

**JMJ COLLEGE FOR WOMEN(A),TENALI.**  
**Course Outcomes 2022-23**

The College offers undergraduate programs in science, Commerce and Humanities. The different programmes offered are

1. BA -Spl.Tel, Spl.Eng & Spl.Eco.
2. B.Com (Gen) & B.Com(Comp)
3. B.Sc –MPC ,CBZ ,H.Sc ,MPCs & MSCs

The college has clearly stated learning outcomes of the Programs and Courses. The Program Outcomes of courses have aims to be achieved. Some of the Programme Outcomes of courses collectively are as follow:

- The approach is envisioned to provide a focused, outcome-based syllabus at the Undergraduate level with an agenda to structure the teaching-learning experiences in a more student-centric manner.
- These wide range of undergraduate courses are designed to satisfy individual objectives and interests.
- The Under-Graduate Programmes will prepare the students for both, academics as well as employment.
- Each programme vividly elaborates its nature and promises the outcomes that are to be accomplished by studying the courses. The programmes also state the attributes that it offers to inculcate at the graduation level.
- The graduate attributes encompass values related to well-being, emotional stability, critical thinking, social justice and also skills for employability. Our students became eligible for all competitive exams like SSC, Insurance sector, Bank PO's, Media, MNC, NGO, and to prepare them for start-ups. In short, each programme prepares students for sustainability and life-long learning.
- Through these Programmes students developed soft skills, their vocabulary improves and they also realised the importance and beauty of languages.

**Display on Website:**

The POs/PSOs/CO's for all Degree courses are made available at the following location on institution's website.

- [Website: jmjcollege.ac.in](http://jmjcollege.ac.in)

**Communication to the teachers:**

- POs/PSOs and COs are developed in each programme of courses involving all the faculty of the program and are reviewed in the BOS meeting after thorough discussion.
- After approval from the respective BOS, these are approved by the Academic council of the Institution and are communicated back to faculty.

**Communication to the Students:**

**First year Induction Programme:** Respective COs are presented at the beginning of each course all through the programme and explained to the students.

**Question papers of Continuous Assessment:** The questions of continuous assessment exams are set reflecting the COs of the particular course along with cognitive levels of learning.

Course learning outcomes are specific to a course of study within a given programme of study. It describes what learners should know, be able to do and value as a result of integrating knowledge, skills and attitudes learned throughout the course. According to the preferences of individual students the elective courses offered by one student may be different from the elective courses offered by another student of the same programme. The achievement by students of course level learning outcomes leads to the attainment of the programme learning outcomes

SEMESTER	COURSE CODE	COURSE NAME	COURSE OUTCOMES	
I	LSC3	Life Skill Course - Entrepreneurship	CO1	Understand the concept of Entrepreneurship, its applications and scope.
			CO2	Report for a start up and differentiate between financial, technical analysis and business

				feasibility
			CO3	Know various types of financial institutions that help the business at Central, State and Local Level
			CO4	Understand Central and State Government policies, Aware of various tax incentives, concessions
			CO5	Apply the knowledge for generating a broad idea for a starting an enterprise/start up
			CO6	Understand the content for preparing a Project
<b>I</b>	LSCI	Life Skill Course - Basic computer applications	CO1	Demonstrate basic understanding of computer hardware and software.
			CO2	Apply skills and concepts for basic use of a computer.
				Identify appropriate tool of MS office to prepare basic documents, charts, spreadsheets and presentations.
			CO3	Create personal, academic and business documents using MS office.
			CO4	Create spreadsheets, charts and presentations.
			CO5	Analyze data using charts and spread sheets.
<b>I</b>	SDCIA	Skill Development Course -Tourism Guidance	CO1	Understand the basic tourism aspects
			CO2	Comprehend the requirements, role and responsibilities of profession of a Tourist Guide
			CO3	Apply the knowledge acquired in managing different groups and guiding in a tour
			CO4	Explain basic values related to tourism and heritage
<b>II</b>	SDC22S	Skill Development Course -Fruits And Vegetables Preservation	CO1	Identify various types of fruits and vegetables and explain their nutritive value.
			CO2	Understand the fragile nature of fruits and vegetables and causes for their damage.
			CO3	Explain various methods of preservation for fresh fruits and vegetables.
			CO4	Get to know the value-added products made from fruits and vegetables.
<b>II</b>	SDC23S	Skill Development Course- DairyTechnology	CO1	Understand the pre-requisites for starting a Dairy farm
			CO2	Recognize different breeds of Cows & buffaloes following safety precautions.
			CO3	Prepare and give recommended feed and water for livestock ,Maintain health of livestock along with productivity
			CO4	Vaccination of cattle, nutrients requirements Entrepreneurship i.e., Effectively market dairy products

			CO5	Ensure safe and clean dairy farm and Standard safety measures to be taken in establishing an industry
			CO6	Efficiently start and manage to establish or develop a Dairy Industry

Semester	Course Code	Course Name		Course Outcomes
I	PHY201	Mechanics, Waves & Oscillations	CO1	Understand Newton's laws of motion and motion of variable mass system and its application to rocket motion and the concepts of impact parameter, scattering cross section. in different fields.
			CO2	Apply the rotational kinematic relations, the principle and working of gyroscope and its applications and the precessional motion of a freely rotating symmetric top.
			CO3	Comprehend the general characteristics of central forces and the application of Kepler's laws to describe the motion of planets and satellite in circular orbit through the study of law of Gravitation.
			CO4	Understand postulates of Special theory of relativity and its consequences such as length contraction, time dilation, relativistic mass and mass-energy equivalence.
			CO5	Examine phenomena of simple harmonic motion and the distinction between undamped, damped and forced oscillations and the concepts of resonance and quality factor with reference to damped harmonic oscillator.
			CO6	Figure out the formation of harmonics and overtones in a stretched string and acquire the knowledge on Ultrasonic waves, their production and detection and their applications
	Physics Practical	Mechanics, Waves And Oscillations	CO1	Perform experiments on Rigidity modulus of certain materials, Surface tension of water, Coefficient of viscosity of a liquid, Moment of inertia of some regular bodies by different methods and compare the experimental values with the standard values.
			CO2	Know how to determine the acceleration due to gravity at a place using Compound pendulum and Simple pendulum.
			CO3	Notice the difference between flat resonance and sharp resonance in case of volume resonator and sonometer experiments respectively.
			CO4	Verify the laws of transverse vibrations in a stretched string using sonometer and comment on the relation between frequency, length and tension of a stretched string under vibration.
II	PHY202	Wave Optics	CO1	Understand the phenomenon of interference of light and its formation in (i) Lloyd's single mirror due to division of wave front and (ii) Thin films, Newton's rings and Michelson interferometer due to division of amplitude.
			CO2	Distinguish between Fresnel's diffraction and Fraunhofer diffraction and observe the diffraction patterns in the case of single slit and the diffraction grating.
			CO3	Describe the construction and working of zone plate and

				make the comparison of zone plate with convex lens.
			CO4	Comprehend the basic principle of laser, the working of He-Ne laser and Ruby lasers and their applications in different fields.
			CO5	Explain about the different aberrations in lenses and discuss the methods of minimizing them.
			CO6	Understand the basic principles of fibre optic communication and explore the field of Holography and Nonlinear optics and their applications.
	Physics Practical	Wave Optics	CO1	Gain hands-on experience of using various optical instruments like spectrometer, polarimeter and making finer measurements of wavelength of light using Newton Rings experiment, diffraction grating etc.
			CO2	Understand the principle of working of polarimeter and the measurement of specific rotatory power of sugar solution
			CO3	Know the techniques involved in measuring the resolving power of telescope and dispersive power of the material of the prism.
			CO4	Be familiar with the determination of refractive index of liquid by Boy's method and the determination of thickness of a thin wire by wedge method
III	PHY193	Thermodynamics And Optics	CO1	Identify the unique vocabulary associated with thermodynamics and Explain the basic concepts of thermodynamics like system, properties, equilibrium, pressure, specific volume, temperature, zeroth law of thermodynamics, temperature measurement and temperature scales.
			CO2	Distinguish between ideal gas and pure substance. Calculate thermodynamic properties using tables of thermodynamic properties .
			CO3	Understand the applications of diffraction and polarization, the applications of interference in design and working of interferometers.
			CO4	Gain knowledge on working of holography and their applications in various fields, Gain knowledge in optical fiber and their applications in communication.
III	Practical	Thermodynamics And Optics	CO1	To identify and formulate power production based on the fundamentals laws of thermal Physics.
			CO2	To instill upon to envisage appropriate experiments related to heat.
			CO3	Analyze the intensity variation of light due to Polarization, interference and diffraction and Explain working principle of lasers.
IV	PHY194	Thermodynamics And Optics	CO1	Explain the concept of thermodynamic work. Calculate and compare work in case of a closed system executing different thermodynamic processes or different thermodynamic cycles
			CO2	Understand the properties of light like reflection, refraction, interference, diffraction etc
			CO3	Understand the applications of diffraction and polarization, the applications of interference in design and working of interferometers, the resolving power of different optical instruments.
			CO4	Understand the applications of the resolving power of different optical instruments.
IV	Practicals	Thermodynamics And Optics	CO1	Perform some basic experiments in thermal Physics: determination of Stefan's constant, coefficient of thermal

				conductivity, Specific heat of a liquid, diffraction grating in normal incidence and minimum deviation methods.
V	PHY5A	Electricity,Magnetism and Electronics.	CO1	Understand the Gauss law and its application to obtain electric field in different cases and formulate the relationship between electric displacement vector, electric polarization, Susceptibility, Permittivity and Dielectric constant.
			CO2	Distinguish between the magnetic effect of electric current and electromagnetic induction and apply the related laws in appropriate circumstances.
			CO3	Understand Biot and Savart's law and Ampere's circuital law to describe and explain the generation of magnetic fields by electrical currents
			CO4	Develop an understanding on the unification of electric and magnetic fields and Maxwell's equations governing electromagnetic waves.
			CO5	Phenomenon of resonance in LCR AC-circuits, sharpness of resonance,Qfactor,Power factor and the comparative study of series and parallel resonant circuits.
			CO6	Describe the operation of p-n junction diodes, zener diodes, light emitting diodes and transistors , Understand the operation of basic logic gates and universal gates and their truth tables
Practical	Electricity,Magnetism and Electronics	Electricity,Magnetism and Electronics	CO1	Observe the resonance condition in LCR series and parallel circuit .
			CO2	Learn how a sonometer can be used to determine the frequency of AC-supply.
			CO3	Observe the variation of magnetic field along the axis of a circular coil carrying current using Stewart and Gee's apparatus.
			CO4	Understand the operation of PN junction diode, Zener diode and a transistor and their V-I characteristics. Construct the basic logic gates, half adder and full adder and verify their truth tables. Further, the student will understand how NAND and NOR gates can be used as universal building blocks.
PHY5B	Modern Physics	Modern Physics	CO1	Develop an understanding on the concepts of Atomic and Modern Physics, basic elementary quantum mechanics and nuclear physics.
			CO2	Develop critical understanding of concept of Matter waves and Uncertainty principle.
			CO3	Get familiarized with the principles of quantum mechanics and the formulation of Schrodinger wave equation and its applications.
			CO4	Examine the basic properties of nuclei, characteristics of Nuclear forces, salient features of Nuclear models and different nuclear radiation detectors. practical applications
			CO5	Classify Elementary particles based on their mass, charge, spin, half life and interaction.
			CO6	Get familiarized with the nano materials, their unique properties and applications. Increase the awareness and appreciation of superconductors and their applications.
Practical	Modern Physics	Modern Physics	CO1	Measure charge of an electron and e/m value of an electron by Thomson method.
			CO2	Determine the Energy gap of a semiconductor using

				thermistor and junction diode.
VI Sem	PHY6GE1	Renewable Energy	CO1	To Understand the Need, importance and scope of non conventional and alternate energy resources.
			CO2	To provide importance of Wind Energy
			CO3	To understand the role of ocean energy in the Energy Generation.
			CO4	To get the utilization of Biogas plants and geothermal energy
	Practical	Renewable Energy	CO1	To understand the concept of energy Conservation.
			CO2	To understand role significance of solar energy.
	PHY6CE1	Solar,thermal and photo voltaic aspects.	CO1	Conceptual knowledge associated with solar power plants.
			CO2	Capability to integrate various options regarding solar power projects.
			CO3	Understand the nature of the solar energy resource
			CO4	Appreciate the mechanisms and the technologies of solar energy conversion including passive and active solar heating, concentrated solar thermal power generation and photovoltaics.
	Practical	Solar,thermal and photo voltaic aspects.	CO1	Understand the solar energy conversion and its storage.
			CO2	Understand the system design for a solar thermal and photovoltaic array.
	PHY6CE2	Wind,Hydro and Ocean energies.	CO1	Define the kinetic energy of a unit mass of flowing fluid along with its corresponding power content.
			CO2	Explain the nature of lift and drag forces and define the lift and drag coefficients.
CO3			Apply the concepts of lift and drag, including use of velocity vectors, to analyze a wind turbine blade. Include propelling forces and bending forces, and compare and contrast their magnitudes along the length of the blade.	
CO4			Define rotor solidity and use this concept to explain the development of modern wind turbines in terms of number of blades.	
Practical	Wind,Hydro and Ocean energies.	CO1	Illustrate a few examples of drag-force rotors.Calculate the power coefficient for a flat-plate and anemometer-type wind turbines, and plot their respective value as a function of tip speed.	
		CO2	Sketch a generic wind turbine power output as a function of wind speed and describe the types of power output regulation that are normally applied.	
PHY6CE3	Energy Storage devices	CO1	Understand need of energy storage systems	
		CO2	Acquire knowledge pertaining to various ways to store energy.	
		CO3	Understand the working of hydrogen storage and fuel cell systems through research.	
Practical	Energy Storage devices	CO1	Understand the the differences between primary and secondary batteries.	
		CO2	Understand the working principles of different fuel cells.	
	PHY6C	Applications of Electricity & Electronics	CO1	Identify various components present in Electricity& Electronics Laboratory.
			CO2	2. Acquire a critical knowledge of each component and its utility

				Demonstrate skills of constructing simple electronic circuits consisting of basic circuit elements. Understand the need & Functionality of various DC & AC Power sources.
	Practical	Applications of Electricity & Electronics	CO1 CO2	List out, identify and handle various equipment in Electrical & Electronics laboratory. . Learn the procedures of designing simple electrical circuits . Demonstrate skills on the utility of different electrical components and devices.
	PHY7C	Electronic Instrumentation	CO1 CO2	Identify various facilities required to set up a basic Instrumentation Laboratory. Acquire a critical knowledge of various Electrical Instruments used in the Laboratory. Demonstrate skills of using instruments like CRO, Function Generator, Multimeter etc. through hands on experience. Understand the Principle and operation of different display devices used in the display systems and different transducers
	Practical	Electronic Instrumentation	CO1 CO2	Learn the construction, operational principles of various instruments. Perform some techniques related to Biomedical Instrumentation and measurement of Certain physiological parameters like body temperature, B.P. and sugar levels etc. Demonstrate skills on handling, Maintenance & trouble shooting of different instruments used in the Labs.
I Sem	MAT 201	Paper I: Differential Equations	CO1	Solve linear differential equations
			CO2	Convert non exact homogeneous equations to exact differential equations by using integrating factors
			CO3	Know the methods of finding solutions of differential equations of the first order but not of the first degree.
			CO4	Solve higher-order linear differential equations, both homogeneous and non homogeneous, with constant coefficients.
			CO5	Understand the concept and apply appropriate methods for solving differential equations
II Sem	MAT 202	Mathematics, Paper II: Three Dimensional Analytical Solid Geometry	CO1	Get the knowledge of planes
			CO2	Basic idea of lines, sphere and cones.
			CO3	Understand the properties of planes, lines, spheres and cones.
			CO4	Express the problems geometrically and then to get the solution.
			CO5	Understand the applications of Solid Geometry in various fields
III Sem	MAT 193	Mathematics, Paper – III: Abstract Algebra	CO1	Acquire the basic knowledge and structure of groups, subgroups and cyclic groups.
			CO2	Get the significance of the notation of a normal subgroups
			CO3	Get the behavior of permutations and operations on them.
			CO4	Study the Homomorphisms and Isomorphisms in Groups with applications.
			CO5	Understand the applications of Group Theory in various fields
IV SEM	MAT 194	Mathematics, Paper – IV: Real Analysis	CO1	Get clear idea about the real numbers and real valued functions
			CO2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann

				integration of a function
			CO4	Know the geometrical interpretation of mean value theorems.
V SEM	MAT 5A	Mathematics, Paper – V: Ring Theory and Vector Calculus	CO1	Get clear idea about the real numbers and real valued functions
			CO2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann integration of a function
			CO4	Know the geometrical interpretation of mean value theorems.
	MAT 5B	Mathematics, Paper – V: Linear Algebra	CO1	Get clear idea about the real numbers and real valued functions
			CO2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann integration of a function
			CO4	Know the geometrical interpretation of mean value theorems.
VISE M	MAT 6GE <sub>1</sub>	Mathematics, Paper – VII: Numerical Analysis	CO1	Get clear idea about the real numbers and real valued functions
			CO2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann integration of a function
			CO4	Know the geometrical interpretation of mean value theorems.
	MAT 6CE <sub>1</sub>	Mathematics, Paper – VIII (A): A <sub>1</sub> : Integral Transforms	CO1	Get clear idea about the real numbers and real valued functions
			CO2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann integration of a function
			CO4	Know the geometrical interpretation of mean value theorems.
	MAT 6CE <sub>2</sub>	Mathematics, Paper – VIII (B):A <sub>2</sub> : Advanced Numerical Analysis	CO1	Get clear idea about the real numbers and real valued functions.
			CO2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
			CO3	Test the continuity and differentiability and Riemann integration of a function
			CO4	Know the geometrical interpretation of mean value theorems.
	MAT 6CE <sub>3</sub>	Mathematics, Paper – VIII ( C ):A <sub>3</sub> : Project Work	CO1	While working on their final year projects, students get a more in-depth insight into real-world functional processes.
			CO2	Developing plans with relevant areas to achieve the project's goals.
			CO3	Break work down into tasks and determine handover procedures.
			CO4	Students able to apply their theoretical knowledge to practical use.



			CO5	Students can demonstrate their practical competence.
I SEM	M101	ALGEBRA	CO1	Understand the concept of Groups, Normal groups and Quotients groups and permutation Groups.
			CO2	Analyse counting principle and Sylow's theorems and apply them for describing structures of finite groups.
			CO3	Demonstrate the knowledge of Rings, ideals of Rings and Quotient rings, Field of Quotients of an integral domain.
			CO4	Describe polynomial Rings and other forms of polynomial rings, base and Dimension of a Vector Space
I SEM	M102	REAL ANALYSIS-I	CO1	Understand the concepts of limit and continuity of functions and discuss types of Discontinuities.
			CO2	Get introduced to the study of another equally important concept namely differentiation that is essential in the study of velocity and acceleration of continuous paths.
			CO3	Determine the Riemann-Stieltjesintegrability of a bonded function and prove a selection of theorems concerning integration.
			CO4	Recognize the difference between point wise and uniform convergence of sequences of functions and illustrate the effect of uniform convergence on the limit function with respect to continuity, differentiability, and integrability
I SEM	M103	DIFFERENTIAL EQUATIONS	CO1	Obtain the solutions of second order homogeneous and nonhomogeneous linear differential equations with constant coefficients and understand the utility of Wronskian, linear independence and independence of solutions.
			CO2	learn how to solve homogeneous and nonhomogeneous differential equations with variable coefficients and homogenous equation with analytic co-efficients.
			CO3	Understand the concepts regular singular points and solve the Euler equation and the Bessel equation.
			CO4	Understand the concepts of successive approximations, The Lipschitz condition and prove local and Nonlocal existence theorems.
I SEM	M104	Topology	CO1	Understand the basic concepts of metric spaces, open sets, closed sets and continuous functions on metric spaces
			CO2	Define and illustrate the concept of topology and prove a selection of theorems concerning Topological spaces, continuous functions and product topologies.
			CO3	Characterize compact spaces using the Heiene-Borel theorem.
			CO4	Define and illustrate the concepts of the separation axioms and appreciate the beauty of deep mathematical results like Urysohn's lemma, Urysohn imbedding theorem and understand the dynamics of the proof techniques. Characterize connected spaces, components of a space
I SEM	M105	Advanced Discrete Mathematics	CO1	Formulate statements from common language to formal logic, apply truth tables and the rules of propositional and predicate calculus.
			CO2	Understand the concept of finite machines and study their applications like minimization, and realization.
			CO3	be familiar with the notions of ordered algebraic structures, including lattices and Boolean algebras.
			CO4	Understand the concept of Boolean polynomials, ideals, filters and calculate the minimal forms of Boolean polynomials. Demonstrate switching circuits and applications of switching circuits.
	M201	Galois Theory		Derive and apply Gauss Lemma, and Eisenstein criterion for

II SEM			CO1	irreducibility of Polynomials
			CO2	Demonstrate Field extensions and characterization of finite normal extensions as splitting fields and study prime fields.
			CO3	Learn Fundamental theorem of Galois theory, fundamental theorem of Algebra and related results, appreciate genius in proving strong important theorems at early age.
			CO4	Understand cyclotomis polynomials, cyclic extensions, Radical field extensions and Ruler & Compass constructions. Know the important applications of Galois Theory.
II SEM	M202	Real Analysis -II	CO1	Study the Stone – Weierstrass theorem and its applications . Understand the properties of power series. Exponential, Trigonometric and Logarithmic functions.
			CO2	Compute derivatives and integrals of real valued and vector valued functions of several variables.
			CO3	Understand and apply the inverse function theorem, implicit function theorem , derivatives of higher order and differentiation of integrals.
			CO4	Understand the concept of integration of differential forms.
II SEM	M203	Measure And Integration	CO1	Understand the concept of measure and properties of Lebesgue measure.
			CO2	Study the properties of Lebesgue integral and compare it with Riemann integral.
			CO3	To establish the derivative of the indefinite integral of an integrable function is equal to the integral a.e. To establish the equivalent condition an indefinite integral is absolutely continuous. Jenson inequality becomes a generalization of the inequality between the arithmetic and geometric mean
			CO4	To establishes several inequalities involving the $\ \cdot\ _p$ in the $L_p$ spaces. To find a representation for bounded linear functions.
II SEM	M204	Computer Oriented Numerical Methods	CO1	Use different data types in a Computer program and Design programs involving Decision structures, Loops and Functions.
			CO2	Apply various Mathematical operations and tasks, such as Interpolation of Polynomials.
			CO3	Ability to solve the Problems based on Numerical Integration.
			CO4	find Numerical solution of ordinary differential equations such as Runga-Kutta methods
II SEM	M205	Graph Theory	CO1	Understand the basic concepts of Graphs and Euler and Hamiltonian graphs and obtain a solution for Travelling salesman problems
			CO2	Study the properties of trees and able to find a minimal spanning tree for a given weighted graph.
			CO3	Understand the purpose of introduction of concepts like cut-set, cut-vertex, Connectivity and separability.
			CO4	Understand the utility planar, dual graphs and vector spaces of a graph.
III SEM	M301	Rings And Modules	CO1	Understand the concepts of commutative ring theory and special structures like Boolean algebras and Boolean rings. Know the relations between ring, Boolean algebra and lattice.
			CO2	Classical isomorphism theorems and some properties of direct sum, product of rings and modules.
			CO3	Understand the concept of Prime ideals, maximal ideals of commutative rings, Prime radical and Jacobson radical.

			CO4	Study the Wedderburn –Artin theorem and its applications and Prime ideal spaces.
III SEM	M302	COMPLEX ANALYSIS	CO1	:Represent Complex numbers algebraically and geometrically and understand Analytic functions, Cauchy-Riemann equations and verify Complex functions for analyticity.
			CO2	Evaluate Complex integrals by applying Cauchy integral formula.
			CO3	Differentiate the Taylor’s series and Laurent series.
			CO4	Understand Residue theorem, the argument principle and Rouché’s theorem, and Compute integrals using residues.
III SEM	M303	Functional Analysis	CO1	Understand basic properties of finite dimensional normed spaces.
			CO2	Analyse bounded linear functionals of finite dimensional normed spaces and apply them to linear and differential equations.
			CO3	Demonstrate the knowledge of continuous linear transformations and the Hahn-Banach theorem.
			CO4	Describe uniform boundedness principle, open mapping theorem and closed graph theorem.
III SEM	M304	Fuzzy Sets And Their Applications	CO1	Understand the basic concepts of fuzzy sets, properties of $\alpha$ -cut sets and extension principle of fuzzy sets
			CO2	Describe fuzzy compliments, fuzzy intersections and fuzzy unions
			CO3	Understand the concept of fuzzy arithmetic.
			CO4	Determine the difference between crisp relations, fuzzy relations and understand the concepts of fuzzy compatibility relations, fuzzy ordering relations and fuzzy morphisms.
III SEM	M305	Linear Programming	CO1	Formulate and solve a linear programming problem
			CO2	Convert standard business problems into linear programming problems and can solve using simplex algorithm
			CO3	Formulate and solve transportation problems
			CO4	Formulate and solve the Assignment problem.
IV SEM	M401	Non-Commutative Rings	CO1	Characterize primitive rings and completely reducible modules.
			CO2	Decide whether a given ring or module, or a class of rings or modules, is Noetherian/artinian/semisimple, by applying the characterizations discussed in the course.
			CO3	Identify local rings, semi-perfect rings, Characterize Injective and Projective modules. Know the relations between different types of modules. endomorphisms of injective modules
			CO4	Understand the concepts of tensor products of modules, Hom and functors, exact sequences.
IV SEM	M402	Partial Differential Equations	CO1	Classify first order partial differential equations and their solutions and solve them using different methods
			CO2	Classify second order partial differential equations and solve one dimensional wave equations using different analytic methods
			CO3	Solve Laplace equations using various analytical methods demonstrate uniqueness of solutions of certain kinds of these equations
			CO4	Compute solutions of heat equations using certain analytic methods and verify uniqueness of solutions of some types of these equations
IV	M403	Near Rings	CO1	Understand elementary and basic concepts of near-rings and its natural examples and homomorphisms and its ideal-like concepts.

SEM			CO2	Analyse ideal theory of near-rings and demonstrate the concepts of prime ideal, nil ideal and nilpotent ideal of a near-ring.
			CO3	Understand the structure theory of near-rings and apply it for a given near-ring
			CO4	Describe different types of primitive near-rings and their structures
IV SEM	M404	Algebraic Coding Theory	CO1	Understand the Effects of error correction and Detection and the concept of Maximum-Likelihood Decoding and Reliability of MLD.
			CO2	Understand Generating Matrices and Encoding, Parity-Check Matrices, solving problems On linear codes.
			CO3	Understand and implement codes and source of information.
			CO4	Understand Cyclic codes.
IV SEM	M405	Operations Research	CO1	Solve the LPP using the two phase method.
			CO2	Find the dual of an LPP and solve the Problem.
			CO3	Solve a linear programming problem using Revised Simplex Method
			CO4	Solve integer programming problems and game theory problems.
VISEM	MAT 6C	Numerical Methods	CO1	understand the subject of various numerical methods that are used to obtain approximate solutions
			CO2	Work out numerical differentiation and integration whenever and wherever routine methods are not applicable.
			CO3	Analyze and evaluate the accuracy of numerical methods. II. Syllabus
	MAT 7C	Mathematical Special Functions	CO1	Understand the Beta and Gamma functions, their properties and relation between these two functions, understand the orthogonal properties of Chebyshev polynomials and recurrence relations.
			CO2	Solve Hermite equation and write the Hermite Polynomial of order (degree) n, also find the generating function for Hermite Polynomials, study the orthogonal properties of Hermite Polynomials and recurrence relations.
			CO3	Solve Bessel equation and write the Bessel equation of first kind of order n, also find the generating function for Bessel function understand the orthogonal properties of Bessel unction.
I	POL201	Political Science I- Introduction to Political Science	CO1	To understand the nature, scope and different approaches to study Political Science.
			CO2	To Analyse the Concept of State and Theories of Origin of the State
			CO3	To Understandthebasic concepts of Liberty, Equality, Rights, Law and Justice.
			CO4	To Understand the basic concepts of Rights and Duties.
			CO5	To Evaluate different Political Ideologies like Liberalism, Individualism, Anarchism, Socialism and Multiculturalism.
I		Skill Development Course I- Public Relations	CO1	Comprehend the role and importance of advertising in society
			CO2	Explain various concepts of public relation
			CO3	Discuss the concept and tools of Public Relations
			CO4	Formulate public relations strategies
			CO5	To evaluate the ethical aspects of PR
II	POL202	Political Science II- Basic Organs of The Government	CO1	To UnderstandOrigin and Evolution of Constitution
			CO2	To Evaluate the B.D.Montesquieu's Theory of Separation of Powers
			CO3	To Understandvarious forms of Governments- Unitary and

				Federal , Parliamentary and Presidential form.
			CO4	To Understand the basic concepts of Democracy and Types of Democracy
			CO5	Critically Evaluating the nature of Pressure Groups and Significance of Public Opinion
II		Skill Development Course II- Social Work Methods	CO1	Demonstrate Ethical and Professional Behavior
			CO2	Engage Diversity and Difference in Practice
			CO3	Assess the importance of Fieldwork in Social Work.
			CO4	Advance Human Rights and Social, Economic, and Environmental Justice
			CO5	Engage, assess, intervene, and evaluate with individuals, families, groups, organizations, and communities
III	POL193	Political Science III- Indian Constitution	CO1	To understand the philosophy of Indian constitutions.
			CO2	To know the salient features of Indian constitution
			CO3	To Examine the Fundamental Rights and Duties of Indian citizens with a study of the significance and status of Directive Principles.
			CO4	Critically analyzing the important institutions of the Indian Union and State Union :
			CO5	Examining The Judiciary system in India: Supreme Court and the High 4Court: composition and functions- Judicial Activism.
IV	POL194	Political Science IV- Indian Political Process	CO1	Evaluating the Electoral Process in India with focus on the Election Commission: Composition, Functions and Role
			CO2	Critically evaluating the Indian Party system – its development and looking at the ideology of dominant national parties.
			CO3	To Understandthe National and Regional Parties Composition and Ideology
			CO4	Analyse the Centre-State Relations with focus on the Legislative, Administrative and Financial Relations.
			CO5	Investigating the challenges to National Integration: Terrorism, Regionalism and Casteism.
V	POL5A	Political Science V- Indian Political Thought	CO1	To Understandthemost prominent Ancient Indian Political Thinkers like Manu, Kautilya,
			CO2	The paper shall elaborate the Indian Renaissance Political Thoughts
			CO3	The paper shall analyse Early Nationalism of Indian Political thinking's
			CO4	It shall also explore the ideas of M G Ranade, Mahatma Gandhi, Jawaharlal Nehru, B R Ambedkar.
			CO5	To develop a comprehensiveunderstanding of the basics of Indian political thought.
VI	POL6GE1	Political Science VII- Public Administration	CO1	Explaining the nature, scope and evolution of Public Administration; Private and Public Administration;
			CO2	The paper shall deal with the primary administrative theories such as Management Theory, Human Relation Theory, Scientific theory.
			CO3	The basic principles of organisation which will help the students to develop a comprehensive understanding of the subjects.
			CO4	The students will also learn about structure of organisation and their intricacies.
			CO5	The paper may explain the concepts and theories onmotivation and leadership.

VI	POL6C	E Governance	CO1	Acquaint student with the introduction to good governance and how it can be achieved by information and communication technology.
			CO2	Understand the growing needs of E-Governance, improving transparency in the system of governance Realize the issues and challenges of E-Governance.
	POL7C	Local Administration	CO1	Understand the existing context of Local Government Institutions in India and have knowledge on the need of empowerment and autonomy of LGIs.
			CO2	Provide an overview on financial resources and constitutional provision
ISEM	ENG201	English-A Course in Communication and Soft Skills	CO1	Demonstrate the use of Vocabulary
			CO2	Understanding of Writing Skills
			CO3	Acquire ability to use Soft skills in Professional and daily life
			CO4	Use of Grammar effectively in writing and speaking
			CO5	Confidently use the tools of communication skills
II SEM	ENG202	English- A Course in Reading and Writing Skills	CO1	Use Reading skills effectively
			CO2	Comprehend different text
			CO3	Use good writing strategies
			CO4	Build up a repository of active vocabulary
			CO5	Improve Writing skills independently for future needs
III SEM		English- A Course in Conversational Skills	CO1	Speak fluently in English
			CO2	Participate confidently in social interaction
			CO3	Face any Professional discourse
			CO4	Demonstrate critical thinking
			CO5	Enhance Conversational skills by observing the Professional interviews
III SEM		English- An Introduction to the Restoration and Augustan Literature (1660-1750)	CO1	Know the Features of Restoration age
			CO2	Identify the Features of Augustan Literature
			CO3	Identify the Characteristics I Literature that reflected the changing friends in society
			CO4	Interpret in Literature of these periods Critically
IV SEM		English- An Introduction to Romantic and Victorian Literature (1757-1901)	CO1	Relate the features of Romantic Period
			CO2	Observe the aspects of poetry
			CO3	Identify the contribution of Women as literary artist
			CO4	Analyze the characteristics in Poetry and Drama
			CO5	Compare and Evaluate of Literature of these periods critically
VSEM	ENG5A	An outline of 20 <sup>th</sup> century literature	CO1	Understand the History of English Language
			CO2	The Characteristics of Different ages
			CO3	Analyze how Language Changes
			CO4	Interpret the ways that led to the formation of Standard English
			CO5	Analyze English across the world
VSEM	ENG5B	English- Glimpses of World Literature	CO1	To Understand different forms of Writings
			CO2	To Comprehend the Passages
			CO3	To Understand the central idea of a passage
			CO4	Elements of Poetry and devices to appreciate poetry
			CO5	Critical Evaluation of the text
VI SEM		English- A Study of the English Language	CO1	An overview of the importance of English Language
			CO2	Analyze the crucial role played the English in the World
			CO3	To understand the features of Vocabulary and structure of

				English
			CO4	Realize the importance of Grimm's law and verner's law
			CO5	Significance of the great Vowel Shift and the 1 <sup>st</sup> Consonant Shift.
VI SEM		English- Indian Writing in English /Translation	CO1	To understand the rise of Translation studies
			CO2	To trace the changes in dramatic form
			CO3	To Study the contribution of Rabindranath Tagore, Raja Rao and R.K. Narayana
			CO4	Glimpses of the Indian Writing in English
			CO5	To understand the development of Short story of the 20 <sup>th</sup> Century
VI SEM	ENG6C	Writing For The Media	CO1	Write with confidence Differentiate between various types of media writing Gather and synthesize information from authentic sources Deliver presentations on the literary works
	ENG7C	Creative Writing and Literary Appreciation	CO1	To Understand and define the art of Creative Writing Identify different literary genres Demonstrate the creative writing skills . Review the published works of others
1	TEL 201	Telugu 1	CO1	Inculcate qualities of leadership through the lessons of polity
			CO2	Explain the character of Daksha
			CO3	Explain how the employees behave ethically
			CO4	Says how one should develop valour and bravery
			CO5	Explain these self-esteem of Srinivas and Padmavathi
2	TEL202	Telugu 2	CO1	Understood the contemporary issues through literary moments in the modern literature
			CO2	Realize the message of the changes in the emergence of Story writing
			CO3	Proved how the social empowerment can be sought through the process of fictionary novels
			CO4	Learn about the plays different folkarts
			CO5	Know the rationality behind qualities so farcics in the Modules literature
3	TEL193	Telugu 3	CO1	Inculcate the qualities of honesty like trust worthiness Through the story of emperor Bali
			CO2	Inculcate the intimacy of nalludu
			CO3	Realize the Importance of love and affection towards friends And parents through the story narrated by Gowthama to Nandana
			CO4	Explain the Humanization in Tilak
			CO5	Sri Revolutionary poetry
			CO6	Preach how the selfishness of the people kill the Humanity Through the play varudu
4		Leadership	CO1	Recognize the different theories of leadership and define function and management
			CO2	Summarise the behavioural concepts and apply personality development concepts in the attitude formation and change
			CO3	Understand the interpersonal behavior in leadership and evaluate transactional analysis
			CO4	Understand the group dynamics and conclude how to resolve conflicts in the management
			CO5	Analyse team build in management and construct team Building activities

3	TEL193S	Special Telugu – paper	CO1	Narrate the poetry is their translation writing pocess
			CO2	The couplet style of writing is Siva kavulu
			CO3	The Potana and Srinadha translation narraate
			CO4	Tell about the prabhandas
4	TEL194S	Special Telugu – paper- I	CO1	Explain about the Gurajada, sri Krishnasastri, Jashuva modern poetry briefly
			CO2	About the Novel of Kandukuri, Unnava, Viswanadha ,kodavatiganti kesava Reddy in a nutshell
			CO3	Explain about the play tirupathi, dharma varam, vedam in a nutshell
			CO4	Explain about the the Short story of Sripada,chalam,maduranthakam,potlapalli in a nutshell
5	TEL5B	Spl telugu	CO1	Explain tha paragraphs of the Guesture treaty
			CO2	Tell the Alankaras in poetic beauty
			CO3	Explain the poetry approach
			CO4	The beauty of yathubasha
			CO5	The beauty of prasabasha
6	TEL6CE1	Spl Telugu	CO1	Explain the types communication
			CO2	Tell the reporter Qualifications ,Responsibilities
			CO3	Explain the types of news features
			CO4	Classification of emerging developments in journals
6	TEL6CE2	Special Telugu – paper- I	CO1	Types of joints
			CO2	Explain the phrases’ gender, text inflection
			CO3	Sentence definition differences
			CO4	Types of verbs
			CO5	Slandered language requirement
1SEM	TEL201S	Special Telugu – paper- I	CO1	Appreciating the penance performed by Arjuna, Lord Shiva presided over the Pasupatastra,Perseverance is the key to success.
			CO2	Appreciating the devotion of Bejjamahadevi, Lord Shiva bestowed salvation
			CO3	Forget the help given by Nadeejanghu and kill the Brahmin who should never do harm to those who have done good
			CO4	Prahlad's devotional life is ideal for everyone
			CO5	Everyone must have sensual restraint, as a nobleman
II SEM	TEL202S	Special Telegu –paper -2	CO1	Rayaprolu exhorted that we should not forget Mother India who informs our India of progress
			CO2	The Vemana poet spoke of morality
			CO3	Informing students of the message Joshua sent with the bat
			CO4	Explaining the Humanitarian Perspective to Students in Sri SriBhikshuvarshiyasiKadika
			CO5	Explaining to students about the experience Tilak had on the night of the elixir
V SEM	TEL5A	Special Telegu –V paper	CO1	Types of dialects Explaining dialect differences
			CO2	Explain the Summary Telugu-Telugu-Andhra Pradesh antiquity, spread



			CO3	Explaining the position and linguistic features of Telugu in Dravidian languages
			CO4	Informing about the semantics of the Telugu language
			CO5	Foreign Languages in Telugu - Types of Homogeneous Languages, Explaining Foreign Languages
VI SEM	TEL6GE1	Special Telegu –VII Paper elective Literary Criticism	CO1	Poetic Definition A description of poetic adjectives, poetic variations, and poetic reasons
			CO2	The characteristics of the best critic, the differences of criticism are the characteristics of the critic
			CO3	About the importance of Navrasa Explaining
			CO4	Novel and Drama, Narrative Features and Importance
			CO5	Article features, and description of the importance of fine arts
			CO6	Translation morphology, translation definition Description about
	TEL6CE3	Special Telegu – Telugu Translation	CO1	Inform about the types of translation and the features of the translation
			CO2	Telling about translation issues, and benefits
			CO3	Telugu as the official language, the importance of the work being done in the state administration
			CO4	Official Language Association Duties, Rights, Responsibilities Description about
1SEM	LSC2	Human values& professional ethics – life skill course	CO1	Introduction-definition ,importance, process classifications of value education explain briefly
			CO2	Harmony in the family –understanding values in human relationships about Explaining
			CO3	professional ethics in education briefly Explaining.
II SEM	SDC2 SDC24A	Performing arts - skill development course	CO1	Managing the dream and revealing its nature
VI SEM	TEL6C	Telugu Bhashaswarupam	CO1	To know the Grammar To understand telugu Grammar
	TEL7C	Telugu Rachanareethulu	CO1	Informing about drama and theater Sentence definition differences
I- Semest er	BOT-201	Fundamentals of Microbes And Non Vascular Plants	CO1	Explain origin of life on the earth.
			CO2	Illustrate diversity among the viruses and prokaryotic organisms and can categorize→ them.
			CO3	Classify fungi, lichens, algae and bryophytes based on their structure, reproduction and→ life cycles.
			CO4	Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi
			CO5	Recall and explain the evolutionary trends among amphibians of plant kingdom for→ their shift to land habitat
			CO6	Evaluate the ecological and economic value of microbes, thallophytes and bryophytes.
I- Semest	BOT-201P	Fundamentals of Microbes And Non	CO1	Demonstrate the techniques of use of lab equipment, preparing slides and identify the material and draw diagrams

er		Vascular Plants- Practicals		exactly as it appears.
			CO2	Observe and identify microbes and lower groups of plants on their own.
			CO3	Demonstrate the techniques of inoculation, preparation of media etc.
			CO4	Identify the material in the permanent slides etc
II- Semest er	BOT-202	Basics of Vascular plants and Phytogeography(Pteridophytes, Gymnosperms, Taxonomy of Angiosperms and Phytogeography)	CO1	Classify and compare Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and life cycles.
			CO2	Justifyevolutionary trends in tracheophytes to adapt for land habitat.
			CO3	Explain the process of fossilization and compare the characteristics of extinct and→ extant plants.
			CO4	Critically understand various taxonomical aids for identification of Angiosperms
			CO5	Analyze the morphology of the most common Angiosperm plants of their localities→ and recognize their families
			CO6	Evaluate the ecological, ethnic and economic value of different tracheophytes and→ summarize their goods and services for human welfare.
			CO7	Locate different phytogeographical regions of the world and India and can analyze→ their floristic wealth.
II- Semest er	BOT-202P	Basics of Vascular plants and Phytogeography(Pteridophytes, Gymnosperms, Taxonomy of Angiosperms and Phytogeography)- Practicals	CO1	Demonstrate the techniques of section cutting, preparing slides, identifying of the materialand drawing exact figures.
			CO2	Compare and contrast the morphological, anatomical and reproductive features of vascular plants.
			CO3	Identify the local angiosperms of the families prescribed to their genus and species level and prepare herbarium.
			CO4	Exhibit skills of preparing slides, identifying the given twigs in the lab and drawing figures of plant twigs, flowers and floral diagrams as they are.
			CO5	Prepare and preserve specimens of local wild plants using herbarium techniques.
III- Semest er	BOT-193	Plant Taxonomy and Embryology	CO1	Understand external and internal structure of plants
			CO2	Aware various plant families and its economic importance
			CO3	Get knowledge on structure and development plant embryo
III- Semest er	BOT-193	Plant Taxonomy and Embryology- Practicals	CO1	Plant anatomy and embryology are much awaited subject to study the internal structures and structure & function of reproductive organs in plants.
			CO2	Students will be able to utilize embryological studies in various aspects like analysis of evolutionary trends, circumscription and delimitation of taxa and making a decision on systematic positions.
			CO3	Understand morphological and reproductive characters different plant families.
IV- Semest er	BOT-194	Plant Physiology and Metabolism	CO1	Comprehendthe importance of water in plant life and mechanisms for transport of water and solutes in plants.
			CO2	Evaluate the role of minerals in plant nutrition and their deficiency symptoms.
			CO3	Interpret the role of enzymes in plant metabolism.
			CO4	Critically understand the light reactions and carbon assimilation processes responsible for synthesis of food in plants.
			CO5	Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.

			CO6	Evaluate the physiological factors that regulate growth and development in plants.
			CO7	Examine the role of light on flowering and explain physiology of plants under stress conditions
IV-Semester	BOT-194P	Plant Physiology and Metabolism-Practical	CO1	Conduct lab and field experiments pertaining to Plant Physiology, that is, biophysical and biochemical processes using related glassware, equipment, chemicals and plant material.
			CO2	Estimate the quantities and qualitative expressions using experimental results and calculations
			CO3	Demonstrate the factors responsible for growth and development in plants.
V-Semester (V-Paper)	BOT-5A	Cell Biology, Genetics and Plant Breeding	CO1	Distinguish prokaryotic and eukaryotic cells and design the model of a cell.
			CO2	Explain the organization of a eukaryotic chromosome and the structure of genetic material
			CO3	Demonstrate techniques to observe the cell and its components under a microscope
			CO4	Discuss the basics of Mendelian genetics, its variations and interpret inheritance of traits in living beings
			CO5	Elucidate the role of extra-chromosomal genetic material for inheritance of characters
V-Semester (V-Paper)	BOT-5AP	Cell Biology, Genetics and Plant Breeding-Practical	CO1	Evaluate the structure, function and regulation of genetic material.
			CO2	Understand the application of principles and modern techniques in plant breeding
			CO3	Explain the procedures of selection and hybridization for improvement of crops
			CO4	Show the understanding of techniques of demonstrating Mitosis and Meiosis in the laboratory and identify different stages of cell division.
V-Semester (VI-Paper)	BOT-5B	Plant Ecology and Phytogeography	CO1	Identify and explain with diagram the cellular parts of a cell from a model or picture and prepare models
			CO2	Solve the problems related to crosses and gene interactions.
			CO3	Demonstrate plant breeding techniques such as emasculation and bagging
			CO4	Know the scope and importance of the discipline.
			CO5	Understand plant communities and ecological adaptations in plants.
V-Semester (VI-Paper)	BOT-5BP	Plant Ecology and Phytogeography-Practical	CO1	Learn about conservation of biodiversity.
			CO2	Discover botanical regions of India and vegetation types in Andhra Pradesh.
			CO3	Phytogeography regions of India and World.
VI-Semester	BOT-6GE1	Organic Farming and Sustainable Agriculture	CO1	Get familiarized with techniques of section making, staining and microscopic study of vegetative, anatomical and reproductive structure of plants.
			CO2	Observe externally and under microscope, identify and draw exact diagrams of the material in the lab.
			CO3	Demonstrate application of methods in plant ecology and conservation of biodiversity and qualitative and quantitative aspects related to populations and communities of plants.
			CO4	Students will learn about organic farming systems and organic farming methods.
			CO5	Students will familiarize on soil pollution, fertilizer pollution and pesticidal pollution and their effect on soil quality.
VI-	BOT-	Organic Farming and	CO1	Students know about the significance of organic farming,

Semester	6GE1P	Sustainable Agriculture-Practical		organic manures and biofertilizers.
			CO2	Students learn about biogas technologies for organic farming waste, recycled use of water in organic farming and domestic and industrial wastes are used in organic farming system.
			CO3	Students get acquire knowledge in soil conservation, rules and regulations of commercialization of organic products.
			CO4	Initiative from Government for organic produce.
VI-Semester	BOT-6CE1	Plant Diversity and Human Welfare	CO1	Role of NGOs in producing organic products.
			CO2	Selection of crops and varieties for organic produce
			CO3	Certification of organic produce.
			CO4	Develop understanding of the concept and scope of plant biodiversity
			CO5	Identify the causes and implications of loss of biodiversity
VI-Semester	BOT-6CE1P	Plant Diversity and Human Welfare-practical	CO1	Apply skills to manage plant biodiversity
			CO2	Utilize various strategies for the conservation of biodiversity
			CO3	Conceptualize the role of plants in human welfare with special reference to India.
			CO4	Mapping species diversity
			CO5	mapping of crop diversity
VI-Semester	BOT-6CE2	Ethanobotany and Medicinal botany	CO1	Visits of plant conservatories
			CO2	study of wood features
			CO3	Herbarium study of a.Avenuetrees,b) Ornamental plantsc Fruits and nuts: Important fruit crops. Wood
			CO4	Recognize the basic medicinal plants
			CO5	Apply techniques of conservation and propagation of medicinal plants.
			CO6	Setup process of harvesting, drying and storage of medicinal herbs
			CO7	Propose new strategies to enhance growth of medicinal herbs considering the practical issues pertinent to India
			CO8	Conceptualize ethnobotany as an interdisciplinary science.
VI-Semester	BOT-6CE2P	Ethanobotany and Medicinal Botany-Practical	CO1	Restate the established methodology of ethnobotany studies.
			CO2	Categories various indigenous ethnic groups and their environmental practices.
			CO3	Understand the legalities associated with ethnobotany.
			CO4	Field work
			CO5	Herbarium
VI-Semester	BOT-6CE3	Pharmacognosy and Phytochemistry	CO1	Ancient Literature
			CO2	Archaeological findings
			CO3	temples and sacred places.
			CO4	Awareness about types of drugs and systems of medicine.
			CO5	Analyze the purity and strength of crude drugs.
VI-Semester	BOT-6CE3P	Pharmacognosy and phytochemistry-Practicals	CO1	Identify the sources of drugs.
			CO2	Apply the Identification and separation techniques to evaluate the medicinally important metabolites.
			CO3	Find any reference related to the theme..
VI-Semester	BOT6C	Plant Tissue Culture	CO1	To Comprehend the basic knowledge and applications of plant tissue culture. Demonstrate skills of callus culture through hands on experience. Understand the biotransformation technique for production of secondary metabolites.
	BOT7C	Mushroom Cultivation	CO1	Understand the structure and life of a mushroom and discriminate edible and poisonous mushrooms. Explain the methods of storage, preparation of value-added products and marketing

				Demonstrate skills preparation of compost and spawn.	
I-Semester	SDC2S	Skill Development Course (Plant Nursery)	CO1	Have presentation skills in terms of precise and contented, relevant presentation	
			CO2	Identify current perspectives related to the subject.	
			CO3	Understand the importance of a plant nursery and basic infrastructure to establish it	
			CO4	Explain the basic material, tools and techniques required for nursery	
II-Semester	SDC225	Skill Development Course (Fruits and Vegetables Preservation)	CO1	Demonstrate expertise related to various practices in a nursery	
			CO2	Comprehend knowledge and skills to get an employment or to become an entrepreneur in plant nursery sector	
			CO3	Identify various types of fruits and vegetables and explain their nutritive value.	
			CO4	Understand the fragile nature of fruits and vegetables and causes for their damage.	
			CO5	Explain various methods of preservation for fresh fruits and vegetables	
			CO6	Get to know the value-added products made from fruits and vegetables.	
I SEM	HSC 2011 HSC 2012 HSC 2013	Basic Nutrition (FN-1)	CO1	Understand the concepts of nutrition and food and its relation to health.	
			CO2	Selection of foods based on the nutrient composition for healthy and disease people.	
			CO3	Identify signs and symptoms of different nutrient disorders	
		General Psychology	CO1	Understand Psychological concepts like Attention, Perception, Memory and Motivation.	
			CO2	Observe different types of personalities	
			CO3	Use theoretical perspectives to understand human behaviour	
			Fundamentals of Textiles (TEX-1)	CO1	Identify of different fibres like plant fibres, animal fibers based on properties
				CO2	Collection of different fabrics and gain knowledge about their seasonal usage
				CO3	Gains knowledge on manufacturing of different textile fibers.
II SEM	HSC 2021	Introduction to Food Science	CO1	Understands application of different processing techniques in cookery	
			CO2	Planning and preparation of nutritious recipes by using different foods	
			CO3	Planning recipes of cereals and millets, pulses, Milk and Milk products, vegetables, fruits, nuts and oil seeds products	
	HSC 2022	Housing for Better Living	CO1	Study of building materials and equipment	
			CO2	Requirements to purchase land, building materials protection and care of house	
			CO3	Principles of planning a house with an emphasis on kitchen plans	
	HSC 2023	Fundamentals of Home Science Extension (EXT-1)	CO1	Learn the meaning, scope and concept of Home Science Extension	
			CO2	Know the importance of Teaching Methods and Teaching Aids in Communication Process	
			CO3	Understand the role Extension worker in community	
III SEM	HSC1931	Food Science	CO1	To impart basic knowledge about the composition of various food stuffs and their products.	
			CO2	To understand the advantages and disadvantages of various cooking methods.	
			CO3	To know the miscellaneous food products available in the market.	

	HSC1932	Natural fibers	CO1	To know different Natural Fibers	
			CO2	To Understand about fiber- staple , filament	
			CO3	To learn Yarn formation and its importance and kinds of natural yarns	
	HSC1933	Housing for Better Family living	CO1	To introduce basic terminology regarding housing.	
			CO2	To train the students to have a comprehensive knowledge of planning and designing kitchens, storage areas and home altogether.	
			CO3	To impart knowledge regarding various household equipment	
IV SEM	HSC 1941	Family Nutrition	CO1	To understand the influence of socio- economic and socio-cultural factors and food fads and fallacies on food choices.	
			CO2	To gain awareness on planning diets for persons of different age groups	
			CO3	To impart basic knowledge about physiological changes during pregnancy and lactation and plan diets accordingly	
	HSC 1942	Manmade fibers	CO1	To gain basic knowledge about manmade fibers	
			CO2	To understand the process of fabric construction	
			CO3	To know about care of clothing	
	HSC 1943	Interior Decoration	CO1	To understand the elements and principles of Design	
			CO2	To learn the importance of art elements in room arrangements	
			CO3	To learn the application of art principles in beautifying various rooms	
V SEM	HSC 5.1	Child Rights & Gender Justice	CO1	To know about the importance of Child Rights	
			CO2	To know problems of women faced at working place	
	HSC 5.2	Fabric Embellishment	CO1	To acquaint students with different methods of Fabric finishing	
			CO2	To develop awareness and appreciation of fabric embellishment	
			CO3	To make them understand the prestige of traditional Indian Textiles and embroidery	
	HSC 5.3	Family Resource Management	CO1	To gain input of knowledge on concepts related to resource management	
			CO2	To acquire the students with managerial skills	
			CO3	To learn room arrangements for different occasions	
	HSC 5.4	Human Development	CO1	Gain knowledge about concepts, Domains related to Human Development	
			CO2	Study developments from Conception till Old Age in brief	
	HSC 5.5	Community Nutrition	CO1	The major nutritional problems existing in India – causes, effects, prevention and control measures	
			CO2	Various national nutritional programmes existing in India to combat malnutrition.	
			CO3	Role of national and international agencies in improving the nutritional status of population	
	HSC 5.6	Home science Extension Education	CO1	Understand the Principles, steps in Teaching and Learning process	
			CO2	Learn Practical skills in planning, preparation of Audio-Visual Aids	
			CO3	The importance of Extension Education in Home Science	
	VI SEM	HSC 61G	Family Dynamics	CO1	Understand different concepts related to marriage
				CO2	Know the need and importance of premarital, marital and family counseling.
CO3				To know different types of Parenting Styles	
HSC		Tie &Dye	CO1	To Learn different processing methods of dyeing	

	62G2		CO2	To know the techniques of Tie & Dye
			CO3	To learn the terminology of Tie & Dye
	HSC 63G	Home Economics	CO1	Understand the terminology related to home economics
			CO2	Gain knowledge regarding methods and mode of money management
			CO3	Equip with the fundamental concepts to become a wise consumer
	HSC 61E	Early Child hood Care and Education	CO1	To enable the students to understand the significance of Early child hood
			CO2	To equip them with skills essential to pre- school teacher
			CO3	To equip them with knowledge to cater to the needs of children with special needs
	HSC 62E	Medical Nutrition Therapy	CO1	To Know the role and responsibilities of a dietician
			CO2	To Understand the modifications of the normal diet in to the therapeutic diet
			CO3	To be aware of the effect of various diseases on nutritional status and nutrients
	HSC 63E	Home Science Extension & Community Development	CO1	To explore the students to different teaching methods.
			CO2	To acquaint them with the concept of non-governmental organizations
			CO3	To get them learn the lesson planning techniques
			CO4	To introduce them to the basic elements of programme planning.
	ISEM	COM2014	Information Technology	CO1
CO2				Apply standard statistical inference procedure to draw conclusions from data
CO3				Analyze compression techniques and file formats to determine effective ways of securing, managing, and transferring data
CO4				Working in 'Outside Syllabus Area' under a Co-curricular Activity (Creativity) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirement
CO5				Efficiently learn and use Microsoft Office applications
Information Technology Practicals			CO1	understand the difference between an operating system and an application program, and what each is used for.
			CO2	Apply standard statistical inference procedure to draw conclusions from data
			CO3	Analyze compression techniques and file formats to determine effective ways of securing, managing, and transferring data
			CO4	Working in 'Outside Syllabus Area' under a Co-curricular Activity (Creativity) Design, implement, and evaluate a computing-based solution to meet a given set of computing requirement
			CO5	Efficiently learn and use Microsoft Office applications
II SEM	COM2024	E-Commerce And Web Designing	CO1	Understand the foundations and importance of E-Commerce
			CO2	Recognize and discuss global E-commerce issues
			CO3	Analyze the impact of E-commerce on business models and strategy
			CO4	Design and/or collect site content
			CO5	Build a site based on the design decisions and progressively incorporate tools and techniques covered:
			CO1	Remember the internet related concepts that are vital in understanding

				dingwebdevelopment
	COM2024 P	E-CommerceAndWebDesigningPracticals	CO2	Understandtheimportanthtmltagsfordesigningstaticpages
			CO3	Designanddevelopwebpagesusingcssstyles
			CO4	Developinteractivewebapplicationsthroughloadingusinghtmlcss
III SEM	COM1934	Office Automation Tools	CO1	Translatethealgorithmstoprograms. Aloneedtotestandexecuteprograms. Toapplyandimplementconditional branching, iterationstatements
			CO2	understandandapplyfunctionsincandrecursion
			CO3	understandpointersanddynamicmemoryallocation
			CO4	Understandandimplementtheconceptofarraysand strings
	COM1934 P	Office Automation Tools Practical	CO1	Use file managers, word processors, spreadsheets, presentation software's
			CO2	Describe the features and functions of the categories of application software.
			CO3	Present conclusions effectively, orally and in writing.
			CO4	Understand the dynamics of an office environment.
IV SEM	COM1945	Buissness Analytics	CO1	To recognize, understand and apply the language, theory and models of the field of business analytics.
			CO2	to critically analyze, synthesize and solve complex unstructured business problems.
			CO3	Encourage an aptitude for business improvement, innovation and entrepreneurial action
			CO4	Instill a sense of ethical decision-making and a commitment to the long-run welfare of both organizations and the communities they serve
	COM1945 P	Buissness Analytics Practical	CO1	Understand and critically apply the concepts and methods of business analytics
			CO2	Identify, model and solve decision problems in different settings
			CO3	Interpret results/solutions and identify appropriate courses of action for a given managerial situation whether a problem or an opportunity
			CO4	Create viable solutions to decision making problems
V SEM	BCO5F	ProgrammingInC	CO1	Translatethealgorithmstoprograms. Aloneedtotestandexecuteprograms. Toapplyandimplementconditional branching, iterationstatements
			CO2	understandandapplyfunctionsincandrecursion
			CO3	understandpointersanddynamicmemoryallocation
			CO4	Understandandimplementtheconceptofarraysand strings
V SEM	BCO5F-P	ProgrammingInC Practical	CO1	Translatethealgorithmstoprograms. AloneedtotestandExecuteprograms. Toapplyandimplementconditional branching, iterationstatements
			CO2	understandandapplyfunctionsincandrecursion
			CO3	understandpointersanddynamicmemoryallocation
			CO4	Understandandimplementtheconceptofarraysand strings
V SEM	BCO5H	DatabaseMamangementSystem	CO1	Understanddbmsconcepts
			CO2	Recallfilesystemsandcomparewithdbmsapproach
			CO3	UnderstandERmodelandEETmodeling
			CO4	ApplySQLcommands
			CO5	UnderstandPL/SQLprogrammingconcepts



V SEM	BCO5H-P	Database Management System Practicals	CO1	Execute Consolidated Balance Sheet of Holding Company.
			CO2	Understand dbms concepts
			CO3	Recall file systems and compare with dbms approach
			CO4	Understand ER model and EET modeling
			CO5	Apply SQL commands
			CO6	Understand PL/SQL programming concepts
V SEM	BCO5I	Web Technology	CO1	Understand basic concepts of internet
			CO2	Understand the basic html tags, formatting tags.
			CO3	Understand the forms, frames, css sheets
			CO4	Understand the interactive web pages
			CO5	Understand rollover buttons
V SEM	BCO5I-P	Web Technology Practicals	CO1	implement html tags
			CO2	Design tables and lists using html tags
			CO3	design forms and frames using html tags
			CO4	design interactive web pages
			CO5	develop web pages using rollover buttons
VI SEM	TY6CE	Tally	CO1	Summarize the concept of Tally.wrp9, its features, Accounting in tally and its applications. Working with the given problem
			CO2	Understand the inventory in Tally.erp9 and its applications. working with the given problem
			CO3	Relate the concept of GST and GST in tally.erp9 and its Application. Working with the given problem
			CO4	Understand TDS in tally.erp9 and its usage. working with the given problem
			CO5	Summarize payroll heads, its applications in Tally.erp9. Working with the given problem
VI SEM	TY6CE-P	Tally Practicals	CO1	Summarize the. Concept of Tally.wrp9, its features, accounting in tally and its applications. Working with the given problem
			CO2	Understand the inventory in Tally.erp9 and its applications. working with the given problem
			CO3	Relate the concept of GST and GST in tally.erp9 and its Application. Working with the given problem
			CO4	Understand TDS in tally.erp9 and its usage. working with the given problem
			CO5	Summarize payroll heads, its applications in Tally.erp9. Working with the given problem
	EC6CE	E-Commerce	CO1	Define anatomy of e-commerce
			CO2	Understand components of I-way
			CO3	understand client/server network security
			CO4	Understand consumer oriented e-commerce
			CO5	Understand E-SCM
	EC6CE-P	E-Commerce Practicals	CO1	Understand anatomy of e-commerce
			CO2	Understand components of I-way
			CO3	understand client/server network security
			CO4	Understand consumer oriented e-commerce
			CO5	Understand E-SCM
	CS6CE	Php & My Sql	CO1	Recall the basic concepts of programming concepts
			CO2	Understand functions, classes, strings in php
			CO3	Design and develop interactive web pages using php code
			CO4	Recall SQL concepts and relate it to MYSQL
			CO5	Design and develop a medium size software application by connecting to a database
	Php & My	CO1	Recall the basic concepts of programming concepts	
		CO2	Understand functions, classes, strings in php	

	CS6CE-P	SqlPracticals	CO3	Designanddevelopinteractiveweb pagesusingphpcode
			CO4	RecallSQLconceptsandrelateittoMYSQL
			CO5	Designanddevelopamediumsizedsoftwareapplicationbyconnectingtoadatabase
BSc I SEM	CSC201	ProblemSolvingInC	CO1	Developprogrammingskillsusingthefundamentalandbasicsofc language
			CO2	Developprogramsusingthebasicelementslikecontrolstatement
			CO3	Developprogramsusingarraysandstrings
			CO4	Enableeffectiveusageofarrays,structures,functionsandpointers
			CO5	Implementfilesandcommandlikearguments
	CSC201P	ProblemSolvingInCP racticals	CO1	Developprogrammingskillsusingthefundamentalandbasicsofc language
			CO2	Developprogramsusingthebasicelementslikecontrolstatement
			CO3	Developprogramsusingarraysandstrings
			CO4	Enableeffectiveusageofarrays,structures,functionsandpointers
			CO5	Implementfilesandcommandlikearguments
II SEM	CSC202	DataStructuresUsingC	CO1	UnderstandavailableDataStructuresfordatastorageandProcessing.
			CO2	ComprehendDataStructureandtheirreal-timeapplications-Stack,Queue,LinkedList,TreesandGraph
			CO3	DevelopabilitytoimplementdifferentSortingandSearchmethods
			CO4	Designanddevelopprogramsusingvariousdatastructures
			CO5	Implementtheapplicationsofalgorithmsforsorting,patternmatchingetc
	CSC202P	DataStructures UsingC Practicals	CO1	UnderstandavailableDataStructuresfordatastorageandProcessing.
			CO2	ComprehendDataStructureandtheirreal-timeapplications-Stack,Queue,LinkedList,TreesandGraph
			CO3	DevelopabilitytoimplementdifferentSortingandSearchmethods
			CO4	Designanddevelopprogramsusingvariousdatastructures
			CO5	Implementtheapplicationsofalgorithmsforsorting,patternmatchingetc
III SEM	CSC193	Object Oriented Programming Using Java	CO1	Recall the fundamentals of programming such as variables, conditional statements and iterative statements
			CO2	Understandtheconceptsofclasses, objects.
			CO3	understandpackagesandinterfacesinjava
			CO4	Analyzetheconceptofappletprogramming, graphicsprogramming
			CO5	understandfilesinJava
	CSC193P	Object Oriented Programming Using Java Practicals	CO1	Recall the fundamentals of programming such as variables, conditional statements and iterative statements
			CO2	Understandtheconceptsofclasses, objects.
			CO3	understandpackagesandinterfacesinjava
			CO4	Analyzetheconceptofappletprogramming, graphicsprogramming
			CO5	understandfilesinJava
IV SEM	CSC194	Data Structures Using Java	CO1	rememberthebasicCprogrammingconceptssuchasarrays, pointers, filesetc.,
			CO2	understandimplementationconceptsoflinearandnonlineardata structures
			CO3	UnderstandtheconceptsofstacksandQueues
			CO4	Understandtheconceptsoftreesandgraphs

			CO5	apply different sorting and searching algorithms
	CSC194P	Data Structures Using Java Practicals	CO1	develop skill to analyze simple linear and linear data structures
			CO2	implement stacks and queues
			CO3	understand algorithms of trees
			CO4	understand graph traversal
			CO5	write programs for different sorting techniques
V SEM	CSC5A	Database Management Systems	CO1	Understand dbms concepts
			CO2	Recall file systems and compare with dbms approach
			CO3	Understand ER model and EET modeling
			CO4	Apply SQL commands
			CO5	Understand PL/SQL programming concepts
	CSC5A-P	Database Management Systems Practicals	CO1	Understand dbms concepts
			CO2	Recall file systems and compare with dbms approach
			CO3	Understand ER model and EET modelling
			CO4	Apply SQL commands
			CO5	Understand PL/SQL programming concepts
	CSC5B	Software Engineering	CO1	Basic knowledge and understanding of the analysis and Design of complex systems.
			CO2	produce efficient, reliable, robust and cost-effective Software solutions.
			CO3	communicate and coordinate competently by listening, speaking, reading and writing English for technical and General purposes.
			CO4	manage time, processes and resources effectively by prioritizing competing demands to achieve personal and team goals Identify and analyze the common threats in Each domain.
			CO5	Ability to understand and meet ethical standards and legal Responsibilities.
CSC5B-P	Software Engineering Practicals	CO1	Basic knowledge and understanding of the analysis and Design of complex systems.	
		CO2	produce efficient, reliable, robust and cost-effective Software solutions.	
		CO3	communicate and coordinate competently by listening, speaking, reading and writing English for technical and General purposes.	
		CO4	manage time, processes and resources effectively by prioritizing competing demands to achieve personal and team goals Identify and analyze the common threats in Each domain.	
VI SEM	CSC6GE1	Web Technologies	CO1	Understand basic concepts of internet
			CO2	Understand the basic html tags, formatting tags.
			CO3	Understand the forms, frames, css sheets
			CO4	Understand the interactive web pages
			CO5	Understand rollover buttons
	CSC6GE1 -P	Web Technologies Practicals	CO1	implement html tags
			CO2	Design tables and lists using html tags
			CO3	design forms and frames using html tags
			CO4	design interactive web pages
			CO5	develop web pages using rollover buttons
CSC6CE1	Foundations Of Data Science	CO1	To demonstrate proficiency with statistical analysis of data.	
		CO2	develop the ability to build and assess data-based models	
		CO3	execute statistical analyses with professional statistical software	
		CO4	Demonstrate skill in data management.	
		CO5	To explore, sort and analyze mega data from various sources in order to take advantage of them and reach conclusions to optimize business processes or for decision support.	
			CO1	Download and install R and RStudio.
			CO2	Navigate and optimize the R integrated development environment (IDE) RStudio.

	CSC6CE1 -P	Foundations Of Data Science Practicals	CO3	Install and load add-in packages.
			CO4	Import external data into R for data processing and statistical analysis.
			CO5	Learn the main R data structures – vector and data frame. compute basic summary statistics
	CSC6CE2	Big Data Technologies	CO1	IdentifyBigdataanditsbusinessapplications
			CO2	DeveloponwritingAPI'sUSINGJAVA,managejobexecutioninHADOOPEnvironment
			CO3	demonstrateBig datasolutionsusingHADOOP-ECOsystemcomponents
			CO4	applymachinelearningtechniquesusingR
			CO5	applymachinelearningtechniquesusingR
	CSC6CE2 -P	Big Data Technologies Practicals	CO1	IdentifyBigdataanditsbusinessapplications
			CO2	DeveloponwritingAPI'sUSINGJAVA,managejobexecutioninHADOOPEnvironment
			CO3	demonstrateBig datasolutionsusingHADOOP-ECOsystemcomponents
			CO4	applymachinelearningtechniquesusingR
			CO5	applymachinelearningtechniquesusingR
	CSC6CE3	Project Work	CO1	Plan, analyze, designassoftwareprojectanddemonstratetheabilitytocommunicateeffectivelyinspeechandwriting
			CO2	Introducethemajorsoftwareengineeringconceptsandpositionthementoleadmediumsizedsoftwareprojects
CO3			Understanddifferentsoftwaredevelopmentprocess.	
CO4			Gainconfidenceindevelopingasmall-sizedsoftwareproject	
CO5			Plan, analyze, designassoftwareprojectanddemonstratetheabilitytocommunicateeffectivelyinspeechandwriting	
VISE M	CSC6C	Web Interface Designing Technologies	CO1	Understand and appreciate the web architecture and services. Gain knowledge about various components of a website. Demonstrate skills regarding creation of a static website and an interface to dynamic website.  Learn how to install word press and gain the knowledge of installing various plugins to use in their websites.
	CSC7C	Web Applications Development using PHP & MYSQL	CO1	Write simple programs in PHP. Understand how to use regular expressions, handle exceptions, and validate data using PHP Apply In-Built functions and Create User defined functions in PHP programming. Write PHP scripts to handle HTML forms. Write programs to create dynamic and interactive web based applications using PHP and MYSQL
ISEM	ECO201	Economics Paper :- I Micro Economic Analysis	CO1	Describethe nature of economics in dealing with the issues of scarcity of resources
			CO2	Analyzesupplyanddemandanalysisanditsimpactonconsumerbehaviour.
			CO3	Evaluatethefactors,suchasproductionandcostsaffectingfirmsbehaviour
			CO4	Analyze Classification of Markets and - Price and output determination - Selling Costs
			CO5	Explain Marginal Productivity Theory of Distribution, Theories of Wage Determination, Theory of Rent
			CO1	To able to understand National Income: Definitions, Concepts, Measurement of National Income - Difficulties - Importance - Concept of Green Accounting
			CO2	UnderstandingmainFunctionsClassical Theory of Employment - Say's Law of Markets Keynesian Theory of

IISEM	ECO201	Economics Paper :- II Macro Economic Analysis		Employment - Consumption Function Investment Function:
			CO3	To able to understand Definitions of Money Concepts of Money, RBI classification of Money Definition and types of Banking,
			CO4	To able to understand What is Inflation Measurement of Inflation, Measures to Control Inflation. Trade Cycles: Phases of a Trade Cycle -Causes and Measures to control Trade Cycles
			CO5	To able to Understand Financial Assets and Financial Instruments, Financial Markets Stock Market Exchanges Concept of Insurance -Types and Importance of Insurance
IIISEM	ECO193	Economics Paper :- III  Macro Economics	CO1	To make students to understand Macro Economics Meaning and Definitions and circular flow of Income
			CO2	To able to understand National Income: Definitions, Concepts, Measurement of National Income , Social Accounting
			CO3	Explain Classical Theory of Employment, and Keynes output and employment theory
			CO4	To make Students to understand Consumption function Consumption Function and Theories Investment Marginal efficiency of capital
			CO5	To able to understand Meaning and Definitions of Trade Cycles & Phases Causes and Consequences of Trade Cycles
IVSEM	ECO 194	Economics Paper :- IV  Macro Economics	CO1	To able to understand Meaning of Money Functions of Money Classifications of Money
			CO2	To able to understand Transaction & Cash Balance approaches
			CO3	To able to understand Types Causes and effects of inflation Measures to control inflation
			CO4	To able to understand Banking System Meaning & types of commercial Banks, Function of Commercial banks
			CO5	To able to understand Functions, importance of stock Market ,primary Secondary Markets, Insurance: Types of Insurance
V Sem	ECO5A	Economics Paper :- IV Indian Economy & Economic Development	CO1	Analysed different sources of Basic features, Natural Resources Land, Water and Forest Resources, Basic Demographic Features.
			CO2	To able to understand Size and growth of the population, Age and sex Composition, Rural & Urban Population , Occupational Distribution
			CO3	To able to understand National Income in India, Trends & Composition Poverty , inequalities , Unemployment Causes & Consequence, A brief review of five years plans
			CO4	To able to understand Meaning of Economic Growth & Development Measures of Economic Development, GNP, PCL, PQL 1 and HDI
			CO5	To able to understand to Growth strategies Balanced and Unbalanced growth, Capital intensive methods
V Sem	ECO5A	Economics Paper :- V Indian Economy & A.P. Economy	CO1	To able to understand Nature & Importance, trends in Agriculture production & productivity, Green revolution , Second Green revolution
			CO2	To able to understand Structure and growth of Indian Industry. Industrial policies of 1956, 1991
			CO3	To able to understand New Economic Reforms: LPG, FERA, FEMA, GATT, WTO .
			CO4	To able to understand GSDP- Sectoral Contribution A.P. Agriculture, Trends in Human Resources
			CO5	To able to understand Special Economic Zones. Growth of

				Income & Employment in A.P - Service Sector
VI Sem	ECO6GE1	Economics Paper :- VI Agricultural Economics	CO1	To able to understand to Nature and Scope of Agricultural Economics. Factors affecting agricultural development: technological, institutional and general.
			CO2	To able to understand Concept of production function : input-output and product relationship in farmProduction
			CO3	Analyze to Growth and Strategies productivity trends in Indian agriculture with special reference to AndhraPradesh. Agrarian reforms and their role in economic development.
			CO4	Understand the Different Systems of farming, farm size and productivity relationship in Indian agriculture
			CO5	To able to understand Agriculture Business in India, Emerging trends in production, processing, marketing and exports; policy controls and regulations
VI Sem	ECO6GE1	Economics Paper :- VII Agribusiness Environment in Andhra Pradesh	CO1	To able to understand Role of agriculture in development process in Andhra Pradesh vis-à-vis otherdeveloped states.
			CO2	To able to understand Agricultural finance-importance in modern agriculture
			CO3	To able to understand Performance of allied sectores in AP (horticulture, poultry dairy and fisheries)
			CO4	To able to understand Growth performance of major agricultural commodities in Andhra Pradesh-production
			CO5	To able to understand Marketing policy- structure of agri markets – regulated markets – need – activities –structure
VI Sem	ECO6GE1	Economics Paper :- VIII Agricultural Input Marketing	CO1	To able to understand Agri input marketing – Meaning and importance – distinctive features of Agri.
			CO2	To able to understand Agriculture seed Markers Issues in seed marketing – determinants of seed demand
			CO3	To able to understand Agriculture Fertilizer Market Fertilizer industry scenario
			CO4	To able to understand BIO Pesticide, Pesticide industry – an overview – nature of industry growth
			CO5	To able to understand Agricultural mechanization – benefits and importance and future priorities
VI Sem	ECO6GE1	Economics Paper :- IX Agricultural Output Marketing	CO1	To able to understand Agriculture Marketing in India Structure and Model of Agri-Marketing Organizations with functions:
			CO2	To able to understand Problems and Challenges in Agriculture Marketing - Market Yards - Support prices - Rural Warehousing.
			CO3	To able to understand Agriculture Marketing Finance Marketing costs and margins, Marketing Structure of Major agricultural commodities, food grains, Crops,.
			CO4	To able to understand State Intervention in Agricultural Marketing, Role of Various agencies State Department, and FCI, Tobacco Board, Cotton Corporation
			CO5	To able to understand WTO and Indian agriculture with special reference to Andhra Pradesh . Inter-regional and international trade in agriculture; emerging scenario of international
VI Sem	ECO6C	Insurance Service	CO1	Explain the concept and principles of insurance service and functioning of insurance service agencies; Identify and analyse the opportunities related insurance services in local rural area; Apply the concepts and principles of insurance to build a career in Insurance services; Demonstrate practical skills to enable them to start insurance service agency or earn wage employment in it.

	ECO7C	Banking and Financial Services	CO1	Explain the concept and essentials banking and financial services. . Identify and analyse the employment opportunities related to banks and other financial institutions. Apply the concepts to banking and financial opportunities and formulate ideas related to them
I SEM BBA	BBA201	Economics Paper :- II Managerial Economics	CO1	To able to understand Business – Meaning and its importance in the economy
			CO2	To able to understand Meaning, Importance, Types of Demand; Law of Demand; Elasticity of Demand:
			CO3	To able to understand Production function Concept of cost of production; Cost function.
			CO4	To able to understand Perfect Competition – Monopoly – Monopolistic Competition – Oligopoly
			CO5	To able to understand National Income, Concepts, Measurements.
II SEM B.COM	COM2021	Economics Paper :- IIBusiness Economics	CO1	Describe the nature of economics in dealing with the issues of scarcity of resources
			CO2	Analyze supply and demand analysis and its impact on consumer behaviour.
			CO3	Evaluate the factors, such as production and costs affecting firms behaviour
			CO4	Recognize Market Structure: Concept of Market, Classification of Markets, Perfect Competition
			CO5	To able to understand National Income, Concepts, Measurements.
II SEM B.COM	SDC22A	Skill Development Course Survey and Reporting	CO1	To able to Understand Survey Methods, Types of Survey
			CO2	To able to Understand Preparing questionnaire and Maintaining objectivity/ neutrality
			CO3	To able to Understand Methods of organizing data, Basic Statistical methods of analysis of data
I SEM	HIS201	HISTORY -1 Ancient Indian History & Culture (from Indus Valley Civilization to 13 <sup>th</sup> Cen A.D.)	CO1	Understanding about Indus civilization and Vedic culture.
			CO2	Our Rich Heritage and Culture Regarding different Religions . Ashok Dharma
			CO3	Different Empires like Sangam Satavahana and Pallavas and their contribution to south India
			CO4	Describe about different conditions of Gupta period - golden Era of Gupta dynasty – Navaratna
			CO5	Describe about Cholas and Kakatiyas Dynasties.
II SEM	HIS202	HISTORY – II Medieval Indian History & Culture (1206 A.D. to 1764 A.D.)	CO1	Understanding about Turkish Invasions – Slave Dynasty
			CO2	Contribution of saints of Bhakti and Sufi towards middle age India..
			CO3	Describe about Moghal Rulers and their Administration.
			CO4	Different conduction of Moughal Empire –downfall – Maratas under Sivaji
			CO5	Understanding about European settlement in India – Carnatic wars
III SEM	HIS193	HISTORY – III Late Medieval & Colonial History of India (1526 to 1857 A. D.)	CO1	Awareness of Establishment of Moughal Empire Shivaji and Peshwas
			CO2	Understanding about conditions of Moughal Era and disintegration
			CO3	Describe of European settlements and Anglo –French conflict
			CO4	Understanding about impact of Industrial Revolutions and Land Revenue settlement.
			CO5	Brief History of causes and Results of Sypoy mutiny

IVSEM	HIS194	HISTORY – IV Social Reform Movement & Freedom Struggle (1820 to 1947 A.D.)	CO1	Understanding of Brahma Samaja ,various Social Religious Reformers like JyotibaPhule,
			CO2	Awarness about India under Viceroy's rule and establishment of I.N.C.
			CO3	Understanding about various Freedom Movements like Vandemataram Home role.
			CO4	Brief History of Freedom Struggle under Gandhi ji.
			CO5	Awarness of Partition of India Integrity under SadarVallabhai Patel
VSEM	HIS5A	HISTORY – V (Age of Rationalism and Humanism: the World between (15 <sup>th</sup> to 18th Centuries)	CO1	Understanding about Geographical Discoveries under Portugal navigators.
			CO2	Understanding about Reformation Movement ,Protestant Movement and Counter Reformation Movement .
			CO3	Awarness of Nation State and various Revolutions Like Glorious Revolution
			CO4	Brief History of American Revolution 1776 and New world.
			CO5	Brief History of French Revolution 1789 – Role of Philosophers
	HIS5B	HISTORY – VI History & Culture of Andhra Desa (from 12th to 19th Century A.D)	CO1	Understanding about KakatiyaDynasty,and Reddy Kingdom.
			CO2	Awarness of VijayanagarEmpire,Sri Krishna Devaraya and Astadiggajas
			CO3	Brief History of Kutb-shahis of Golconda and their various conductions.
			CO4	Under standing about European settlement in Andhra and carnit wars.
			CO5	Understanding about impact of Industrial Revolution – Revolts – Sir Arthur cotton Thomas Monrow ,C.P.Brown.
VI SEM	HIS6GE1	HISTORY – VII (History of Modern Europe (from 19th century to 1945 A. D.)	CO1	Understanding about how and where Industrial Revolution occurred – its consequences
			CO2	Brief History of Unifications (Germany and Italy and its impact on Europe.
			CO3	Awarness of Russian Revolution 1917 and its impacts on Europe
			CO4	Emerging of World Wars I – Establishment of League of Nations.
			CO5	Emerging of World Wars II - Establishment of U.N.O .
I SEM	SDCIA	Skill Development (Tourism Guidance )	CO1	Students must know about Characteristics of tourism and Guidance
			CO2	To know about Characteristics of Guide – Training Institutions –Leadership Skills.
II SEM	LSC5	Life Skill course (Indian Culture and Science )	CO1	To know about Visa Passport – Route Map Accident and Death
			CO2	Students got More information about Different Religions like Buddhism and various Arts.
VI SEM	HIS6C	Tourism and Hospitality Services	CO1	Understand hospitality as a career Inculcate interpersonal skills Develop the ability for multitasking and crisis management Understands the spirit of team work
	HIS7C	Tourism Guidance and Operating Skills	CO1	Acquire tour guiding, operating and soft skills Understand different situations under which one has to work Cultivate cultural awareness and flexibility Understand and apply team spirit
I	ZOO 201	Animal Diversity I– Biology Of Nonchordates	CO1	Describe general taxonomic rules on animalclassification
			CO2	Classify Protozoa to Coelenterata with taxonomickeys
			CO3	Classify Phylum Platy helminthes to Annelida phylum using examples from parasitic adaptation and vermincomposting



			CO4	Describe Phylum Arthropoda to Mollusca using examples and importance of insects and Molluscans
			CO5	Describe Echinodermata to Hemichordata with suitable examples and larval stages in relation to the phylogeny
II	ZOO 202	Animal Diversity II – Biology Of Chordates	CO1	Describe general taxonomic rules on animal classification of chordates
			CO2	Classify Protochordata to Mammalia with taxonomic keys
			CO3	Understand Mammals with specific structural adaptations
			CO4	Understand the significance of dentition and evolutionary significance
			CO5	Understand the origin and evolutionary relationship of different phyla from Prochordata to mammalia.
II	SDC 23S	Dairy Techniques	CO1	Establish a Dairy Farm with the knowledge of Dairy development in India
			CO2	Classify the Indian Cattle breeds, exotic and Indian buffalo breeds.
			CO3	Understand the Care and management of dairy animals
			CO4	Acquire the knowledge of Feed and Dairy Management
			CO5	Understand and apply the Safety precaution to prevent the accidents in an industry
III	Zoo 193	Cytology Genetics and Evolution	CO1	Understand the basic unit of the living organisms and to differentiate the organisms by their cell structure.
			CO2	Describe fine structure and function of plasma membrane and different cell organelles of eukaryotic cell.
			CO3	Understand the history of origin of branch of genetics, gain knowledge on heredity, interaction of genes, various types of inheritance patterns existing in animals
			CO4	Acquiring in-depth knowledge on various aspects of genetics involved in sex determination, human karyotyping and mutations of chromosomes resulting in various disorders
			CO5	Understand the principles and forces of evolution of life on earth, the process of evolution of new species and apply the same to develop new and advanced varieties of animals for the benefit of the society
IV	Zoo 194	Embryology Physiology and Ecology	CO1	Describe the key events in early embryonic development starting from the formation of gametes up to gastrulation and formation of primary germ layers.
			CO2	Describe the development and functions of different types of mammalian placenta.
			CO3	Understand the functions of important animal physiological systems including digestion, cardio-respiratory and renal systems.
			CO4	Understand the muscular system and the neuro-endocrine regulation of animal growth, development and metabolism with a special knowledge of hormonal control of human reproduction.
			CO5	Understand the importance and influence of abiotic factors and nutrient cycles on living beings.
			CO6	Know the components of the ecosystem and energy flow in ecosystem
			CO7	Understand the community interactions, ecological succession and population ecology
V	Zoo 5A	Animal Biotechnology	CO1	Get familiar with the tools and techniques of animal biotechnology.
			CO2	Understand the techniques of the recombinant DNA Technology
			CO3	Understand the Animal cell Technology including animal cell/ tissue culture, Hybridoma technology stem cell

				technology and genetic engineering
			CO4	Understand the reproductive Technologies and transgenic animals production and applications
			CO5	Understand the applications of Biotechnology in the fields of industry and agriculture
V	Zoo 5B	Animal Husbandry	CO1	Understand the field level structure and functioning of insurance sector and its role in protecting the risks
			CO2	Acquire knowledge about the Principles and Systems of poultry housing.
			CO3	Understand Management of chicks, growers and layers and Broilers.
			CO4	learn about Poultry feed management
			CO5	Describe the Poultry diseases – viral, bacterial, fungal and parasitic
			CO6	Know the Selection, care and handling of hatching eggs and Methods of hatching.
			CO7	Classify the Indian Cattle breeds, exotic and Indian buffalo breeds.
			CO8	Understand Care and management of dairy animals
VI	ZOO6 GE1	Immunology	CO1	Acquire knowledge about organs of Immune system, types of immunity, cells and organs of immunity.
			CO2	Describe immunological response as to how it is triggered (antigens) and regulated (antibodies)
			CO3	Understand the working of immune system
			CO4	Know the importance of immune system in health and disease
			CO5	Apply the knowledge of vaccines in day to day life in the field of Human health care, poultry, dairy and aquaculture industry.
VI SEM	ZOO6 CE1	Principles of Aquaculture	CO1	Know the Basics of Aquaculture
			CO2	Acquire knowledge of different Types of Aquaculture and Culture systems
			CO3	Apply the knowledge of Design and construction of aqua farms
			CO4	Know the Seed resources
			CO5	Manage the carp culture ponds
			CO6	Select the pearl oysters and Ornamental fish Culture as self employment
	ZOO6 CE2	Aquaculture management	CO1	Awareness on the potential fishes and their breeding habits
			CO2	Generating knowledge on different fish based value added products
			CO3	Ability to manage feed and feeding in aquaculture farms
			CO4	Nutritional requirements of fish and production and supply of balanced diet.
			CO5	Importance of live feeds in fish nutrition.
			CO6	Economic analysis of business organizations.
			CO7	Cost and earnings from aquaculture systems
	ZOO6 CE3	Post Harvest Technology	CO1	Acquire the knowledge of handling of fish and apply the principles of fish preservation
			CO2	Discriminate the Traditional and advanced methods of fish preservation
			CO3	Use the advanced methods of fish preservation along with traditional methods
			CO4	Understand the preparation of Seaweed Products and can use the Seaweeds for consumption, in disease treatment and preparation of therapeutic drugs.

			CO5	Understand the Processing and preservation of fish and fish by-products in the field of food industry and agriculture
			CO6	Understand the importance of Sanitation and Quality control
			CO7	Acquire the knowledge of Quality Assurance, Management and Certification in Aqua food industry
VI SEM	ZOO6C	SUSTAINABLE AQUACULTURE MANAGEMENT	C01	Evaluate the present status of aquaculture at the Global level and National level Classify different types of ponds used in aquaculture Demonstrate induced breeding of carps Acquire critical knowledge on commercial importance of shrimps Identify fin and shell fish disease
	ZOO7C	POSTHARVEST TECHNOLOGY OF FISH AND FISHERIES	C01	Identify the types of preservation methods employed in aquaculture Choose the suitable Processing methods in aquaculture Maintain the standard quality control protocols laid down in aqua industry Identify the best Seafood quality assurance system
SEM I	COM2012	Fundamentals Of Accounting	C01	Identify transactions and events that need to be recorded in the books of accounts.
			C02	Equip with the knowledge of accounting process and preparation of final accounts of sole trader.
			C03	Develop the skill of recording financial transactions and preparation of reports in accordance with GAAP.
			C04	Analyze the difference between cash book and pass book in terms of balance and make reconciliation.
			C05	Design new accounting formulas & principles for business organizations.
SEM I	COM2013	Business Organization And Management	C01	Understand different forms of business organizations.
			C02	Comprehend the nature of Joint Stock Company and formalities to promote a Company.
			C03	Critically examine the various organizations of the business firms and judge the best among them.
			C04	Design and plan to register a business firm. Prepare different documents to register a company at his own
SEM I	COM2011	Business Environment	C05	Understand the concept of business environment.
			CO2	Define Internal and External elements affecting business environment.
			CO3	Explain the economic trends and its effect on Government policies
			CO4	Evaluate and judge the best business policies in Indian business environment.
			CO5	Develop the new ideas for creating good business environment.
SEM I	LSC3	Life Skill Course :Entrepreneurship Development	C01	Understanding main functions and its characteristics of an entrepreneur
			C02	Analyzed different sources to generate new ideas in business
			C03	Developing new projects and its report preparation of project
			C04	Understanding different financial institutions that support SSI's
			C05	Describing various government policies and taxation benefits of SSI's
SEM I	SDC2C	Skill	C01	Understand the field level structure and functioning of insurances

		Development Course: Insurance Promotion		ector and its role in protecting the risks
			C02	Comprehend pertaining skills and their application for promoting insurance coverage
			C03	Prepare better for the Insurance Agent examination conducted by IRDA
			C04	Plan 'promoting insurance coverage practice' as one of the carrier options
			C05	Comprehend pertaining skills and their application for promoting insurance coverage
SEM II	COM2023	Fundamentals Of Accounting-Ii	C01	Understand the concept of consignment and learn the accounting treatment of the various aspects of consignment.
			C02	Analyze the accounting process and preparation of accounts in consignment and joint venture
			C03	Distinguish Joint Venture and Partnership and to learn the method of maintaining records under Joint Venture.
			C04	Determine the useful life and value of the depreciable assets and maintenance of Reserves in business entities.
			C05	Design an accounting system for different models of businesses at his own using the principles of existing Accounting system.
SEM II	COM2022	Banking Theory And Practice	C01	Understand the basic concepts of banks and functions of commercial banks.
			C02	Demonstrate an awareness of law and practice in a banking context.
			C03	Organize information as it relates to the regulation of banking products and services.
			C04	Formulate the procedure for better service to the customers from various banking innovations.
SEM II	SDC23C	Advertising	C01	Understand the field of Advertising
			C02	Comprehend opportunities and challenges in Advertising sector
			C03	Understand applying of related skills
			C04	Examine the scope for making advertising a future career
SEM II	SDC21C	Agricultural Marketing	CO1	Know the kinds of agricultural products and their movement
			CO2	Understand the types, structure and functioning of agricultural marketing system
			CO3	Comprehend related skills and apply them in sample situations
			CO4	Extend this knowledge and skills to their production/consumption environment
SEM III	COM1931	Corporate Accounting	CO1	Understand the Accounting treatment of Share Capital and aware of process of book building.
			CO2	Comprehend the important provisions of Companies Act, 2013 and prepare final accounts of a company with Adjustments.
			CO3	Understand analysis of complex issues, formulation of well-reasoned arguments and reaching better conclusions.
			CO4	Participate in the preparation of consolidated accounts for a corporate group.
			CO5	Communicate accounting policy choices with reference to relevant laws and accounting standards.
SEM III	COM1932	Business Statistics	CO1	Understand the importance of Statistics in real life
			CO2	Formulate complete, concise, and correct

				mathematical proofs
			CO3	Frame problems using multiple mathematical and statistical tools, measuring relationships by using standard techniques.
			CO4	Learn and apply the statistical tools in day life.
			CO5	Create quantitative models to solve real world problems in appropriate contexts.
SEM III	COM1933	Banking Theory And Practice	C01	Understand the basic concepts of banks and functions of commercial banks.
			C02	Demonstrate an awareness of law and practice in a banking context.
			C03	Organize information as it relates to the regulation of banking products and services.
			C04	Formulate the procedure for better service to the customers from various banking innovations.
SEM III		Online Business	C01	Understand the online business and its advantages and disadvantages
			C02	Recognize new channels of marketing, their scope and steps involved
			C03	Analyze the procurement, payment process, security and shipping in online business
			C04	Create new marketing tools for online business
			C05	Define search engine, payment gateways and SEO techniques.
SEM IV	COM1941	Accounting For Service Organization	C01	Identify transactions and events that need to be recorded in the books of accounts.
			C02	Understand the basic concepts of financial services and identify to importance of merchant banking services
			C03	Design and plan to register a business firm. Preparedifferentdocumentstoregisteracompanyathisown
SEM IV	COM1943	Business Law	C01	Understand the legal environment of business and laws of business.
			C02	Understand the various provisions of Company Law
			C03	Engage critical thinking to predict outcomes and recommend appropriate action on issues relating to business associations and legal issues.
			C04	Integrate concept of business law with foreign trade.
SEM IV	COM1944	Income Tax	C01	Acquire the complete knowledge of the tax evasion, tax avoidance and tax planning.
			C02	Understand the provisions and compute income tax for various sources.
			C03	Grasp amendments made from time to time in Finance Act.
			C04	Compute total income and define tax complicacies and structure.
			C05	Prepare and File IT returns of individual at his own.
SEM IV	COM1942	Banking Theory And Practice	C01	Understand the basic concepts of banks and functions of commercial banks.
			C02	Demonstrate an awareness of law and practice in a banking context.
			C03	Organize information as it relates to the regulation of banking products and services.
			C04	Formulate the procedure for better service to the customers from various banking innovations.

SEM V	BCO5A	Cost Accounting	C01	Understand various costing methods
			C02	Prepare cost sheet, quotations, and tenders to organization for different works.
			C03	Compare and contrast the financial statements of firms and interpret the results
SEM V	BCO5B	Goods And Services Tax	C01	Understand the basic principles underlying the Indirect Taxation Statutes.
			C02	Examine the method of tax credit. Input and Output Tax credit and Cross Utilization of Input Tax Credit.
			C03	Identify and analyze the procedural aspects under different applicable statutes related to GST.
			C04	Develop various GST Returns and reports for business transactions in Tally.
SEM V	BCO5C	Taxation	C01	Acquire the complete knowledge of the tax evasion, tax avoidance and tax planning
			C02	Understand the provisions and compute income tax for various sources.
			C03	Grasp amendments made from time to time in Finance Act.
			C04	Compute total income and define tax complicacies and structure.
			C05	Prepare and File IT returns of individual at his own.
SEM V	BCO5D	Commercial Geography	C01	Learning about the earth having contents
			C02	Understand the land utilization of agriculture in Indian economy
			C03	Understand the uses of mining and mineral resources
			C04	To know the sources of water India
SEM V	BCO5E	Central Banking	C01	Understanding support from real business information
			C02	To know the central banking in India and understand recent monetary and credit policies in India
			C03	Learning inflation and price control by RBI and understand supervision and regulation of central banks
	BCO5G	Rural And Form Credit	C01	Understanding how to develop rural areas
			C02	Acquire the complete knowledge of the rural area farmers to get agricultural loans and credits
			C03	Develop an idea about rural areas development
	PJW	Project Work Evaluation-Banking	C01	Understand the basic concepts of banking
			C02	Acquire the complete knowledge of the overall banking sector
	BCO5J	Business Leadership	C01	gain theoretical and practical knowledge to evaluate leadership skills
			C02	understand the group dynamics and group decision making
C03			evaluate the role of women as leader and using various social media platforms	
SEM VI	MT6GE	Marketing	C01	Develop an idea about marketing and marketing environment.
			C02	Understand the consumer behavior and market segmentation process.
			C03	Comprehend the product life cycle and product line decisions.

			C04	Develop new product line and sales promotion techniques for a given product.
			C05	Formulate new marketing strategies for a specific new product.
SEM VI	AU6GE	Auditing	C01	Understanding the meaning and necessity of audit in modern era
			C02	Comprehend the role of auditor in avoiding the corporate frauds
			C03	Identify the steps involved in performing audit process
			C04	Apply auditing practices to different types of business entities
			C05	Plan an audit by considering concepts of evidence, risk and materiality
SEM VI	MA6GE	Management Accounting	C01	Understand various management techniques.
			C02	Apply Management accounting methods for both manufacturing and service industry.
			C03	Prepare analysis of various special decisions, using relevant management techniques.
SEM VI	FS6CG	Financial Services	C01	Understand the basic concepts of financial services and identify to importance of merchant banking services
			C02	Demonstrate an awareness of leasing, hire purchase, scrutinization of debts
			C03	Acquire the complete knowledge of the credit rating and other financial services
SEM VI	MFS6CE	Marketing Of Financial Services	C01	Understand the basic concepts of financial services
			C02	identify to importance of merchant banking services
			C03	Demonstrate an awareness of leasing, hire purchase, scrutinization of debts
			C04	Acquire the complete knowledge of the credit rating and other financial services
SEM VI	PR6CE	Project Work-Banking	C01	Understand the basic concepts of banking
			C02	Acquire the complete knowledge of the overall banking sector
SEM VI	EM6GC	Event Management	C01	understand the event manager is responsible for the planning and managing of events
			C02	Acquire the complete knowledge of creating a detailed plan of events
VI SEM	AMP63	Advertising And Media Planning	C01	Understand the role of advertising in business environment
			C02	Understand the legal and ethical issues in advertising
			C03	Acquire skills in creating and developing advertisements
			C04	Understand up-to-date advances in the current media industry.
VI SEM	SPP64	Sales Promotion And Practice	C01	Analyse various sales promotion activities Get exposed to new trends in sales Promotion Understand the concepts of creativity in sales promotion
			C02	Enhance skills to motivate the salesperson to reach their targets
			C03	Develop the skills of designing of sales promotion events

	MAC61	Management Accounting And Practice	C01	Understand the nature and scope of management accounting and differentiate management accounting, financial accounting and cost accounting.
			C02	Compute ratios and draw inferences
			C03	Analyze the performance of the organization by preparing funds flow statement and cash flow statements
	CCT62	Cost Control Techniques	C01	. Differentiate cost control, cost reduction concepts and identify effective techniques.
			C02	Allocate overheads on the basis of Activity Based Costing. Evaluate techniques of cost audit and rules for cost record.
			C03	Appraise the application of marginal costing techniques to evaluate performances, fix selling price, make or buy decisions.
	ECM65	E Commerce	C01	Understand the mechanism of ecommerce Equip specialization in website designing for e commerce Enhance their skills in operational services of e commerce Involve in activities of e commerce
	EF166	E FILING	C01	Understand and apply basic knowledge of Indian Tax System
			C02	Equip specialization in taxation system and Enhance their skills in presenting returns
			C03	Involve in activities of Chartered Accountants for filing returns file returns of Income Tax and GST
	MAD67	Mobile Application Development	C01	Identify basic terms ,tools and software related to android systems
			C02	Describe components of IDE, understand features of android development tools
			C03	Describe the layouts and controls
			C04	Explain the significance of displays using the given view
			C05	Explain the features of services and able to publish android Application
	CSM68	Cyber Security And Malware Analysis	C01	Understand the computer networks, networking tools and cyber security
			C02	Learn about NIST Cyber Security Framework
			C03	Understand the OWASP Vulnerabilities Implement various Malware analysis tools
			C04	Understand about Information Technology act 2000
SEM I	CHE201	Chemistry-I Inorganic And Physical Chemistry	C01	Understand the basic concepts of p-block elements
			C02	Understand the basic concepts of d & f block elements. Understand the basic concepts of different bonds.
			C03	Apply the concepts of Solids, important theories, and applications of Crystal Solids.
			C04	Explain the difference between solid, liquid and gases inter



				molecular forces and attractions.
			CO5	Different types of solutions, Different laws & its applications.
			CO6	Understand the concepts of common ion effect, solubility product and concepts related to qualitative analysis.
			CO7	Understand the colligative properties & its application in different sectors in Physical chemistry.
		Chemistry-I-Practical Inorganic and physical chemistry practical	C01	Understand and explain the volumetric analysis based on fundamental concepts learnt ionic equilibria
			C02	Learn and identify the concepts of a standard solutions, Primary and secondary standards
			C03	Facilitate the learner to make solutions of various molar concentrations .This may include: The concept of the mole; Converting moles to grams; Converting grams to moles;
SEM II	CHE202	Chemistry-I-Organic And General Chemistry	C01	Understand the basic concepts of saturated and unsaturated compounds and also cyclic compounds.
			C02	Understand the basic concepts of unsaturated compounds
			C03	Understand the basic concepts of Aromatic compounds. Explain the concepts of aromatic nature of Benzenoid and non Benzenoid compounds.
			C04	Understand the concept of Adsorption and its types with examples. Industrial applications also. Semi-conductors and its types. Understand the different theories & bonding in Metals.
			C05	Correlate and describe the stereochemical properties of Organic compounds and reactions
		Chemistry practicals-II	C01	Understand the basic concepts of qualitative analysis of Inorganic mixture
			C02	Use glass ware, equipment and chemicals and follow Experimental procedures in the laboratory
			C03	Apply the concepts of common ion effect, solubility product And concepts related to qualitative analysis
SEM III	CHE193	Chemistry-III	C01	Describe and understand the molecular formula. structure, preparation, properties of halogen compounds and hydroxyl compounds
			C02	Describe and understand the nomenclature, preparation, Properties of carbonyl compounds
			C03	Describe and understand the nomenclature, preparation, properties of carboxylic acids, active methyl compounds
			C04	Understand the concept Chemical Kinetics, Enzyme catalysis & its factors
			C05	Describe and understand the concept of Phase rule & different component Systems. Understand the concept of Photochemistry & Photochemical Reaction mechanisms.
		CHEMISTRY-III Organic Qualitative Analysis	C01	Understand the chemical behavior of functional groups
			C02	Recognize the MP & BP of various functional groups
			C03	Understand the procedure for functional group

				Identification	
			C04	Practice the functional group analysis	
SEM IV	CHE194	CHEMISTRY-IV organic & spectroscopy of organic compounds	C01	Understand the nomenclature, types, structure, preparations, reactions of nitro hydrocarbons	
			C02	Introduction of amino acids and its classification. Protein synthesis. Explanation on Zwitter ion and iso electric point. Discuss the nomenclature, types, preparations, properties of pyrrole, furane, thiophene	
			C03	Identify the structures of glucose, fructose and analyze the tests, properties, inter conversions of carbohydrates	
			C04	Understand analytical data treatment, error, classify analytical, instrumental methods, consider EMR rotation spectroscopy	
			C05	understand the concept of vibrational spectroscopy, selection rules	
			C06	Analyze the elements using mass spectroscopy , understand The atomic and NMR spectroscopy Understand the concepts of UV spectroscopy	
			C07	Applications of spectroscopy to simple organic molecules	
			CHEMISTRY- practical -IV Preparation and spectral analysis of organic compounds	C01	Acetylation , benzylation and nitration of organic compounds with examples.
		C02		IR spectral analysis of the 3 functional groups with examples (Hydroxyl, carbonyl, amine)	
		SEM V	CHE 5A	CHEMISTRY-V Organic and physical chemistry	C01
C02	To analyze the magnetic behavior, stability of complex compounds introduction of organo metallic compound, classification and its applications				
C03	classify and analyze the reactivity of complex compounds, understand the trans effect, essential elements, Metalloporphyrins, myoglobin, chlorophyll				
C04	Understand on state and explain the various concepts, laws, Derivations of thermodynamics				
C05	To analyse the concepts of conductance, kohlrusch's, arrhenius, ostwald's, debye huckel- onsagar, transport numbers, Hittorof's law.				
		CHEMISTRY-V practical –V Physical and instrumental methods of analysis	C01	Conductometric titrations, CST-phenol water system Potentiometric titrations Spectrophotometry	

SEM V	CHE5B	CHEMISTRY-VI Inorganic, Organic and physical chemistry	C01	classify and analyse the reactivity of complex compounds Understand the concept of metal complexes, Substitution Reactions & Trans effect and its applications.
			C02	Essential elements, biological significance of Essential Elements. Metalloporphyrins, myoglobin & chlorophyll
			C03	Understand the concept of rate of reaction, activation energy derivation of rate Constants. Methods to determine the order of reactions.
			C04	Discuss the nomenclature, types, preparations, properties of pyrrole, furane, thiophene.
			C05	Identify the structures of glucose, fructose and analyse the tests, properties, inter conversions of carbohydrates
		CHEMISTRY- Practical -VI-Physical Chemistry	C01	To understand the determination of rate constant for Ester hydrolysis
			C02	To understand the determination of Partition coefficient
			C03	To understand the determination of Surface tension of Liquid
			C04	To understand the determination of Viscosity of Liquid
			C05	To understand the Adsorption method.
SEM VI	CHE6GE1	CHEMISTRY-VII Elective Paper- Environmental Chemistry	C01	To understand the Concept, scope, importance of Environmental Chemistry. Segments of Environment & Hydrological cycle.
			C02	To discuss the sources & classification of Air pollution. Acid rain, Greenhouse effect. Ozone depletion & Controlling methods of Air pollution
			C03	To discuss the Properties & quality of Water, DO, BOD & COD. Methods to convert permanent hard water in to soft water.
			C04	To find the toxic elements in the Environment effects of Toxic elements.
			C05	To understand the Concept of biodiversity, significance & its trends
			C06	Redox titrations- Determine the Fe using $\text{KMnO}_4$
			C07	To determine the Fe using $\text{K}_2\text{Cr}_2\text{O}_7$
			C08	Complexometric titrations- To determine the Ni ions by EDTA
			C09	Gravimetric Analysis. To determine the Ni as Nickel dimethyl glyoxime
SEM VI	CHECE1	CHEMISTRY-VIII Cluster Elective-1 Paper- VIII	C01	To understand the principles of NMR & Chemical Shift & factors affecting it.

		Organic Spectroscopic techniques	C02	To discuss the Spin decoupling & spin tickling. Application in Medical diagnostics.
			C03	To discuss the Electronic spectra of diatomic molecules. Types of transitions
			C04	To discuss the Electronic spectra of polyatomic molecules. Electronic spectroscopy – BEER LAMBERTS LAW
			C05	To understand the Electronic spin resonance spectroscopy. Basic principles & its applications
		CHEMISTRY-VIII Cluster Elective 1 Paper- VIII Practical-1 Organic Preparations	C01	Preparation of Aspirin
			C02	Preparation of Paracetamol
			C03	Preparation of Acetanilide
			C04	Preparation of Barbutiric acid
			C05	Preparation of Phenyl Azo Beta naphthol
SEM VI	CHECE2	CHEMISTRY-VIII Cluster Elective 2 Paper- VIIIA Advanced Organic reactions.	C01	To discuss the concept of Organic Photochemistry. Different types of Transitions
			C02	Norrish type-1 & Norrish type-II cleavage. Mechanism and Stereo chemistry.
			C03	To understand the Protecting groups & Organic reactions.
			C04	To understand the concept Synthetic reactions and its applications.
			C05	To understand the concept of new Synthetic reactions
		CHEMISTRY-VIII Cluster Elective 2 Paper- VIIIA Practical Green Chemistry Practicals	C01	Green Procedure for Organic Qualitative Analysis
			C02	Preparation of Acetanilide
			C03	EAS Reactions : Nitration of Phenol
			C04	Green oxidation reaction : Synthesis of Adipic acid
			C05	Green Procedure for Organic Preparation: Synthesis of Benzilic Acid from Benzil
SEM VI	CHECE3	CHEMISTRY-VIII Cluster Elective-3 Paper- VIII Pharmaceutical & Medicinal Chemistry.	C01	To understand the concept & different terms in pharmaceutical Chemistry.
			C02	Understand the nomenclature, classification & therapeutic activity.
			C03	Synthesis & therapeutic activity of the compounds- Psychotherapeutic drugs & Chemotherapeutic drugs.
			C04	To discuss about the Pharmacodynamics drugs – Antiasthma & diuretic drugs.
			C05	To understand the concept of HIV/ AIDS. Prevention of AIDS. Available drugs with examples.
		CHEMISTRY – Practical -VIII-C3 Pharmaceutical	C01	In a specialization domain of her choice, student will be able to choose an appropriate topic for study and will be able to clearly formulate & state a research problem .

		&Medicinal Chemistry.	C02	For a selected research topic, student will be able to compile relevant data, interpret & analyze it and test the hypotheses wherever applicable
SEM VI	CHE6C	Synthetic Organic Chemistry	C01	Identify the importance of reagents used in the synthesis of organic compounds.
			C02	Acquire knowledge on basic concepts indifferent types of pericyclic reactions.
			C03	Understand the importance of retro synthesis in organic chemistry.
			C04	Comprehend the applications of different reactions in synthetic organic chemistry.
	CHE7C	Analysis of Organic Compounds	C01	Identify the importance of mass spectrometry in the structural elucidation of organic compounds.
			C02	Acquire the knowledge eon structural elucidation of organic compounds.
			C03	Understand various chromatography methods in the separation and identification of organic compounds.
			C04	Demonstrate the knowledge gained in solvent extraction for the separate the organic compounds
P.G SEM-1	Paper I	General Chemistry	C01	To understand the treatment of analytical data, standard error of mean, testing for significance , linear least square analysis
			C02	To understand the types of titrations, types of indicators and its applications
			C03	To understand the visible spectrophotometry and potentiometry . concept of beer-lambert's law, types of electrodes and its applications
			C04	To understand the Programming in FORTRAN 77, concept of flowcharts and data statement.
	Paper II	Inorganic Chemistry	C01	To understand the Introduction to exact quantum mechanical results, approximate methods and angular moment, concept of schrodinger wave equation, variation theorem, eigen functions.
			C02	To understand the chemistry of non-transition elements, structure and bonding. Concept of interhalogen compounds, bent's rule
			C03	To understand the metal ligand bonding , concept of crystal field theory and molecular orbital theory
			C04	To understand the metal ligand equilibria in solutions, concept of job's method,HSAB method
	Paper III	Organic Chemistry	C01	Understanding the nature of bonding in Organic molecules,localised and delocalisedchemical bindings Discuss the concept Aromaticity, Aromaticity of five membered,Six membered rings and fused system
			C02	To Understand the concept of Reactive intermediates and Hetero cyclic compounds,and hetero cyclic compounds more than one hetero atom
			C03	To Undersatand the Stereo Chemistry ,Concept of Chirality ,D-L and R-S nomenclature ,Diastereoisomerisam ,inter converstions of projectionsUnderstand the Concept of Geometricalisomerism and stereo chemistry of compounds
			C04	To understand the concept of Conformation analysis of cyclic compounds and C-C and hetero atom bonds having C-O& C-N
	Paper IV	Physical Chemistry	C01	To understand the concept of thermodynamics, Maxwell equation, first and second law of thermodynamics.
			C02	To understand the surface phenomena and phase equilibrium, surface active agents, BET equation,

			CO3	To understand the concept of electrochemistry, Nernst equation, Debye-Huckel-Onsager equation.	
			CO4	To understand the concept of chemical kinetics, primary and secondary salt effects and chain reactions	
	Practical - 1	Inorganic chemistry	CO1	Volumetric and gravimetric analysis acid base titrations, redox titrations complex metric titrations and miscellaneous titrations	
	Practical-2	Organic chemistry	CO1	Preparation and purification organic compounds involving in one and two step process	
	Practical-3	Physical chemistry	CO1	Distribution coefficient, rate constant, relative strength of acids, critical solution temperature	
P.G SEM-II	Paper I	General Chemistry	CO1	To understand the concept of symmetry and group theory , concept of orthogonality theorem and its importance	
			CO2	To understand the microwave and infrared spectroscopy. Concept of microwave spectra of polyatomic molecules, Born-Oppenheimer approximation.	
			CO3	To understand the Raman, visible and ultraviolet spectroscopy. Concept of resonance Raman spectroscopy , electronic spectra of polyatomic molecules –instrumentation –applications	
			CO4	To understand the concept of nuclear magnetic and electron spin resonance spectroscopy, coupling constant. Chemical shift, g factor, hyperfine coupling constant	
	Paper II	Inorganic Chemistry	CO1	To understand the concept of nonmetal cages and metal clusters, structure and bonding in higher boranes. Discuss the concept of metal clusters and its applications. Preparation, structure and bonding in different complexes.	
			CO2	To discuss the concept of organometallic complexes of transition metals and its classification- applications of organometallic compounds , biochemical aspects of iron and cobalt	
			CO3	To discuss the concept of reaction mechanisms of transition metal complexes and its factors, importance of photo reactions in various fields.	
			CO4	To understand the concept of transition metal complex and charge transfer spectra	
	Paper III	Organic Chemistry	CO1	To understanding the concept of synthetic methods and Named reactions and its mechanisms	
			CO2	To understanding the concept of Aliphatic Nucleophilic Substitutions SN1,SN2,mixed SN1and SN2Aromatic nucleophilic substitution SNAr,SN1 and benzyne mechanisms	
			CO3	To understanding the concept of Eliminations of protecting agents and molecular rearrangements of during eliminations	
			CO4	To understand the concept of Chemistry of natural products,Chemistry and synthesis of Alkaloids Lower terpenoids and Quinones	
	Paper IV	Physical Chemistry	CO1	To understand Thermodynamics, third law and statistical thermodynamics and its limitations	
			CO2	To understand the polymer chemistry , end group analysis, osmometry	
			CO3	To understand the electrochemistry double layer at the interface, Butler-Volmer equation and its applications	
			CO4	To understand the photochemistry and chemical kinetics , quantum yield and enzyme catalysis	
		Practical-1	Inorganic Chemistry	CO1	To understand the Semi micro Qualitative Analysis of an Inorganic mixture containing three cations and three anions

Practical-1I	Organic Chemistry	CO2	To understand the Semi micro Qualitative Analysis of an Organic compound and its derivatives.
Practical-1II	Physical Chemistry	CO3	Instrumental analytical methods –Potentiometry ,conductometry and <sup>pH</sup> metry.

### JMJ COLLEGE FOR WOMEN(A),TENALI

#### PO's and PSO's

Programme		<b>BA(Spl.English,Spl.Telugu,Spl.Economics,History&amp;Politics)</b>
<b>Programme Outcomes</b>	<b>PO1</b>	.Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
	<b>PO2</b>	.Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
	<b>PO3.</b>	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
	<b>PO4</b>	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
	<b>PO5</b>	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
	<b>PO6</b>	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
	<b>PO7</b>	. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological change
<b>Programme Specific Outcomes</b>	PSO1	The faculty familiarizes students withdebates about culture, the delineation of high and low culture and help them engage with debates about the canonical and non-canonical, and investigate the category ofliterary and non-literary fiction.
	PSO2	Help the students to apply analytical skills to social phenomena in order to understand human behavior.
	PSO3	Knowledge of multiple perspectives throughwhich significant

		developments in the history of the Indian subcontinent from earliest times up to the period after independence.
<b>Programme</b>		<b>B.Com(General &amp; Computers)</b>
<b>Programme Outcomes</b>	<b>PO1</b>	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
	<b>PO2</b>	.Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
	<b>PO3.</b>	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.
	<b>PO4</b>	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
	<b>PO5</b>	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
	<b>PO6</b>	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
	<b>PO7</b>	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological change
<b>Programme Specific Outcomes</b>	PSO1	The projects assigned to students helps in improving their Interpersonal and Communication Skill.
	PSO2	The course gives an understanding of Ethical, Social Sustainable Business Issue
<b>Programme</b>		<b>BSc (MPC,CBZ,MPCs,MSCs&amp;HSc)</b>
<b>Programme Outcomes</b>	<b>PO1</b>	Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
	<b>PO2</b>	Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
	<b>PO3.</b>	Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.



	<b>PO4</b>	Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
	<b>PO5</b>	Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
	<b>PO6</b>	Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.
	<b>PO7</b>	Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological change
Programme Specific Outcomes	PSO1	Understand, analyze and develop computer programs in the areas related to algorithms, multimedia and web design for efficient design of computer-based systems of varying complexity. Perform Programs in the programming languages of C, C++, Java, DS, C#. Net, DBMS, Web Technologies. Understanding the applications of computer Science in Office work, Software development, Photo Studios and Internet centers
	PSO2	The laboratory procedures followed by the students to gain practical knowledge about the specimen observation and its classification depending on the observed characteristics, Alkalinity, concentration of oxygen in the given water sample and also analysis of human blood regarding types of blood groups (A, B, AB, O), Estimation of Hemoglobin, total count of RBC, WBC etc.
<b>Programme</b>		<b>MA English</b>
Programme Outcomes	PO1	Attained profound Expertise in Discipline
	PO2	Acquired Ability to function in multidisciplinary Domains
	PO3	Attained ability to exercise Research Intelligence in investigations and Innovations
	PO4	Learnt Ethical Principles and be committed to Professional Ethics
	PO5	Incorporated Self-directed and Life-long Learning
	PO6	Obtained Ability to maneuver in diverse contexts with Global Perspective
	PO7	Attained Maturity to respond to one's calling
Programme Specific Outcomes	PSO1	Acquire the knowledge of great literary traditions due to their strong influence on British and American literature
	PSO2	Students understand Shakespeare texts in the light of recent approaches
	PSO3	It Enhanced the Employability skills through Communicative Skills, Professional Communication Skills, Creative Writing, Advance Academic Writing and technical writing for Business
		<b>M Com</b>
Programme Outcomes	PO1	Attained profound Expertise in Discipline
	PO2	Acquired Ability to function in multidisciplinary Domains
	PO3	Attained ability to exercise Research Intelligence in investigations and Innovations
	PO4	Learnt Ethical Principles and be committed to Professional Ethics
	PO5	Incorporated Self-directed and Life-long Learning

	PO6	Obtained Ability to maneuver in diverse contexts with Global Perspective
	PO7	Attained Maturity to respond to one's calling
Programme Specific Outcomes	PSO1	The students should keep Qualities of Researcher and Formation of Research Proposal
	PSO2	Know the types of research, Sample design and Sample techniques .
	PSO3	Understand the procedure for data collection and applying statistics to solve problems.
		<b>M. Sc- Chemistry</b>
Programme Outcomes	PO1	Attained profound Expertise in Discipline
	PO2	Acquired Ability to function in multidisciplinary Domains
	PO3	Attained ability to exercise Research Intelligence in investigations and Innovations
	PO4	Learnt Ethical Principles and be committed to Professional Ethics
	PO5	Incorporated Self-directed and Life-long Learning
	PO6	Obtained Ability to maneuver in diverse contexts with Global Perspective
	PO7	Attained Maturity to respond to one's calling
Programme Specific Outcomes	PSO1	Global level research opportunities to pursue Ph.Dprogramme targeted approach of CSIR – NET examination .
	PSO2	Enormous job oppurtunities at all level of chemical , pharmaceutical , food products ,life oriented material industries. Specific placements in R & D and synthetic division of polymer industries & Allied Division.
	PSO3	Discipline specific competitive exams conducted by service commission
		<b>MSc Maths</b>
Programme Outcomes	PO1	Attained profound Expertise in Discipline
	PO2	Acquired Ability to function in multidisciplinary Domains
	PO3	Attained ability to exercise Research Intelligence in investigations and Innovations
	PO4	Learnt Ethical Principles and be committed to Professional Ethics
	PO5	Incorporated Self-directed and Life-long Learning
	PO6	Obtained Ability to maneuver in diverse contexts with Global Perspective
	PO7	Attained Maturity to respond to one's calling
Programme Specific Outcomes	PSO1	Understand the mathematical concepts and applications in the field of algebra, analysis, computational techniques, optimization, differential equations, engineering, finance and actuarial science.
	PSO2	Handle the advanced techniques in algebra, analysis, computational techniques, optimization, differential equations, engineering, finance and actuarial science to analyze and design algorithms solving variety of problems related to real life problems.