Relate one's knowledge with day to day learning and personal as well as professional behavior.
POS 3: Analysis of behavioral and psychological issues and its impact on one's psychological and emotional health.
POS 4: Understanding of various psychological disorders, their symptoms and various treatments to cure them.
POS5: Applying various psychological principles in education, teaching and one's profession.
POS6: Tackle the present problems at individual and group as well as interpersonal level.

POS7: Try to disseminate and implement ones' knowledge for various adjustment levels and stages.

POS 8: Pursue research in social and psychological fields for better understanding.

F.Y.B.A. Semester I
DSC-PSY- 1A: FOUNDATIONS OF PSYCHOLOGY

Course outcomes and learning outcomes:

After the completion of this course students will be able to demonstrate the following competencies:

1. Understand the basic psychological processes and their applications in day to day life.
2. Develop the ability to evaluate cognitive processes, learning and memory of an individual.
3. Understand the importance of motivation and emotion of the individual.
4. Understand the personality and intelligence of the individuals by developing their psychological processes and abstract potentials.

F.Y.B.A. Semester II
DSC-PSY- 1B: INTRODUCTION TO SOCIAL PSYCHOLOGY

Course outcomes and learning outcomes:

After the completion of this course students will be able to demonstrate the following competencies:

1. Understand the basics of social psychology.
2. Understand the nature of self, concept of attitude and prejudice of the individual.
3. Assess the interactional processes, love and aggression in our day today life. .
4. Understand group dynamics and individual in the social world.

Course Outcomes: S.Y.B.A. (Psychology)

COURSE: DSE-1A: PSYCHOLOGY OF ABNORMAL BEHAVIOR-I (SEM- III)

CO 1: Student completing this course will acquire the knowledge about the symptoms, diagnostic criteria, and causes of various psychological disorders

CO 2: Student completing this course will examine multiple probable causes and correlates of behaviour.

CO 3: Student completing this course will understand critiques, limitations, and implications of diagnosis and classification of psychological diseases.

CO 4: Student completing this course will create awareness about mental health problems in society.

COURSE: DSE-2A: DEVELOPMENTAL PSYCHOLOGY (SEM- III)

CO 1: Student completing this course will understand the importance, characteristics and concern in lifespan development

CO 2: Student completing this course will understand biological, cognitive, and socio-emotional processes.

CO 3: Student completing this course will understand the periods of development, the significance of age, and discuss developmental issues.

CO 4: Student completing this course wills understand Psychoanalytic, Cognitive, Behavioural and Social Cognitive, Ethological, Ecological and Eclectic theories of development.

CO 5: Student completing this course will understand methods of data collection and research designs used in Life-span development research.

COURSE: SEC- 1A: HEALTH PSYCHOLOGY (SEM- III)

CO 1: Student completing this course will understand health psychology and arrive at the introduction to the role of psychology in health.

CO 2: Student completing this course will understand the nature of stress and coping.

CO 3: Student completing this course will understand various factors related to health and diseases.

CO 4: Student completing this course wills understand quality of life and promoting the good health.

COURSE: DSE-1B: PSYCHOLOGY OF ABNORMAL BEHAVIOR-II (SEM- IV)

CO 1: Student completing this course will Learn descriptions, and theories underlying diagnostic of psychiatric disorders.

CO 2: Student completing this course will Learn and understand benefits, critiques, limitations, and implications of diagnosis and classification.

CO 3: Student completing this course will help students to acquire the knowledge about the symptoms, diagnostic criteria, and causes of various psychological disorders.

CO 4: Student completing this course will examine multiple probable causes and correlates of behaviour.

CO 5: Student completing this course will create awareness about mental health problems in society.

COURSE: DSE-2B: THEORIES OF PERSONALITY (SEM- IV)

CO 1: Student completing this course will understand the concept of personality with various theories of personality on the basis of personality psychology.

CO 2: Student completing this course will understand different framework and theoretical aspects of personality.

CO 3: Student completing this course will understand and observe, interpret individual differences in behaviour in the light of sound theoretical systems of personality.

CO 4: Student completing this course will understand comprehensive overview of the major theories personality.

COURSE: SEC- 1B: POSITIVE PSYCHOLOGY (SEM- IV)

CO 1: Student completing this course will understand how the positive psychology as the science of happiness, human strengths, positive aspects of human behavior and 'psychology of well-being.'

CO 2: Student completing this course will how we lead our lives, find happiness and satisfaction, and face life's challenges.

CO 3: Student completing this course will how positive psychology has become an evolving mosaic of research and theory from many different areas of psychology.

TYBA
G3: INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY
(To be implemented from 2015-2016)
Outcomes:
To acquaint the students with:
CO 1- The emergence of Industrial and Organizational Psychology
CO 2- The work done in Industrial and Organizational Psychology
CO 3- The significance of training, performance appraisal, leadership models
CO 4- The importance of Engineering Psychology

S3: SCIENTIFIC RESEARCH AND EXPERIMENTAL PSYCHOLOGY
(To be Implemented From 2015-2016)
Outcomes-
CO 1. To acquaint the students with the basic concepts of experimental psychology and research methodology,
CO 2. To develop the spirit of scientific inquiry in the students,
CO 3. To help them generate ideas for research, as well as develop hypotheses and operational definitions for variables.
CO 4. To help students understand the basic steps in scientific research,
CO 5. To equip the students with the basic information and knowledge about test-administration and scoring, and interpretation of the obtained results,
CO 6. To enable the students to undertake an independent small-scale research project.

S4: PSYCHOLOGY PRACTICAL: TESTS AND EXPERIMENTS
(To be implemented from 2015-16)
Outcomes:
CO 1. To familiarize the students with the use of elementary statistical techniques.
CO 2. To give practical experience to the students in administering and scoring psychological testsand interpreting the scores,
CO 3. To acquaint the students with the basic procedure and design of psychology experiments,
CO 4. To encourage and guide the students to undertake a small-scale research project.

CO 5. To encourage students to learn practical application through study tour and visit.

F.Y.B.Sc. Semester I
PSY- 111: FOUNDATIONS OF PSYCHOLOGY
Course outcomes and learning outcomes:
After the completion of this course students will be able to demonstrate the following competencies:
CO 1. Understand the basic psychological processes and their applications in day to day life.
CO 2. Develop the ability to evaluate cognitive processes, learning and memory of an individual.
CO 3. Understand the importance of motivation and emotion of the individual.
CO 4. Understand the personality and intelligence of the individuals by developing their psychological processes and abstract potentials.

F.Y.B.Sc. Semester I
PSY- 112: EXPERIMENTAL PSYCHOLOGY
Course outcomes and learning outcomes:
After the completion of this course students will be able to demonstrate the following competencies:
CO 1. Understand basic concepts of Experimental Psychology.
CO 2. Understand the different methods of psychophysics, learning, and reaction time.
CO 3. Understand psychological tests, intelligence, aptitude and personality.

F.Y.B.Sc. Semester I
PSY- 113: PSYCHOLOGY PRACTICAL: EXPERIMENTS
Outcomes:
CO 1. To acquaint the students the basic concepts of Experiments in Psychology.
CO 2. To acquaint the students how to conduct the experiments and to understand its practical applications and To introduce the students about basic knowledge of elementary statistics.
Outcomes: Understand human behavioural and mental processes through experiments.

F.Y.B.Sc. Semester II
PSY- 121: INTRODUCTION TO SOCIAL PSYCHOLOGY
Course outcomes and learning outcomes:
After the completion of this course students will be able to demonstrate the following competencies:
CO a) Understand the basics of social psychology.
CO b) Understand the nature of self, concept of attitude and prejudice of the individual.
CO c) Assess the interactional processes, love and aggression in our day today life. .
CO c) Understand group dynamics and individual in the social world.

F.Y.B.Sc. Semester II
PSY- 122: PSYCHOLOGICAL TESTING
Course outcomes and learning outcomes:

After the completion of this course students will be able to demonstrate the following competencies:
CO a) Understand the basics of psychological testing.
b) Understand and assessing the human abilities.
CO c) Understand and evaluate behaviour analysis.

F.Y.B.Sc. Semester II
PSY- 123: PSYCHOLOGY PRACTICAL: TESTS
Outcomes:
CO 1. To acquaint the students the basic concepts of Tests in Psychology

PO. No.	**Name of Program (with Specialization) - Bachelor of Arts in Geography**	
	Program Outcomes **After successful completion of this program, a student will be able to**	**Graduate Attributes**
SO1	Apply clear written and oral communication skills to communicate results of research	Communication skill
SO2	Demonstrate connections between everyday life at the local scale and the larger economic, social, and/or environmental forces that network them into a global community	Life long learning
SO3	Evaluate cultural, social, and environmental processes with a particular focus on space and place, critical theory, practical application, analysis and/or social justice.	Critical Thinking
SO4	Think in spatial terms to explain what has occurred in the past as well as using geographic principles to understand the present and plan for the future.	Disciplinary Knowledge
SO5	Present completed researches, including an explanation of methodology and scholarly discussion, both orally and in written form and, wherever possible, utilize cartographic tools and other visual formats.	Research Related Skills
SO6	Create the national integrity and fraternity among the students and social groups.	Moral and Ethical Values

FYBA		
Title of Course	**CO. No.**	**Course Outcomes**
Gg110 (A): Physical Geography (Sem.-I)	CO1	Explain principal terms, definitions, concept and theories of Physical Geography.
	CO2	To acquaint the students with the utility and application of Physical geography in different regions and environment.
	CO3	Apply knowledge of basic Forms and types of Precipitation in Climatology.
	CO4	Describe composition and Structure of Earth Atmosphere.
	CO5	Categorizes and compares different Waves and Tides.
	CO6	Compares exogenous and endogenous processes in the formation of landforms.
Gg110 (B): Human Geography (Sem.-II)	CO1	Describe nature of man-environment relationship and human capability.
	CO2	Identify and explain spatial distribution pattern of population and environment.
	CO3	Apply knowledge of basic types and pattern of rural Settlements.
	CO4	Students will acquainted the diversity of human society, regions and its interaction.
	CO5	Explain basic problems of Indian agriculture.
	CO6	Identify the different types of agriculture and its market utility.
SYBA		
Gg: 210(A) Environment Geography-I (G2) Sem.-III	CO1	Explain principal terms, definitions and concept of environment geography.
	CO2	Describe various environmental issues with their trend and impact.
	CO3	Identify the different Disaster management techniques with their application.
	CO4	Identify & describe the various environmental issues in India and their management.
	CO5	design solution orientaed environment projects
	CO6	Apply and use of ICST for different disaster management
Gg-220 (A) Geography of Maharashtra-I (S-1) Sem.-III	CO1	Describe geographical location, economic position and geological structure of Maharashtra.
	CO2	Explain physiographic divisions and drainage system of Maharashtra.
	CO3	Apply climatic related knowledge for cropping pattern.
	CO4	Identify soil types and their distribution in Maharashtra by using geographical map.
	CO5	Evaluate population growth and distribution in Maharashtra.
	CO6	Camparison ethe mineral power resources and major Industries distribution in Maharashtra
Gg201 (A): Practical Geography-I (S-2) Sem.-III	CO1	Explain principal terms, definitions, and concept of geomorphology.
	CO2	Describe drainage network analysis and drainage basin relief analysis.
	CO3	Constructions of various map projection.
	CO4	Apply and locate statistical data on Thematic Maps.
	CO5	Reading & Design of maps according to statistical data.
	CO6	Planning and executing field surveys.
SEC- A Course: Applied course of Disaster Management (SEC- A) Sem.-III	CO1	Describe concepts of Disaster and its relations with Geography.
	CO2	Explain terminology and concepts of Disaster Management.
	CO3	Demonstrate Disaster Management at local level.
	CO4	Explain standard operating procedure on government for disaster Management.
	CO5	Suggest methods of protection from disaster and will be able to do Disaster Management.
	CO6	Implement concepts of hazards in different areas and its Management.
Gg: 210(B) Environment Geography-II (G2) Sem.-IV	CO1	Awareness of environment assessment methods
	CO2	Recognised the environmental laws
	CO3	Application of various conservation methods
	CO4	Identify the different Disaster management techniques with their application

	CO5	Describe the Environmental Planning and their Management.
	CO6	Identify the various Environmental Problems and their solutions.
Gg-220 (B) Geography of Maharashtra-II (S-1) Sem.-IV	CO1	Describe the Agriculture problems and prospects of Maharashtra.
	CO2	Describe the Population and Settlement in Maharashtra
	CO3	Camparison Population distribution and their distribution in Maharashtra
	CO4	Evaluate prospectus in Industry in Maharashtra and the role of MTDC and Role of MIDC in industrial development in rural area of Maharashtra.
	CO5	Aaply for all agriculture pattern in rural area
	CO6	identify agriculture problems in variuos region
Gg201 (B): Practical Geography-II (S-2) Sem.-IV	CO1	Explain basic concepts of Cartographic Techniques and Surveying.
	CO2	Identify different types of Survey.
	CO3	Demonstrate and preparation of Measurement of land.
	CO4	Apply Surveying Techniques in Geography.
	CO5	Explain & Demonstrate about Basic of GPS.
	CO6	Conduct geographical field investigation and report writing.
SEC-B Course: Applied course of Travel & Tourism Geography (SEC-B) Sem.-IV	CO1	Students will awared the skills of Travel & Tourism.
	CO2	Identify different types of travel and tourism.
	CO3	Apply the basic skill of Tour planning and Skill development.
	CO4	Demonstrate and preparation of Tour planning.
	CO5	Conduct geographical field investigation and report writing.
	CO6	Develop awareness of travel and tourism.
TYBA		
Gg.-310: Regional Geography of India (G-3)	CO1	Describe Cultural Setting of India.
	CO2	Explain Role of Transportation in regional development of India.
	CO3	Describe Developments in communication technology.
	CO4	identify Resources and their distribution in India by using geographical Map.
	CO5	Describe Significance of agriculture in Indian Economy in India.
	CO6	Students will understand Regional Planning.
Gg.-320: Agriculture Geography (S-3)	CO1	Students will understand recent trends in agriculture.
	CO2	Explain Role of irrigation in Agricultural Development
	CO3	students will understand the Determinates of Agriculture
	CO4	application of conservation methods of reclaim land
	CO5	Can Evalute Significance of agriculture in Indian Economy in India.
	CO6	understand and implementaion of Various Schemes of Central and State Govt. for Agricultural Development and Farmers
Gg-301 Techniques of Spatial Analysis (S-4)	CO1	Applications of Statistical data and the skill of data representation
	CO2	Describe weather instruments and their applications in Geographical phenomena.
	CO3	Conduct geographical field investigation and report writing.
	CO4	Interpret top sheet/ map, aerial photographs and analysis of toposheet, aerial Photographs.
	CO5	Apply Remote Sensing Techniques in Geography.
	CO6	Identify and campare different methods of Relief Representation.

Title of Course	CO. No.	Course Outcomes
FYBCom		
Gg110 (A):Elements of Commercial Geography – I (Sem.-I)	CO1	Understand the human resource
	CO2	Comparison of various economic activites.
	CO3	Application of human resources
	CO4	Carryout the survey's of various economic activities.
	CO5	Analyze various factors determines the economic activities in particular environment
	CO6	Analyze man and environment relationship
Gg110 (B): Elements of Commercial Geography – I (Sem.-II)	CO1	Describe nature of man-environment relationship and human capability.
	CO2	Identify the factors affecting on industrial location.
	CO3	Understand the of Industry and Economic Development
	CO4	Understand the Roll of Trade , Transport and Communication
	CO5	Understand the roll of Tourism and Hospitality in economy.
	CO6	Application of Cartographic Techniques of Data Representation and Maps

Program outcomes (B.A POLITICAL SCIENCE)

1. Students are expected to develop academic proficiency in the sub fields of Introduction Indian constitution, An introduction to Political Ideology, western political thoughts, Political journalism, basics of Indian constitution, Political Ideology, International Relations, Public Administration.

2. They will develop and be able to demonstrate skills in conducting as well as presenting research in political science

3.Students will be able to analyse political and policy problems and formulate policy options.

4. They will be enabled to discuss the major theories and concepts of political science and its

subfields, and also deliver thoughtful and well-articulated presentations of research findings.

Course Outcomes of BA (Political Science)

Class: FYBA semester I

PAPER CODE -11161A

Course title: Introduction to Indian Constitutions (G-1)

Outcomes

Students will be to understand the philosophy of Indian constitutions.

1. Students will be able to identify the causes, impact of British colonial rule.
2. Students will develop insights to appreciate the various phases of Indian national movement.
3. Students will be inculcated with values in regarding patriotism.
4. Students will be able to understand the various Government of Indian acts their provision and reforms.
5. Students will be able to know the salient features in making of Indian constitution
6. Students will appreciate the socio-economic political factors which lead to the freedom struggle.
7. Students will be able to to appreciate the fundamental rights and duties and the directive principle of state policy

Course Outcomes of BA (Political Science)

Class: FYBA semester II

PAPER CODE -12161

Course title: Introduction to Indian Constitutions (G-1)

1. Students will get the insights into the evolution, functioning and consequences of political parties in India.
2. Students will identify how electoral rules and procedure in India effect election outcomes.
3. They will get familiarized with the working of the constitutions of India
4. Students get acquainted with India's legislature process.
5. Students will comprehend India's executive process and their own duty.
6. Students will understand India's judiciary process and justice.

Course Outcomes of BA (Political Science)

Class: SYBA semester III

PAPER CODE -23164

Course title: An introduction to Political Ideology (CC-2C)

1. Student will understand the role of different political Ideologies and their impact in Politics.
2. They will be able to comprehend the different streams and subtle nuances within each ideology, the change and continuities in its doctrine and its relevance to contemporary times are highlighted.
3. Student are expected to understand the core doctrines of each of the ideologies.

Course Outcomes of BA (Political Science)

Class: SYBA semester IV

PAPER CODE – 24164

Course title: An introduction to Political Ideology (G-2)

1. Student will be able to understand the role of different political Ideologies and their impact in Politics.
2. They will be able to understand the different streams and subtle nuances within each ideology, the change and continuities in its doctrine and its relevance to contemporary times are highlighted.
3. Students enable to Marxism, Phule - Ambedkarism, Gandhism and feminism.
4. They will understand the significance of ideologies in order to understand the socio-political systems at large.

Course Outcomes of BA (Political Science)

Class: SYBA semester III

PAPER CODE –23161

Course title: western political thoughts (S-1)

1. Students will examine political thought through the Classical, Renaissance, and Enlightenment periods based on the works of Plato, Aristotle, Machiavelli, Locke.
2. They will be able to compare and contrast the concepts of justice, freedom, equality, citizenship, and sovereignty in the works of Machiavelli, Hobbes, Locke, and Rousseau.

3. They will be able to comprehend the different versions of, and importance of, the state of nature to political thought.

Course Outcomes of BA (Political Science)

Class: SYBA semester IV

PAPER CODE –24161

Course title: western political thoughts (S-1)

1. Students will be able to examine political thought through the Classical, Renaissance, and Enlightenment periods based on the works of Rousseau, Hegel, mill and Marx.
2. They will get significant glimpses of Karl Marx's worldview, with regard to his critique of democracy and the modern, politically liberal state; how it came to be; and its fundamental link capitalism: and Explain John Stuart Mill's theory on utilitarianism and how he applies it to society and the state.

Course Outcomes of BA (Political Science)

Class: SYBA semester III

PAPER CODE – 23162

Course title: Political journalism

1. Students will understand the basic concepts of journalism and political journalism.

2. They will learn about the communication, its purpose and effects.

3. They will be well versed with news, its purpose and importance.

4. The course will create general awareness about societal, environmental, historical, and political happenings.

5. Students will become aware about the responsibility and role press plays in democracy

6.They will understand the role played by press during British rule in creating awareness about bringing social change and Swarajya.

Course Outcomes of BA (Political Science)

Class: SYBA semester IV

PAPER CODE – 24162

Course title: Political journalism

1. Students will be able to think scientifically about the mass communication process and be able to do scientific research in Communication and Journalism
2. They will understand his responsibility as a media person to the society
3. They will understand the role media plays in building the nation, its wellbeing and development.
4. They will be able to find the discrepancies and question them and if need be, raise a voice
5. They will be able to rationally think in terms of benefit of society

Course Outcomes of BA (Political Science)

Class: SYBA 23165 /24165

Course title: basics of Indian constitution

1. Students will be able to identify the causes and impact of British colonial rule.
2. They will be able to appreciate the various phases of Indian national movement.
3. Students will get the knowledge about the various Government of India acts, their provision and reforms.
4. They will know the salient features in making of Indian constitution
5. Students will be able to appreciate the fundamental rights and duties and the directive principle of state policy

Course Outcomes of BA (Political Science)

Class: TYBA

Sem V

Subject- Self Government Maharashtra

CO 1.To Understand the evaluation of Local Self Government in Maharashtra.

CO 2. To Make Students understanding About 73th and 74rt Constitutional Amendment

CO 3. To Understanding the student structure of local Self Government.

CO 4. To understanding the compostion, Power, Function of loacal Bodies.

Subject- Public Administration

CO 1.Students enable to demonstrate understanding of various activities of government

CO 2.Govermental administrators that fall under the rubric of public administration to include

rule-making, ratemaking, and other regulatory activities, policy making and the delivery of

services and programs.

CO 3. Students enable to understand the 20th century emergence of the modern administrative

CO 4.state as a result of the technological, social, economic and political pressures that have

Subject- International Relation

CO 1. Students enable to introduces the evolution and important of various theories.

CO 2. Students know a brief history of international politics.

CO 3.They understanding what are happening in the world and the levels of analysis Competing theories are presented.

CO 4. Students enable to understand the evolution, scope and significance of international relations.

CO 5.Students enable to demonstrate an understanding of: the key historical events and also they

CO 6.enable to understand contemporary international system; and the key actors which shaped the international Politics.

CO 7. Students enable to discuss the main international relations theories.

CO 8.Students enable to analyze importance of International relation in process of nation progress.

CO 9. Students enable to appreciate the foreign policy their determinants features& its relevance

Subject- Samyukt Maharashtra Movement

CO 1.To Understand the Political Process in Maharashtra with special reference to regionalism sub-regionalism and Samyukta Maharashtra Movement.

CO 2.To understand historical evaluation of Maharashtra Politics and Different analysis of politics of the state.

CO 3. To understand the main issues in public life of regional Society as in the concept of Colonialism, nationalism and modernity.

B.Com.

Programme Specific Outcomes

Students completing B.Com. will be able

PSO1 To develop numerical abilities of students

PSO2 To develop language abilities of students

PSO3 To inculcate writing skills and Business correspondence.

PSO4 To create awareness of Law and Legislations related to commerce and business.

PSO5 To introduce recent Trends in Business, Organizations and Industries

PSO6 To inform about Economic Environment of Country as well as World

PSO7 To acquire practical skills related with banking and other business

F.Y.B.Com -Business Environment & Entrepreneurship.

CO1. Teaches Basic Life Skills Entrepreneurship education teaches essential life skills such as an innovative approach to solve a problem, resolve real world problems, collaboration and working with a team, and many more.

CO2. Entrepreneurship and Innovation minors will be able to sell themselves and their ideas. Students master oral and visual presentation skills and establish a foundation of confidence in the skills necessary to cause others to act.

CO3. Entrepreneurship and Innovation minors will be able to find problems worth solving. Students advance their skills in customer development, customer validation, competitive analysis, and iteration while utilizing design thinking and process tools to evaluate in real-world problems and projects.

CO4. Entrepreneurship and Innovation minors will be able to mobilize people and resources. Students identify and secure customers, stakeholders, and team members through networks, primary customer research, and competitive and industry analyses in order to prioritize and pursue an initial target market in real-world projects.

S.Y.B.Com Banking & Finance-I (Indian Banking Structure)

CO1. To Understand the Dynamics of Indian Banking Sector.

CO 2. To Analyze the Pertinent Issues in the Banking Sector

 CO3. To Familiarize students with the Reforms in the Banking Sector.

CO 4. Comprehend the need, definition, functions and economic significance of financial institutions and markets.

CO 5. To Critically understand the evolving role of Central Banking and Grasp the conduct of

monetary policy

S.Y.B.Com Business Management

CO 1. Identify the applications of management principles

CO 2. Relate theory to practical knowledge of the subject.

CO 3. Apply the basic techniques to real life situations

CO.4. Compare management practices of different organizations

T.Y.B.Com

Semester-V

Advanced Accounting-352

CO 1.To impart the knowledge of various accounting concepts

CO 2.To instil the knowledge about accounting procedures, methods and techniques.

CO 3.To acquaint them with practical approach to accounts writing by using software package.

Banking and Finance-II- 365B

CO 1. To Understanding the structure and role of Financial System in India.

CO 2. To Understanding instruments in Money and Capital Marketing.

CO 3. To Understand the foreign Exchange Market system.

Semester -VI

Advanced Accounting-362

CO 1. To develop conceptual understanding about forensic accounting, corporate social responsibility, derivative contracts and artificial intelligence in accounting.

CO 2.To understand the conceptual knowledge, objectives, methods & tools of analysis of financial statements.

CO 3. To Understanding the Branch Account and Co-operative Society Concept and its Accounting

Banking and Finance-II 366B

CO 1. To Understanding the basic concept of stock market.

CO 2. To Understanding the basic concept and types of stock trading.

CO 3. Understanding the functions and working of Non -Banking Financial Institutions in India .

B.B.A.(Computer Application)

On completion of this course students will be able to -

- Procure skill oriented human resource skills.
- Import practical skills.
- Become industry ready resource.
- Develop the spirit of entrepreneurship.

F.Y.B.B.A.(Computer Application)

1. Business Communication Skill   (CA-101)

On completion of the course, students will be able to–

- Understand what is the role of communication in personal and business world.
- Understand system and communication and their utility.
- develop proficiency in how to write business letters and other communications in required in business.

2. Organizational Behavior and Human Resource Management (CA-201)

On completion of the course, students will be able to–

- Understand basic concepts of HRM & OB.
- Make aware students about traditional & modern methods of procurement and development in organization.
- Know the major trends in HRM & OB.

3. Principles Of Management (CA-102)

On completion of the course, students will be able to–

- Understand basic concepts regarding Organisational Business Administration.
- Examining how various management principles.
- Develop managerial skills among the students.

4. Financial Accounting   (CA-202)

On completion of the course, students will be able to-

- To develop right understanding regarding role and importance of monetary and financial transactions in business.
- To cultivate right approach towards classifications of different transactions and their implications.
- To develop proficiency preparation of basic financial as to how to write basis accounting statement -Trading and P&L

5. C Language(CA-103)

On completion of the course, students will be able to -

• Introduce the foundations of computing, programming and problem- solving using computers.
• Understand structured programming approach.
• Develop the basic concepts and terminology of programming in general.
• Implement algorithms in the 'C' language.
• Test, debug and execute programs.

•Develop modular programs using control structures, pointers, arrays, strings andstructures
• Design and develop solutions to real world problems using C.

6. Business Mathematics (CA – 203)

On completion of this course students will be able to –

- Understand role and importance of Mathematics in various business situations and while developing softwares.
- Develop skills related with basic mathematical technique

7. Database Management System (CA-104)

On completion of the course, student will be able to–

- Solve real world problems using appropriate set, function, and relational models.
- Design E-R Model for given requirements and convert the same into database tables.
- Use SQL to solve the queries of database.

8. Relational database (CA-204)

On completion of the course, student will be able to–

- Use database techniques such as SQL& PL/SQL.
- Explain transaction Management in relational database System.
- Use advanced database Programming concepts.

9. Business Statistics (CA -105)

On completion of this course students will be able to –

- Understand role and importance of statistics in various business situations
- Develop skills related with basic statistical technique
- Develop right understanding regarding regression, correlation and data interpretation

10. Web Technology (HTML-JSS-CSS) (CA - 205)

On completion of this course students will be able to –

- Know & understand concepts of internet programming.
- Understand how to develop web based applications using JavaScript.

11. Computer Laboratory Based on 103 &104(CA-106)

On completion of the course, students will be able to –

- Devise pseudocodes and flowchart for computational problems.
- Write, debug and execute simple programs in 'C'.
- Solve simple computational problems using modular design and basic features of the 'C'language

12.Computer Laboratory Based on 204 & 205(CA-206)

On completion of the course, student will be able to –

- Devise pseudocodes and flowchart for computational problems.
- Develop web applications using HTML, Java Script and CSS/
- Design Databases using RDBMS

13 Add-On PPA (CA-107)

On completion of the course, student will be able to –

● Develop the ability to analyse a problem and devise an algorithm to solve it.
● Formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems

14. Add-On Advanced C Programming(207)

On completion of the course, student will be able to–

●Write, debug and execute programs using advanced features in 'C'.

● solve real world computational problems.

●Develop modular programs using pre-processors and Files.

S.Y.B.B.A.(Computer Application)

1. Digital Marketing (CA-301)
On completion of the course, student will be able to –

- Get the basic knowledge about using digital marketing in and as business.
- Get basic knowledge about to make SWOT analysis ,SEO optimization and use of Various digital marketing tools.

2. Networking (CA-401)

On completion of the course, student will be able to–

- To understand concepts of basic knowledge of Computer Network
- To understand working of networking model, address, transmission medias and connectivity connect ivory devices.
- To acquire information about network security and cryptography

3. Data Structure (CA - 302)

On completion of this course students will be able to –

- Understand the concepts of ADTs
- Learn linear data structures – lists, stacks, and queues
- Understand sorting, searching and hashing algorithms
- Apply Tree and Graph structures

4. Object Oriented Concepts Through CPP(CA-402)

On completion of the course, student will be able to–

- Understand basic of object oriented programming and issue involved in effective class design.

- Enable student to write programs using C++ features like oprator overloading, constructor and destructor, inheritance, polymorphism and exception handling

5. Software Engineering (CA-303)

On completion of the course, student will be able to–

- Understand system concepts.
- Understand software engineering concepts.
- To be familiar about the basic knowledge of software.

6. Operating System (CA-403)

On completion of the course, student will be able to–

- Processes and Thread Scheduling by operating system
- Synchronization in process and threads by operating system
- Memory management by operating system using with the help of various schemes
- Management of deadlocks and File System by operating system
- Scheduling storage or disk for processes Distributed Operating
- System and its architecture and the extended features in mobile OS.

7. PHP (CA-304)

On completion of the course, student will be able to–

- Understand how server-side programming works on the web.
- Use PHP built-in functions and creating custom functions.
- Understand POST and GET in form submission.
- Develop how to receive and process form submission data.
- Read and process data in a MySQL database.

8. Advance PHP (CA- 404)

On completion of the course, student will be able to–

- To know & understand concepts of internet programming.
- Understand how server-side programming works on the web.
- Understand how to use PHP Framework (Joomla / Druple) in software development.

9. Blockchain (CA-305)

On completion of the course, student will be able to–

- Understand concepts of Bitcoin, blockchain, Ethereum,

- Understand how blockchain system work.

- Identify use of blockchain application

10. Project (CA -405)

On completion of the course, student will be able to –

- Implement Software Engineering, Designing and Programming skills practically

11. Computer Laboratory based on CA-302, CA-304 & CA-305 (CA-306)

On completion of the course, student will be able to –

- Implement Data structures, PHP and Big Data programming skills practically

12. Computer Laboratory based on CA-402 & CA-404 (CA-406)

On completion of the course, student will be able to –

- Implement CPP and Advanced PHP programming skills practically

13. Environmental Awareness (AECC-23921)
On completion of the course, student will be able to –

- Understand current concern about our impact on the environment.
- Recognize the things they do affect the environment.
- Promote green practices at home and at work.
- Describe what is being done and what we all can do to help prevent harm to the enviornment

14. ADD On JQuery (CA 407)

On completion of the course, student will be able to –

- Develop AJAX based applications
- Handle events, perform animations and AJAX support in web applications

T.Y.B.B.A.(Computer Application)

1. Cyber Security (CA-501)

On completion of the course, student will be able to–

- Have a good understanding of Cyber Security and the Tools.
- Identify the different types of Cyber Crimes.
- Have a good understanding of Cyber laws

- To develop Cyber forensics awareness.
- Identify attacks, security policies and credit card frauds in mobile and Wireless ComputingEra.

2. Recent Trends in IT (CA-601)

On completion of the course, student will be able to -

- To discuss the basic concepts of AI
- To apply basic, intermediate and advanced technique to mine the data.
- To provide an overview of the concept of Spark programing.

3. Object Oriented Software Engineering (CA- 502)

On completion of this course students will be able to –

- Understand the fundamentals of object modelling.
- Understand and differentiate Unified Process from other approaches.
- Design with static UML diagrams.
- Design with the UML dynamic and implementation diagrams.
- Improve the software design with design patterns.
- Test the software against its requirements specification.

4. Software Testing (CA – 602)

On completion of the course, student will be able to –

- Learn testing tools.
- Acquire Knowledge of Basic SQA.
- Design basic Test Cases.

5. Core Java (CA-503)

On completion of the course, student will be able to–

- Understand the concepts of class, object, packages and collection

- To develop GUI based application

6. Advanced Java (CA – 603)

On completion of the course, student will be able to –

- Know the concepts of JDBC Programming.
- Know the concepts of Multithreading and Socket Programming.
- Know the concepts of Spring and Hibernate.
- Develop the project by using JSP and JDBC.
- Develop applications in Spring and hibernate.

7. Python (504)

On completion of the course, student will be able to –

- Define and demonstrate the use of built-in data structures "lists" and "dictionary".

- Design and implement a program to solve a real world problem.
- Design and implement GUI application and how to handle exceptions and files.

8. Android Programming (CA-604)

On completion of the course, student will be able to–

•Student will be able to write simple GUI applications, use built-in widgets and components, work with the database to store data locally, and much more.

•Demonstrate their understanding of the fundamentals of Android operating systems Demonstrate their skills of using Android software development tool

9. Project (605)

On completion of the course, student will be able to –

- Develop a software project using Python
- Implement programming and software Engineering skills

10. Project (605)

On completion of the course, student will be able to –

- Develop a software project using JAVA
- Implement programming and software Engineering skills

11. Computer Laboratory Based on 503 and 504 (CA-506)

On completion of the course, student will be able to–

•Install and configure JAVA application development tools.

•Design and develop user Interfaces using Python platform.

•Save state information across important operating system events

12. Computer Laboratory Based on 603 and 604 (CA-606)

On completion of the course, student will be able to–

•Install and configure Android application development tools.

•Design and develop user Interfaces using JAVA platform.

•Save state information across important operating system events

13. Internet of Things (CA -507)

On completion of the course, student will be able to–

- To explain key technology, smart objects, IoT Architecture and security in Internet of IoT
- To illustration the role of IoT protocol for efficient network communication.
- To understand IoT platform such as Arduino Uno

14. Soft Skill   (CA-607)

On completion of the course, student will be able to -

- Understand the significance and essence of a wide range of soft skills.
- Learn how to apply soft skills in wide range of routine social and professional settings.
- Learn how to employ soft skills to improve interpersonal relationships.
- Learn how to employ soft skills of enhance employability and ensure workplace and currier success

B.Sc. (Computer Science)

Outcomes

Students completing this course will –

- Develop problem solving abilities using a computer.
- Build the necessary skill set and analytical abilities for developing computer based solutions for real life problems.
- Students will be trained in professional skills related to Software Industry.
- Prepare necessary knowledge base for research and development in Computer Science.
- Build-up a successful career in Computer Science and to produce entrepreneurs who can innovate and develop software products

F.Y.B.Sc.(Computer Science)

1.Problem Solving using Computer and'C' Programming (CS-101)

On completion of the course, student will be able

- To introduce the foundations of computing, programming and problem- solving using computers.
- To develop the ability to analyze a problem and devise an algorithm to solve it.
- To formulate algorithms, pseudo codes and flowcharts for arithmetic and logical problems
- To understand structured programming approach.
- To develop the basic concepts and terminology of programming in general.
- To implement algorithms in the 'C' language.
- To test, debug and execute programs.

2. Advanced 'C' Programming (CS-201)

On completion of the course, student will be able to–

- Develop modular programs using control structures, pointers, arrays, strings andstructures
- Design and develop solutions to real world problems using C.

3. Database Management System (CS –102)

On completion of the course, student will be able to–

- Solve real world problems using appropriate set, function, and relational models.
- Design E-R Model for given requirements and convert the same into database tables.
- Use SQL to solve the queries of database.

4. Relational Database Management System (CS –202)

On completion of the course, student will be able to–

- Design E-R Model for given requirements and convert the same into database tables.
- Use database techniques such as SQL& PL/SQL.
- Explain transaction Management in relational database System.
- Use advanced database Programming concepts.

5.Practical Course based on CS-101 & CS-102(CS-103)

On completion of the course, student will be able to–

- Devise pseudocodes and flowchart for computational problems.
- Write, debug and execute simple programs in 'C'.
- Solve simple computational problems using modular design and basic features of the 'C'language.

6. Practical Course based on CS – 201 & CS-202(CS – 203)

On completion of the course, student will be able to–

- Write, debug and execute programs using advanced features in 'C'.

- To solve real world computational problems.

7. Matrix Algebra (MTC-111)

Upon successful completion of this course, the student will be able to:

- Work with graphs and identify certain parameters and properties of the given graphs.
- Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
- Solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
- Develop an appreciation for the literature on the subject and be able to read and present results from the literature.
- Write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

8. Linear Algebra (MTC-121)

Upon successful completion of this course, the student will be able to:

- Work with graphs and identify certain parameters and properties of the given graphs.
- Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
- Solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
- Develop an appreciation for the literature on the subject and be able to read and present results from the literature.
- Write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

9. **Discrete Mathematics (MTC-112)**

Upon successful completion of this course, the student will be able to:

- Work with graphs and identify certain parameters and properties of the given graphs.
- Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
- Solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
- Develop an appreciation for the literature on the subject and be able to read and present results from the literature.
- Write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

10. **Graph Theory (MTC-122)**

Upon successful completion of this course, the student will be able to:

- Work with graphs and identify certain parameters and properties of the given graphs.
- Perform certain algorithms, justify why these algorithms work, and give some estimates of the running times of these algorithms.
- Solve basic exercises of the type: given a graph with properties X, prove that the graph also has property Y.
- Develop an appreciation for the literature on the subject and be able to read and present results from the literature.
- Write cohesive and comprehensive solutions to exercises and be able to defend their arguments.

11 . **Mathematics Practical (MTC -133)**

On completion of the course, students will be able to –

- Implement mathematics theory concepts practically

12 . **Mathematics Practical (MTC -143)**

- On completion of the course, students will be able to –
- Implement mathematics theory concepts practically

13. **Descriptive Statistics I (CSST 111)**

Upon successful completion of this course, the student will be able to:

- Understand the concepts and ability to apply statistical tools and techniques.
- Learn and apply acquired techniques in computer based applications

14. Methods of Applied Statistics (CSST 121)

Upon successful completion of this course, the student will be able to:

- Understand the concepts and ability to apply statistical tools and techniques.
- Learn and apply acquired techniques in computer based applications

15. Mathematical Statistics (CSST 112)

Upon successful completion of this course, the student will be able to:

- Understand the concepts and ability to apply statistical tools and techniques.
- Learn and apply acquired techniques in computer based applications

16. Continuous Probability Distributions and Testing of Hypothesis (CSST122)

Upon successful completion of this course, the student will be able to:

- Understand the concepts and ability to apply statistical tools and techniques.
- Learn and apply acquired techniques in computer based applications

17. Statistics Practical (CSST113)

On completion of the course, students will be able to –

- Implement Statistics theory concepts practically

18. Statistics Practical (CSST -123)

- On completion of the course, students will be able to –

Implement statistics theory concepts practically

19. Semiconductor Devices and Basic Electronic systems. (ELC-111)

On completion of the course, student will be able -

   *To study various types of semiconductor devices
   *To study elementary electronic circuits and systems

20. Principles of Digital Electronic (ELC-112)

On completion of the course, student will be able

* To get familiar with concepts of digital electronics

* To learn number systems and their representation
* To understand basic logic gates, Boolean algebra and K-maps
* To study arithmetic circuits, combinational circuits and sequential circuits

21. Electronics Lab lA (ELC-113)

On completion of the course, student will be able

*To design and build his/her own Electronic circuit

*To acquire skills of semiconductor devices

   *To know logic gates and k-maps techniques useful in developing Arithmetic,
   Combination,Sequential circuits.
   *Do build and test own network and do settings.

22. Instrumentation system (ELC -121)

On completion of the course, student will be able

   *To study Instrumentation System
   *To study various blocks of Instrumentation System
   *To study Smart Instrumentation System

23. Basics of Computer organization (ELC-122)

On completion of the course, student will be able

*To get familiar digital sequential circuits
*To study Basic computer Organization
*To study Memory architecture

24. Electronics Lab IB (ELC-123)

On completion of the course, student will be able

   *To design and build his/her own Instrumentation based projects.
   *To acquire skills of Architecture
   *To know multiplexing and modulation techniques useful in developing wireless application
   *Do build and test own network and do settings.

1. Data Structures and Algorithms – I (CS - 231)

On completion of the course, student will be able to –

- Use well-organized data structures in solving various problems.
- Differentiate the usage of various structures in problem solution.
- Implementing algorithms to solve problems using appropriate data structures.

2. DATA STRUCTURES AND ALGORITHMS-II (CS- 241)

On completion of this course students will be able to –

- Implement different data structures efficiently
- Use well-organized data structures to handle large amount of data
- Use appropriate data structures for problem solving

3. Software Engineering (CS –232)

On completion of the course, student will be able to–

- Compare and choose a process model for a software project development.
- Identify requirements analyze and prepare models.
- Prepare the SRS, Design document Project plan of a given software system

4. Computer Networks-I (CS –242)

On completion of the course, student will be able to–

- Have a good understanding of the OSI and TCP/IP Reference Models and in particular have a good knowledge of Layers.
- Understand the working of various protocols.
- Analyze the requirements for a given organizational structure and select the most appropriate networking architecture and technologies

5. Practical course on CS 231 (Data Structures and Algorithms I) and CS 232 (Software Engineering) (CS – 233)

On completion of the course, student will be able to –

- Implement Data Structures and Software Engineering concepts practically.

6. Practical course on CS 241(Data Structures and Algorithms II) and CS 242 (Computer Networks I) (CS – 243)

On completion of the course, student will be able to –

- Implement Data Structures and Computer Networking concepts practically.

7. Numerical Techniques (MTC-232)

On completion of the course, student will be able to–

- Recall basic facts about Numerical Techniques and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.
- Get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
- Get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.
- Apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
- Make aware of history of mathematics and hence of its past, present and future role as part of our culture.

8. Operational Research (MTC-242)

On completion of the course, student will be able to–

- Recall basic facts about Operational Research and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.
- Get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
- Get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.
- Apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
- Make aware of history of mathematics and hence of its past, present and future role as part of our culture.

7. Groups and Coding Theory (MTC-231)

On completion of the course, student will be able to–

- Recall basic facts about Numerical Techniques and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.
- Get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
- Get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.

- Apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
- Make aware of history of mathematics and hence of its past, present and future role as part of our culture.

8. Computational Geometry (MTC-241)

On completion of the course, student will be able to–

- Recall basic facts about Operational Research and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.
- Get a relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
- Get adequate exposure to global and local concerns that explore them many aspects of Mathematical Sciences.
- Apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.
- Make aware of history of mathematics and hence of its past, present and future role as part of our culture.

9. Mathematics Practical (MTC -233)

On completion of the course, students will be able to –

- Implement mathematics theory concepts practically

10. Mathematics Practical (MTC -243)

- On completion of the course, students will be able to –
- Implement mathematics theory concepts practically

11. Microcontroller Architecture and programming (ELC-231)

On completion of the course, student will be able -

*To write programs for 8051 microcontroller
*To interface I/O peripheral to 8051 microcontroller
*To design small microcontroller based projects

12. Communication and Networking (ELC-232)

On completion of the course, student will be able to -

*Define and explain terminologies of data communication
*Understand the impact and limitations of various digital modulation techniques
*To acknowledge the need of spread spectrum schemes.
*Identify functions of data link layer and network layer while accessing communication link
*To choose appropriate and advanced techniques to build the computer network

13. Practical Course I (ELC- 233)

On completion of the course, student will be able -

*To design and build his/her own microcontroller based projects.

　*To acquire skills of Embedded C programming
　*To know multiplexing and modulation techniques useful in developing wireless application
　*Do build and test own network and do settings.

14. Embedded system Design. (ELC -241)

On completion of the course, student will be ableto -
*To understand the difference between general computing and the Embedded systems.
*To know the fundamentals of embedded systems.
*Understand the use of Single board Computer (Such as Raspberry Pi) for an embedded system application.
*Familiar with the programming environment to develop embedded systems and their interfaces with peripheral devices.
*To develop familiarity with tools used to develop in an embedded environment

15. Wireless communication and Internet of Things.(ELC- 242)

On competition of this course, Students will be able to-
*Know working of wireless technologies such as Mobile communication, GSM, GPRS
* Become familiar with 3G and 4G Cellular Network Technologies for Data Connections.
*Understand working principles of short range communication application
*Get introduce to upcoming technology of Internet of Things
*Explore themselves and develop new IoT based applications

16. Practical Course II (ELC- 243)

On completion of the course, students will be able-

*To design and develop own smart applications using Rasberry-Pi
*To write Python program for simple applications
*To build own IoT based system

T.Y.B.Sc.(Computer Science)

1. Python Programming (CS-3510)

On completion of the course, student will be able to–

- Develop logic for problem solving

- Determine the methods to create and develop Python programs by utilizing the data

Structures like lists, dictionaries, tuples and sets.

- To be familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.

- To write python programs and develop a small application project.

2. Software Tasting Tools (CS-3610)

On completion of the course, student will be able to–

- To understand various software testing methods and strategies.
- To understand a variety of software metrics and identify defects and managing those defects for improvement in quality for given software.
- To design test case and test plans, review reports of testing for qualitative software.
- To understand latest testing tools used in the software industries.

3. Foundations of Data Science (CS – 354)

On completion of the course, student will be able to–

- Perform Exploratory Data Analysis

- Obtain, clean/process, and transform data.

- Detect and diagnose common data issues, such as missing values, special values, outliers, inconsistencies, and localization.

- Demonstrate proficiency with statistical analysis of data.

- Present results using data visualization techniques.

- Prepare data for use with a variety of statistical methods and models and recognize how the quality of the data and the means of data collection may affect conclusions.

4. Data Analytics (CS-364)

On completion of the course, student will be able to–

- Use appropriate models of analysis, assess the quality of input and derive insight from results.
- Analyze data, choose relevant models and algorithms for respective applications
- Understand different data mining techniques like classification, prediction, clustering, and association rule mining

5. Computer Networks - II (CS-352)

On completion of the course, student will be able to–

- Student will understand the different protocols of Application layer.
- Develop understanding of technical aspect of Multimedia Systems
- Develop various Multimedia Systems applicable in real time.
- Identify information security goals.
- Understand, compare and apply cryptographic techniques for data security.

6. Software Testing (CS – 362)

On completion of the course, student will be able to–

- Understand various software testing methods and strategies.
- Understand a variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.
- Design test cases and test plans, review reports of testing for qualitative software.
- Understand latest testing methods used in the software industries.

7. Web Technologies - I (CS – 353)

On completion of the course, student will be able to–

- Understand how to develop dynamic and interactive Web Page
- To Design dynamic and interactive Web pages.
- To Learn Core-PHP, Server Side Scripting Language.
- To Learn PHP-Database handling.

8. Web Technologies - II (CS – 363)

On completion of the course, student will be able to–

- Build dynamic website
- Using MVC based framework easy to design and handling the errors in dynamic website.
- To Learn XML and XML parsers.
- To Learn Java Script to program the behavior of web pages
- To Learn AJAX to make our application more dynamic

9. Practical Course based on CS - 353 and CS - 354 (CS – 358)

On completion of the course, student will be able to–

- Understand how to develop dynamic and interactive Web Page.
- Prepare data for use with a variety of statistical methods and recognize how the quality of the data may affect conclusions.
- Perform exploratory data analysis.

10.Object Oriented Programming using Java-I (CS-355)

On completion of the course, student will be able to–

- Understand the concepts of class, object, packages and collection
- To develop GUI based application

11. Object Oriented Programming using Java – II(CS – 365)

On completion of the course, student will be able to–

• To access open database through Java programs using Java Data Base Connectivity (JDBC) and develop the application.

• Understand and create dynamic web pages, using Servlets and JSP.

• Work with basics of framework to develop secure web applications.

12. Practical Course based on CS – 365(CS – 369)

On completion of the course, student will be able to–

- Learn database Programming using Java
- Understand and create dynamic web pages using Servlets and JSP.
- Work with basics of framework to develop secure web applications

13. Project (CS – 3611)

On completion of the course, student will be able to–

- Build a full-fledged software project
- Implement programming and software Engineering skills.

14. Operating System I(CS-351)

On completion of the course, student will be able to–

- Processes and Thread Scheduling by operating system
- Synchronization in process and threads by operating system
- Memory management by operating system using with the help of various schemes

15. Theoretical Computer Science(CS – 356)

On completion of the course, student will be able to–

•Understand the use of automata during language design.
● Relate various automata and Languages.
● Understand the Regular Language, Context Free Language, Context SensitiveLanguage and Unrestricted Language.

16. Operating System II(CS –361)

On completion of the course, student will be able to understand –

● Management of deadlocks and File System by operating system
● Scheduling storage or disk for processes Distributed Operating
● System and its architecture and the extended features in mobile OS..

17. Compiler Construction (CS – 366)

On completion of the course, student will be able to–

● Understand the process of scanning and parsing of source code.
● Learn the conversion code written in source language to machine language.
● Understand tools like LEX and YACC.

18. Practical Course based on CS – 351(CS – 357)

On completion of the course, student will be able to–

● Understand Process synchronization
● Understand Processes and Thread Scheduling by operating system
● Understand Memory management by operating system using with the help of various schemes using C programming .

19. Practical Course based on CS – 361(CS – 367)

On completion of the course, student will be able to–

● Understand Management of deadlocks by operating system
● Understand File System management
● Understand Disk space management and scheduling for processes

20. Practical Course based on CS - 363 and CS - 364 (CS – 368)

On completion of the course, student will be able to–

● Build dynamic website
● Using MVC based framework easy to design and handling the errors in dynamic website.
● To Learn AJAX to make our application more dynamic