Shri. Shivaji Education Society, Amravati`s
Mahatma Fule Arts, Commerce & Sitaramji Chaudhari Science Mahavidyalaya, Warud.
Dist. Amravati – 444 906 ☎(07229) 232022
NAAC Reaccredited with "B" Grage CGPA 2.24 (III[rd] Cycle) (2021-2026)

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Outer No. MFM/ Date: / /

2.6.1. Teachers and students are aware of the stated Programme and course outcomes of the Programme offered by the institution.

- ***Programme outcomes, Programme Specific outcomes and Course outcomes***

Program Outcomes and Course Outcomes

Programme Outcomes: Bachelor of Science (B. Sc.)

- Enrich knowledge of students in all basic sciences
- Ability to identify, formulate and develop solutions to computational challenges
- Develop Scientific temper and Scientific thinking
- Inculcate sense of scientific responsibilities and social & environment awareness
- Help student to build-up a progressive and successful career in academics and industry
- Sensitivity towards environmental concerns and contribute in the development of Nation.

Syllabus for B.Sc. Part-I
Subject: Compulsory English

General Course Outcome (COs) :

1. To facilitate the learners in acquiring listening and speaking competence

2. To assist the learners in independent language comprehension and production

3. To make the students aware of the different communicative functions of English.

4. To impact skills and proficiency for being employed as teachers, state government employees,

civil aviation, engineering and medico-related industry, defense, commerce and taxation sector.

5. To be able to speak, write, read and listen flawlessly in person and through the electronic mode in English.

6. To understand views of others, mediate contradictory views/ disagreements, reaching conclusion in groups / group discussions.

7. To understand and use basic skills of the English language for applying it in the job assigned / employment accepted / profession undertaken.

Course Specific Outcome:

After completion of this course successfully, students would be able to

1. Understand nature and nuances of English Language used in prose lessons, poetic passages.

2. Apply the knowledge of English to communicate with others on personal, social, literary and interdisciplinary topics.

3. Compare the structure of English language to use LSRW.

4. Formulate the sentences as per situational requirement.

5. Differentiate between acceptable and unacceptable sentences in English.

6. Create appropriate, grammatically correct and acceptable sentences in English.

7. Develop general language proficiency through listening, speaking, reading and writing

Course Learning Outcome:

At the end of the Course, student would be able to:

1. Understand the paragraph, prose and poetry.

2. Apply the four skills of language in his daily inter-personal communications.

3. Formulate/ compose his own sentences and able to speak English Language.

4. Converse with other students in English.

5. Communicate their ideas and concepts properly in English.

B. Sc. I Semester I Compulsory English
Course Objective:

- To train and prepare the students to seek and find employment in various field.
- To develop communicative competence in students
- To impart knowledge, ideas and concepts in the technicalities of proper pronunciation, structure, appropriate use and style of the English language as well as the application areas of English Communication.
- To expose the students to the employment opportunities, challenges and job roles.

Course Outcomes:

At the end of the Course, student would be able to:

CO1 Understand the paragraph, prose, poetry

CO2. Apply the four skills of language in his daily routine.

CO3. Formulate/ compose his own sentences and able to speak English Language.

CO4. Collaborate with others students in English.

CO5. Communicate properly their ideas and concepts in English.

B. Sc. I Semester II Compulsory English
Course Objective:

- To train and prepare the students to seek and find employment in various field.
- To develop communicative competence in students
- To impart knowledge, ideas and concepts in the technicalities of proper pronunciation, structure, appropriate use and style of the English language as well as the application areas of English Communication.
- To expose the students to the employment opportunities, challenges and job roles.

Course Outcomes:

At the end of the Course, student would be able to:

CO1 Understand the paragraph, prose, poetry

CO2. Apply the four skills of language in his daily routine.

CO3. Formulate/ compose his own sentences and able to speak English Language.

CO4. Collaborate with others students in English.

CO5. Communicate properly their ideas and concepts in English.

Name of the Programme: B.Sc. Part-I, Semester – I&II
Name of Course – Marathi Compulsory

Course Outcome

Apart from understanding the language, the high level of human values in the society should be inculcated in the students, national integration, social commitment, humanity, patriotism, patriotism, scientific approach, environment protection conservation, compassion etc. Sant Gadge Baba Amravati University has very thoughtfully adopted the policy of determining this course in the context of the new educational policy in accordance with the goal policies set by the Human Resource Commission of the Government.

Course Specific Outcome

Marathi language is not only a subject of learning and teaching but also an effective medium of self-expression. It is also a culture that creates such a person. It should be multi-faceted, along

with this, the direction of the comprehensive study of the language should be indicated to the students, and the various literary types and trends in literature should be identified.

Name of the Programme: B. Sc. Mathematics
Programme Outcomes & Programme Specific Outcomes
POs :

At the end of the programme, graduates would be able to

1. Enhance the knowledge of student in all basic sciences.

2. Identify, formulate and develop solutions to computational challenges.

3. Develop scientific temper and think in a critical manner.

4. Build up progressive and successful career in academics, industry and society.

5. Develop student's abilities and aptitudes to apply the mathematical ideas.

PSOs:

Upon completion of the programme successfully, students would be able to

1. Understand major concepts in all disciplines of Mathematics

2. Formulate and develop Mathematical arguments in a logical manner

3. Gain good knowledge and understanding in advanced Mathematics

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

5. Create sensitivity towards environmental concerns and contribute in the development ofnation.

B. Sc. I Semester-I Mathematics Paper-I
Course Outcomes OF Algebra and Trigonometry

Students will able to

1. Find inverse and normal form of matrices.

2. Evaluate the characteristic equation, eigen value and corresponding eigen vector of a given matrix

3. Evaluate relation between the roots and coefficients of equations.

4. To study application of De Moivre's theorem.

5. Compute summation of trigonometric series.

B. Sc. I Semester-I Mathematics Paper-II
Course Outcomes of Differential and Integral Calculus
Students will able to
1. Define limit and study the basic properties.

2. Classify continuity and discontinuity of the functions.

3. Solve the differentiability and L'Hospital rule with their applications.

4. Describe the geometrical applications of mean value theorems.

5. Evaluate the reduction formulae for integration.

B. Sc. I Semester-II Mathematics Paper-III
Course Outcomes of Differential Equations: Ordinary and Partial
Students will able to

- Solve first order differential equations using different techniques..
- Solve higher order differential equations and orthogonal trajectories.
- Calculate complementary function and particular integral of the second order differential Equation.
- Describe the different methods to solve second order differential equations.
- Illustrate applications of differential equations.

B. Sc. I Semester-II Mathematics Paper-IV
Course Outcomes of Scalar and vector Analysis and Geometry
Students will able to

- Interpret the vectors, their products, differentiation and integration.
- Determine curvature and torsion .
- Apply the concepts of divergence, curls which are useful in physics.
- Describe the different forms of sphere and properties.
- Discuss the equations of cone and cylinder.

B. Sc. I Semester-II Mathematics
Course Outcomes of Mathematics Numerical Ability-I

COs: After completing this course, students would be able to

1. Restate the ideas and concept of HCF & LCM of number and also find square root & cube roots.

2. Illustrate the problem on numbers, ages, percentage, and profit and loss.

3. Analyze ratio and proportion, time, work and distance.

4. Outline the problems on train, simple interest, compound interest, area measurement.

5. Create the Bar graphs, Pie charts and Line graphs.

B. Sc. II Semester-III Mathematics Paper-V
Course Outcomes of Advanced Calculus

Students will able to

1. get knowledge of basic principles of limit and continuity, Taylor's theorem.
2. understand Lagrange's multipliers method and Jacobian.
3. understand the concept of improper integral and Beta-Gamma function.
4. learn the definition of sequence and series and Sandwich theorem.
5. learn various tests for convergence and divergence of series
6. To enhance interest among the students about course.
7. To develop the learning and writing skills.
8. To create mental ability.

B. Sc. II Semester-III Mathematics Paper-VI
Course Outcomes of Partial Differential Equations

Students will able to

1. study partial derivatives, differential equation, real valued functions of two variables and solve the system of homogeneous functions.
2. learn to evaluate partial differential equations, solution of some special type of equations
3. learn to solve methods of partial differential equation of second and higher order.
4. students will be familiar with techniques of Calculus of variations.
5. recognize various methods of separation of variables.
6. To enhances interest among the students about course.
7. To develop the learning and writing skills.
8. To create mental ability

B. Sc. II Semester-IV Mathematics
Course Outcomes of Elements of Algebra

COs: After completing this course, students would be able to

1 . learn the concept of Group, Subgroup and Cosets.
2. explain the significance of the notations of Cosets, Normal subgroups and Quotient group.
3. learn the concept of Homomorphism & Isomorphism and its Theorem.

4. study the properties of Ring and Ideals and Integral domain.
5.familiar with Fundamental concepts of Number theory.
6.To enhances interest among the students about course.
7. To develop the learning and writing skills.

B. Sc. II Semester-IV Mathematics Paper-VIII
Course Outcomes of Classical Mechanics

Students will able to

1. learn radial and transverse component of velocities and acceleration.
2. learn to explain Degree of freedom, Generalized co-ordinates and constraints.
3. learn to expressing the central force motion and areal velocity.
4. explain the significance of coplanar forces, triangle law of forces, parallel forces and equilibrium forces.
5. learn to find work and energy, virtual work and uniform catenary.
6.To enhances interest among the students about course.
7. To develop the learning and writing skills
8. To create mental ability.

B. Sc. III Semester-V Mathematics Paper-IX
Course Outcomes of Mathematical Analysis

Students will able to

- Define Riemann Integral, Integrability of continuous and monotonic functions,
- Understand the proof fundamental theorem of integral calculus, mean value theorem of integral calculus.
- Understand Improper integrals and their convergence, comparison and limit tests.
- Define and Beta and gamma and its applications.
- Have a knowledge of Continuity and differentiability of complex function, analytic function, Cauchy-Riemann equations and their application in analytic functions, harmonic and conjugate functions.
- Find the analytic functions by Milne-Thomson method.
- Have a knowledge of Elementary function, mapping by elementary function, Mobius transformation, fixed point, cross ratio and its application to find the bilinear transformation, inverse and critical points, conformal mapping.
- Have a knowledge about Metric spaces, Definition and examples of metric spaces, neighbourhood, limit point, interior point, open and closed sets, Cauchy sequences, completeness.

B. Sc. III Semester-V Mathematics Paper-X
Course Outcomes of Mathematical Methods

Students will able to

- Define and solve Legendre's equation, Legendre's polynomials, generating function of $P_n(x)$, recurrence formulae for $P_n(x)$, orthogonality of Legendre's polynomial, Rodrigue's formula.
- Define and evaluate Bessel's equation, solution of Bessel's equation, generating function for $J_n(x)$,
- Understand Recurrence formulae for $J_n(x)$. Strun-Liouville boundary value problem.
- Understand and apply the fundamental concept of Fourier series,
- Find the Fourier series for odd and even functions, half-range Fourier sine series and half-range Fourier cosine series.
- Learns the method and properties of Laplace transform of some elementary functions, existence of Laplace transform
- Understand Laplace transform of derivatives and integrals, multiplications of t^n and division by *t*, inverse Laplace transform,
- Understand the convolution property, application of Laplace transform in solving ordinary and partial differential equations.
- Understand and apply the fundamental concept of Fourier Transform: Finite Fourier sine transform, inverse finite Fourier sine transform and cosine transform, Infinite Fourier transform, infinite Fourier sine transform and cosine transform, properties of Fourier transform, application to pde.

B. Sc. III Semester-VI Mathematics Paper-XI
Course Outcomes of Linear Algebra

Students will able to

- Understand the Definition and example of vector spaces, subspaces, sum and direct sum of subspaces, linear span, linear dependence, independence and their basic properties, basis , finite dimensional vector spaces ,existence theorem for bases, invariance of the number of elements of a basis set, dimension
- Apply the properties of linear transformations to linearity of transformations, kernel and rank of linear transformations using rank – nullity theorem, inverse transformations to solve the problems of matrix transformations, change of basis.
- Define the Dual space, bidual space.
- State and prove the theorems on natural isomorphism,Define the adjoint of a linear transformation,
- Understand Eigen values and eigenvectors of a linear transformation and solve examples on it.
- Use the concept of inner product spaces to find norm of vectors, distance between vectors, check the orthogonality of vectors, to find the orthogonal and orthonormal basis.

- State and prove Cauchy-Schwarz inequality, orthogonal vectors, orthogonal complements, orthonormal sets and bases, Bessel's inequality for finite dimensional spaces, Gram Schmidt orthogonalisation process.
- Understand the concept of Modules, submodules, quotient modules, homomorphism and isomorphism theorems.

B. Sc. III Semester-V Mathematics Paper-XII

Course Outcomes of Linear Algebra

Students will able to

- Have a knowledge of Newtonian Mechanics and understand Inertial frames, speed of light and Galilean relativity, relative character of space and time, postulates of special theory of relativity, Lorentz transformation and its geometrical interpretation, group properties of transformation.
- Understand the concept of Composition of parallel velocities, length contraction, time dilation, transformation equation for components of velocities and acceleration of a particle, Lorentz contraction factor. The thermodynamics of moving systems: The two laws of thermodynamics for a moving system, the Lorentz transformation for thermodynamics quantities a) volume and pressure b) energy c) work d) heat e) entropy f) temperature.
- Have a knowledge of Four dimensional Minkowskian space-time of relativity , time like and space like intervals , proper time , world line, four vectors and tensors in Minkowskian space-time ,past, present and future null cone .
- Understand the concept of basic tensors, covariant, contravariant, mixed , operations on tensors, outer product, inner product, quotient law.
- Understand the concept of Relativistic Mechanics**.** Variation of mass with velocity, equivalence of mass and energy, transformation equation for mass, momentum and energy, relativistic force and transformation equations for its components, relativistic Lagrangian and Hamiltonian, the energy momentum tensor.

Faculty: Science and Technology

Programme: M.Sc. Mathematics

POs

At the end of the programme, students would be able to

• Apply knowledge of Mathematics, in all the fields of learning including higher research and its extensions.

• Innovate, invent and solve complex mathematical problems using critical understanding, analysis and synthesis.

• Adjust themselves completely to the demands of the growing field of Mathematics by lifelong learning.

• Effectively communicate about their field of expertise on their activities, with their peer and society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations

• Crack lectureship and fellowship exams approved by UGC like CSIR – NET and SET.

PSOs

Upon completion of the programme successfully, students would be able to

• Develop problem-solving skills and apply them independently to problems in pure and applied mathematics.

• Understand advanced mathematical knowledge and skills that prepare them to pursue further studies and research.

• Understand advanced and pure mathematical concepts and research.

• Create knowledge, capability in formulating and analyzing mathematical models of real life applications.

• Analyze the latest advances in applied mathematics such as numerical computations and mathematical modeling in physical sciences.

Programme : M.Sc.-I (Mathematics) Semester- I
Course Outcomes of Research Methodology and IPR

COs:

On successful completion of this course, students would be able to

• understand the role of research methodology in Mathematics.

• understand data collection methods and basic instrumentation.

• understand literature review process and formulation of a research problem.

• create awareness at intellectual property and patents.

• learn technical writing and communication skills required for research.

Programme : M.Sc.-I (Mathematics) Semester- I
Course Outcomes of Real Analysis
COs:

On successful completion of this course, students would be able to

• restate the ideas and concept of Riemann – Stieltjes integral with some of its properties and apply the fundamental theorem of integration.

• apply the Weierstrass M-test, Abel's and Dirichlet's tests for uniform convergence of sequences.

• differentiate between uniqueness theorem for power series, Abel's limit theorem and Tauber's first theorem.

• recognize the functions of several variables, linear transformation, partial and higher order derivatives in an open subset of R.

Programme : M.Sc.-I (Mathematics) Semester- I
Course Outcomes of Advanced Abstract Algebra

COs:

On successful completion of this course, students would be able to

• recall the concepts of coset and normal subgroup and to prove elementary propositions involving these concepts.

• recognize different types of subgroups such as normal subgroups, cyclic subgroups and understand the structure and characteristics of these subgroups.

• demonstrate the homomorphism, Sum and direct sum of ideals, maximal and prime ideals, nilpotent and nil ideals.

• translate the transition of important concepts of homomorphisms and isomorphisms from discrete Mathematics to advanced abstract Mathematics.

Programme : M.Sc.-I (Mathematics) Semester- I
Course Outcomes of Complex Analysis

COs

On successful completion of this course, students would be able to

• identify Cauchy integral formula apply to find the value of function at inside point of the region.

• express the function in series of positive and negative power of variable in a given region.

• record the concept of singularities to find integral of complex valued function on some simple connected region and multi connected region.

• apply the residue theorem to compute several kinds of real integrals.

Programme : M.Sc.-I (Mathematics) Semester- I
Course Outcomes of Differential Geometry (Optional)

COs

On successful completion of this course, students would be able to

• discuss the local intrinsic properties of a surface, curves on a surface, surfaces of revolution.

• design arguments in the geometric description of family of curves and surfaces in order to establish basic properties of geodesics.

• apply Geodesics theorem and restate the Gaussian Curvature, Surface of constant curvature, conformal and Geodesic mappings.

• recognize the tensor calculus, tensor product of vector spaces, transformation formulae, contraction special tensors, and inner product.

Programme : M.Sc.-I (Mathematics) Semester- II
Course Outcomes of Advanced Linear Algebra and Field Theory

COs

On successful completion of this course, students would be able to

• recall the concepts of eigen values , eigen vectors and polynomials.

• explain quadratic form, linear transformation, canonical and normal form.

• describe the concepts of algebraic extension of fields.

• understand the concepts of Galois theory and its application.

Programme : M.Sc.-I (Mathematics) Semester- II
Course Outcomes of Integral Equations

COs:

On successful completion of this course, students would be able to

• understand the type of integral equations.

• categorize Volterra integral equations of first and second kinds.

• determine the solution of Fredholm integral equations of the second kinds.

• define the concepts of iterated kernels and reciprocals kernels.

Programme : M.Sc.-I (Mathematics) Semester- II
Course Outcomes of Topology

COs:

On successful completion of this course, students would be able to

• demonstrate the concepts such as topological spaces, open and closed sets, interior, closure and boundary.

• categorize some important concepts like continuity, compactness, connectedness, projection mapping etc. and prove related theorems.

• relate the basic concepts of countability axiom, separation axioms and convergence in topological spaces.

• distinguish between the regular, normal and completely regular spaces.

• categorize some important concepts of metric spaces.

Programme : M.Sc.-I (Mathematics) Semester- II
Course Outcomes of Measure And Integration Theory

COs:

On successful completion of this course, students would be able to

• analysis Lebesgue outer measure, regularity and Lebesgue measurability

• explain integration and non-negative function, the general integral, Riemann and Lebesgue integrals

• demonstrate the concepts of four derivatives, differentiation and integration

• discuss the measure and outer measure

Name of the Programme: B.Sc. PHYSICS

Programme outcomes & programme specific outcomes

POs:

At the time of graduation, Students will be able to

PO1.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.

PO2.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.

PO3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. 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.

PO5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

PSOs:

Upon completion of the Programme successfully, students would be able to

1. acquire a comprehensive knowledge and sound understanding of fundamentals of Physics

2. develop laboratory skills, enabling them to take measurement in a physic laboratory and analyze the measurements to draw valid conclusions.

3. be prepared to acquire a range of general skills, to solve problems, to evaluate information, to use computers productively, to communicate with society effectively and learn independently.

4. Develop good oral and written scientific communication skill.

Course Outcomes of Physics
B. Sc. part-I Semester I
Course Outcomes of Mechanics, Properties of matters, Oscillations & Relativity

Students will able to

- Discuss the basic concepts of rotational dynamics.
- Examine the phenomenon of simple harmonic motion and distinction between undamped, damped and force oscillations and the concept of resonance.
- Explain the superposition of simple harmonic motion and acquire the knowledge of Ultrasonic waves, their production, detection and applications in different field.
- Determine the constants of elasticity and relate it with appropriate things
- Interpret the postulates of special theory of relativity.
- Know the concept of Global positioning system (GPS)
- Apply the principles of measurement and error analysis.
- Develop the skills to handle various instruments with precision.

Course Outcomes of Physics
B. Sc. part-I Semester I
Course Outcomes of (Laboratory/Practical/practicum/hands on/Activity)
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On successful completion of this practical course, the students would be able to

1. List out, identify and handle various equipment likes different types of pendulum.

2. Learn the procedures of operation of various oscillating objects.

3. Acquire skills in observing and measuring different types of errors.

4. Perform procedures and techniques related to experiments based on mechanics.

5. Conduct an experiments collaboratively and ethically.

B. Sc. part-I Semester II
Course Outcomes of Electrostatics, Magnetostatics, Ultrasonic Waves and Acoustics,Network Theorems
COs

After going through the course, the student would be able to

7. Discuss the concept of scalars & vectors and their properties.

8. Develop an understanding of Gauss law and its applications to obtain electric filed in different cases.

9. Formulate the relationship between electric displacement vector, electric polarization and dielectric constant.

10. Distinguish between the magnetic effect of electric current, electromagnetic induction and the related laws in appropriate circumstances.

11. Simplify electrical circuits by applying various network theorems.

3. Make use of Multi meter for the measurement of electrical parameters and get the knowledge of electronic components and their applications.

4. Estimate the power consumption of domestic appliances and carry out energy audit.

B. Sc. part-I Semester II
Course Outcomes of (Laboratory/Practical/practicum/hands on/Activity)

COs

On successful completion of this practical course, the students would be able to

- 6. Simplify various electrical circuits by using network theorems.
- 7. Learn the procedures of operation of electrical components like capacitor, resistor and inductor.
- 8. Acquire skills in measuring dielectric constants of different materials.
- 9. Perform procedures and techniques related to experiments based on electrical and electronic circuits.
- 10. Conduct an experiments collaboratively and ethically.

Course Outcomes B.Sc. Physics
B. Sc. II Semester-III
On successful completion of this course, the student will be able to:

1. Gain knowledge of the fundamental laws of thermodynamics, concept of enthalpy, develop critical understanding of concept of thermodynamic potentials and formulation of Maxwell's thermodynamic relations with its applications.

2. Understand the basic aspects of kinetic theory of gases, Maxwell's distribution law of velocities, Mean free path of molecular collisions and transport phenomena in ideal gases.

3. Examine the nature of black body radiations and understand Stefan-Boltzmann's Law, Rayleigh-Jeans Law and Wien's displacement Law with their significance.

4. Understand the properties of macroscopic systems using the knowledge of individual particles by different theories and comparison of Maxwell's-Boltzmann, Fermi-Dirac and Bose-Einstein statistics.

5. Explain the fundamental understanding of static and dynamic behaviour of P-N junction diode, Zener diode, light emitting diode and Transistor.

6. Understand concept of rectification, Ripple Factor and Filter Circuits and gain a knowledge of construction of Regulated Power supply.

7. Explain the structure and the operations of transistor and recognize the different types of transistor and their applications.

8. Understand basic concept of heat transfer and analyze process of heat transfer (conduction, convection and radiation)

9. Demonstrate an understanding of concepts involved in semiconductor devices operation and their characteristics.

10. Identify and handle different types of semiconductor devices like diodes & Transistors.

11. Acquire skills in observing and measuring different type of errors.

12. Perform procedures and techniques related to experiments based on Thermal and Semiconductor Physics.

13. Learn best practices for handling, cleaning and maintaining the instruments.

Course Outcomes B.Sc. Physics

B. Sc. II Semester-IV

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

1. Understand the phenomenon of Interference of light and its formation in thin films, Newton's rings and Michelson interferometer (division of amplitude.)

2. Distinguish between Fresnel and Fraunhoffer diffraction and observe the diffraction patterns in case of double slit and diffraction grating.

3. Describe the construction and working of zone plate and compare the zone plate with convex lens.

4. Explain various methods of production of plane, circularly and elliptically polarized light and their detection.

5. Comprehend the basic principle of LASER, the working of He-Ne laser and Ruby laser and their applications in various fields.

6. Understand the parameters of fiber-optics and explore their applications.

7. Understand the kinematics of moving fluid by different theorems and Laws.

8. Gain Knowledge about different applications of transistor by operational amplifier and oscillator circuits.

9. Understand the different optical phenomena like Interference, Diffraction and Polarization.

10. Determine the wavelength of light by different phenomena like Interference and diffraction.

11. Demonstrate an understanding of the key concepts of LASER & Fiber Optics

12. List out, identify and handle different types of passive and active devices (resistors, capacitors, inductors, diodes & Transistors.

13. Acquire skills in observing and measuring different types of errors.

14. Perform procedures and techniques related to experiments based on Optics and Semiconductor Physics.

15. Learn best practices for handling, cleaning and maintaining the equipment, components & devices.

Course Outcomes B.Sc. Physics

B. Sc. III Semester-V

Students will able to

- Have a knowledge about the black body radiation.
- Study of Plank's radiation law & photoelectric effect.
- Study Compton effect& Heisenberg's uncertainty principle.
- Know the Schrodinger's wave equation.
- Understanding mathematical operator's.
- Study motion of particle in rectangular box.
- Know the different atomic models.
- Understand quantum numbers.
- Study Raman effect.
- Have the knowledge about the theory of nucleus.
- Understand alpha & beta decay.

- Study Nuclear reaction & reactor.
- Know the h-parameters.
- Understand concept of amplifier, study Noise & distortion in amplifier.
- Know the concept of feedback, electronic oscillators, study of multivibrators.
- Understand above concepts through experiments in laboratory and develop numerical solving technique in students

Course Outcomes B.Sc. Physics
B. Sc. III Semester-VI

Students will able to

- Have the knowledge about the phase space, unit cell, micro & macro states, Boltzmann's entropy relation
- Study Maxwell-Boltzmann statistics & its applications.
- Know the concept of boson & fermions.
- Understand Bose-Einstein statistics & its applications.
- Study Fermi-Dirac statistics & its applications.
- Know the crystalline & amorphous solids.
- Understand different crystal structures & X-ray diffraction, crystal defects.
- Know the concept of drift motion.
- understand Fermi energy.
- Study band structure in solids.
- Have knowledge about the concept of magnetism.
- Understand types of magnetic materials.
- Study Hysteresis.
- Know the concept of superconductors.
- Understand types of superconductors & BCS theory.
- Study Basic concepts of nanotechnology.
- Understand above concepts through experiments in laboratory and develop numerical solving technique in students.

Faculty: Science and Technology
Programme: M.Sc Physics

POs:

On completion of program, students would be able to

1. Gain advanced knowledge, general competence, and analytical skills that are required in industry, consulting, education, and research.

2. Instill an inquisitive mindset in the students so that they are capable of independent and critical thinking.

3. Get trained in such a way that they can objectively carry out investigations, scientific and/or otherwise, without being biased or without having any preconceived notions.

4. Apply the knowledge and skill in the design and development of Electronics circuits to fulfil the needs of Electronic Industry.

5. Become professionally trained in the area of electronics, optical communication, nonlinear circuits, materials characterization and lasers.

6. Develop research problems related to Physics and Materials characterization and applications.

7. Get nurtured as good researchers in the field of technology too.

8. Demonstrate highest standards of Actuarial ethical conduct and Professional Actuarial behavior, critical, interpersonal and communication skills as well as a commitment to life-long learning.

PSOs:

Upon completion of the programme successfully, students would be able to

1. Understand the basic concepts of physics particularly concepts in classical mechanics, quantum mechanics, statistical mechanics, electrodynamics and electronics to appreciate how diverse phenomena observed in nature follow from a small set of fundamental laws.

2. Learn how to perform experiments in basic as well as advanced areas of Physics such as Nanomaterials, Condensed Matter Physics, Electronics and Photonics.

3. Develop Analytical and integrative problem-solving methodologies through research-based learning.

4. Pursue research careers, careers in academics, in industries in physical science and in allied fields.

Programme M.Sc. Physics Semester I
Course Outcomes of Research Methodology and Intellectual Property Rights

Upon completion of the course successfully, students would be able to

1. Understand the steps in research and pure and applied research.

2. Formulation of selected problem and understand the research design.

3. Test the research hypothesis, understand the data collection and prepare the scientific research paper.

4. Understand Characterization techniques in Physics

5. Explore on various IPR components and patent writing.

6. Understand the adequate knowledge on patent and rights

7. Identify an appropriate research problem in their interesting domain.

8. Understand the review and planning of research.

9. Get knowledge of data collection and preparation of a research report.

10. Know about the intellectual property rights (IPR).

11. Understand the adequate knowledge on patent rights.

Programme M.Sc. Physics Semester I
Course Outcomes of Mathematical Physics

Upon completion of the course successfully, students would be able to

1. Explain vector spaces and transformations, the algebra of matrix, partitioning of matrices; solve the eigen value problems.

2. Analyze limits and continuity for complex functions as well as consequences of continuity; apply the concept and consequences of analyticity and the Cauchy-Riemann equations;

3. Obtain the solution of second-order differential equation and apply the properties of Legendre Polynomial to solve boundary value problems.

4. Apply the knowledge of Bessel and Hermite functions for the solution of differential equation and related problems in physical sciences.

5. Solve transfer functions in Instrumentation using Laplace transforms.

6. Apply Fourier transforms to transform the signal into different domains.

Programme M.Sc. Physics Semester I
Course Outcomes of Classical Mechanics

After successfully completing the course, student will be able to:

1. Define and understand basic mechanical concepts related to advanced problems involving the dynamic motion of classical mechanical systems and describe and understand the motion of the forces in non-inertial systems.

2. Describe and understand the motion of a mechanical system using Lagrange's formalism.

3. Describe and understand the motion of a mechanical system using Hamilton's formalism.

4. State the concept of two body central force problem, reduction to the equivalent one body problem, equation of motion and first integral, Virial theorem.

5. Able to explain the Canonical Transformations, figure out the Small oscillations, principal axis transformation, normal coordinates and its applications to linear molecules.

Programme M.Sc. Physics Semester I
Course Outcomes of Quantum Mechanics I

Upon completion of the course successfully, students would be able to

1. discuss and explain the key concepts and principles of quantum physics

2. use quantum mechanical axioms and the matrix representation in quantum mechanics

3. Solve the Schrödinger equation for standard systems with both analytical and numerical methods, and then interpret the results.

4. describe orbital angular momentum operators and their eigen values.

5. describe angular momentum addition rules and CG coefficients.

6. use approximate methods for solving the Schrödinger equation.

Programme M.Sc. Physics Semester I&II
Course Outcomes of Computational Methods and C Programming

Upon completion of the course successfully, students would be able to

After successfully completing the course, student will be able to:

1. understand digital world of computer where fast calculation is the key to success, those computational methods are of great practical importance. The syllabus gives the best available methods with numerical and practical examples.

2. apply the methods of differentiation, integration to solve initial value problems and integral equation.

3. understand the important principles, methods and processes used for calculating results to the desired degree of accuracy.

4. develop and execute C to solve computational problrms.

5. develop flowchart a powerful aid for programming to find solutions of difficult problems.

6. understand critical features such as pointers that are central to C programming.

Programme M.Sc. Physics Semester II
Course Outcomes of Quantum Mechanics II

Upon completion of the course, students will:

1. be able to derive and apply time-independent perturbation theory to solve simple problems for which no analytic solutions exist.

2. be able to derive and apply the results of time-dependent perturbation theory up to first order and to derive and apply Fermi's golden rule, and explain the relevance of selection rules for atomic transitions and opto-electronic phenomena in solids.

3. understand background allowed and forbidden transitions.

4. learn the quantum mechanics of scattering and its role to understand matter at subatomic level.

5. learn the quantum mechanics of identical particle systems.

6. learn the advanced concepts of relativistic quantum mechanics involving the Klein Gordon and the Dirac equations.

Programme M.Sc. Physics Semester II
Course Outcomes of Electromagnetic Theory

Upon completion of the course successfully, students would be able to

1. acquire the extensive knowledge of electrostatics.

2. acquire the extensive knowledge about dielectric properties of the substances.

3. acquire the extensive knowledge of magnetostatics.

4. understand the significance of Maxwell’s equations, concept of electromagnetic fields and electrodynamics.

5. apply the concepts of electrodynamics to explore power radiated by oscillating electric dipole and radiation pressure.

6. explore the propagation of electromagnetic waves in various media and wave guides.

Programme M.Sc. Physics Semester II
Course Outcomes of Atomic and Molecular Physics

Upon completion of the course successfully, students would be able to

1. describe structure atom by drawing the vector diagram and the physical interpretation of atom using quantum numbers.

2. explain the quantum behaviour of atoms in external electric and magnetic fields.

3. explain the coupling schemes and spectral line broadening in external fields to understand the fine structure of alkali elements.

4. recognize the spectroscopy of many electron atomic systems and hyperfine splitting of spectral lines through Resonance Spectroscopy (ESR and NMR)

5. understand the importance of rotational and vibrational energy levels by studying molecular spectroscopy.

6. describe the Infrared and Raman spectra of polyatomic molecules and interpret the results from spectra.

Programme M.Sc. Physics Semester II
Course Outcomes Network Theorems and Solid State Devices

Upon completion of the course successfully, students would be able to

1. analyse ac and dc networks.

2. use diodes, UJT and SCR to design circuits for various applications

3. design and construct regulated power supply and SMPS.

4. design and construct single stage and two stage amplifier circuits.

5. design and construct oscillators and multivibrators.

6. identify various transducers and use measuring instruments.

Programme M.Sc. Physics Semester III
Course Outcomes of Statistical Mechanics

Upon completion of the course successfully, students would be able to

CO1 Understand the concept of microscopic and macroscopic states and relationship between thermodynamics and statistics; classify ensembles, relate partition function with thermodynamic quantities.

CO2 Discuss statistics of indistinguishable particles, application of Fermi-Dirac and Bose-Einstein distribution to these particles.

CO3 Interpret classical (Maxwell-Boltzmann) statistics and quantum statistics (Bose and Fermi Dirac) statistics for different systems of particles.

CO4 Discuss phase transition, transport phenomenon and correlate space – time dependent fluctuations.

CO5 Understand the concept of super-fluidity, Landau's theory and non-equilibrium processes.

Programme M.Sc. Physics Semester III
Course Outcomes Of Atomic & Molecular Physics

COs After completing the course, students must be able to

CO1 describe VAM and quantum numbers and understand spectroscopy of the hydrogen and alkali atoms

CO2 discuss of quantum behaviour of atoms in external electric and magnetic fields and recognize the spectroscopy of many electron atomic systems and hyperfine splitting of spectral lines

CO3 discuss Paschen Back effect, Stark effect, apply coupling schemes for two electron atoms and describe Resonance Spectroscopy (ESR and NMR)

CO4 be able to apply knowledge to detailed understanding of vibrationalrotational spectroscopy of diatomic molecules, isotope shifts and the detailed concept of Infrared and Raman spectra of Polyatomic molecules.

CO5 discuss the importance of rotational and vibrational energy levels by studying molecular spectroscopy.

Programme M.Sc. Physics Semester III
Course Outcomes of Radiation and Plasma Physics

COs After completing the course, students must be able to

CO1 discuss charged particle dynamics and radiation from localized time varying electromagnetic sources and the basic mathematical concepts related to electromagnetic vector fields.

CO2 discuss and solve wave equation for electric field and magnetic fields in free space.

CO3 be familiar with concepts of plasma physics and its relation with ordinary electromagnetics.

CO4 discuss the concept and application of wave guide, plasma and confinement and effect of magnetic field on electromagnetic wave.

CO5 Be familiar with the Magnetosonic and Alfven Waves

Programme M.Sc. Physics Semester III
Course Outcomes of Condensed Matter Physics -I

COs After completing the course, students must be able to

CO1 Discuss the concept of band theory using models and theorems functional materials from an experimental viewpoint, solid state theory and properties; classify different crystal lattice types and state its correlation with reciprocal lattice and crystal diffraction.

CO2 Describe the origin of magnetism in solids and discuss classical and quantum theories for the paramagnetic solids.

CO3 Discuss the properties and origin ferromagnetism in solids and related theories.

CO4 Describe the dielectric properties of insulators and polarization mechanisms, outline its application in day-to-day life

CO5 Explain basic concepts of superconductivity, its properties, important parameters related to possible applications

Programme M.Sc. Physics Semester IV
Course Outcomes of Nuclear and Particle Physics

COs After completing the course, students must be able to

CO1 Understand the structure of atomic nuclei and basic properties of a nucleus such as binding energy and nuclear forces, the experiments to measure nuclear magnetic moment by Rabi's method and Block's method

CO2 Interpret ground state properties of Deuteron, discuss Meson Theory of Nuclear forces, beta decay and parity violation in the beta decay process.

CO3 Understand the concept of neutron physics, neutron energy sources and detectors.

CO4 Understand the process in particle detection and accelerations; identify and differentiate different nuclear detectors and particle accelerators.

CO5 Classify elementary particles and understand interaction between them.

Programme M.Sc. Physics Semester IV

Course Outcomes of Op-Amp Theory and its Applications

COs After completing the course, students must be able to

CO1 discuss the designing, operation and parameters of differential amplifier.

CO2 discuss the block diagram, parameters and applications of operational amplifier.

CO3 describe the parameters of op-amp and circuit to determine these parameters.

CO4 design the signal generators, oscillators and low and high pass first and second order filters.

CO5 understand and design multi-vibrators, ADC and PLL circuits.

Programme M.Sc. Physics Semester IV

Course Outcomes of Nano-science and Nanotechnology

COs After completing the course, students must be able to

CO1 understand the concept of free electron theory and 1D, 2D, 3D nanomaterials, band structure in three dimensions.

CO2 understand various chemical and physical methods for the synthesis of diverse types of nanomaterials (0D, 1D and 2D); derive information on the specific details of both bottom up and top-down synthesis

CO3 understand working principles and analysis of size, topography and morphology analysis of nanomaterials based on SEM/TEM and scanning probe microscopies (AFM and STM).

CO4 describe the size dependent properties of nanostructured materials using the

concept of quantum confinement and summarize their electrical and mechanical properties.

CO5 acquire the knowledge of carbon nanostructures and illustrate their potential applications.

Programme M.Sc. Physics Semester IV

Course Outcomes of Condensed Matter Physics – II

COs After completing the course, students must be able to

CO1 identify different type of defects and imperfections in crystals.

CO2 explain various dislocations and stacking faults in close packed structures by experimental methods.

CO3 interpret the Hartee & Hartee-Fock approximation; understand the basics of Fermi Liquid Theory.

CO4 describe different types of point defects within the frame work of band model.

CO5 identify different types of lattice disorders applying theoretical models, summarize impurity band semiconductor and amorphous semiconductors.

Department of Electronics
Programme Outcomes and Programme Specific Outcomes

Program Outcomes (POs):
At the end of the programme, students would be able to

1) Utilize the basic knowledge in Electronics science.

2) Identify electronic components and ICs.

3) Design system components that meet the requirement of public safety and offer solutions to the societal and environmental concerns

4) Apply research based knowledge to design and conduct experiments

5) Construct, choose and apply the techniques, resources and modern electronics tools required for Electronics applications.

6) Apply the contextual knowledge to assess societal, health, safety and cultural issues and endure the consequent responsibilities relevant to the professional electronics practice.

7) Examine the impact of electronics solutions in global and environmental contexts and utilize the knowledge for sustained development.

8) Develop consciousness of professional, ethical and social responsibilities as experts in the field of Electronics and Communication.

9) Perform effectively as a member/leader in multidisciplinary teams.

10) Demonstrate resourcefulness for contemporary issues and lifelong learning.

Program Specific Outcomes:

Upon completion of the programme successfully, students would be able to

1. acquire knowledge in fundamental aspects of all branches of Electronics

2. create inquisitiveness and problem-solving skills

3. apply the principles of Electronics in solutions to real world problems

4. get prepared for higher education and career in Electronics

5. develop skills in the proper handling of apparatus and components

6. apply Electronics in their day to day life

7. act as a responsible citizen

8. Select and apply cutting-edge engineering hardware and software tools to solve complex Electronics and Communication Engineering problems

9. Apply the fundamental concepts of electronics and communication science to design a variety of components.

B. Sc. Electronics I Semester –I
Course outcomes of Basic Electronics

Cos

Unit I : Passive Components and Network –

At the end of this unit, students will be able to know passive and active components, analysis and verification of network theorems with numericals. Also students will be able to select and identify electronic components such as resistors capacitors etc. of required value.

UNIT II: Measuring Instruments :

After this unit, students will be able to understand principle and working of different meters and CRO . They will be able to handle and connect the measuring instruments such as Voltmeter, Ammeter etc. at appropriate place

Unit III: Semiconductor Diode and Regulated power supply:

At the end of this unit, students will be able to know function of diodes, rectifiers and voltage regulators. They will be able to design simple dc power supply.

Unit IV: Bipolar Transistors:

After completion of this unit, students will be able to know types transistor and their working in different modes, amplification and biasing, faults detection in electronic circuits. Also they will be able to design and construct simple amplifiers.

Unit V: Switching and Optoelectronic devices :

At the end of this unit, students will be able to know Switching and Optoelectronic devices and their working. They will be able to use these active devices for many applications.

Unit VI: Integrated Circuits:

After completion of this unit, students will be able to know design and fabrication process of ICs and their scale of integration.

B. Sc. Electronics I Semester –II
Course outcomes of Digital Electronics

COs

Unit I: Binary Arithmetic & Logic gates :

After completion of this unit, students will be able to know number systems and binary codes, their interconversion and arithmetic, logic gates, use of logic gates in adders. They will be able to design and construct logic circuits using logic gates.

Unit II: Boolean Algebra & Logic families:

At the end of this unit, students will be able to understand Boolean algebra, De'Morgan's theorem, logic equations, K-map and logic families like DTL,TTL etc. They will be able to minimise logic equation, design and construct logic circuits using logic gates.

Unit III: Multivibrators and Flip Flops:

At the end of this unit, students will be able to know construction and working of multivibrators and flip-flops. Also they will be able to design and construct different types of flip-flops using logic gates.

Unit IV: Counters and Shift registers:

At the end of this unit, students will be understand the construction and working of different types of counters and shift registers and their IC version. They will be able to design and construct different types of counters and shift registers using flip-flops and logic gates.

Unit V: Combinational logic circuit:

After this unit, students will be know the construction and working of different types of encoders, decoders, multiplexers and demultiplexers and their IC version. They will be able to design and construct different types of encoders, decoders, multiplexers and demultiplexers using logic gates.

Unit VI: Semiconductor Memories:

At the end of this unit, students will be able to know different types of memories and their working. They will be able to access these memories in serial and parallel mode (to read and write operations).

Course outcomes of B. Sc. Electronics
B. Sc. II Semester –III

1. At the end of this unit, students will be able to know what is hybrid parameters. What is equivalent circuits of CE,CB and CC . What is concept of coupling? Which are different types of coupling etc.

2. At the end of this unit, students will be able to understand which are different types of power amplifier, How transformer is use as a coupling device. How power amplifier is work. Which are different stages of coupling etc.

3. At the end of this unit, students will be able to know, what is mean by feedback. Physically how circuits are connected as positive or negative type. What is oscillator, Which are basic elements of oscillator. What is tank circuit, Which are different types of oscillators etc.

4. At the end of this unit, students will be able to know, Block diagram of operational amplifier, Characteristics of ideal op amp, concept of virtual ground, Parameters of op amp. Op amp as inverting and non-inverting amplifier, Adder, Subtractor, Differentiator, Integrator, Regenerative comparator.

5. At the end of this unit, students will be able to know, Solution to simultaneous equation, Astable, Monostable and Bistable multivibrator using Op Amp. Need of A/D and D/A convertor, D/A convertor- R-2R ladder type, Weighted register, Sampled and hold circuit, IC ADC and DAC specifications. A/D convertorSingle slope, Counter type, Successive approximation type.

Course outcomes of B. Sc. Electronics
B. Sc. II Semester –IV

1. After completion of this unit, students will be able to know Need for modulation, AM theory, Power relation, Theory of FM, Frequency spectrum of AM and FM, Generation of AM and FM, Difference between AM and FM, Demodulator: Diode detector, slope detector. Transmitter and receiver: Block diagram and working of AM and FM transmitter and receiver

2. After completion of this unit, students will be able to know Advantages and disadvantages of OFC, Block diagram of OFC, Types of optical fibers, Total internal reflection, Jointer and Coupler, Fiber alignment, joint losses. Pulse modulation, Sampling theorem, PAM, PWM, PPM, and PCM (Bandwidth of PCM and quantizing noise), Multiplexing principles: TDM and FDM.

3. At the end of this unit, students will be understand what is history of microprocessor, block diagram of microprocessor, how microprocessor work, what is function of each pin, skill of identify the pins and instruction, how to plot timing diagram of instruction etc.

4. At the end of this unit, students will be understand what is instruction, skill of development of algorithm and flowchart, identify what is difference between assembly language and machine language, skill of writing programs for Addition, Subtraction, Multiplication, Division, finding maximum and minimum number etc.

5. At the end of this unit, students will be understand what is interfacing, which are different types of memory, what is PPI, which ICs are used for PPI , What is block diagram of 8255, what is function of each blocks etc.

Course outcomes of B. Sc. Electronics
B. Sc. III Semester –V and VI
Students will able to

- Have the knowledge about the basic instrumentation, measurement of temperature, timer and PLL
- Understand the display, digital instrument and recorder, sensor and actuators, biomedical electronics
- Study the advanced microprocessor and microcontroller and know the 8086 architecture, programming of 8086,
- Understanding the 8051 microcontroller architecture, its instruction set and programming, 8051 interfacing and applications.

Name of the Programme: B. Sc. Chemistry
Programme Outcomes and Programme Specific Outcomes

POs:

At the time of graduation, Students would be able to

PO1.Critical Thinking: Take informed actions after identifying the assumptions that frame ourthinking 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.

PO2.Effective Communication: Speak, read, write and listen clearly in person and throughelectronic media in English and in one Indian language, and make meaning of the world byconnecting people, ideas, books, media and technology.

PO3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. Effective Citizenship: Demonstrate empathetic social concern and equity centred nationaldevelopment, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

PSOs:

Upon completion of the programme successfully, the learners would be able to

1. Understand the scope, methodology and application of modem chemistry.

2. Apply theoretical and practical concepts of instruments that are commonly used-in most chemistry field.

3. Plan and conduct scientific experiments and record the results of such experiments.

4. Get acquainted with safety of chemicals, transfer, and measurements of chemicals, preparation of solutions, and using physical properties to identity compounds and chemical reactions.

5. Describe how chemistry is useful to solve social, economic and environmental problem and issues facing our society in energy, medicine, and health.

B. Sc. Chemistry I Semester –I
Course outcomes of CHE (1S) T Chemistry 1S
Students will able to

- Solve the conceptual questions using the knowledge gained by studying periodicity in atomic radii, ionic radii, ionization energy and electron affinity of elements.
- Apply concepts of acids and bases as well as non-aqueous solvents and their industrial usage.
- Compare different reaction intermediates, functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.
- Choose correct synthetic approach to prepare derivatives of industrially important molecules
- Solve different numerical problem of varying difficulty associated with gaseous and liquid state.

- Apply the concepts from advanced mathematics to solve the derivation of different chemical formulae.
- Create models associated with periodic table
- Associate reaction intermediates and functional group chemistry with different types of reaction mechanisms.
- Solve numerical problem associated with gaseous and liquid state.

B. Sc. Chemistry I Semester –I
Course outcomes of CHE (1S) PR Chemistry 1S

COs

At the end of Lab/Practical course, students would be able to

- Synthesise different types of organic compounds.
- Perform the process of filtration, crystallization, melting point, waste management.
- Understand the effect of orientation effect of a group
- Skilfully determine the surface tension, viscosity of liquid.
- Predict the endothermic or exothermic process from heat of solution of a salt.

B. Sc. Chemistry I Semester –II
Course outcomes of CHE (2S) T Chemistry 2S
COs

By the end of this course, the students would be able to:

1. apply the knowledge gained by studying types of bonding, solvation, hybridization and molecular geometries.

2. Draw the correct molecular structures, bond order and bond length.

3. synthesize commercially important compounds of varying carbon backbone.

4. Choose correct synthetic approach to prepare derivatives of industrially important molecules.

5. Solve numerical problems related to crystalline state.

6. Acquire skills to use chemical kinetics to develop mechanism of chemical reactions.

7. Create models associated with molecular geometries, hybridization, MO diagrams.

8. Develop synthetic routes for halo benzenes and benzyl halides.

9. Solve numerical problems associated with crystalline state and chemical kinetics.

B. Sc. Chemistry I Semester –II

Course outcomes of CHE (2S) PR Chemistry

At the end of Lab/Practical course, students would be able to -

- Analyse the given organic compound qualitatively by different tests.
- Prepare the derivative of the provided substance.
- Illustrate the practical skills in volumetric analysis.
- Differentiate types of titrations e.g. acid-base, redox, etc.
- Comprehend the kinetics of reactions and interpret the experimental data.
- Calculate, communicate and analyse the result.

Course outcomes of B. Sc. Chemistry

B. Sc. II Semester –III

By the end of this course, the students will be able to:

1. apply concepts of volumetric and gravimetric analysis

2. use commercial method for extraction of elements and acquaintance of transition series elements

3. compare functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.

4. select correct synthetic approach to prepare derivatives of industrially important molecules

5. solve different numerical problem of varying difficulty associated with thermodynamics, phase equilibrium and colligative properties.

6. apply the concepts from advanced mathematics to solve the derivation of different chemical formulae.

7. Create models associated with stereochemistry

8. Use aldehydes, ketones and carboxylic acids as starting material for different commercially important molecules

9. Solve numerical problem associated with thermodynamics and colligative properties.

10. estimate different metals using a variety of methods.

11. skilfully prepare solution of different concentrations.

12. determine molecular weight of an organic molecule.

13. determine thermodynamic parameters associated with a physical phenomenon and state.

14. use methods of determination of partition coefficient.

Course outcomes of B. Sc. Chemistry

B. Sc. II Semester –IV

COs: By the end of this course, the students will be able to:

1. Application of methods of synthesis of soaps and detergents

2. Commercial method for extraction of elements and acquaintance of transition series elements

3. Compare functional group chemistry through the study of methods of preparation, properties and chemical reactions with underlying mechanism.

4. Choose correct synthetic approach to prepare derivatives of industrially important molecules

5. Solve different numerical problem of varying difficulty associated with electrochemistry and photochemistry.

6. Apply the concepts of UV and IR spectroscopy for structure elucidation.

7. Create charts and posters for nitrogen-based compounds and groups

8. Use of carbonyl compounds for starting material for different commercially important molecules

9. Solve numerical problem associated with thermodynamics and colligative properties.

10. prepare soap from available oil or fat and determine its different parameters.

11. extract different constituents of milk.

12. prepare glucose from cane sugar

13. use advanced instruments like pH-meter, potentiometer, conductometer, etc.

14. determine electrode potential of a metal.

15. determine pH of given soil sample.

Course outcomes of B. Sc. Chemistry
B. Sc. III Semester –V
Students will able to

- Understand Werner's formulation of complexes and identify the type of valencies
- Get importance of electronic spectra of transition series elements
- Solve numerical on crystal field theory
- Have the knowledge of various drugs their synthesis and application
- Knowledge about various pesticides and herbicides
- Acquaint about mode of action of drugs on various diseases
- Understand different terms Lamberts law Beers law, Quantum yield ,Fluorescence, phosphorescence

- Derive expression for rotational spectra, vibrational spectra, band spectra
- Solve numerical on rotational and vibration spectroscopy
- Know idea for preparation of complexes like tetra mine Cu(II) sulphate, hexamine Ni(II) chloride, Prussian blue, Sodium thiosulphate
- Perform titration and estimation by conductometry, potentiometric, polariometrically

Course outcomes of B. Sc. Chemistry

B. Sc. III Semester –VI

Students will able to

- Knowledge of different reaction SN1 and SN2 substitution reaction
- Understand various concept of beers law verification, expressions
- Understand chromatography types
- Know the role Na ,K, Ca, Mg haemoglobin myoglobin in biological system
- Understand different spectroscopic terms In electronic spectroscopy chromophore, auxochrome bathochromic shift, hypsochromic shift
- Know application of electronic spectra for dienes unsaturated aldydes and ketones, aromatic compound
- Understand concept of NMR, Mass spectroscopy and their application in structure determination
- Determination pH of solutionby using hydrogen ,glass, quinhydrone electrode
- Understand different terms of nuclear chemistry Shell model,liquid drop model, meson theory
- Knowledge about nuclear fusion and fission, Q value
- Know the application of radioisotope in industries agriculture and medicine
- Know the idea to perform various titration formaldehyde, ascorbic acid, phenol, aniline, urea
- Develop skill based practicals like separation of mixtures of dyes
- To develop titration skill for conductometry, potentiometry , pH metry.
- Verify lamberts beers law by using colorimeter.

Name of the Programme: M. Sc. Chemistry

Programme Outcomes and Programme Specific Outcomes

Program Outcomes

By the end of the Programme, students would be able to

PO1 Deep subject Knowledge and intellectual breadth Apply the subject knowledge to the solution of real-world problems.

PO2 Professional Ethics Apply ethical principles and commit to professional ethics and responsibilities and norms of the standard practices.

PO3 Creative & 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.

PO4 Innovation, Research and Problem Solving Identify, formulate, review research literature, and analyze complex problems reaching substantiated and innovative conclusions. Design solutions for complex problems with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. Use research-based knowledge and research methods to provide valid conclusions. Demonstrate the knowledge of, and need for sustainable development.

PO5 Team work and Communication Skills Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. Present/communicate research at national/international level, write effective articles, reports and design documentation, make effective presentations, and give and receive clear instructions. Communicate disciplinary knowledge to the community and broader public.

PO6 Professionalism and Leadership Readiness Demonstrate personal accountability and effective work habits, e.g., punctuality, working productively with others, and time as well as workload management. Demonstrate integrity and ethical behavior, act responsibly with the interests of the larger community in mind, and to learn from his/her mistakes. Use the strengths of others to achieve common goals, and use interpersonal skills to coach and develop others. Assess and manage his/her emotions and those of others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.

PO7 Lifelong learning Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

PO8 Competence for Digital World Prepare well for living, learning and working in a Digital Society; Create, select, and apply appropriate techniques, resources, and modern ICT tools to complex activities with an understanding of the limitations. Use existing digital technologies ethically and efficiently to solve problems, complete tasks, and accomplish goals. Demonstrate effective adaptability to new and emerging technologies.

PO9 Global Citizenship Act with an informed awareness of global issues. Engage in initiatives that encourage equity and growth for all.

Program Specific Outcomes:

On completion of M.Sc. Chemistry programme, graduates would be able to:

PSO-1: observe, analyze and interpret chemical phenomena and process

PSO-2: design and develop new molecules/processes with industrial and societal applications

PSO-3: formulate new ideas/concepts in chemical sciences and test them

PSO-4: communicate effectively the principles and practice of chemical sciences

PSO-5: address issues of environment, health and development from a chemical perspective

PSO-6: follow professional ethics in all spheres of activity

PSO-7: function effectively as a member/leader in diverse teams/groups

PSO-8: engage in independent learning in the broadest context of scientific advancement.

M. Sc. Chemistry Semester –I
Course outcomes of Research Methodology and IPR in Chemsitry

Course Outcomes: At the end of the course students would be able to

1. Formulate research problem

2. Test the research hypothesis, understand the data collection and prepare the scientific research paper.

3. Identify various meta data sources for literature survey

4. Communicate research effectively using various online tools

5. Explore on various IPR components and patent writing

6. Apply electronic spreadsheets for chemical calculations, data visualization, and plotting.

7. Apply probability theorem and probability curves in statistical analysis.

8. Perform tests for rejection of data, including T-test, F-test, and Q-test.

9. Utilize the least squares method for deriving calibration graphs in chemical analysis.

M. Sc. Chemistry Semester –I
Course outcomes of Structural Inorganic Chemistry

Course Outcomes: At the end of the course students would be able to

1. predict the nature of bond and its properties through various electronic structural methods; bonding models

2. recognize and assign symmetry characteristics to molecules and objects,

3. understand and analyze structure-property correlation of carbonyls, clusters boron hydrides

4. design new metal carbonyls based on a fundamental understanding of their electronic properties 5. calculate EAN of carbonyls and nitrosyls.

6. appreciate specialized and advanced topics in inorganic and coordination chemistry

7. corelate structure and bonding with reactivity of boron clusters

M. Sc. Chemistry Semester –I
Course outcomes of General Organic Chemistry

Course Outcomes: At the end of the course students would be able to

1. Implement rules of aromaticity to organic molecules

2. Evaluate the organic reactions based on the influence of the substituents on substrate molecules 3. Design organic reactions based on free radical chemistry in order to achieve the required product(s)

4. Sketch organic molecules in different projection formula and assign its configuration.

5. Compare the stability of different conformers

6. Apply their understanding about the organic reactions of industrial significance with respect to the chemo- selectivity, regioselectivity and enantioselectivity.

7. Analyze the product distribution and the stereochemistry of various organic products.

M. Sc. Chemistry Semester –I
Course outcomes of Physical Chemistry – I

Course Outcomes: At the end of the course students would be able to

1. Understand basic and advanced level statistical thermodynamics, and reaction kinetics, electrolytic conductance

2. Apply the concepts of statistical thermodynamics and reaction kinetics to solve complex problems.

3. Demonstrate the ability to use chemical dynamics to solve problems associated with enzyme kinetics, and complex reactions

4. Implement and build theoretical models for reaction rates, thermodynamics, conductometric and potentiometric titration

5. Solve numerical problems associated with statistical thermodynamics, reaction kinetics**.**

M. Sc. Chemistry Semester –I
Course outcomes of Organic Reaction Mechanism

After completion of this course successfully, the students would be able to

1. Predict the orientation and stereochemistry of the product of addition reaction
2. Apply enolate chemistry to achieve molecular complexity
3. Predict the orientation and stereochemistry of the product of elimination reaction
4. Justify the formation of products in the reaction due to anchimeric assistance
5. Design organic reactions in order to achieve the required product(s).
6. Write the reactions and mechanism for the functionalization of aromatic ring

M. Sc. Chemistry Semester –I
Course outcomes of Organic Chemistry Laboratory

Course Outcomes: At the end of the course students would be able to

1. Design the methodologies to develop ecofriendly and green technology for industry and research.
2. Develop methods and remedies for reactions with environmental pollution.
3. Improve scientific practical information orally and in writing.
4. Get awareness about laboratory safety and handling of chemicals.
5. Separate mixture into its constituent using physical and chemical methods of separation.

M. Sc. Chemistry Semester –I
Course outcomes of Physical Chemistry Laboratory

Course Outcomes: At the end of the course students would be able to

1. Apply knowledge to determine reaction rate of chemical reactions
2. Create methods for estimation of concentration of electrolytes in mixture using potentiometry.
3. Corelate nature of graphs in conductometric titrations
4. Improve skill to perform experiment in electroanalytical methods
5. Corelate structure property relationship of conjugated systems
6. Design conjugated polymer of desired optoelectronic property.

M. Sc. Chemistry Semester –II
Course outcomes of Coordination Chemistry

Course Outcomes: At the end of the course, student would be able to

1. recollect the principles of electronic structure, bonding and reactivity of coordination complexes

2. understand the concept of synthesis and stability of transition metal organometallic complexes

3. develop the possible catalytic pathways leading to desired products

4. unravel and interpret the magnetic properties of coordination complexes

5. Apply principles of metal-ligand bonding in predicting the electronic and structural properties of complexes.

6. Analyze the splitting of d orbitals in different coordination geometries (octahedral, square planar, tetrahedral, square-pyramidal, and trigonal bipyramidal complexes) using crystal field theory, considering the Jahn-Teller distortion and spectrochemical series.

7. Evaluate the stability of different oxidation states and ionization energies of transition metal ions based on crystal field effects and variation of lattice energy and heats of hydration.

8. Compare and contrast the limitations of crystal field theory with the adjusted crystal field theory (LFT or ACFT) and molecular orbital theory (MOT) to better describe metal-ligand interactions in transition metal complexes.

M. Sc. Chemistry Semester –II
Course outcomes of Basic Analytical Chemistry

Course Outcomes: At the end of the course students would be able to

1. demonstrate a comprehensive understanding of analytical chemistry principles and techniques

2. recognize and classify different analytical methods and sampling techniques, evaluating their applicability in various scenarios

3. analyze and interpret titration curves and thermograms, applying theoretical concepts to predict behaviour.

4. determine equilibrium constants and pH values accurately

5. comprehend polarography principles and use them to quantitate metal ions and organic compounds

M. Sc. Chemistry Semester –II
Course outcomes of Advanced Organic Chemistry

Course Outcomes: At the end of the course students would be able to

1. Analyse the mechanisms and synthetic applications of various molecular rearrangements

2. Discuss the formation of C-C and C-X single bonds through name reactions.

3. Design the construction of double and multiple bonds through various name reactions,

4. Explain the carbonyl methylenation using reagents such as Tebbe reagent, Petasis reagent, and Nystedt reagent.

5. Analyse the preparation and synthetic applications of enamines, focusing on the Stork enamine reaction.

6. Utilize the synthetic application of organometallic reagents for achieving molecular complexity

M. Sc. Chemistry Semester –II
Course outcomes of Inorganic Chemistry LaboratoryII

Course Outcomes: At the end of the course students would be able to

1. Design the methodologies to develop ecofriendly and green technology for industry and research.

2. Develop methods and remedies for reactions with environmental pollution.

3. Improve scientific practical information orally and in writing.

4. Get awareness about laboratory safety and handling of chemicals.

5. Separate mixture into its constituent using physical and chemical methods of separation

M. Sc. Chemistry Semester –II
Course outcomes of Analytical Chemistry Laboratory

1. Demonstrate proficiency in classical methods and separation techniques, including calibration and statistical analysis.

2. Perform volumetric analysis to determine the concentration of various substances in mixtures and solutions.

3. Conduct gravimetric analysis to estimate the amount of specific substances in samples.

4. Master separation techniques like paper chromatography and ion exchange to separate metal ions.

5. Utilize electroanalytical techniques such as conductometric and potentiometric titrations for quantitative analysis.

6. Apply colorimetry to determine the dissociation constants of indicators and study complex formation.

7. Use instrumental methods to analyze commercial samples, such as vinegar, using conductometric titration.

8. Gain hands-on experience in various optical methods to estimate the concentrations of substances in solutions.

9. Develop essential skills in data interpretation, record keeping, and report writing for practical experiments

M. Sc. Chemistry Semester –III
Course outcomes of Organic Chemistry special paper

Course Outcomes: At the end of the course students would be able to

1. Develop a comprehensive understanding in research and advancements in the field of organic chemistry.

2. Modify the method to solve complex synthetic problems.

3. Appraise various synthesis and transformation processes.

4. Develop understanding to write the product with proper stereochemistry.

5. Devise problem-solving skills and critical thinking ability through the analysis of complex reaction mechanisms

M. Sc. Chemistry Semester –III
Course outcomes of Research Project Phase-I

Course Outcomes: At the end of the course students would be able to

1. Identify a research problem and carry out literature survey

2. Analyse the research gap and formulate the problem

3. Interpret the data and synthesize research findings

M. Sc. Chemistry Semester –IV
Course outcomes of Selected topics in Chemistry-II

Course Outcome: After completion of this course successfully, the students would be able to……

1. Explain the principles, instrumentation, and applications of Auger electron microscopy and compare it with ESCA (electron spectroscopy for chemical analysis) techniques.

2. Demonstrate knowledge of different electron microscopy techniques (e.g., TEM, SEM, STEM) and their applications in surface characterization.

3. Apply analytical methods to determine the approximate composition of food, including moisture, fat, protein, fiber, and carbohydrate.

4. Evaluate the composition of cosmetics, including creams, lotions, and face powder, by determining water content, non-volatile matter, ash content, and specific chemical components.

5. Classify different types of poisons, understand their mode of action, and estimate poisonous materials (e.g., lead, mercury, arsenic) in biological samples.

6. Apply chemical sensors in various fields such as the food industry, agriculture, and biotechnology.

7. Outline the terms and role of forensic science, analytical toxicology and different units of crime lab

8. Formulate and compile scientific problems based on analytical spectroscopy.

9. Specify the applications of analytical spectroscopy in chemistry and interdisciplinary fields.

M. Sc. Chemistry Semester –IV

Course outcomes of Organic Chemistry special paper

Course Outcome: After completion of this course successfully, the students would be able to

1. Devise and prioritize organic reactions and reagents for different types of organic transformation

2. Analyse and develop reaction mechanisms for a reactions

3. Design and execute own synthetic route for the organic synthesis

4. Criticise and modify the role of organometallic reagents in organic synthesis.

5. Correlate the stereochemistry of reactant and product for better understanding of organic transformations.

Programme B. Sc. Botany

Programme outcomes and specific programmes outcomes

POs:

The students graduating with the degree B.Sc. with Botany will be able to

PO1.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.

PO2.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.

PO3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. 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.

PO5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

PSOs:

Upon completion of the programme successfully, students would be able to

1. Identify major groups of plants and compare the characteristics of lower (microbes, algae ,fungi, bryophytes and pteridophytes) and higher (Gymnosperms and angiosperms).

2. use evidence based comparative botany approach to explain the evolution of organism and understand the genetic diversity.

3. explain various plant processes and functions, metabolism, concepts of gene, genome and how organism's function is influenced at the cell, tissue and organ level.

4. understand adaptation, development and behavior of different forms of life.

5. demonstrate the experimental techniques and methods of their area of specialization in Botany.

B.Sc. Botany I Semester –I
Course outcomes of BOT (1S)/Botany DIVERSITY Of MICROBES , PHYCOLOGY, MYCOLOGY AND PHYTOPATHOLOGY

After completion of this course successfully , the students would be able to

- understand microbial diversity, reproduction and economic importance.

- differentiate the microbes, algae and fungi on the basis of morphology, cellular organization, nutrition and metabolic activities.
- classify and identify the various algal genera.
- classify and identify the various fungal genera.
- Systematize the plant diseases and their pathogens
- Apply understanding of microbial diversity, phycology and mycology for teaching primary to high school students.

B.Sc. Botany I Semester –I

Course outcomes of skill enhancement module

- Acquire skill of isolation of Arbuscular Mycorrhizal Fungal and also able to
- classify the various species of mycorrhiza.
- Evaluate the AMF spore in the soil sample of crop plants.
- Establish own production unit of mushroom cultivation
- Asses the economy of mushroom cultivation
- Diagnosed the local crop diseases.
- Advise the proper fungicides or other measures to prevent crop diseases.

B.Sc. Botany I Semester –I

Course outcomes of BOT(1S)/BOTANY Practical 2

After completion of this course successfully , the students would be able to

- Identify and classify the algae on the basis of morphology and other characters.
- Create monograph of Algae and Fungi.
- Demonstrate the structural details of viruses and bacteria included in practical work.
- Evaluate the plant diseases of local plants and diagnosed the diseases on the basis of symptology.

B.Sc. Botany I Semester –II

Course outcomes of BOT(2 S)/Botany Bryophytes, Pteridophytes, Gymnosperms and Morphology of Angiosperms

After completion of this course successfully , the students would be able to

- demonstrate on understanding of Archegoniate, Bryophytes, Pteridophytes and Gymnosperms.
- identify and classify plants from Bryophytes, Pteridophytes and Gymnosperms.
- develop critical thinking on morphology, anatomy and reproduction of Bryophytes, Pteridophytes and Gymnosperms.

- acquire skill of collection and preservation of Bryophytes, Pteridophytes and Gymnosperms.
- Understand the herbal technology.
- Develop the skill for cultivation of plants.
- Acquire the skill of morphological and microscopic examination of herbal plants.
- List the major herbs, their Botanical names and chemical constituent's.

B.Sc. Botany I Semester –II

Course outcomes of BOT(2S)/Botany Bryophytes, Pteridophytes, Gymnosperms and Morphology of Angiosperms, Utilization of Plants

By the end of the Lab/Practical Course, generally students would be able to:

- Understand forms of Bryophytes, Pteridophytes and Gymnosperms.
- Acquire the skill of preparation of slides of plant body and reproductive organs.
- Classify and identify different plant parts on the basis of external morphology.
- Describe the plants in technical language.
- develop critical understanding on morphology, botanical names and cultivation practices of economically important plants.

B.Sc. Botany I Semester –II

Course outcomes of Ethnobotany and Ethnopharmacology

After completion of this course, student would be able to

- Appreciate the need to conserve floristic and cultural diversity of the region.
- Rescue and document Ethno botanicals for sustainable use of plant resources.
- Understand the need for development of new drugs for safe and more rational use of herbal preparations.
- develop laboratory skills in testing of herbal drugs and new commercial products.

Course Outcomes

B. Sc. Botany (Sem III- Sem VI)

Students will able to

- Understand the basic principles involved in identification, naming and classification of flowering plants.
- Know the systematic study and economic importance of plants belonging to the various families.

- Differentiate various tissue systems.
- Understand the normal and anomalous secondary growth in plants and their causes.
- Understand developmental stages in plant embryo and seed formation.
- Apply understanding this knowledge to explain the taxonomic diversity of plants and Imply the embryological and anatomical knowledge to differentiate the plant taxa.
- Gain Practical skills in plant identification.
- Learn how to assemble and properly documentation of collected Plants.
- Identify the taxonomic diversity of useful plants.
- Provide scientific information to the public regarding the plants.
- Understand the importance of a plant nursery and basic infrastructure to required.
- Explain the preliminary materials, tools and techniques required for nursery.
- Demonstrate expertise related to various practices in a nursery.
- Apply comprehend skills and knowledge to become Nursery entrepreneur or worked as nursery supervisor, assistants.
- Understand the structure and purpose of basic components of prokaryotic and eukaryotic cells.
- Identify the concept that explains chemical composition and structure of cell wall and membrane
- Differentiate cell organelles on the basis of structure and function.
- Comprehend the effect of chromosomal abnormalities in numerical as well as structural changes.
- Have conceptual understanding of laws of inheritance, genetic basis of loci, alleles, their linkage and crossing over.
- Understand the basic concepts of plant breeding.
- Analyse the different selection and breeding methods applied in crop improvement.
- enhance sense of sight by microscopic techniques
- to describe the principle, construction and working of various microscopes

- allow to follow curiosity outdoors and explore hands-on, experiential learning
- to achieve an increase in numbers and preserve the essential characteristics of the plant.
- Excellent research skills

Programme M. Sc. Botany
Programme outcomes and specific programmes outcomes

POs

By the end of the programme, students would be able to

PO1 Deep subject Knowledge and intellectual breadth Apply the subject knowledge to the solution of real-world problems.

PO2 Professional Ethics Apply ethical principles and commit to professional ethics and responsibilities and norms of the standard practices.

PO3 Creative & 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.

PO4 Innovation, Research and Problem Solving Identify, formulate, review research literature, and analyze complex problems reaching substantiated and innovative conclusions. Design solutions for complex problems with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. Use research-based knowledge and research methods to provide valid conclusions. Demonstrate the knowledge of, and need for sustainable development.

PO5 Team work and Communication Skills Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. Present/communicate research at national/international level, write effective articles, reports and design documentation, make effective presentations, and give and receive clear instructions. Communicate disciplinary knowledge to the community and broader public.

PO6 Professionalism and Leadership Readiness Demonstrate personal accountability and effective work habits, e.g., punctuality, working productively with others, and time as well as workload management. Demonstrate integrity and ethical behavior, act responsibly with the interests of the larger community in mind, and to learn from his/her mistakes. Use the strengths of others to achieve common goals, and use interpersonal skills to coach and develop others. Assess and manage his/her emotions and those of others; use empathetic skills to guide and motivate; and organize, prioritize, and delegate work.

PO7 Lifelong learning Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

PO8 Competence for Digital World Prepare well for living, learning and working in a Digital Society; Create, select, and apply appropriate techniques, resources, and modern ICT tools to complex activities with an understanding of the limitations. Use existing digital technologies ethically and efficiently to solve problems, complete tasks, and accomplish goals. Demonstrate effective adaptability to new and emerging technologies.

PO9 Global Citizenship Act with an informed awareness of global issues. Engage in initiatives that encourage equity and growth for all.

PSOs:

After completing the programme successfully, students would be able to

1. explore the cutting edge technologies and skills currently used in plant sciences.

2. Be aware of social, environmental issues and plant significance in natural interest.

3. create interest in nature conservation and save the natural resources.

4. study the concepts of genetics, plant breeding and their applicability.

5. understand and correlate the various biochemical and physiological processes in plants.

6. study the evolutionary process in Bryophytes and Pteriodophytes.

7. study the bioactive principles in plants and their defence mechanisms.

M.Sc. Botany I Semester –I

Course outcomes of BOT 01 Research Methodology and IPR 04

Upon completion of this course successfully, students would be able to

1. The main objective of this course is to introduce the basic concepts in research methodology.

2. This course addresses the issues inherent in selecting a research problem and discuss the techniques and tools to be employed in completing a research project. This will also enable the students to prepare report writing and framing Research proposals.

3. To make them aware about the latest techniques used in plant sciences

4. To make friendly about the tools and techniques.

5. To know the principle and applications of these techniques.

M.Sc. Botany I Semester –I

Course outcomes of BOT101 Cell and Molecular Biology

Upon completion of this course successfully, students would be able to

1. To understand structural organization and functional role of cell and organelles and role of biomolecules.

2. To correlate the various life processes and their functioning.

3. To understand the process of chromosomal organization and its role in cellular metabolism.

4. To evaluate the various life processes and their regulations with special reference to regulation of gene expression.

M.Sc. Botany I Semester –I
Course outcomes of BOT102 Evolution and Diversity of Algae and Fungi

Upon completion of this course successfully, students would be able to

1. Understand the phycology with special reference to Indian work.

2. Algae in diversified habitats (Terrestrial, fresh water, marine) Criteria used in classification of algae, Role of algae in human welfare

3. General account of thallus organization, reproduction and life history of algae.

4. Study of important groups of algae Cyanophyta, Chlorophyta, Charophyta, Xanthophyta, Bacillariopyta, Phaeophyta & Rhodophyta.

5. Fungi: General Characters, Classification., Economic importance of fungi in medicine,

6. Agriculture (Biopesticide an biofertilizer).

7. Fungi as plant pathogen.

M.Sc. Botany I Semester –I
Course outcomes of BOT103 Plant Development Economic Botany and Resource Utilization

Upon completion of this course successfully, students would be able to

1. Study the origin, divarication, utility and conservation strategies & natural resources

2. Study importance of food, fiber, medicines & oil yielding plant.

3. Study the plants and their value in the service & mankind.

4. Study the conservation of biodiversity.

5. Deals with regulation of growth and development of plants in relation to bio-molecular interaction.

M.Sc. Botany I Semester –I
Course outcomes of BOT104-B Molecular Systematics of Plants- Elective

Upon completion of this course successfully, students would be able to

1. Discuss and apply principles of delimitation and identification of species and other taxa

2. Account for the central concepts of the field and principles of phylogenetic analysis, especially based on the parsimony criterion

3. Discuss and apply methods to generate relevant molecular data, mainly sequence data.

4. Choose and apply existing software in the included course parts, from generating relevant molecular data to phylogenetic analysis

5. Critically analyse, evaluate, compile, and present the results of phylogenetic analyses.

M.Sc. Botany I Semester –II
Course outcomes of BOT-201 Plant Physiology

Upon completion of this course successfully, students would be able to

1. This course aims to educate student on concepts of proteins, enzymes, basic plant signaling mechanisms, sensory photobiology. The course further deals with physiology of nutrient uptake, photosynthesis and nitrogen metabolism.

2. To make them aware about the latest techniques used in plant sciences

3. To make friendly about the tools and techniques.

4. To know the principle and applications of these techniques.

M.Sc. Botany I Semester –II
Course outcomes of BOT-202 Evolution and Diversity of Bryophytes and Pteridophytes

Upon completion of this course successfully, students would be able to

1. To understand evolutionary diversification of early land plants and morphology and reproduction in bryophytes, pteridophytes.

2. To know the Ecological and Economic Importance of bryophytes, pteridophytes.

3. To classify Bryophytes into various groups, study their importance

4. To classify Pteridophytes into various groups, study their importance and multiplication of important ferns

5. To know the applied aspects of Bryophytes and Pteridophytes.

M.Sc. Botany I Semester –II
Course outcomes of BOT-203 Plant Biochemistry, Genetics and Plant Breeding

Upon completion of this course successfully, students would be able to

1 To understand the concept of classical and modern genetics clearly.

2 To study the inheritance pattern.

3 To know the role of chromosomes in evolution and the factors leading to changes in them.

4 To study mutations and breeding and their significance in crop improvement.

5 To study the variation in populations.

6 To study the plant biochemistry and its various aspects.

7 To study the metabolism and regulation of bio molecules

M.Sc. Botany I Semester –II
Course outcomes of BOT204-A Angiosperm Taxonomy, Phytochemistry and Pharmacognosy

Upon completion of this course successfully, students would be able to

1) Study plant morphology, Description of a plant specimen, Study of locally available

families of flowering plants, Identification of genus and species of locally available wild plants.

2) Appreciate the need to conserve floristic and cultural diversity of the region.

3) Preparation of botanical keys at generic level by locating key characters.

4) To develop laboratory skill like isolation, extraction & evaluation of phyto chemicals from medicinal plants.

5) To develop knowledge of herbal drugs and new commercial plant products.

6) Rescue and document Ethno botanicals for sustainable use of plant resources.

M.Sc. Botany I Semester –II
Course outcomes of Angiosperm Taxonomy, Phytochemistry and Pharmacognosy

Upon completion of this course successfully, students would be able to

1. Discuss and apply principles of delimitation and identification of species and other taxa

2. Account for the central concepts of the field and principles of phylogenetic analysis, especially based on the parsimony criterion

3. Discuss and apply methods to generate relevant molecular data, mainly sequence data

4. Choose and apply existing software in the included course parts, from generating relevant molecular data to phylogenetic analysis

5. Critically analyse, evaluate, compile, and present the results of phylogenetic analyses.

M.Sc. Botany I Semester –III
Course outcomes of Systematics and Taxonomy of Angiosperms

Upon completion of this course successfully, students would be able to

1. To equip students with strong fundamentals in subject domain knowledge.

2. To attract students in all the areas of plant science with unique combination of core, elective papers.

3. Students can explore the cutting-edge technologies and skills currently used in plant sciences.

4. They are made aware of social, environmental issues and plant significance in natural interest.

5. To create interest in nature conservation and save the natural resources.

6. Focus is equally given on labour work as well as field work.

7. To worth together as a team along with other branches of life sciences without any complex.

8. To develop scientific temperament and research attitude and much for society.

M.Sc. Botany I Semester –III
Course outcomes of Paleobotany, Evolution and Diversity of Gymnosperms.

1. To understand the phylogenetic significance of Gymnosperms

2. To illustrate the diversity of past vegetation

3. To know the distribution and economic potential of gymnosperms

4. To contribute to the ancestry of present day dominant vegetation: Angiosperms

5. To understand the significance of past vegetation in the formation of fossil

M.Sc. Botany I Semester –III
Course outcomes of Angiosperm Taxonomy, Phytochemistry and Pharmacognosy

1) Study plant morphology, Description of a plant specimen, Study of locally

available families of flowering plants, Identification of genus and species of locally available wild plants.

2) Appreciate the need to conserve floristic and cultural diversity of the region.

3) Preparation of botanical keys at generic level by locating key characters.

4) To develop laboratory skill like isolation, extraction & evaluation of phytochemicals from medicinal plants.

5) To develop knowledge of herbal drugs and new commercial plant products.

6) Rescue and document Ethnobotanicals for sustainable use of plant resources.

M.Sc. Botany I Semester –IV

Course outcomes of Applied Botany

1. To provide detailed knowledge about virus and sub-viral particles, their taxonomy, growth, reproduction and role in nature.

2. To explain the industrial aspects of microbiology for the production of various of industrial products of biological origin.

3. The course explains the application of microorganisms in environment and the role of microorganisms in industrial, food and dairy technology.

4. To understand the salient features and economic importance of algal diversity.

5. To encourage production and use of organic and biological sources of nutrients like biofertilizers, organic manure, compost for sustained soil health and fertility and improving soil organic carbon and to promote production and use of biopesticides, biocontrol agents etc as alternative inputs in organic farming.

6. To facilitate, encourage and promote development of organic agriculture in the country

M.Sc. Botany I Semester –IV

Course outcomes of Plant Ecology

1. Study of diversity and distribution of plant communities

2.Effect of climate change on vegetation.

3.Restoration of plant communities.

4.Conservation of plant and plant communities.

5.Analyze the current theories, methods and interpretations with in the field of plant

M.Sc. Botany I Semester –IV

Course outcomes of Plant Biotechnology and Genetic Engineering

1. Study of Tussive culture methods

2.Able to micro-propagate the plants.

3.Utilization of rDNA technology

B. Sc. Zoology
Programme outcomes and specific programmes outcomes

POs:

At the time of graduation, Students will be able to

PO1.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.

PO2.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.

PO3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. 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.

PO5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

PSOs

By the end of the programme, Students would be able to

1. Develop a deeper sense with respect to phylum Protozoa to Echinodermata relation to taxonomy, classification, body organization and general characteristics this strengthens students' capability in basic zoology.

2. grasp various the Systematic positions from Protozoa to Echinodermata their pathogenicity and its epidemiology.

3. describe unique characters and recognize life functions of Protozoa, Porifera, Coelenterate, Helminthes, Arthropoda, Annelida, Mollusca and Echinodermata. Improve ability and apply Knowledge of Nonchordates for its execution in Agriculture especially with the phylum Arthropoda.

4. Implement an extensive idea about economic and ecological significance of various non-chordates phylum's in human life.

B.Sc. Zoology I Semester –I & II
Course outcomes of Life and diversity of Animals (Non-chordate)

COs:

Upon completion of this course successfully, students would be able to

- Develop a deeper sense with respect to phylum Protozoa to Echinodermata relation to taxonomy, classification, body organization and general characteristics this strengthens students' capability in basic zoology.
- grasp various the Systematic positions from Protozoa to Echinodermata their pathogenicity and its epidemiology.
- describe unique characters and recognize life functions of Protozoa, Porifera, Coelenterate, Helminthes, Arthropoda, Annelida, Mollusca and Echinodermata.
- Improve ability and apply Knowledge of Non-chordates for its execution in Agriculture especially with the phylum Arthropoda.
- Implement an extensive idea about economic and ecological significance of various non-chordates phylum's in human life.

B.Sc. Zoology I Semester – I & II
Course outcomes of Life and diversity of Animals (Chordate) and concept of Evolution

COs:

Upon completion of this course successfully, students would be able to

1. know what the chordates are.

2. Learn about the different phylum of chordates.

3. confidently explain the general characters and classification of Protochordates upto class Mammalia.

4. understand the level of organization in chordate.

5. explain the origin and evolutionary relationship in different subphylums of chordates.

6. describe specific features of Protochordates upto class Mammalia.

7. recognize and differentiate life functions of Protochordates upto class Mammalia.

8. understand Migration in fishes and birds , parental care in Amphibians and Poisonous and non-poisonous snakes.

9. explain the adaptations in Birds and Mammals.

B.Sc. Zoology I Semester – I & II
Course outcomes of Snake Identification their Rescue & Snake Bite Management.

Course Outcome:

Every student participating in the course will get to know about the different species of snakes in Vidarbha. The student can easily identify venomous and non-venomous snakes. It will be possible to differentiate between venomous and non-venomous snake bites. Participate in a rescue operation with volunteers from a snake rescue organization. Understand how to catch them. Students confidently told about the habitat of snakes, their role in nature and why it is important to save snakes. Visiting hospitals for people who have been bitten by snakes will help them to understand the difference between the bites of different venomous snakes. Awareness can be created by taking active part in future campaigns on the importance of snakes for the environment.

B.Sc. Zoology I Semester – I & II
Course outcomes of Basic Course in Ornithology

Course Outcome:

The student who has taken admission in this course will get basic knowledge of bird species from all over the world as well as complete information about bird species found in Maharashtra and Vidarbha. Course students will get an in-depth knowledge of various bird species in nature, their functions, their major habitats, bird-specific habitat. Students may have the opportunity to work on various research projects run by international or national bird organizations. Students can set up their own bird tour company, organize small bird tours at famous bird sanctuaries in

India, pursue their hobbies and earn money through the tour. Students can put up an exhibition of selected photographs of the birds they photograph while going birding each day. This will make people aware of the local bird diversity and at the same time help encourage other students who are interested in the field. Students can also earn money by selling selected photos displayed in the exhibition.

B.Sc. Zoology I Semester – I & II
Course outcomes of ENVIRONMENTAL ISSUES AND ITS AWARENESS.

Course outcomes:

• Students will understand current environmental scenario with clearer concepts in mind.

• Students will have Ability to demonstrate understanding of the environmental processes and will possess knowledge of the changing climate.

• Students will have Ability to comprehend to structure and functions of ecosystem.

• Students will know how to identify and quantify the magnitude and intensity of Environmental pollution problems.

• Student will have Ability to demonstrate understanding Environmental Laws and policies in India.

• Student will appreciate the ecosystem responses to climate change and how environmental crisis will greatly impact both current and future generations of humans and all other species.

Course Outcomes
B. Sc. Zoology (Sem III - Sem VI)

Students will able to

- Describe the structure and function of cellular organelles.
- Describe various mode of cellular transport.
- Compare active transport with passive transport.
- Describe structure of chromosomes.
- Differentiate between various types of chromosomes.
- Define the basic concept of developmental biology, cell division, embryogenesis and emergence of adult organisms.
- Describe zygote formation and different stages of embryonic development in frog and chick.

- Describe Mendel's Laws of Inheritance.
- Differentiate between a monohybrid and a dihybrid cross.
- Deduce the type of gene interaction from ratio of offspring.
- Describe linkage and crossing over.
- Describe various modes of sex determination.
- Identify the type of syndrome from karyotype.
- Describe various prenatal diagnostic techniques.
- Describe effects of water, temperature and light as ecological factors.
- Identify the type of biotic interaction from given example.
- Describe components of ecosystem and structure of terrestrial and marine ecosystem.

M. Sc. Zoology
Programme outcomes and specific programmes outcomes

POs:

The post graduate course of Zoology will provide theoretical as well as experimental knowledge as per the courses included under the syllabi by which build up creativity in students will lead towards thorough learning and development of ideas of research work and will become ready to face recent challenges.

Students can attain the employability skills through the experiences based on their practical knowledge.

After completion of MSc in Zoology successfully, the students would be able to:

1. demonstrate the significance of the topics of syllabi and evaluate its relevance. Think creatively for its gravity and develop ideas.

2. Interpret scientific ideas and its analysis. Create experiments independently and draw inferences by sharing it with others.

3. Derive information from various digital sources. Develop skills for scientific writing and present the data and analyse it scientifically.

4. Articulate scientific ideas lay down a hypothesis, design the pathway to develop research ideas.

5. Acquaint skills in handling the instruments and different techniques through the practicals and developing the scientific temperaments for research.

6. Develop competence through healthy atmosphere and a quality intercommunication with different groups.

7. Understand environmental and sustainability issues and its sensitivity and regional relevance.

8. get the facility of different training and internship programs through job-oriented curriculum

9. Utilize the sources confidently and independently and develop self-sustenance.

PSOs:

Upon completion of the programme successfully, students would be able to

1. Learn to Prepare the checklist and inventories through the identification of the fauna in local areas being Melghat Tiger Reserve and Pohra Forest are very nearer to survey.

2. Gain comprehensive knowledge about different animals and develop confidence to handle them during research work.

3. Interpret metabolic pathways, their correlation in concern with prokaryote and eukaryotes.

4. Compare genetic aspects, genetic traits, diseases and their specific causes.

5. Survey and analyse data of the various kinds of diseases in the locality.

6. Understand the various strategies and phenomena related to animal reproduction and their development.

7. Get acquainted with conservation strategies and environmental threats to reduce and save energy through Wildlife Week Celebration.

8. Compare the different developmental events during embryogenesis of different animals.

M.Sc. Zoology I Semester – I & II
Course outcomes of ZOO (RM)

Upon completion of this course successfully, Students would be able to …..:

1. Fundamental knowledge and skills required to conduct effective research in the field.

2. Covers various research methodologies, experimental design, analysis , interpretation, scientific communication and ethics in research.

3. Understand the role of research methodology in Science/Zoology.

4. Understand literature review process and formulation of a research problem.

5. Understand data collection methods and basic instrumentation.

6. Learn various statistical tools for data analysis.

7. Learn technical writing and communication skills required for research.

8. IPR aims to equip students with a comprehensive understanding of intellectual property laws, principles and practices.

9. Create awareness about intellectual property rights and patents

M.Sc. Zoology I Semester – I & II
Course outcomes of Structure and Functions of Invertebrate

After learning this course, students would be able to…..

1. Describe various methods of taxonomy.

2. Differentiate between different methods of taxonomy.

3. Identify different types of feeding in invertebrates.

4. Describe mechanisms of chemoreception and photoreception in invertebrates.

5. Conjecture the stage of metamorphosis in insects from concentrations of different hormones.

6. Differentiate between different modes of reproduction.

M.Sc. Zoology I Semester – I & II
Course outcomes of General Physiology

After learning this course, students would be able to…..

1. To develop a deep understanding of enzymes, hormones, respiratory pigments and neurotransmitters.

2. To understand the concept of Thermoregulation, osmoregulation, chemiluminescence and camouflage with suitable examples.

3. To understand the various functional components of an organism.

4. To explore the complex network of these functional components.

5. To comprehend the regulatory mechanism for maintenance of function in the body.

6. To understand the concept of special senses

M.Sc. Zoology I Semester – I & II
Course outcomes of Gamete Biology

After learning this course, students would be able to…..

1. Study spermatogenesis and oogenesis in eukaryotes.

2. Determine different events and their mechanisms during fertilization and its consequent changes.

3. Learn assisted reproduction techniques to overcome infertility.

4. Understand Ex vivo and In vivo gene therapy etc.

5. Learn about contraception and methods

M.Sc. Zoology I Semester – I & II
Course outcomes of Tools And Techniques In Biology

Upon completion of the course successfully, students would be able to CO Description

1) Student will develop real time problem solving skills using techniques like electrophoresis, chromatography based applications based questions and projects.

2) The course will help to understand the principles and applications of different biophysical techniques.

3) The Course will able to differentiate in between structure, size, shape, dynamics, polarity, and modes of interaction of biological molecules.

4) To get acquainted with Cytological and histological techniques.

M.Sc. Zoology I Semester – I & II
Course outcomes of Wildlife Conservation and Management

Upon completion of the course successfully, students would be able to

1: Define and Explain Wildlife Conservation: Students will articulate the definition and significance of wildlife conservation, discussing its role in preserving biodiversity and ecological balance.

2: Examine Wildlife Management Techniques: Students will demonstrate the ability to apply wildlife management techniques, including assessing wildlife populations, habitat management, and the establishment of wildlife corridors.

3: Analyze Legal and Policy Frameworks: Students will analyze the legal and policy frameworks governing wildlife conservation, with an understanding of international conventions and the roles of governmental and non-governmental organizations.

4: Evaluate Human-Wildlife Interactions: Students will evaluate the interactions between humans and wildlife, identifying potential conflicts and proposing strategies for mitigation.

5: Design Sustainable Wildlife Tourism Practices: Students will design and justify sustainable wildlife tourism practices, considering economic benefits and ethical considerations.

6: Promote Conservation Awareness through Education: Students will design educational initiatives to raise conservation awareness, emphasizing responsible wildlife viewing practices and ethical wildlife management.

M.Sc. Zoology I Semester – I & II
Course outcomes of ZOO 1

Upon completion of the course successfully, students would be able to

1. Describe merits and demerits of different types of taxonomic keys.

2. Differentiate between binomial and trinomial nomenclature.

3. Describe rules of International Code of Zoological Nomenclature (ICZN).

4. Identify various derivatives of integument in vertebrates.

5. Describe characteristic features of Agnatha.

6. Differentiate between different types of kidneys.

7. Justify position of protochordates among chordates.

M.Sc. Zoology I Semester – I & II
Course outcomes of MOLECULAR CELL BIOLOGY

Cos:

Upon completion of the course successfully, students would be able to

1. At the end of the course, the student has a strong foundation on the functions of the cell.

2.This course imparts students the knowledge about how cell to cell communication occurs to carry out different functions of the cell.

3.The course will help to understand the basic principles of signal transduction mechanisms, in particular the concepts of response specificity, signal amplitude and duration, signal integration and intracellular location

4.It will help the students to provide knowledge about cytoskeleton of the cells and how it gives strength , shape and motility to the cell.

5. Have an overview of the different intracellular transport pathways in the eukaryotic cell, and understand how proteins and lipids affect these processes.

M.Sc. Zoology I Semester – I & II
Course outcomes of Ecology and Environment

After completion of the Environment and Ecology course the students from different and or biology background, the students will be able to :

1. Understand the concepts and principles of ecology.

2. Understand the structural and functional aspects of biodiversity and the need for its conservation.

3. Be aware of the suitable use of field techniques, data collection, mapping, analysis and interpretation.

4. Be able to take up interdisciplinary research and teaching in ecology and environment.

5. Making the people and the society aware towards better understandings of the environmental ethics, issues and challenges before the vast growing population of the state and the country as well

M.Sc. Zoology I Semester – I & II
Course outcomes of Advanced Tools and Techniques

After learning this course, students would be able to…..

1. Here students are taught to deal with different tools and techniques applicable in biological

2. research including various types of microscopes, spectrophotometer and bioinformatics software. etc.

3. The theory session mainly focuses on understanding the principles and working mechanisms of different instruments.

4. Learning of Principle and applications of different radioactive material.

5. Learning phylogeny construction by using bioinformatics software.

6. Develop skills of advanced instrumentation.

M.Sc. Zoology I Semester – I & II
Course outcomes of Advance Wildlife Conservation and Management

Upon completion of the course successfully, students would be able to

1.Understand the significance of ecosystem services and biodiversity in wildlife conservation, recognizing their importance in supporting human well-being and ecosystem health.

2.Analyze the role of biodiversity in ecosystem functions and comprehend the potential threats posed to wildlife and habitats.

3.Describe the principles of wildlife ecology and population dynamics, including factors influencing wildlife populations and their growth.

4.Recognize migratory patterns and behavioural adaptations in wildlife and understand their ecological significance

5.Apply the core principles of conservation biology to design effective strategies for wildlife protection.

6.Explore conservation approaches outside protected areas, considering community-based conservation and conservation breeding for endangered species.

7.Demonstrate the ability to engage local communities as partners in wildlife conservation, understanding their perspectives and involving them in decision-making processes.

M.Sc. Zoology II Semester – III
Course outcomes of MOLECULAR CYTOGENETICS- I

Upon completion of the course successfully, students would be able to

CO1: Molecular Cytogenetics gives the knowledge of biological mechanisms of variations and heredity.

CO2: It also gives an elementary idea about different hereditary diseases and syndromes and their inheritance.

CO3: It trains the students to perform laboratory exercises in cytogenetic.

M.Sc. Zoology II Semester – III
Course outcomes of MOLECULAR CYTOGENETICS- II

Cos:

Upon completion of the course successfully, students would be able to

CO1: Molecular Cytogenetics gives the knowledge of biological mechanisms of variations and heredity.

CO2: It also gives an elementary idea about different hereditary diseases and syndromes and their inheritance.

CO3: It trains the students to perform laboratory exercises in cytogenetic.

M.Sc. Zoology II Semester – III
Course outcomes of Animal Physiology -I

Cos:

Upon completion of the course successfully, students would be able to

CO1: Animal physiology gives the knowledge of biological processes through the investigation of physiological processes.

CO2: It enables to understand the chemical and molecular processes that occur in and between cells.

CO3: It also provides knowledge about the theoretical processes related to hormonal action.

CO4: Trains the students to perform laboratory exercises in Animal physiology that is applicable to Pathology laboratory, medicine, forensics and pharmaceutical industry.

M.Sc. Zoology II Semester – III
Course outcomes of Animal Physiology –II

CO1: Animal physiology gives the knowledge of biological processes through the investigation of physiological processes.

CO2: It enables to understand the chemical and molecular processes that occur in and between cells.

CO3: It also provides knowledge about the theoretical processes related to hormonal action.

CO4: Trains the students to perform laboratory exercises in Animal physiology that is applicable to Pathology laboratory, medicine, forensics and pharmaceutical industry.

M.Sc. Zoology II Semester – IV
Course outcomes of Biochemistry

PO1. Knowledge of various branches of Zoology and in particular Molecular Biology for Postgraduate studies is made possible.

PO2. This higher studies make the student for widening the horizon of knowledge for the sustenance of the stakeholders.

PO3. Awareness and relative action to reduce the hurdles of the lives of people through the steps for reduction of pollution and global warming.

PO4. Students acquainted to the skills in handling the instruments and different techniques through the practicals and developing the scientific temperaments for research.

CO5: Biochemistry gives the knowledge of biomolecule and the biochemical processes occurring inside the cell and the body as a whole.

CO6: It trains the students to carry out laboratory exercises in biochemistry and biochemical investigations.

M.Sc. Zoology II Semester – IV
Course outcomes of Enzymology and Biostatistic

CO1: Enzymology enables to understand the role and activities of various enzymes functioning in the body.

CO2: It also gives some idea about clinical and pharmaceutical applications of enzymes.

CO3: It trains the students to carry out laboratory exercises related to enzyme activity and estimations of enzymes.

CO4: Biostatistics trains the students in handling and analyzing the biological clinical data.

B. Sc. Computer Science
Programme outcomes and specific programmes outcomes

POs:

After completion of graduation, students will be competent to:

PO1: 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.

PO2: 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.

PO3: Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4: 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.

PO5: Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6: Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7: Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

PSOs:

At the end of this program, the students would be able to:

PSO1: Understand the computer hardware and software.

PSO2: use the knowledge of software installation.

PSO3: Select modern computing tools and techniques for programming task.

PSO4: Identify, analyze, formulate and develop computer-based solutions to meet desired needs within realistic constraints.

PSO5: Develop databases and perform operations on them.

PSO6: Identify research and development areas in multiple disciplines.

PSO7: Design and develop the small web applications.

B. Sc. Computer Science Semester – I

Course outcomes of Fundamentals of Computer and C Programming

COs

Upon completion of this course successfully, Students would be able to -

- Understand the computer, I/O and peripheral devices.
- Understand concept of Operating systems.
- Apply the Programming concepts.
- Learn C language.
- Write Simple C Programs
- To draw flowchart, learn Algorithms and write simple programs.
- To assess the curricular skills acquired by students at college level through Assignments, Unit test, Internal Test, Group Discussion/Seminar/Mini Project, Study Tour

B. Sc. Computer Science Semester – I
Course outcomes of Fundamentals of Computer and C Programming

COs

Upon completion of this course successfully, Students would be able to demonstrate/perform/accomplish the following

- Write word processing task.
- Create worksheet and perform operations on it.
- Design, compile and debug programs in C language.
- Classify conditional expressions and looping statement to solve problems associated with
- conditions and repetitions.
- Demonstrate the programs using arithmetic and relational operators.
- Implement the concept of various string handling functions.
- Classify programming components that efficiently solve computing problems in real-world.

B. Sc. Computer Science Semester – I
Course outcomes of 1CS2 Data Structure and OOPS

COs

Upon completion of this course successfully, Students would be able to -

- Implement basic data structures such as arrays, stacks.
- use linked list, trees and queues.

- Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data.
- Describe the procedural and object-oriented paradigm with concepts of streams, classes, functions, data and objects.
- Perform programming on functions, inline functions, constructor and destructor.
- Perform programming on the concept of function overloading, operator overloading, virtual functions and polymorphism.
- Acquire skill to work with core components of data structure
- Acquire object oriented programming skill.

B. Sc. I Computer Science Semester – I
Course outcomes of Data Structure and OOPs lab

COs

Upon completion of this course successfully, Students would be able to demonstrate/perform/accomplish the following

- Perform various operations Data structure using CPP.
- Develop the concept of dynamic memory allocation through linked list.
- Design stack and queue with contiguous and non-contiguous data storage mechanism.
- Perform the various operations on binary tree.
- Implement sorting on 1-D array using different techniques

B. Sc. I Computer Science Semester – II
Course outcomes of Data Structure and OOPs lab

COs
Upon completion of this course successfully, Students would be able to -

- Implement basic data structures such as arrays, stacks.
- use linked list, trees and queues.
- Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data.
- Describe the procedural and object-oriented paradigm with concepts of streams, classes, functions, data and objects.
- Perform programming on functions, inline functions, constructor and destructor.
- Perform programming on the concept of function overloading, operator overloading, virtual functions and polymorphism.
- Acquire skill to work with core components of data structure
- Acquire object oriented programming skill.

B. Sc. I Computer Science Semester – II
Course outcomes of Data Structure and OOPs lab

COs

Upon completion of this course successfully, Students would be able to demonstrate/perform/accomplish the following

- Perform various operations Data structure using CPP.
- Develop the concept of dynamic memory allocation through linked list.
- Design stack and queue with contiguous and non-contiguous data storage mechanism.
- Perform the various operations on binary tree.
- Implement sorting on 1-D array using different techniques

Course Outcomes
B. Sc. Computer Science (Sem III- Sem VI)

COs: On completion of course, the students will be able to

1. Understand Internet and Networking

2. Understand the fundamentals of data communication,networking, internet and their importance.

3. Understand different networking topologies

4. Describe the seven layer OSI model with data transmission media

5. Understanding Switching and Multiplexing techniques

6. Understanding basics concepts of DBMS

7. Demonstrating SQL commands

8. Demonstrating PL/SQL concepts

9.Writing basic java programs using basics features of Java programming language/

10. Demonstrating concepts of OOP's using classes, Inheritance, Interfaces etc.

M. Sc. Computer Science
Programme outcomes and specific programmes outcomes

PROGRAMME OUTCOMES (POs)

Upon completion of the programme successfully, students would be able to

PO1: **Problem Analysis**

Identify, formulate, review research literature and analyze complex engineering problems in Computer Science and Engineering reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO2: **Design / Development of Solutions**

Design solutions for complex engineering problems and design system components or processes of Computer Science and Engineering that meet the specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO3: **Conduct Investigations of Complex Problems**

Use research-based knowledge and research methods including design of experiments in Computer Science and Engineering, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO4: **Modern tool usage**

Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex activities related to Computer Science with an understanding of the limitations.

PO5: **The services to the society**

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice in Computer Science and Engineering.

PO6: **Project Management**

Demonstrate knowledge and understanding of the computer science and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Upon completion of the programme successfully, students would be able to

PSO 1: deliver efficient solutions for emerging challenges in the computation domain through continuous learning

PSO 2 : design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.

M. Sc. Computer Science Semester – I & II
Course outcomes of Computer System Design

PROGRAMME OUTCOMES (POs)

Upon completion of the programme successfully, students would be able to:

PO1: Problem Analysis Identify, formulate, review research literature and analyze complex engineering problems in Computer Science and Engineering reaching substantiated conclusions using first principles of mathematics, naturalsciences and engineering sciences.

PO2: Design / Development of Solutions Design solutions for complex engineering problems and design system components or processes of Computer Science and Engineering that meet the specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO3: Conduct Investigations of Complex Problems Use research-based knowledge and research methods including design of experiments in Computer Science and Engineering, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO4: Modern tool usage Create, select and apply appropriate techniques, resources, and modern engineering and IT toolsincluding prediction and modeling to complex activities related to Computer Science with an understanding of the limitations.

PO5: The services to the society Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice in Computer Science and Engineering.

PO6: Project Management Demonstrate knowledge and understanding of the computer science and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

M. Sc. Computer Science Semester – I
Course outcomes of N1MCS3/DSC II Data Structure with OOP

Course Outcomes

After completion of this course student will be able to:

1. Learn the concepts of linear data structures such as arrays, linked lists, stacks and queues.

2. Understand and use the concepts of non-linear data structures such as trees & Graph.

3. Learn and understand various data searching and sorting methods with its complexity.

4. Demonstrate operations such as insertion, deletion, searching and traversing on data structures.

5. Analyse and apply specific sorting and searching methods depending upon factors like type of data, volume of data.

6. Learn & Understand B-tree indexing, hashing, collisions processing and its applications.

M. Sc. Computer Science Semester – I
Course outcomes of N1MCS4/DSC III Data Base Management Technologies

Course Outcomes :

Course Outcomes: On completion of this course, students would be able to:

1. Understand and apply the basic concepts and principles of database systems, including their purpose, structure, design, query languages, and relational operations.

2. Demonstrate understanding of data manipulation, retrieval, database management concepts and apply SQL query language effectively.

3. Design efficient and normalized databases using the Entity-Relationship model and will be able to achieve good relational designs and improve database by normalization techniques.

4. Apply knowledge of physical storage systems, data storage structures, and indexing techniques for efficient and effective management of databases.

5. Comprehend and apply the fundamental concepts and techniques related to transactions (ACID property), concurrency control & Protocols, recovery mechanisms, deadlock handling, and recovery algorithms.

6. Understand recent trends in database technology and analyze different database architectures, cloud- based services, No SQL databases, and big data storage systems based on Map Reduce and Hadoop.

M. Sc. Computer Science Semester – I
Course outcomes of DSE I(3)/ N1MCS5(3) Software Engineering

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Recognize evolving role of software project management.

2. Understand and estimate cost for software project

3. Identify & analyse aspects of managing time, process & resources effectively with quality concept.

4. Estimate software productivity using metrics and indicator & identify important issues for planning a project

5. Judge different testing techniques used to test software.

6. Apply various `testing strategies for software testing and validation.

M. Sc. Computer Science Semester – I
Course outcomes of Computer System Organization

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Implementation of Computer organisation Programs using Simulators

2. Testing the working of Digital Electronics components and operations.

3. Ability to understand Input –Output Organization

4. To impart the knowledge on micro programming.

5. Implementation of Logic Gates.

6. Able to design electronic circuits.

M. Sc. Computer Science Semester – II
Course outcomes of DSC IV/ N2MCS1: Operating System Algorithms

Course Outcomes

Upon completion of this course successfully, students would be able to

1. To make aware of different types of Operating System and their services.

2. Know basic components of an operating system.

3. Comprehend how an operating system virtualises CPU and memory.

4. Discuss various scheduling and swapping policies.

5. Explain how a simple file system organizes data in the hard disk.

6. get to know how an operating system protects the computer system.

M. Sc. Computer Science Semester – II
Course outcomes of DSC V/ N2MCS2: Graphics Application Programming

Course Outcome:

Upon completion of this course successfully, students would be able to

1. Able to understand the mathematical modelling of graphical objects to be drawn/used in different kind of applications.

2. Learn and understand the concepts of computer graphics, including viewing, projection, perspective, modelling and transformation in2 D&3D.

3. Learn and understand the algorithms to generate line segments, polygon and its transformations, windowing and clipping.

4. Demonstrate operations such as various Transformation and Projection.

5. Demonstrate various algorithms for scan conversion and filling of basic objects and their comparative analysis.

6. Get the knowledge of display control, 3D geometry, primitives and conversions, algorithms for hidden surfaces and lines, concepts of shading and curves.

M. Sc. Computer Science Semester – II
Course outcomes of DSC VI N2MCS3: Computer Networks and Wireless Technology

Outcomes Upon completion of this course successfully, students would be able to

1. Understand the basics of data communication and computer networking

2. Compare and describe the structure and working of various reference models for networking

3. Infer the process of communication in client server model

4. Develop knowledge about design of various protocols used in communication

5. Anticipate various anomalies that may occur during network communication

6. Build knowledge about wireless technology

M. Sc. Computer Science Semester – II
Course outcomes of DSE II(3)/ N2MCS4(3) : Data Mining and Data Warehousing

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Use basic concepts and techniques of Data Mining

2. Develop skills of using recent data mining software for solving practical problems.

3. Develop experience of doing in dependent study and research.

4. Study the methodology of engineering legacy databases for data warehousing and data mining to derive business rules for decision support systems.

5. Develop and apply critical thinking, problem-solving, and decision- making skills.

M. Sc. Computer Science Semester – III
PROGRAMME OUTCOMES (POs)

Upon completion of the programme successfully, students would be able to

PO1: Problem Analysis Identify, formulate, review research literature and analyze complex engineering problems in Computer Science and Engineering reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO2: Design / Development of Solutions Design solutions for complex engineering problems and design system components or processes of Computer Science and Engineering that meet the specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations.

PO3: ConductInvestigations of Complex Problems Use research-based knowledge and research methods including design of experiments in Computer Science and Engineering, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO4: Modern tool usage Create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex activities related to Computer Science with an understanding of the limitations.

PO5: The services to the society

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice in Computer Science and Engineering.

PO6: Project Management

Demonstrate knowledge and understanding of the computer science and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

Upon completion of the programme successfully, students would be able to

PSO 1: deliver efficient solutions for emerging challenges in the computation domain through continuous learning

PSO2 design, develop, implement computer programs and use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.

M. Sc. Computer Science Semester – III
Course outcomes of Web Computing

Upon completion of this course successfully, students would be able to

Course Outcomes

1. Describe the basic concept PHP, Server-Side Scripting Language.

2. Design applications using Arrays and Function.

3. Understand OOP concepts for application development.

4. Implement the knowledge of PHP-Database handling.

5. Develop PHP framework for effective design of web application.

6. Implement JavaScript to develop dynamic web pages.

M. Sc. Computer Science Semester – III
Course outcomes of Artificial Intelligence and Machine Learning

Course Outcomes:

Upon completion of this course successfully, students would be able to

1. Analyze artificial intelligence (AI) techniques and describe their principles.

2. Examine and demonstrate the important role that search algorithms play in problem-solving, inference, perception, knowledge representation, and learning.

3. Use the concepts of logic and knowledge representation to solve challenges in the real world.

4. Recognize the features of machine learning that allow it to be used in solving a real-world problem.

5. Implement the various supervised learning techniquesfor tree-based and support vector machine models.

6. Use several linear approaches for classification and regression, then optimize them using various regularization strategies.

M. Sc. Computer Science Semester – III
Course outcomes of Distributed Computing

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Learn the fundamental concepts of distributed computing systems.

2. Learn the concepts of message passing in distributed systems with inter Process Communication.

3. Learn and understand Remote Procedure Call-RPC

4. Learn and understand the concept of Synchronization

5. Learn and understand Deadlock in distributed computing systems with solutions

6. Learn and understand resource management and process management and also learn the concept of threads with issues in designing treads packages.

M. Sc. Computer Science Semester – III
Course outcomes of Network Security

Course Outcome:

Upon completion of this course successfully, students would be able to

1. Study the introduction about security over the network.

2. Learn the cryptographic algorithm.

3.Learn and understand the types of authentication application and protocol.

4.Learn the Protocol used to provide authenticity to the client and data.

5. Understand the concept of network security and prevention from intruders.

6. Learn and understand Types of viruses.

M. Sc. Computer Science Semester – III
Course outcomes of Algorithm & Design

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Analyze the running time proved the correctness basic algorithms.
2. Design efficient algorithms for computational problems using divide and conquer
3. Design optimal solutions using greedy algorithm.
4. Able to apply searching and traversing efficiently
5. Prove the hardness of NP hard problems using simple reduction.
6. Do performance analysis of simple approximation algorithm

M. Sc. Computer Science Semester – IV
Course outcomes of CLOUD COMPUTING

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Describe the basic concept of Cloud Computing and Its Models.
2. Analyze the application and virtualization infrastructures for cloud computing.
3. Exhibit in-depth understanding of key cloud-based services.
4. Understand the necessity of management activity at cloud environment.
5. Study different cloud deployment tools.
6. Understand various security aspects related to cloud

M. Sc. Computer Science Semester – IV
Course outcomes of Big Data

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Identify current scenarios of big data and provide various facets of big data.

2. Illustrate different types of big data technologies.

3. Familiar with the big data technology framework and file systems.

4. Describe the components of Map Reduce & it's working.

5. Understand the use of Apache Spark in Distributed processing System

6. Apply NoSQL to store big data and real time web application

M. Sc. Computer Science Semester – IV
Course outcomes of Cyber Security

Course Outcomes

1. Analyse and evaluate the importance of personal data & its privacy & security.

2. Recognize the importance of firewall in cyber-attacks from unauthorized access in network.

3. Increase awareness about Cyber-attack vectors and safety against Cyber-frauds

4. Take measures for self -Cyber protection as well as societal Cyber- Protection.

5. Analyse and evaluate existing legal framework and laws on Cyber security

6. Analyse and evaluate the digital payment system security and remedial measures against digital payment frauds

M. Sc. Computer Science Semester – IV
Course outcomes of BLOCKCHAIN TECHNOLOG

Course Outcomes :

Upon completion of this course successfully, students would be able to

1. Describe the basic concept of Blockchain and Distributed Ledger Technology.

2. Interpret the knowledge of the Bitcoin network, nodes, keys, wallets and transactions.

3. Implement smart contracts in Ethereum using different development frameworks.

4. Develop applications in permissioned Hyperledger Fabric network.

5. Understand different Crypto assets and Crypto currencies.

6. Analyse the use of Blockchain in different use cases and with AI, IoT and Cyber Security using case studies.

M. Sc. Computer Science Semester – IV
Course outcomes of nternet of Things (IOT)

Course Outcomes Course Outcome:

Upon completion of this course successfully, students would be able to

1. Understood what Internet of Things are.

2. Identify the use of IOT from the global market.

3. Able to control home appliances from anywhere in the world.

4. Analyze the IOT enabling technologies.

5. Design applications using IOT.

6. Determine the real-world problems and challenges in IOT.

B. Sc. Environmental Studies
Programme outcomes and specific programmes outcomes

- Environmental Science is an multidisciplinary course to develop an awareness of the natural , social and cultural environment
- Environmental science emphasis on using various objects, places, plants and animals
- Students exposes to real situations in their surroundings to help them to connect
- Undergraduates students demonstrate critical thinking skills in relation to environmental affairs
- Students expresses knowledge and application of communication skills and the ability to write effectively in a variety of contexts
- Undergraduate students acquire awareness about the ability to integrate the many disciplines and fields that intersect with environmental concern
- Students the approach to environmental issues with a focus on sustainability
- Students develop skills of reflection, critical analysis and communication
- Enhance and promote curiosity and creativity in relation to the immediate surroundings

Course Outcomes

B. A. / B. Com. / B. Sc. Environmental Studies (Sem VI)

Students will able to

- Understand the multidisciplinary nature of environmental studies , definition, scope and importance , need for public awareness
- Know the social issues and the environment from unsustainable to sustainable development
- Understand urban problems related to energy, water conservation, rain water harvesting
- Have the knowledge about the environmental ethics, global warming, consumerism and waste products
- Know the environmental protection act, wildlife protection act, forest conservation act and public awareness
- Understand the human population environment, population growth, environment and human health,case study
- Acquire the knowledge about human rights, value education, woman and child welfare
- Understand the role of information technology in environment and human health

Bachelor of Commerce & Management

Programme Objectives :-

- To impart the basic knowledge of Economics.
- To impart basic knowledge of Accountancy & Statistics.
- To impart knowledge of creating a cash book and ledger books.
- To impart the basic knowledge of management, planning, organizing, directing and controlling
- To impart the basic knowledge of application of computers and its development.
- To impart the knowledge of business sectors, firms, e-commerce, cashless transaction
- To impart the knowledge of local and global enterprises and trade.
- To develop presentation skills and ability of goal setting.
- To bring about the holistic development of the students.
- To develop ethics of life.
- To inculcate Environmental awareness.
- To impart the fundamental knowledge of Computer.

Programme Outcomes :-

- The students would able to –

- Attain requisite skills and knowledge after the completion of the Programme.
- Achieve the basic knowledge of Economics.
- Assimilate basic knowledge of Accountancy & Statistics.
- Efficiency in reading and writing skill.
- Achieve requisite skills and knowledge of preparing cashbook, ledger books and balance sheet of company.
- Become knowledgeable about marketing.
- Create a self employment.
- Assimilate ethics of life.
- Achieve Environmental awareness.
- Attain fundamental knowledge of Computer.

B.COM I. Semester – I
Course outcomes of English.

Course Outcome :

1. Able to communicate skillfully in Business correspondence
2. Acquaint with the work culture in corporate world
3. The life of great personalities will motivate them to toil to be successful
4. Learn and gain fluency in the English language and conversation.
5. Become efficient in reading and writing skills.
6. The drafting skills of the learners will be honed through grammar and writing skills
7. Become proficient in the language and to eventually inculcate professional skills

B.COM I. Semester – I
Course outcomes of Principle of Accountancy

Course Outcome :

- Student important basic accounting knowledge at applicable to business i.e. meaning of
- accountancy.
- Able to handling account transaction
- Maintaining sub subsidiary books and all types of cash books
- Calculation of depreciation method of assets
- Preparation of all types of final account.

B.COM I. Semester – I
Course outcomes of Principle of Business Economics

Course Outcomes :

- Application of Micro &Macroeconomic Concepts
- Application of Utility & Indifference Curve Analysis
- Application of Demand Pattern
- Application of Supply and Production Pattern
- Application of Cost & Revenue Pattern.

B.COM I. Semester – I
Course outcomes of Principle of Business Management

Course Outcomes :

The students will be able to :

- With this course, students will be able to have clear understanding of managerial functions.
- Students will have the knowledge of planning process in the organization.
- Students will be able to demonstrate the ability to directing, leadership and communicate effectively.
- Students able to analyze isolate issues and formulate best control tools and techniques.

B.COM I. Semester – I
Course outcomes of Computer Fundamental And Operating System-I

Course Outcomes:

The students will be able to -

- Get information about evolution and application of computer & its development.
- Know about different elements of computer system.
- Aware about different types of memory.
- Get to know about different input devices and output devices.
- Learn to prepare a text document with complete formatting and page setting.

B.COM I. Semester – I
Course outcomes of Computer Fundamental And Operating System-I (Practical)

Course Outcomes:

Students will be able to do at the end of practical's:

- Prepare new document using Templates.
- Change font size & font color
- Change line spacing of Paragraph

- Change case of Paragraph
- Create Bullets, Numbering list
- Create Subscript & Superscript
- Decrease and Increase of Paragraph indent
- Insert Header & Footer in document
- Page Setup of Document
- Insert Page break, Section break, Columns.
- Students will learn to final Proofing and printing documents.

B.COM I. Semester – II
Course outcomes of English.

1. Able to communicate skillfully in Business correspondence
2. Acquaint with the work culture in corporate world
3. The life of great personalities will motivate them to toil to be successful
4. Learn and gain fluency in the English language and conversation.
5. Become efficient in reading and writing skills.
6. The drafting skills of the learners will be honed through grammar and writing skills
7. Become proficient in the language and to eventually inculcate professional skills.

B.COM I. Semester – II
Course outcomes of Course Outcomes of Skill Enhancement Module :

The students will be able to:
1. Acquaint with work culture in Bank
2. Acquaint with the use of ICT in Finance sector
3. Acquaint with Management Skills in the industry
4. Assignment: A Report on Visit to Bank or Industry
5. Class Test: Sharing experiences on visited Bank or Industry

B.COM I. Semester – II
Course outcomes of Financial Accounting

Course outcome :

- Rectification of Journal entry
- Student acquire the knowledge of nonprofit organization
- Prepare the all types of cooperative society account
- Students should be acquired partnership farm accountancy
- The bill of exchange contest and unconditional order to pay a create amount on as agree day.

B.COM I. Semester – II

Course outcomes of Business Economics

Course Outcomes

- Examine the difference between business and managerial economics.
- Application of Discriminative nature of monopolist.
- Application of monopolistic competition, oligopoly, and perfect competition
- Application of demand and supply pattern of rent and wage.
- Application of the theories of interest and profit.

B.COM I. Semester – II

Course outcomes of Principle of Business Organization

The students will be able to:

- To Familiar with business organization.
- Understand the concepts related to Business policies.
- Demonstrate the roles, skills and functions of management.
- To diagnose and solve organizational problems and develop optimal managerial decisions..

B.COM I. Semester – II

Course outcomes of Computer Fundamental And Operating System-II (Practical)

Course Outcome:

Students will be able to do at the end of practical's:

- Know how to organize files/folder in File Explorer
- Understand different customization setting in windows 10.
- Create windows login Account which is necessary for Windows 10
- Create table, utilizing existing Template provided by Microsoft and add customization Template according to user needs.
- Add header and footer to long list of pages which is crucial.
- Complete Mail Merge process.
- Change layout of pages
- Create Presentation, designing slides and add different Transition and Animation effect to objects and Slide.

Course outcomes

B. Com. (Sem-III – Sem-VI)

Students will able to

- Understand the process with its legal requirements for issuing, forfeiting, and re-issuing equity shares. Apply the relevant accounting treatments and procedures for recording these transactions.
- Comprehend the format and requirements of Schedule VI Part I & II of the Companies Act 2013 for preparing the final accounts and financial statements of a company. Also, prepare the final accounts and financial statements of a company in accordance with the prescribed schedule and guidelines.
- Understand the concept and accounting treatment for profit earned before the incorporation of a company and apply the appropriate methods for calculating and disclosing profit prior to incorporation in the financial statements.
- Gain knowledge of the concept of amalgamation and the different types of amalgamation. Understand the accounting treatment for amalgamation, including the preparation of amalgamation accounts and the treatment of assets, liabilities, and reserves.
- Comprehend legally the concept of absorption and accounting aspects involved in the absorption of a company. Apply the relevant accounting procedures and treatments for recording the absorption of a company.
- Get information about usage of data and how to process the data.
- Know about DBMS and data warehousing.
- Become aware about different types of data processing.
- Know about Spreadsheet Package and its components with formatting.
- Prepare formulas, functions and charts with complete formatting and page setting.
- Prepare new Spreadsheet and perform insert, delete and formatting.
- Perform Data entry in the cell.
- Perform sorting on the given data.
- Formatting of row, column and cell.
- Perform the calculations using formulas.
- Perform the calculations using functions.
- Page Setup of Spreadsheet
- Create various charts and graphs.

- Students will learn to printing Spreadsheet, salary sheet and mark sheet ·
- Acquire Profound knowledge about Auditing
- Understand the Auditing Procedure
- Identify any discrepancies in the financial reports of an organization or institution
- Analyze the financial reports and records of any institution/organization
- Prepare an Audit Report of any institution/organization.
- Understand the duties and liabilities of a company auditor.
- Understand skills required for Auditing
- TounderstandthestructureandfunctionofIndianMonetarySystem.
- ToenablestudentstounderstandthefunctionsimportanceandkindsofmoneyApplicationofMoneyMarket.
- TounderstandtheInflationandDeflationtargetingwithspecialreferencetoIndia.
- TounderstandtheEffectsofDemonetizationonvarioussectorsinIndianeconomy.
- To understand the various Concept of Marketing Management and Marketing Mix.
- To understand the Concept of Product, Branding and new product development.
- To understand the concept of Pricing Polices and pricing mix strategies.
- To understand Marketing Channel and its Co-operation.
- To understand the concept of Promotion and its tools.
- Understand the meaning of goodwill, its characteristics and the need for its valuation, demonstrate knowledge of the methods used for the valuation of goodwill.
- Comprehend the meaning of shares, their characteristics, and the need for their valuation, as also apply some of the methods.
- Interpret and prepare the final accounts of a company during liquidation.
- Demonstrate an understanding of the preparation of final accounts for a banking company, including schedule-wise Profit & Loss Account and Balance Sheet.

- Understand the meaning of fund and funds flow along with the objectives, limitations, and uses of a Funds Flow Statement, as also solve problems related to the preparation and interpretation of Funds Flow Statements.
- Apply the concepts of Highest Common Factor (HCF) and Lowest Common Multiple (LCM) to find the HCF and LCM of two or more integers.
- Solve linear equations involving one variable and two variables using appropriate methods such as substitution, elimination and graphical representation.
- Understand the concept of ratio and proportion and apply them to solve problems involving direct and indirect proportions and in various real-life scenarios.
- Understand the concept of simple interest and compound interest. Calculate simple interest and compound interest using appropriate formulas and methods.
- Comprehend the concept of percentage and its applications.
- Differentiate between primary and secondary data and select appropriate data collection methods for different research situations, organize and construct frequency distributions to summarize and represent data effectively.
- Calculate and interpret measures of central tendency, Dispersion and its coefficient.
- Define index numbers and understand their meaning, characteristics, importance, and various applications in economics and business. Interpret and analyze index numbers to measure changes in variables over time.
- Understand the construction and application of aggregative index numbers and Fisher's Ideal Index Number formula to measure changes in a group of related variables and analyze their significance.
- Understand the basics of correlation and its statistical analysis. Learn to calculate and interpret the coefficient of correlation using Karl Pearson's formula for both grouped and ungrouped data. Understand and compute probable error to determine the reliability of the coefficient of correlation.
- Understand basic concepts of income tax
- Compute total income of an Individual
- Know how they can save taxes in a legitimate way through the basic understanding of deductions available under chapter VI A
- Compute income from salary

- Compute income from House Property
- Compute Gross Capital Gains
- Compute Income from Other Sources
- Acquire basic understanding of Income From House Property
- Save tax in a legitimate way through proper deductions
- Fill ITR -1
- Understanding of form no. 16
- To understand the structure & function of Indian finance System.
- Toprovide an insight in to the various types of bank & Its function.
- Application of Capital Market.
- Applicationof Stock Exchange.
- Application of SEBI as a regulatory authority.
- Familiarized with basics of information technology
- Understand Computerized Accounting Package for business data processing
- Student will learn all Screen element of Tally 9.0
- Student will learn direct command area (calculator)
- Student will learn all F11 Features and F12 Configuration for better handle tally s/w
- Students will be able to work on accounting of business by creating company in Tally
- Students will be able to work necessary groups and list of Ledgers creation for smooth accounting flow
- Students will be able to enter accounting and Inventory Vouchers
- Student will able to work with various Indian Tax systems and its computation with tally

Master of Commerce (Sem-I – Sem-IV)
Programme Objectives & Programme outcomes

Programme Objectives :

1) To enable the student to acquire the process of managerial economics, demand analysis, production theory, price determination and prizing practices, etc.
2) To acquaint the student with basic issues in services marketing and customer relationship management.
3) To enable the student to understand & master the accounting concepts as well as tools and techniques used for taking managerial decisions.
4) To impart the knowledge of ratio analysis, cash flow and budgetary control.
5) To enhance decision making abilities of students in situation of uncertainty in dynamic business environment.
6) To help the student to understand and master the conceptual framework of Management and organizational behavior.
7) To provide understanding of computer operating system and application of relevant software's in managerial decision making.
8) To impart the knowledge of commercial banks and its transactions, nature and scope of insurance and its kinds.

Programme Outcomes :-

The student would be able

1) To acquire a job as an Economist, Market Research Analyst, a banker, management consultant, stockbroker/trader, Actuary, Financial analyst, Financial advisors or Advisor to Tax Law Court etc.
2) To acquire the process of managerial economics, demand analysis, production theory, price determination and prizing practices, etc.
3) To acquire proficiency in the accounting concepts as well as tools and techniques used for taking managerial decisions.
4) To master the knowledge of ratio analysis, cash flow and budgetary control.
5) To achieve decision making abilities in the situation of uncertainty in dynamic business environment.
6) To master the conceptual framework of Management and organizational behavior.
7) To attain understanding of computer operating system and application of relevant softwares in managerial decision making.
8) To gain the knowledge of commercial banks and its transactions, nature and scope of insurance and its kinds.

M.COM I. Semester – I
Course outcomes of Managerial Economics

Course Outcomes

1. To know the concepts of managerial economics economic and managerial theory

2. To provide the knowledge of demand analysis and consumer choice theory.

3. To understand production function and law of supply

4. To acknowledge price determination and pricing practices

5. To enable students to understand business cycles.

M.COM I. Semester – I

Course outcomes of Service Marketing & Customer Relationship Management

Course Outcome

1. Students will understand seven phases of marketing of service in depth.

2. Student will understand strategic issues peculiar of service marketing.

3. Students will understand an importance of new and innovative concepts of CRM, especially E-CRM.

4. DemonstrateideacreationandimplementationofCRMfordifferentservicesector.

M.COM I. Semester – I

Course outcomes of Advanced Financial & Cost Accounting

Course Outcomes :

1. Understand the basics of Cost Accounting. Apply techniques to ascertain Cost Per Unit and Selling Price and solve typical problems related to cost determination.

2. Demonstrate knowledge of Machine Hour Rate and its application in calculating the cost of production.

3. Analyze and maintain Operating Cost Accounts, focusing on the context of the Transport service industry.

4. Differentiate between Job Costing and Batch Costing, and identify scenarios suitable for each method. Create cost estimates for specific jobs and batches, incorporating overhead allocation.

5. Comprehend the principles and methods of Contract Costing, particularly in relation to long-term projects.

6. Understand the concepts and processes involved in Process Costing, particularly in industries with continuous production.

7. Define Cost Audit and its role in ensuring cost control and efficiency. Evaluate the advantages and scope of Cost Audit, differentiating it from Financial Audit. Analyze the step-by-step Cost Audit procedure, including planning, execution, and documentation. Prepare a comprehensive Cost Audit Report, highlighting findings, recommendations, and potential areas of improvement

M.COM I. Semester – I
Course outcomes of Banking & Insurance Services

Course Outcomes :

1. To understand the structure & function of banking and insurance service
2. To enable students to understand the functions, importance and kinds of bank and insurance.
3. Application of Bank and insurance.
4. To understand the types of banking and insurance.
5. To understand the banking and insurance sectors in Indian economy.

M.COM I. Semester – II
Course outcomes of Accounting for Managerial Decision

Course Outcomes :

1. Understand the basics of management accounting and its role in the overall field of accounting and understand the position, role, and responsibilities of a management accountant.
2. Define, understand the necessity, advantages, and limitations of ratio analysis. Classify and interpret different types of ratios for assessing liquidity, activity, leverage, and profitability
3. Understand the basics of fund flow statement. Learn the procedure for preparing a fund flow statement. Understand the purpose and importance of a cash flow statement. Follow the guidelines of Accounting Standard (AS-3) for preparing a cash flow statement.
4. Understand standard costing as a control technique in cost accounting. Explain the method of cost control and the objectives of standard costing. Analyze the relationship between standard costing and budgetary control. Learn the process of setting and revising standards.
5. Define variance and its importance in cost analysis. Identify and calculate material variance and labor variance. Analyze the relevance of variances in budgeting and standard costing.
6. Differentiate between marginal costing and absorption costing. Understand cost-volume-profit analysis in marginal costing.
7. Explain the assumptions and practical applications of break-even analysis. Apply break-even analysis in decision-making scenarios such as sales mix, make or buy decisions, and product line discontinuation. Solve problems related to marginal costing and break-even analysis.
8. Define budget and understand its essentials. Identify different types of budgets (functional, master, etc.), the concepts of fixed and flexible budgets and solve problems related to cash budget and flexible budget.

9. Define the purpose and objectives of reporting to management. Identify the reporting needs at different managerial levels. Discuss types of reports and modes of reporting. Explain the reporting requirements at various management levels

M.COM I. Semester – II
Course outcomes of Strategic Management

Course outcome

1. Demonstrate decision making ability and dynamism.

2. Will understand major theories, background work, concept and research output in the field of strategies management.

3.Demonstrate a proper meaning of the tools and technique used by executives in executing strategies and will appreciate its integrative and interdisciplinary nature.

4. Demonstrate practical situation for diagnosing and solving organizational issues.

5. Relate theories and device application of it.

M.COM I. Semester – II
Course outcomes of Organizational Behaviour and Development

Course Outcomes :

1. Student Understand decision making process both at individual level and ingroup.

2. Student Understand Power, Politics, and Accomplishing organizational goals.

3. Students demonstrate ability to manage conflicts.

4. Students will determine Leadership style according to the situation.

M.COM I. Semester – II
Course outcomes of Computer Application in Business
(Skill Enhancement Course)

Course outcomes:

1. Word process allows students to create and edit the documents and also gives them the ability to generate productivity-related images like charts, tables and graphs.

2. Students should know basic data types in spreadsheets. Is able to determine databases and convert them. Know basic functions to calculate mathematical, financial, statistical and logical operations. Have skills of data visualization depending on data and task types.

3. Understand how to start MS –Excel and SPSS. Enter basic data into SPSS and Carry out statistical analysis that can test hypotheses. Develop various required graphs.

4. Enable students to gain expert knowledge, principles and procedure of computerized accounting and taxation. Also, they will be able to do critical thinking and problem-solving skills in analyzing financial information and taxation.

M.COM II. Semester – III

Course outcomes of Corporate Tax Planning & Management

Course Outcome :-

1. Understand basic concepts of Corporate Tax.
2. Computation of Tax liability of company.
3. Knowledge about the capital structure of a company.
4. Awareness about advance tax payment.

M.COM II. Semester – III

Course outcomes of Research Methodology

Course Outcomes:-

1. To understand basics and methods of research.
2. To evaluate research problems and apply to decide sampling techniques.
3. To Comprehend Sources of Data Collection.
4. To define & write Review of Literature.
5. To apply data analysis and interpretation methods. 6. To write a Research Report

M.COM II. Semester – III

Course outcomes of Statistical Analysis

Course Outcomes:-

1. Understand the concept, identify and describe the types of correlation (positive, negative, zero) and explore and explain the methods used to study correlation.

2. Understand the concept and solve problems involving regression equations and calculate regression coefficients.

3. Understand the concept of sampling and different sampling methods (random sampling, stratified sampling, cluster sampling, etc.). Differentiate between sampling and non-sampling errors. Identify and explain common sources of non-sampling errors. Understand the concept of sampling distributions and their properties (mean, variance, shape). Calculate and interpret sampling distribution characteristics.

4. Understand the concepts of statistical estimation and hypothesis testing

5. Differentiate between point estimation and interval estimation. Solve problems related to point and interval estimation of population mean. Calculate point estimates and construct confidence intervals for population means.

6. Calculate variance for proportions

7. Conduct statistical tests of hypotheses and identify type I and type II errors.

8. Solve problems involving the F-test for comparing variances or testing model significance.

9. Apply the t-test for small samples and z-test for large samples to test hypotheses about population means.

10. Understand the chi-square test for goodness of fit and its applications. Also understand, apply and interpret degrees of freedom in the context of chi-square tests.

11. Solve problems using the parabolic curve and binomial expansion method for interpolation and extrapolation.

12. Understand the concept and types of index numbers (price index, quantity index, composite index, etc.). Solve problems involving the simple (unweighted) aggregate method and weighted index number methods (Laspeyre's, Paasche's, Fisher's, Marshall-Edgeworth) for constructing index numbers.

13. Understand the concept of statistical quality control and different quality control methods (control charts, process capability analysis, acceptance sampling). Determine and set up control limits for control charts. Construct control charts (X-bar chart, R-chart, p-chart, c-chart) and interpret the results.

14. Understand the importance and applications of time series analysis. Identify and describe the components of time series (trend, seasonality, cyclical variations, irregular variations). Apply different methods (moving averages, least squares) to measure and analyze trends in time series data. Choose appropriate trend models (linear, exponential, quadratic) based on the merits and limitations of each model. Use methods (simple averages, ratio-to-moving-average) to measure and analyze seasonal variations in time series data, considering their merits and limitations

M.COM II. Semester – III

Course outcomes of E-Commerce and Legal Security

Course outcomes:

1. Analyze the impact of E-commerce on business models and strategy.

2. Describe the major types of E-commerce.

3. Explain the process that should be followed in building an E-commerce presence.

4. Identify the key security threats in the E-commerce environment.

5. Describe how procurement and supply chains relate to B2B E-commerce.

6. To understand Electronic Payment Systems and Unified Payment Interface System

M.COM II. Semester – IV

Course outcomes of Entrepreneurship and Skill Development

1. The objective of the course is to improve entrepreneurship quality for self-employment.

2. To gives knowledge for start their own start-up.

3. This course is also guiding them how business skill developed for achieving business goals

M.COM II. Semester – IV

Course outcomes of Sales and Distribution Management

1.The objective of the course is to improve marketing skill and Distribution management avenues.

2.To gives knowledge for strategy, planning budgeting, and forecasting of Sales.

3.This course is also guiding them how to manage inventory control system within an organization of Business Concern and Individual

M.COM II. Semester – IV

Course outcomes of International Marketing

1 To develop understanding about International Marketing

2 To develop understanding of Application about International Marketing Organisation

3 To develop understanding of Global Product Planning

4 To develop understanding of application of Global Product Pricing

5 To develop understanding of Emerging Issues of Global Marketing

M.COM II. Semester – IV

Course outcomes of Cooperative Management

1 To develop understanding about the functioning of cooperative industry

2 To develop understanding about functioning of Agricultural Cooperative Societies

3 To develop understanding about functioning of Sugar Cooperative Societies

4 To develop understanding about Government policy on cooperation

5 To develop understanding about cooperative legislation in India

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)

PSOs:

After completion of this course students will be able to:

1. Comprehend various forms of literature like Prose, Poetry, Drama and Fiction

2. Develop the knowledge of grammatical system

3. Develop four language skills LSRW

4. Widen scope of employability and Entrepreneurship viz Teaching, Civil Services and Creative Writing.

B.A.I. Semester – I
Course outcomes of Compulsory English

Cos:-

After completion of this course students will be able to:

- Understand the basic knowledge of English language and literature
- Understand the relation between literature and real life.
- Understand and interpret the prose, poem, short stories
- Write the News Report, Letter, Essay, Paragraph etc.
- Avail the pleasure of literary forms such as Novel, Poem, Play etc.
- Develop interview technique, Reading Skills, Writing Skills and Speaking Skills.
- Enhance the interest in English Language.

B.A.I. Semester – I
Course outcomes of Skill Enhancement Module (For Internal Assessment)
Reading Skills: Comprehension

Cos:

After completion of this module students will be able to:

- Read speedily and fluently.
- Develop understanding of the passage
- Enrich their vocabulary.
- Summaries a paragraph.

B.A.I. Semester – I
Course outcomes of Ability Enhancement Course (Communication Skills in English)

COs :

After completion of this course students will be able to:

- Communicate effectively in different real life situations.
- Register complaints, make enquiries and give opinions.
- Make proper self introduction.
- Respond well to questions at an interview.

B.A.I. Semester – II
Course outcomes of Compulsory English

PSOs:

After completion of this course students will be able to:

1. Comprehend various forms of literature like Prose, Poetry, Drama and Fiction

2. Develop the knowledge of grammatical system

3. Develop four language skills LSRW

4. Widen scope of employability and Entrepreneurship via Teaching, Civil Services and Creative Writing

B.A.I. Semester – II
Course outcomes of Cos:-
After completion of this course students will be able to:

- Understand the basic knowledge of English language and literature
- Understand the relation between literature and real life.
- Understand and interpret the prose, poem, short stories
- Write the News Report, Letter, Essay, Paragraph etc.
- Avail the pleasure of literary forms such as Novel, Poem, Play etc.
- Develop interview technique, Reading Skills, Writing Skills and Speaking Skills.
- Enhance the interest in English Language.

B.A.I. Semester – II
Course outcomes of Skill Enhancement Module (For Internal Assessment)
Writing Skills: Writing an Application

Cos:

After completion of this module students will be able to:

- Understand various types of application.
- Understand the structure of application.
- Write various applications.

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)
Programme : B.A. (English Literature) Part A

PSOs:

AFTER COMPLETION OF THIS COURSE STUDENTS WILL BE ABLE TO:

1. Understand Literary Movements that existed in different ages.

2. Define Literary Theories and Terms in Criticism.

3. Develop reading, writing and analytical skills.

4. Communicate their ideas critically and creatively.

Programme : B.A. (English Literature) Semester-I to VI

Cos:

AFTER COMPLETION OF THIS COURSE STUDENTS WILL BE ABLE TO:

1. Analyse various forms of literature.

2. Acquaint them with the forms of structures and aesthetics of style and techniques of literary works.

3. Analyse various elements of literature.

4. Communicate in English orally and in writing.

5. Kindle their critical thinking skills.

Programme : B.A. (English Literature) Semester I&II

Skill Enhancement Module (For Internal Assessment) Report Writing

COs:

After completion of this module students will be able to:

1. Understand different kinds of Reports.

2. Understand writing reports effectively

3. Prepare effective reports

I) Project : Collection of Newspaper Report

II) Class Test : Report of Activity

Programme : B.A. (English Literature) (Soft Skills) Semester I&II
(Course Code GIC ENG 1.5)

COs:

AFTER COMPLETION OF THIS COURSE STUDENTS WILL BE ABLE TO:

1. Understand various soft skills.

2. Avail the pleasure of reading English short stories.

3. Use soft skills in day to day life.

4. Communicate in English orally and in writing.

Programme : B.A. (English Literature) (Soft Skills) Semester I&II
(Course Code GIC ENG 1.6)

COs:

AFTER COMPLETION OF THIS COURSE STUDENTS WILL BE ABLE TO:

1. Understand various soft skills.

2. Avail the pleasure of reading English short stories.

3. Use soft skills in day to day life.

4. Communicate in English orally and in writing.

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)
Programme : B.A. (Marathi)

B.A. Marathi (Required) Syllabus Specific Result PSOS:

1) Sant Gadgebaba B.A from Faculty of Human Sciences, Amravati University. By studying the Marathi (required) syllabus, the concept of 'literature' will be clarified and the Marathi language taste will be developed.

2) Marathi literary tradition, writers, poets, thinkers will be introduced, social integration, interfaith equality, national integration and human values which are the foundation of Indian Constitution will be inculcated in the students through their writings.

3) Students will develop interest in Marathi, language, literature, art, due to the development of their vision of treatment, comparison and review, they will conduct proper study, research and creative production of writing in various literature types.

4) By studying language and literature at the social as well as artistic level, practical application of literature and language can be made by developing prudent rationality and compassionate sensitivity.

5) Arts students will acquire linguistic skills to get prestigious employment along with philosophical study of Marathi language.

6) Students will apply practical skills required in various fields through Marathi language.

7) Students will develop an attitude towards various skill formation required for employment generation.

B.A.I. Semester – I
Course outcomes of compulsory Marathi

Conclusion of Study (COS):

1. From the assigned literature, the life philosophy, contemporary business sense will be known.

2 Knowledge of various types of literature such as conceptual, fine, poetry. In this class one will know the uniqueness of the Maya type and will understand the similarities and differences between them.

3. Students will understand the creative form of language through conceptual prose. Also, students will get inspiration from the life work of great people with character and the idea that they can overcome the crisis and succeed in life will make them money.

4. Through the reading of fine art, the students' knowledge about life will be enriched by getting pleasure, understanding, knowledge etc

5. The perspective of the students will be enriched by conceptualism, philosophy, poetics, sentimentality, vision of abnormality in ordinary things,

6. Students will develop their taste by increasing their ability to understand, describe, appreciate, analyze and evaluate different types of literature.

7. Through this literary form, the students will get the teaching of various moral values, life values, it will be used to lead a better life.

8. Through the applied component, various types of skills will be developed in them and they will become employable

9. Students will understand how to use language creatively and produce different types of literature through this study will be motivating and helpful to become thinkers, writers, poets. Also they will be employable by practical application.

B.A.I. Semester – I
Course outcomes of Ability Enhancement Course-l

Conclusions of Study (COs)

1. It will help in the development of communication skills.

2. It will help to increase Marathi language ability.

3. The doors to the conversation area will open

4. Opportunities will be available in various business sectors.

B.A.I. Semester – I
Course outcomes of compulsory Marathi 'Shabdgandha' part-1

Coordinating Officers (COs):

1. From the assigned literature, life philosophy, contemporary practice awareness will be known.

2 There will be knowledge of various forms of conceptual, fine, poetry. The uniqueness of this type of palace will be known and the similarities and differences between them will be understood.

3 Through ideological prose, students will understand the creative form of language, also the life work of great people with character will inspire students and the idea that success in life can be overcome by overcoming adversity will be instilled in them.

4. Through the reading of fine art, the students' knowledge about life will be enriched by attaining happiness, wisdom, knowledge etc.

5. The perspective of the students will be enriched with conceptualism, philosophy, poetics, sentimentality, vision of abnormality in ordinary things.

6. Students will develop their taste by increasing their ability to understand, describe, appreciate, analyze and evaluate different types of literature.

7. Students will learn various moral values and life values from this class, which will be used to lead a good life.

8. Through the applied component, various types of skills will be developed in them and they will become employable.

9. This study will be motivating and helpful to become a thinker, writer, poet, students will understand how to use language creatively and will produce different types of literature and will become employable by practical application.

B.A.I. Semester – II
Course outcomes of 'Marathi Language Skills: Writing Skills'

Conclusions of Study (COs)

1. It will help in writing skill development.

2. It will help to increase Marathi language ability,

3. The doors to the writing field will open.

4. Opportunities will be available in various business sectors.

B. A.I (Sem-III – Sem-IV) – Marathi & Literature
Course outcomes

अभ्यासपत्रिकेची फलनिष्पत्ती) COs):

१. वैचारिक लेखांमधून विद्यार्थ्यांना लोकशाही मूल्यांची जपणूक करण्याचा संस्कार व विचार मिळेल. महापुरुषांचे बिचार व कार्य समजून घेता येईल. त्यांच्या जीवन आणि विचारांपासून विद्यार्थ्यांना प्रेरणा मिळेल

२. ललित व कचिता या विभागांतून गतकालीन आणि सममकालीन जगण्याचे प्रश्न समजून घेण्यासांठी उपयुक्त असे मार्गदर्शन विद्याध्यर्थ्यांना मिळेल.

३. कौशल्य विकास आधारित अभ्यासक्रम (उपयोजित मराठी) हा विभाग विद्यार्थ्यांना विविध प्रकारची कौशल्ये आत्मसात करण्यासाठी मार्गदर्शक ठरेल. विविध स्पर्धा परीक्षांची तयारी करणाऱ्या विद्यार्थ्यांना हा अभ्यास पटक मार्गदर्शक व सहायक ठरेल.

४. वैचारिक, ललित, कविता आणि कौशल्य विकास आधारित अभ्यासक्रम (उपयोजित मराठी) या बार विभागांतील घटकाचा अभ्यास केल्यानंतर विद्यार्थ्यांना संवाद कौशल्ये, भाषिक कौशल्ये, लेखन कौशल्ये आत्मसात करता येतील, लोकशाही मूल्यांची जपणूक करण्याची तत्त्वनिष्ठा त्यांचे अंगी निर्माण होईल. मराठी भाषेचे जतन, संवर्धन करण्याची प्रेरणा त्यांना मिळेल. ही भाषिक कौशल्ये विद्यार्थ्यांना रोजगारक्षम करण्यासाठी सहायक ठरतील.

५. या अभ्यासक्रमातील साहित्यकृतींच्या आकलन, आस्वाद व मूल्यमापनातून विद्यार्थ्यांना ललितसाहित्य वा वाङ्मय प्रकाराच्या सामाजिक सांस्कृतिक फलश्रुतीची जाणीव होईल, समाजाच्या प्रभावामुळे साहित्यकृती निर्माण होत असते तसेच साहित्यकृतीतील विचारांच्या प्रभावातून प्रगतिशील समाजाची जडणघडण होत असते ही प्रक्रिया विद्यार्थ्यांना समजेल.

६. भाषा आणि साहित्य समाजाचे सांस्कृतिक भरणपोषण करीत असते. भाषा आणि साहित्यामुळे संस्कृतीचे व अभिरुचीचे संवर्धन आणि नवनिर्माण होत असते. समाज, संस्कृती, प्रदेश यांच्या संवर्धन आणि नवनिर्माणासाठी भाषेचे जतन आणि साहित्याची निर्मिती आवश्यक असते याची जाणीव विद्यार्थ्यांना होईल..

७. भाषा आणि साहित्याच्या आकलन आस्वादनातून सवाद कौशल्ये, लेखन कौशल्ये आत्मसात करून विद्यार्थ्यांना रोजगारक्षम होता येईल.

८. 'दृष्टांतवैभवा' तून महानुभाव पंथाच्या सामाजिक, सांस्कृतिक, भाषाविषयक कार्याचा व प्राचीन मराठी गद्य वाक्याचा परिचय होईल. महानुभाव पंथाच्या वाड्मय अभ्यासातून तत्कालीन सामाजिक, सांस्कृतिक प्रश्नांचे आकलन होईल,

९. 'दृष्टांतवैभवा' या पुस्तकाच्या अभ्यासातून लोकव्यवहार व भाषा व्यवहार यांचे ज्ञान होईल.

१०. महानुभाव पंथाच्या वाड्मय अभ्यासातून तत्कालीन सामाजिक व्यवस्थेचे आकलन होईल.

११. महानुभाव पंथाच्या वाड्मय अभ्यासातून तत्कालीन भाषिक मूल्यांचा अभ्यास करता येईल ५

१२. हा अभ्यास विद्यार्थ्यांना प्राचीन मराठी साहित्यकृतीचे संशोधन, जतन व संवर्धन करण्यासाठी प्रेरक ठरेल.

१३. या अभ्यासामुळे विद्याच्यांना समकाळात दृष्टांत लेखनाची आणि अल्पाक्षरी पण आशयपूर्ण लेखनाची प्रेरणा मिळेल.

B.A.I. Semester – I to VI
Course outcomes of Marathi Literature

1) By studying the Marathi literature (optional) curriculum in the Faculty of Humanities of Sant Gadgebaba Amravati University, the concept of literature will be clarified and the taste of Marathi language will be developed.

2) Marathi literary tradition, writers, poets, thinkers will be introduced, social integration, interfaith equality, national integration and human values which are the foundation of Indian Constitution will be inculcated in the students through their writings.

3) Students will develop interest in literature and art. As his vision for therapy, comparison, and review develops, he will study, research, and creatively produce writing in various literary genres.

4) The study of language and literature at the social as well as the artistic level leads to the practical application of literature by developing rational rationality and compassionate sensitivity.

5) Literature students will acquire skills to get prestigious employment with study of Marathi literature.

6) Students will develop an attitude towards various skill building required for employment

generation.

B.A.I. Semester – I
Course outcomes of Marathi Literature (Optional)

Course Outcomes (COs):

1) Awareness of social issues and social values will be created through the flow of novels.

2) The novel Dhulpaval will show various characters in the society and rural culture.

3) The complexities of relationship and emotional movement of the characters in the assigned novel can be explored

4) Linguistic and literary values will be studied.

5) The technique of novel writing can be learned.

6) By understanding the nature and elements of a novel, one can attempt to write a novel based on human beings and other elements that are at the center of life.

7) Various types of compositions can be studied through poetry.

8) Commitment to social consciousness, national unity, love feelings, sentimentality will arise.

9) Various streams of poetry will be introduced and the inspiration for poetry will be developed from it.

B.A.I. Semester – II
Course outcomes of Marathi Literature (Optional)

Course Specific Outcome (PSOS):

1) By studying the Marathi literature (optional) course in the Faculty of Humanities of Sant Gadgebaba Amravati University, the concept of literature will be clarified and the taste of Marathi language will be developed.

2) Marathi literary tradition, writers, poets, intellectuals will be introduced, social integration, interfaith equality, national integration and human values which are the foundation of Indian Constitution will be inculcated in the students through their writings.

3) Students will develop an interest in literature and art, develop the ability to treat, compare, and review it, and will conduct proper study, research and creative production of writing in various literary genres.

4) The study of language and literature at the social as well as the artistic level leads to the practical application of literature by developing rational rationality and compassionate sensitivity.

5) Literature students will acquire skills to get prestigious employment with study of Marathi literature

6) The attitude of various skill formation required for employment generation will be created in the students.

B.A.I. Semester – II
Course outcomes of Marathi Literature (Elective)

1) The students will be introduced to the literary form 'Nataak' which enriches human life

2) Various human tendencies will be seen in the play 'Vata Palawata'.

3) Social culture will be seen through Vata Palawata plays and various personalities will be introduced.

4) The study of 'Vata Palavata' will develop the ability to understand, appreciate and evaluate drama

5) Studying the elements and techniques of drama production will inspire students to produce drama.

6) This study paper will be useful for students who want to pursue a career in drama / theatre.

7) Various types of compositions can be studied through Kavyasarita.

8) Commitment to social consciousness, national unity, love feelings, sentimentality will arise.

9) Various streams of poetry will be introduced and inspiration for poetry will develop from it.

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)
Programme : B.A. (Philosophy)

PSOs:

1. To develop the insight among students about Fundamentals of Indian and Western

Philosophy

2. To create an interest among the students about various Indian and Western Schools.

3. To classify between Indian and Western Philosophical thoughts.

4. To inculcate and develop Ethical Values among the students

5. To apply the various Moral Values in day to day life.

6. To analyze the moral thoughts of Contemporary Indian Saints.

B.A.I. Semester – I
Course outcomes of Introduction to Philosophy

COs

- To create insight about Nature of Philosophy.
- To develop understanding of Branches of Philosophy.
- To identify various isms in Philosophy.
- To develop insight into Orthodox and Heterodox Schools and Contemporary Indian Philosopher.
- To Evaluate Ancient, Medieval and Modern Western Philosophy and Contemporary Western Philosopher.
- To Analyze and Evaluate the contribution of various Contemporary Indian Social Philosopher
- To Criticize and Justify the Theories of various Contemporary Indian Social Philosopher

B.A.I. Semester – II
Course outcomes of Human Life and Ethics

COs

- To introduce the Nature of Ethics as a branch of Philosophy.
- To develop understanding of various concepts in Human Moral System.
- To develop insight and application of Buddhist, Jainas', Patanjal's, Plato's and Kant's ethics in every human being for betterment of life.
- To Apply Moral Teaching of Indian Saints in day to day life.
- To know an ultimate goal of human life according to Hedonic thoughts various Indian and Western Moral Thinkers.
- To Analyze and Evaluate the Applied Ethics
- To Criticize and Justify the Significance of Applied Ethics.

Course outcomes
B. A. (Sem-III & Sem-VI) – Philosophy
Students will able to
1) To develop the inside among students about the beginning of western philosophy.

2) students will be justified between the various theories put forward regarding the origin of the world.

3) Students will classify between monism and pluralism. also, they will identify what is material and what is ideal things.

4) students will acquire knowledge about how to evaluate previous thought, how to create new ideas, and how to justify between Ideal and practical life.

5) A student will acquire knowledge about himself.

6) The ability of students to think for themselves will increase.

7) Different Views about religion will come up.

8) Rationality and experience can be evaluated in debate.

9) Students will be able to analyze the relationship between body and mind.

10) What is doubt? Doubt is there any method? The student will review this.

11) Students will evaluate various theories put forward by philosophers about the ultimate truth of the world.

12) Students will argue for harmony between rationalism and empiricism.

13) Does God, soul exist or not? Students will treat this.

14) Comparatives study between different views of Knowledge.

15) To know the reality of World.

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)
Programme : B.A. (B.A. Economics)

Pos:

1. 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.

2. 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.

3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

4. 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.

5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

PSOs:

- Problem analysis: recognize formulate and study the problems of various sectors of the Indian economy, regional economy and the global economy with the help of the economic ways of thinking, theories, concepts and laws.
- Apply the knowledge of economic concepts, laws and theories, for a better economic environment for the society at large.
- Communicate effectively on the economic activities with the community and the society through the acquiring knowledge of the national and the global economy.
- To build on these concepts to develop deeper understanding of Economy in the future.
- Explain the basic concepts, laws and theories related to the economic behavior of the human being.
- Graduates from our department are effectively taught and explained the cause with the help of visual aids like white board and PowerPoint Presentation.
- They will be able to visualize the real world situation and enhance them to initiate the programmers for pursuing studies and be alert with the importance of entrepreneurial skills for their self-employment, to improve the general attitudes and living conditions of the masses.

B.A.I. Semester – I
Course outcomes of Economics Micro Economics

Course Outcomes:

The student will be able to:

- Apply knowledge and skill in the field of Economics and will be able to have the employability in these areas.
- Describe and apply the methods for analysing consumer behaviour through demand and supply, elasticity.
- Perform analysis to analyse the impact of economic events on Markets,
- To create a new approach towards the study of Economics.
- The course will illustrate how microeconomic concepts can be applied to analyze real-life situations
- Analyse the performance of firms under different market structures,
- Evaluate the factors affecting firm behaviour, such as production and costs
- To have better awareness regarding different Factors Pricing Rent, Wages, Interest, and Profit.

Skill Enhancement Module(SEM): Agricultural Market System

- Awareness about Market System
- To develop the ability of Entrepreneurship

B.A.I. Semester – II
Course outcomes of Economics Economy of Maharashtra

Course Outcomes:

The student will be able to:

- Develop ideas of the basic characteristics of Maharashtra's economy and its potential for natural resources.
- Understand agriculture as the foundation of economic growth and development, analyse the
  progress and changing nature of the agricultural sector and its contribution to the economy as a whole.
- Understand the role of Agriculture in Economy of Maharashtra.
- Study the issue of farmers suicide in Maharashtra.
- Study the concept of FDI and its trends in Maharashtra.
- Consider the role of Industry and Service sector in Economy of Maharashtra.

Skill Enhancement Module (SEM): Agro-based Industries

- To introduce Agro-based Industries
- To understand how to create new employment opportunities from Agro-based Industries

Course outcomes

B. A. (Sem-III – Sem-VI) – Economics

Students will able to

1. Apply knowledge and skill in the field of Economics and will be able to have the employability in these areas.

2. Describe and apply the methods for measurement of national income, GDP and Per Capita Income

3. Perform analysis to analyse the impact ofInflation and Deflation

4. To create a new approach towards the study of Value of Money.

5. The course will illustrate how macroeconomic concepts can be applied to analyze real-life situations

6. Analyse the performance consumption function,

7. Evaluate the factors and awerness of international trade.

8. Awareness about Central Budget

9. To develop the ability to understand the Central Budget

10. Apply knowledge and skill in the field of banking.

11. Describe and apply the methods for analysing commercial banks.

12. Perform analysis to analyse the impact of economic events on banking

13. To create a new approach of central banks

14. The course will illustrate how cooperative and NABARD

15. Analyse the performance of Banking Services,

16. To have better awareness regarding IMF and World Bank.

17. Awareness about Indian Banking System

18. To develop the ability to ‘How to do financial transactions through banks

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)

Programme : B.A. (Political Science)

POs:

1: Understanding of constitution, government institutions, electoral processes and policies.

2: Knowledge of some of the philosophical underpinnings of modern politics and government.

3: Develop the ability to make logical inferences about social and political issues on the basis of comparative and historical knowledge.

4: Knowledge of key theories and concepts, political thoughts, organization, and modern issues in international relations.

5: Develop the analytical abilities, observational skills and decision making abilities of the students so that they will be able to face different challenges of life.

6: Equip students with the concepts, principles, theories and processes studied in Political Science, so as to facilitate their career choices and employment.

7: Aim at shaping the students' perception and outlook on social, economic and political environment of India and beyond.

PSOs:

Student of B.A.program studying Political Science as an optional subject is expected to:

1: To understand the basic structure of Indian political system

2: To Inculcate interest in political field

3: To create the leadership qualities in students

4: To understand Indian governing system

B.A.I. Semester – I
Course outcomes of Political-Science Indian Political System

COs

At the end of the course the students should be able to:

- 1: Understand and explain the significance of Indian constitution as the fundamental law of the land.
- 2: To know the making process of the constitution and salient features of Indian constitution.
- 3: Exercise the fundamental rights in proper sense at the same time identifies his responsibilities in national building.
- 4: Analyze the Indian Political System, the powers and functions of the Union, State Government in detail.
- 5: Critically analyzing the important institutions of Indian Union: The Executive: President, Vice-President, Prime Minister, Council of Ministers, State Executive:

Governor, Chief Minister, Council of Ministers, The Legislature: Rajya Sabha, LokSabha, State Legislature, The Judiciary: Supreme Court and High Court: Composition and jurisdictions.

- 6: To make conscious of the social, cultural, economic and political environment that affects politics in India, at the national as well as regional levels.
- 7:To improve knowledge and communication and presentation skill of the students.
- 8:To encourage the students to explore new areas relevant to the topic.

B.A.I. Semester – II

Course outcomes of Political Science Indian Political System

COs

At the end of the course the students should be able to:

- Understand and explain the significance of Election Commission of India
- know the powers and role of Governor, Chief Minister & Council of Minister
- Understand structure & powers of Legislative Assembly and Legislative Council
- Explain the structure and jurisdiction of High Court and District Court
- Know the Composition Function and Powers of Grampanchayat & Gram Sabha.

Course outcomes

B. A. (Sem-III – Sem-VI) - Political Science

Students will able to

1) Understand the Meaning and Approaches of Comparative Politics.

2) Know the salient features of the Constitution and Executive of the Britain.

3) Understand the supremacy of the British Parliament.

4) Know about the salient features of the Constitution and Executive of USA.

5) Analyse the election process of the President and the Vice-President of the USA.

6) Understand the powers and functions of the President and Vice-President of USA.

7) Know about the Legislature of the America.

8) Understand the supremacy of the Supreme Court of the USA with its Jurisdiction.

9. To develop Communication and Presentation Skills of the students.

10. To develop the writing skill of the students on the related relevant topic.

11. Understand the concepts of Constitution and Constitutionalism

12. Know about the salient features of the Constitution and executive of the China.

13. Understand one House Legislature (NCP) with it's Standing Committee.

14. Analyse the comparative study of the British Constitution and American Constitution.

15. Analyse the comparative study of the British Constitution and China's Constitution.

16. Analyse the comparative study of the British Prime Minister and the President of the USA.

17. Analyse the comparative study of British House of Lords and American Senate.

18. Analyse the comparative study of the British Speaker and American Speaker.

19. Analyse the comparative study of the Supreme Court of the USA and China's Supreme People's Court.

20. To develop a Research Ability amongst students

21. To develop the Skill of Report Writing.

Programme Outcomes and Programme specific outcomes Bachelor of Arts (B. A.)
Programme : B.A. (B.A. Home Economics)

PSOs

After successfully completion of UG course in Home Economics student will be able to -

- Describe the home management process and apply it in practice for planning and executing inside and outside the home
- Play model role as a home maker, home manager, home Scientist, counselor as well as play a differentrole in different kinds.
- Build Confidence to create her own business and adjust in it better way.
- Derive certain changes in behavior and attitudes that require for effective communication and as a Entrepreneur.

B.A.I. Semester – I
Course outcomes of Family Resource Management and Interior Decoration

COs

After successfully completion of course student should be able to-

- Formulate a plan of activities/programs managing and saving resources.
- Evaluate the planned activities and will be able to build better plan in coming program.
- Classify the decisions to its hierarchy for achieving a goal in future.
- Make family budget with list of items.
- Make greeting cards and sample design using colour schemes
- Quote and Name to each flower arrangement.

Objectives: This course will enable the students-

- To recognize the basic concepts home economics.
- To design a plan of home-work using management process.
- To classify the resources and decisions and use it effectively.
- To enhance the chances of reaching the desired goals through wise decisions and effective use of resources.
- To apply the course knowledge in day-to-day life.

B.A.I. Semester – I
Course outcomes of SEM (Module) Event Management

Objectives: -

- To Acquire the basic concept of event management
- To design a event plan for carrying out easily and skillfully.
- To enable event delivery and evaluation
- To develop skills Event /planning is a source of employment and self-employment

COs

After successfully completion of module course students should be able to –

- Design Draft of event plan and follow the timeline
- Do job work in event planning industry as well as play a role of Event manager after well-practiced
- Identify best practice in the development and delivery for successful event.
- Enhance the scope for bringing understandings into event planning practices.

B.A.I. Semester – I
Course outcomes of Family Resource Management and Interior Decoration

COs-

After successfully completion of practical course student will be able to-

- Draw a design for colour schemes.
- Apply the practical knowledge of colour schemes for rangoli and flower arrangement.
- Do and demonstrate types of flower arrangements.

- Take order of flower decoration.

B.A.I. Semester – I
Course outcomes of Family Resource Management and Interior Decoration

Objectives:

- To realize the basic concepts of housing
- To design a plan of different arrangements in home Decoration
- To modify the home simply using this course knowledge.
- To demonstrate the principles of housing
- To develop aesthetic sense of students.

COs

After successfully completion of course student can-

- Formulate a plan of arrangements to modify home decoration.
- Classify and arrange the items using principles of housing.
- Design plan of work/ activities by acquiring knowledge of Work Simplification
- Make carrier in the field Interior Decoration and designing.
- Apply and guide ergonomics' technique for comfort physique.

B.A.I. Semester – II Home Economics
Course outcomes of SEM (Module) Interior Decoration

Objectives: This Module will enable the students-

- To describe the basic concept of Interior Decoration
- To design art draft skillfully.
- To inspire the students to choose their carrier in this field
- To apply the knowledge in their carrier advancement

COs

After successfully completion of module course student should be able to-

- Design a Draft plan of interior decoration on gain knowledge.
- Match all the arrangements in order to relation in home space and area.
- Enhanced their Skills in this field for carrier advancement.
- Open his/her self- enterprise all industry, applying the respective course knowledge.

B.A.I. Semester – II
Course outcomes of Family Resource Management and Interior Decoration

COs-

After successfully completion of practical course student will be able to-

- Draw a design on clothes.
- Apply the practical knowledge for making block printing sample
- Create carpet designs applying motifs
- Decorate their own home by applying the practical course knowledge.
- Enter in this field doing self-enterprise.

Course outcomes
B. A. (Sem-III – Sem-VI) - Home Economics

After successfully completion of course student should be able to

- To understand the basic concepts of Nutrition.
- To develop abilities to plan diets for various developmental stages.
- To inspire the students for entrepreneurial skill.
- To acquaint the required abilities for culinary fields.
- To formulate diet plan for different developmental stages.
- To choose nutritive foods while preparing Diet plans.
- To know nutritive value of diet plan. Given by ICMR.
- Comprehend the basic concepts of food nutrition.
- Describe food groups and food functions.
- Understand how calculate nutritive value and cost value of prepared food dishes.
- Formulate diet plans for various developmental stages.
- Manage a stall or household enterprise/ business.
- Formulate diet plan for different developmental stages.
- Select nutritive foods while preparing Diet plans.
- Calculate Nutritive value of diet plan.
- To obtain hand on practicum experience through laboratory work
- To know the rule and safety while doing menu preparion
- To apply the technique learning by doing for skills enhancement.
- Apply obtained hand on practicum experience in their daily life and enterprises
- Acquire about rule and safety to protect life while doing menu preparion
- Calculate Nutritive and Cost value of dishes.
- Understand the goals and objectives of early childhood care and education.
- Determine the skill sets appropriate for transacting Activity Based Learning.
- Create insight into the process of child development and learning.
- Comprehend the importance of early childhood years and significance of early childhood education.

- Categorize the meaning of curriculum and its various components for child learning.
- Ascertain the historical perspective of early childhood education in India.
- Assess the terms-growth, normality and identification of deviance
- Analyze the development of children through ELORS
- Evaluate the process and outcome of developmentally appropriate curriculum.
- Plan the schedule for preschool children.
- Develop play material and tools for preschool children.
- To identify ingredients and their functions
- To Apply appropriate scaling and mixing method.
- To Gain Knowledge of Faults, Fault Causes and Remedies in Cake
- To Gain Knowledge making about Biscuits and Cookies
- To Gain Knowledge about Ingredients of pizza
- To Acquire the basic Skill to Making and Decorating Cake
- To design a Packing Material for carrying out easily and skillfully.
- To develop skills is a source of employment and self-employment
- Familiarize the students with different equipment used in bakery.
- Aware the students with different categories of bakery products and their possible uses.
- Understand function of various ingredients used in bakery products
- Apply knowledge for making of various bakery products
- Develop creativity skill in decorating Cake.
- Enhance Packaging Skill.
- Understand marketing Skill.
- Increase Practical Knowledge about Making Bakery Product
- Gain Skill Knowledge about Biscuits, Cookies, Pizza
- Understand the function of Equipment of Bakery.
- Expand Knowledge about the Weight & Measurement.
- Make aware the students about Colour and Printing technology.
- Practice the Drafting and Draping by different Ways.
- Create and learn the Traditional Embroideries in India.
- To Acquaint with the student to the field of printing
- To acquire the knowledge of different Printing
- To develop the ability how to make different. Types of hand and machine printing
- Differentiate the types of hand printing
- Formulate various design for tie and die
- Organize a sample of hand and machine printing.
- Selection for Traditional Embroideries
- Apply the practical knowledge of State Embroideries
- Make samples of Embroideries
- To know how we afford quality food for healthy lives.
- To develop abilities to plan diets for various diseases.

- To understand the methods of food preparation and food preservation.
- To encourage the students for self-employment in the field food preparation and food preservation.
- To aware the work of different agencies in the area of health.
- To provide knowledge and skills for better preservation techniques, processing and value addition to agricultural products.
- To promote environment for food product and process and sanitation and safety of processed food items.
- To know about well-equipped infrastructure and facilities for preparation of food preservatives carrying out it safely.
- Demonstrate an understanding of public health through acquired knowledge of human Health and Nutrition.
- Make diet plans for various diseases skilfully and guide too.
- Provide culturally competent nutrition services for individuals and communities.
- Comprehend certain skills of detecting adulteration in common foods.
- Get jobs or Practice self-employment in the field food stalls and food preservation.
- Apply knowledge and skills for better preservation techniques and processing.
- Create favourable environment while food preparation and process and look sanitation and safety of processed food items.
- Develop awareness and spirit among the students for self-enterprises in the field of food Preservatives towards sustainable developments.
- To obtain Hands on Exercises through laboratory work
- To know the rule and safety while doing menu preparion
- To apply the technique learning by doing for skills enhancement.
- To prepare nutritious dishes, cafeteria dishes and preservatives in a scientific procedure.
- Apply obtained hand on practicum experience in their daily life and enterprises
- Acquire about rule and safety to protect life while doing menu preparion
- list and classify food dishes according to its nutritive values.
- Prepare nutritious dishes and cafeteria dishes region-wise.
- Determine the importance of developmental appropriate curriculum for early childhood
- Introduce students to various teaching and learning methods
- develop abilities in the students to plan, implement and evaluate a program
- Comprehend the importance of developmental assessment of young children.
- Create sensitivity towards the differently-able children and assist them
- Work as a professional child caretaker for Preschool child
- Ensure health and safety of a Preschool child
- Asses the development and growth of Preschool child
- Counsel the parents on childcare.
- Understand the concept of Developmental Appropriate Program (DAP)
- Prepare and process DAPS.
- Learn the methodology and complete process of child survey

- Enhance observation skills by using child studying methods
- To Understand the Basic Concept of Baking
- To Provide Knowledge on Basic Bakery Technology.
- To aware Knowledge on Basic Confectionary Technology.
- To acquire the basic Skill to Making and Decorating Pastry
- To design a Packing Material for carrying out easily and skilfully.
- To develop skills is a source of employment and self-employment
- Identify and differentiate the small and large equipment in bakery.
- Understand the role of ingredients in bakery quality
- Increased Knowledge on the complete process of baking and presentation of Bread
- Develop entrepreneurship skills in Baking Products
- Gain Knowledge to setup a bakery unit.
- Improve skill in decorating Pastry.
- Develop innovations in Packaging Skill.
- Understood marketing Skill.
- Gain Knowledge about the Weight & Measurement
- Gain Practical Knowledge about Making Chocolate
- Understand the process of Chocolate.
- Develop skilled creativity among student in textile & Clothing
- Explain the students about traditional embroideries
- Place motifs on background as for taught course contents.
- Prepare mentally for self-employment through learned practical course.
- Contribute to achieve quality in traditional.
- Make and create fashion the verity of traditional costumes.
- To describe the basic concept of Traditional costumes
- To apply the knowledge in their carrier advancement
- To design traditional costume
- Selection for Measurement Chart, Men and Women & Boys and Girls
- Apply the practical knowledge Traditional Costume

Programme Outcomes and Programme specific outcomes Master of Arts (M. A.)
Programme : M.A. (English)

PROGRAMME OUTCOME (POs)

1) To educate students in English literary and critical writing with a view to enable them to probe literary & critical theories & contexts that require substantive expertise in literature.

2) To develop and foster ideological sense and a sense of social awareness and cultural understanding.

3) To acquire proficiency in expression skills and critical thinking skills through exposure to various forms & genre of writing.

4) To develop research, critical and analytical attitude & approach in the students.

5) To help emerge social thinkers & critics who can take up a study of various social problems and issues that ail the society and impede social change and progress and contribute to the process of social transformation and social progress.

6) To help grow great leaders, thinkers, artists, visionaries, pundits / experts, educationists, managers, consultants, guides, coaches, social analysts, reformers, social activists, social pleaders & crusaders, think-tanks, journalists, critical and creative writers professionally in various fields of knowledge.

COURSE OUTCOMES (COs)

1) The students would acquire critical attitude and approach and gain knowledge, intellectual competence and critical scholarship which would help them to improve their performance in competitive exams like MPSC/UPSC/NET/SET in the subject.

2) The student will be able to understand and apply the evocative power of language and would be able to apply critical insight and judgment to form an informed and impactful opinion.

3) The Student will be fairly acquainted with the background and socio-political as well cultural background of the poets and understand the factors behind their making and evolution. The student will grasp the distinctive writing style and technique of various poets & creative writers.

4) The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

5) The student will understand the socio-political and cultural importance of Literature and Literary Criticism.

6) The Course would help emerge social thinkers & critics who can take up various social problems and issues that ail the society and impede social change and progress and thus to achieve social transformation and social progress.

M.A. (English) I. Semester – I
PROGRAMME OUTCOME (POs)

1) To educate students in English literary and critical writing with a view to enable them to probe literary & critical theories & contexts that require substantive expertise in literature.

2) To develop and foster ideological sense and a sense of social awareness and cultural understanding.

3) To acquire proficiency in expression skills and critical thinking skills through exposure to various forms & genre of writing.

4) To develop research, critical and analytical attitude & approach in the students.

5) To help emerge social thinkers & critics who can take up a study of various social problems and issues that ail the society and impede social change and progress and contribute to the process of social transformation and social progress.

6) To help grow great leaders, thinkers, artists, visionaries, pundits / experts, educationists ,managers, consultants, guides, coaches, social analysts, reformers, social activists, social pleaders & crusaders, think-tanks, journalists, critical and creative writers professionally in various fields of knowledge.

7) To create an awareness regarding the significance of Intellectual Property Rights along with the corresponding innovation, creation and strategic implementation among the students.

COURSE OUTCOMES (COs)

1) The students would acquire critical attitude and approach and gain knowledge, intellectual competence and critical scholarship which would help them to improve their performance in competitive exams like MPSC/UPSC/NET/SET in the subject.

2) The student will be able to understand and apply the evocative power of language and would be able to apply critical insight and judgment to form an informed and impactful opinion.

3) The Student will be fairly acquainted with the background and socio-political as well cultural background of the poets and understand the factors behind their making and evolution. The student will grasp the distinctive writing style and technique of various poets& creative writers.

4) The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

5) The student will understand the socio-political and cultural importance of Literature and Literary Criticism.

6) The Course would help emerge social thinkers & critics who can take up various social problems and issues that ail the society and impede social change and progress and thus to achieve social transformation and social progress.

7) The students will have an awareness regarding the significance of Intellectual Property Rights along with the corresponding innovation, creation and practice among the students.

M.A. (English) I. Semester – I
Course outcomes of Research Methodology and IPR

Course Specific Objectives (CSOs)

1. To familiarise researchers with the principles, tools and techniques of research in English studies.

2. To train them in collecting, classifying, organizing and materials in the writing of their research project/ paper.

3. To familiarize them with the conventions governing the written presentation of research.

4. To train them to apply these conventions in their research work.

5. To embrace research attitude and rational & scientific temper.

6. To create an awareness regarding the significance of Intellectual Property Rights along with the corresponding innovation, creation and practice among the students.

Course Outcome (COs):

1. To gain critical understanding and insight into the phenomenon of Renaissance

2. Understanding the factors behind the emergence of Shakespeare as a great dramatist

3. To critically analyse the chronology of events that led to the rise and glory of Eliza be than Literature

4. To improve one's performance in competitive exams like MPSC/UPSC/NET/SET.

5. The students will have an awareness regarding the significance of Intellectual Property Rights along with the corresponding innovation, creation and strategic implementation among the students.

M.A. (English) I. Semester – I
Course outcomes of History of English Literature -1

Course Specific Objectives (CSOs-) –

1) To develop a sense of history through understanding of major traditions, trends, conventions, fashions as well as social developments.

2) To facilitate insight into social norms and culture that the causes and consequences of human actions and dispositions.

3) To study the emergence and development of Renaissance and its influence on the English society.

4) To assimilate the values and principles that lead to progress and social well-being

Course Outcome (COs):

1. To gain critical understanding and insight into the phenomenon of Renaissance

2. Understanding the factors behind the emergence of Shakespeare as a great dramatist

3. To critically analyse the chronology of events that led to the rise and glory of Eliza be than Literature

4. To improve one's performance in competitive exams like MPSC/UPSC/NET/SET

M.A. (English) I. Semester – I
Course outcomes of Literary Criticism – 1

Course Specific Objectives (CSOs)

1) To enhance aesthetic understanding

2) To develop critical, analytical and logical thinking and judgment

3) To grasp and assimilate critical temper and insight

4) To appreciate and analyse critical texts and documents

5) To apply logic and sense of discrimination in decision-making

Course Outcome (COs):

1) To be able to write critical review

2) To analyse and interpret texts

3) To compare and contrast different ideas

4) To apply critical sense and judgment to form an informed opinion

5) Acquisition of critical attitude

M.A. (English) I. Semester – I
Course outcomes of Poetry – 1

Course Specific Objectives (CSOs)

1) To enhance artistic sensibility for word-music and critical appreciation of Poetry as an Art.

2) To develop fertile imaginativeness and emotional depth and maturity.

3) To perceive subtle nuances and shades of meaning in the use of language.

4) To appreciate and assimilate suggestive and pictorial quality of language.

5) To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc. in expression.

6) To explore the subjective nature of Truth and Beauty.

Course Outcomes (COs)

1.The Student will be able to critically appreciate and interpret a piece of poetic work.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the poet and understand the factors behind his making and evolution.

3. The student will grasp the distinctive poetic style and technique of various poets.

4. The student will understand the socio-political and cultural importance of Poetry and Poetic art.

5. The student will be able to quote the memorable quotations in his speech and writing.

6. The student will be able to understand and apply the evocative power of language.

7. The student will understand and appreciate the subjective nature of Truth and Beauty.

8. The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

M.A. (English) I. Semester – I
Course outcomes of Drama – 1

Course Specific Objectives (CSOs)

1) To enhance artistic sensibility for word-music and critical appreciation of Dramatic art.

2) To understand various dramatic types and the origin of the English drama.

3) To explore and appreciate the wonder and magic of Renaissance Drama and the greatness of Shakespearean dramatic art.

4) To understand and assimilate the laws and principles of dramatic composition.

5) To acquire insight and understanding of the mysteries and ironies of human life.

Course Outcomes (COs)

1. The Student will be able critically appreciate a piece of dramatic art.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the dramatist and understand the factors behind his making.

3. The student will grasp the distinctive dramatic style and technique of various playwrights.

4. He will understand the socio-political and cultural significance of Play and dramatic art.

5. He will be able to quote the memorable dialogue and quotations in his speech and Writing

M.A. (English) I. Semester – II
Course outcomes of History of English Literature -2

Course Specific Objectives (CSOs)

1) To develop a sense of history through understanding of major traditions, trends, conventions, fashions as well as social developments.

2) To facilitate insight into human nature as well as understanding of social norms and culture.

3) That the causes and consequences of human actions and dispositions.

4) To study the emergence and development of Renaissance and its influence on the English society.

5) To assimilate the values and principles that lead to progress and social well-being.

Course Outcome (COs):

1) The student will attain a sense of history and the impulses behind human action.

2) To gain critical understanding and insight into trends & fashion in English society and culture.

3) Understanding the factors behind the emergence of John Milton as well as other post Shakespearean writers and value and significance of their literary output.

4) To critically analyse the chronology of events that led to the rise and growth of post Shakespearean writers.

5) To create good critical thinkers and writers.

M.A. (English) I. Semester – II
Course outcomes of Literary Criticism- 2

Course Specific Objectives (CSO)

1) To enhance aesthetic understanding and expression skills.

2) To develop critical, analytical and logical thinking and judgment.

3) To grasp and assimilate critical temper and insight.

4) To appreciate and analyse critical texts and documents.

5) To apply logic, reasoning and sense of discrimination in decision-making.

6) To grow in erudition and intellectual scholarship.

Course Outcome (COs):

1) The student be able to write critical and scholarly reviews and articles.

2) The student analyse & interpret texts and grasp subtle and deep meaning embedded in the texts.

3) The student compare and contrast different ideas logically and rationally.

4) The student apply critical sense and judgment to form an informed opinion.

5) The student will acquire critical attitude and approach.

6) The student will acquire knowledge, intellectual competence and critical scholarship.

M.A. (English) I. Semester – II
Course outcomes of Poetry – 2

Course Specific Objectives (CSOs)

1) To enhance artistic sensibility for sounds or word-music and critical appreciation of Poetry asean Art.

2) To develop fertile imaginativeness and emotional depth and maturity.

3) To perceive subtle nuances and shades of meaning in the use of language.

4) To appreciate and assimilate subtle, suggestive and pictorial quality of language.

5) To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc .in expression.

6) To acquire the ability to read between the lines.

7) To appreciate and acquire the evocative power of language.

8) To explore the subjective nature of Truth and Beauty.

Course Outcomes (COs)

1. The Student will be able to critically appreciate and interpret a piece of poetic work.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the poet and understand the factors behind his making and evolution.

3. The student will grasp the distinctive poetic style and technique of various poets.

4. The student will understand the socio-political and cultural importance of Poetry and Poetic art.

5. The student will be able to quote the memorable quotations in his speech and writing.

6. The student will be able to understand and apply the evocative power of language.

7. The student will understand and appreciate the subjective nature of Truth and Beauty.

8. The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

M.A. (English) I. Semester – II

Course outcomes of Drama-2

Course Specific Objectives (CSOs):

1) To enhance artistic sensibility for word-music and critical appreciation of Dramatic art.

2) To understand various dramatic types and the origin of the English drama.

3) To explore and appreciate the wonder and magic of Renaissance Drama and the greatness of Shakespearean dramatic art.

4) To understand and assimilate the laws and principles of dramatic composition.

5) To acquire insight and understanding of the mysteries and ironies of human life.

Course Outcomes (COs)

1. The Student will be able critically appreciate a piece of dramatic art.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the dramatist and understand the factors behind his making.

3. The student will grasp the distinctive dramatic style and technique of various playwrights.

4. He will understand the socio-political and cultural significance of Play and dramatic art.

5. He will be able to quote the memorable dialogue and quotations in his speech and writing

M.A. (English) II. Semester – III
Course outcomes of History of English Literature

PSO –

1. To develop a sense of history through understanding of major traditions, trends, conventions, fashions as well as social developments.

2. To facilitate insight into human nature as well as understanding of social norms and culture.

3. That the causes and consequences of human actions and dispositions.

4. To study the emergence and development of Renaissance and its influence on the English society.

5. To assimilate the values and principles that lead to progress and social well-being.

Course Outcome (CO):

1) The student will attain a sense of history and the impulses behind human action.

2) To gain critical understanding and insight into trends & fashion in English society and culture.

3) Understanding the factors behind the emergence of John Milton as well as other post Shakespearean writers and value and significance of their literary output.

4) To critically analyse the chronology of events that led to the rise and growth of post Shakespearean writers.

5) To improve one's performance in competitive exams like MPSC/UPSC/NET/SET.

6) To create good critical thinkers and writers.

M.A. (English) II. Semester – III

Course outcomes of History of Critical Theory

PSO–

1) To appreciate and analyse critical texts and documents.

2) To acquire critical temper, insight and judgment.

3) To apply logic, reasoning and sense of discrimination in decision-making.

4) To foster erudition and intellectual scholarship.

Course Outcome (CO):

1) To be able to write critical and scholarly reviews and articles.

2) To analyse and interpret texts and grasp subtle and deep meaning embedded in the texts.

3) To compare and contrast different ideas logically and rationally.

4) To apply critical sense & competence and critical scholarship to form an informed opinion.

M.A. (English) II. Semester – III

Course outcomes of History of Indian Writing in English

PSO8 –

1) To enhance artistic sensibility for sounds or word-music and critical appreciation of Poetry as an Art.

2) To develop fertile imaginativeness and emotional depth and maturity.

3) To perceive subtle nuances and shades of meaning in the use of language.

4) To appreciate and assimilate subtle, suggestive and pictorial quality of language.

5) To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc .in expression.

6) To acquire the ability to read between the lines.

7) To appreciate and acquire the evocative power of language.

8) To explore the subjective nature of Truth and Beauty.

Course Outcomes (CO8s)

1. The Student will be able to critically appreciate and interpret a piece of poetic work.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the poet and understand the factors behind his making and evolution.

3. The student will grasp the distinctive poetic style and technique of various poets.

4. The student will understand the socio-political and cultural importance of Poetry and Poetic art.

5. The student will be able to quote the memorable quotations in his speech and writing.

6. The student will be able to understand and apply the evocative power of language.

7. The student will understand and appreciate the subjective nature of Truth and Beauty.

8. The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

M.A. (English) II. Semester – III

Course outcomes of History of American Literature

PSO –

1. To enhance artistic sensibility for sounds or word-music and critical appreciation of Poetry as an Art.

2. To develop fertile imaginativeness and emotional depth and maturity.

3. To perceive subtle nuances and shades of meaning in the use of language.

4. To appreciate and assimilate subtle, suggestive and pictorial quality of language.

5. To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc. in expression.

6. To acquire the ability to read between the lines.

7. To appreciate and acquire the evocative power of language.

8. To explore the subjective nature of Truth and Beauty.

Course Outcomes (CO)

1. The Student will be able to critically appreciate and interpret a piece of poetic work.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the poet and understand the factors behind his making and evolution.

3. The student will grasp the distinctive poetic style and technique of various poets.

4. The student will understand the socio-political and cultural importance of Poetry and Poetic art.

5. The student will be able to quote the memorable quotations in his speech and writing.

6. The student will be able to understand and apply the evocative power of language.

7. The student will understand and appreciate the subjective nature of Truth and Beauty.

8. The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression

M.A. (English) II. Semester – III

Course outcomes of History of Translation Studies

PSO –

1. To enhance artistic sensibility for sounds or word-music and critical appreciation of Poetry as an Art.

2. To develop fertile imaginativeness and emotional depth and maturity.

3. To perceive subtle nuances and shades of meaning in the use of language.

4. To appreciate and assimilate subtle, suggestive and pictorial quality of language.

5. To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc .in expression.

6. To acquire the ability to read between the lines.

7. To appreciate and acquire the evocative power of language.

8. To explore the subjective nature of Truth and Beauty.

Course Outcomes (CO)

1. The Student will be able to critically appreciate and interpret a piece of poetic work.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the poet and understand the factors behind his making and evolution.

3. The student will grasp the distinctive poetic style and technique of various poets.

4. The student will understand the socio-political and cultural importance of Poetry and Poetic art.

5. The student will be able to quote the memorable quotations in his speech and writing.

6. The student will be able to understand and apply the evocative power of language.

7. The student will understand and appreciate the subjective nature of Truth and Beauty.

8. The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

M.A. (English) II. Semester – IV
Course outcomes of History of History of English Literature

PSO –

1.To develop a sense of history through understanding of major traditions, trends, conventions, fashions as well as social developments.

2.To facilitate insight into human nature as well as understanding of social norms and culture.

3.To study the causes and consequences of human actions and dispositions.

4.To study the emergence and development of origin, nature and development of recent trends in English literature.

5.To assimilate the values and principles that lead to social progress and social well-being.

Course Outcome (CO):

1. The student will attain a sense of history and the impulses behind human action.

2. Students would gain critical understanding and insight into trends & fashion in English society and culture.

3. Students would gain an understanding of the emergence and development of origin, nature and development of recent trends in English literature.

4. Students performance in competitive exams like MPSC/UPSC/NET/SET would improve.

5. Students would emerge as good scholars and thinkers.

M.A. (English) II. Semester – IV
Course outcomes of History of Critical Theory

PSO–

1. To appreciate and analyse critical texts and documents.

2. To acquire critical temper, insight and judgment.

3. To apply logic, reasoning and sense of discrimination in decision-making.

4. To foster erudition and intellectual scholarship

Course Outcome (CO):

1. To be able to write critical and scholarly reviews and articles.

2. To analyse and interpret texts and grasp subtle and deep meaning embedded in the texts.

3. To compare and contrast different ideas logically and rationally.

4. To apply critical sense& competence and critical scholarship to form an informed opinion.

M.A. (English) II. Semester – IV
Course outcomes of History of Colonial and Post Colonial Literature

PSO –

1. To develop fertile imaginativeness and emotional depth and maturity.

2. To perceive subtle nuances and shades of meaning embedded in the Colonial & Postcolonial writing.

3. To appreciate and assimilate subtle, suggestive and pictorial quality of language.

4. To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc. in expression.

Course Outcomes (COs)

1. The Student will be able to critically appreciate and interpret a piece of poetic work.

2. Students' would be able to acquire fertile imaginativeness and emotional depth and maturity.

3. Students' would be able to perceive subtle nuances and shades of meaning embedded in the Colonial & Post colonial writing.

4. Students' would be able to appreciate and assimilate subtle, suggestive and pictorial quality of language.

5. Students' would be able to acquire artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness ,freshness etc .in expression.

M.A. (English) II. Semester – IV
Course outcomes of History of Alternative Literature

PSO –

1. To enhance artistic sensibility for sounds or word-music and critical appreciation of Poetry as an Art.

2. To develop fertile imaginativeness and emotional depth and maturity.

3. To perceive subtle nuances and shades of meaning in the use of language.

4. To appreciate and assimilate subtle, suggestive and pictorial quality of language.

5. To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc. in expression.

6. To acquire the ability to read between the lines.

7. To appreciate and acquire the evocative power of language.

8. To explore the subjective nature of Truth and Beauty.

Course Outcomes (CO)

1. The Student will be able to critically appreciate and interpret a piece of poetic work.

2. The Student will be fairly acquainted with the background and socio-political as well cultural background of the poet and understand the factors behind his making and evolution.

3. The student will grasp the distinctive poetic style and technique of various poets.

4. The student will understand the socio-political and cultural importance of Poetry and Poetic art.

5. The student will be able to quote the memorable quotations in his speech and writing.

6. The student will be able to understand and apply the evocative power of language.

7. The student will understand and appreciate the subjective nature of Truth and Beauty.

8. The student will acquire enhanced sensibility and emotional depth and maturity in his/her expression.

M.A. (English) II. Semester – IV

Course outcomes of History of Literature and Gender

PSO –

1. To enhance artistic sensibility for sounds or word-music and critical appreciation of Poetry as an Art.

2. To develop fertile imaginativeness and emotional depth and maturity.

3. To perceive subtle nuances and shades of meaning in the use of language.

4. To appreciate and assimilate subtle, suggestive and pictorial quality of language.

5. To sharpen artistic and critical skills with better grasp and acquisition of qualities like picture squeness, terseness, conciseness, accuracy, aptness, freshness etc. in expression.

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Programme Outcomes and Programme specific outcomes
Master of Arts (M. A.-Economics)

PROGRAMME OUTCOMES (POs)

1 To analyse the Economic Issues related to local to global scenarios.

2 This programme helps to understand the various Social, Political and Economic Institutions.

3. Applying their knowledge to assess issues in fields of agriculture, industry, banking and finance, environmental, and societal issues to provide practical solutions.

4 Formulate and execution of field study, and an industrial visit to get practical exposure to the latest issues.

5 To understand how economic policies affect the common people through interactions.

6 To utilize the research spheres of Economics.

7 The students should be able to find a career in Economics.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

1 Helps to understand the basic theories of economic growth and development.

2 Students will be able to understand the working principles of the Money market and Capital market.

3 Students should be able to develop knowledge about production, demand, market and pricing.

4 Students can know how to apply the knowledge of Economics in various sectors of society to solve various financial issues.

5 Able to understand the role of the public and private sectors in economic development.

6 Students should be able to develop knowledge about the role of International trade in economic development.

7 Develop, analyse and appraise developmental plan for sustainable development.

8 Students should be able to develop knowledge about monetary policy, fiscal policy and its implications for the economy.

9 Develop professional entrepreneurial ability and skills.

Master of Arts (M. A.-Economics) I Semester – I
Course outcomes of Research Methodology and Intellectual Property Rights in Economics

Course Outcomes:

After the completion of this course the student will be able to:

1) To understand the formulation and identification of the research problem.

2) To understand the various methods of research and conclusion of research problem.

3) Student realised Awareness of research tradition.

4) To understand the Intellectual Property Right and Rights regarding copyright.

5) To understand and knowledge for Ph.D. and Research Project to various Research

Institute.

Master of Arts (M. A.-Economics) I Semester – I
Course outcomes of Advanced Micro Economics – I

Course Outcomes :

After the completion of this course the student will be able to:

1 : Students should have a solid understanding of the core concepts of microeconomicsand the ability to apply economic reasoning to everyday decision-making and policy analysis.

2 : To provide students with a strong foundation in understanding consumer behavior, market dynamics, and the implications of demand for business strategy and policymaking.

3 : To equip students with the knowledge and skills to understand consumer motivations, preferences, and decision-making processes, as well as how to analyze and interpret demand responsiveness for various goods and services.

4 : to provide students with a solid understanding of production theory, factors of production, and their implications for resource allocation and economic efficiency.

5 : To equip students with the knowledge and analytical skills necessary to understand the financial aspects of business operations, pricing strategies, and profit maximization.

Master of Arts (M. A.-Economics) I Semester – I
Course outcomes of Advanced Macro Economics –I

Course Outcomes

After the completion of this course the student will be able to:

1. Explain the evolution of money and know the concept of money and its functions.

2. To understand the national income concept.

3. Know about the supply of money and high-powered money.

4. To gives the idea of Keynesian theory of employment.

5. To understand the theories of the consumption function.

6. To gives an idea about how to make a saving and investment.

7. Evaluate the working and effects of monetary and fiscal policy

Master of Arts (M. A.-Economics) I Semester – I
Course outcomes of Agriculture Economics

Course Outcomes :

After the completion of this course the student will be able to:

1 : To demonstrate knowledge and Understand important reforms in agriculture and analyze how the agricultural sector contributes to the economy and sustainable development in India.

2 : To train the students in production economics tools for agricultural decision making and to know the various types of farming and its importance in today's scenario .

3 : To evaluate the various aspects of agricultural policies of pricing and marketing of agricultural products and the students acquire the knowledge of technological changes in agricultural sector.

4 :To impart adequate knowledge and analytical skills in the field of agricultural finance and agricultural credit policies and its issues.

5:To understand the role of WTO, Globalization and MNCs and its impact on agricultural development in India.

Master of Arts (M. A.-Economics) I Semester – I
Course outcomes of Statistics for Economics –I

Course Outcomes:

After the completion of this course the student will be able to:

1) The students should be able to describe the basic concept of statistics.

2) The students should be able to understand the significance of statistics in Economics

3) The students should be able to understand the issues regarding the survey, data collection, classification, tabulation & presentation of data.

4) The students should be able to understand the role of CSO & NSSO

5) The students should be able to calculate & apply the measures of central tendency, dispersion, skewness, correlation & regression.

Master of Arts (M. A.-Economics) I Semester – I
Course outcomes of Rural and Urban Development

Course Outcomes:

After the completion of this course the student will be able to:

1. To understand the concept of urbanization and study urbanization in developing countries.

2. To know the factors related to urbanization and see the picks of urbanization on the economy.

3. To know the meaning of urban planning understand Megha and Smart City planning.

4. To understand the problems of urbanization and to know the relation between factors of urbanization and urban development.

5. To know the government policies about urbanization & rural development.

6. To impart better education from classroom to common man.

7. To understand the development gap between urban and rural areas.

8. To know the understanding and availability of resources for rural development.

9. To understand the employment opportunities and reasons of employment opportunities and reasons of unemployment in rural & urban areas.

Master of Arts (M. A.-Economics) I Semester – II
Course outcomes of Advanced Micro Economics – II

Course Outcomes: After Completing the course, the students will be able -

1 : To equip students with the knowledge and analytical skills to understand how prices and quantities are determined in different market structures. This understanding is valuable for economists, business managers, policymakers, and entrepreneurs to make informed decisions and develop effective strategies in a competitive market environment.

2 : To equip students with the knowledge and analytical skills to understand the behavior of firms in these markets and the strategic interactions that influence market outcomes.

3 : To provide students with a comprehensive understanding of the principles and theories that explain the distribution of income in different economic systems.

4 : To equip students with the knowledge and analytical skills to assess and design economic policies that contribute to overall societal welfare and well-being

Master of Arts (M. A.-Economics) I Semester – II
Course outcomes of Advanced Macro Economics-II

Course Outcomes:

After the completion of this course the student will be able to:

1) It will enable students to handle macroeconomics theories and related macroeconomics issues.

2) It will enable students to understand the effects of macroeconomic decisions taken by Governments.

3) This study will enable students to collect the data on macroeconomics level and analyze it and draw the suggestions, over macroeconomic problems.

4) This study shall enable to compare economic conditions of various countries and also of various regions among the country.

5) Theory of interest rate will be useful to guide saving and investment.

6) This course is useful for understanding various real economic issues and evaluating them.

7) Policy outcomes

Master of Arts (M. A.-Economics) I Semester – II
Course outcomes of Public Economics

Course Outcomes:

After the completion of this course the student will be able to:

1: To develop an understanding of various aspects of Public Finance and the sources both public and private and principles of Maximum Social Advantage.

2 : To understand the familiarity with micro and macro aspects of Public Expenditure and the causes of growing public expenditure.

3 : To understand the public debt and its impact on common people.

4 :To understand the various taxes among various classes of people and to know the general trend and impact of tax burden.

5 :To understand the mechanics of government budget and fiscal policy of India and to deliver the preparation of budget and how they are passed in the house.

Master of Arts (M. A.-Economics) II Semester – II
Course outcomes of Statistics for Economics – II

Course Outcomes:

After the completion of this course the student will be able to:

1) The students should be able to understand the concept of Sampling & Estimation.

2) The students should be able to use of sample survey on various issues.

3) The students should be able to test of Hypothesis by using various statistical test.

4) The students should be able to understand time-series trends & calculate it for forecasting.

5) The students should be able to understand & Uses of Probability.

6) The student should be able to calculate Index Number

Master of Arts (M. A.-Economics) II Semester – II
Course outcomes of Co-operation

Course Outcomes:

After the completion of this course the student will be able to:

1. To understand the principle of cooperation and the values of cooperative institutions.

2. To understand the origin and development of the Cooperative movement.

3. To know the role of NAFED & Co-operative agro-based industries.

4. Examine the various types of co-operative society.

5. Create awareness about the working of cooperative organizations in rural and urban areas.

6. To know the role of the financial institute framework.

7. Will be developing the accounting, audit & role of the cooperative auditor.

Master of Arts (M. A.-Economics) II Semester – III
Course outcomes of Economic Growth, Development and Planning-I

Course outcome's:

After completion of this course the Student will be able to

1) Cite the basic principles of Economic Growth.

2) Interpret the concepts of Development and Planning.

3) Apply these concepts to Solve and analyze various problems in Social & Institutional Aspect.

4) Cite the theories of development.

5) Interpret and understand the development & Growth model.

Master of Arts (M. A.-Economics) II Semester – III
Course outcomes of International Trade & Finance-I

Course Outcomes:

After completion of this course the Student will be able to.

1) Students learned about the classical theory International Trade.

2) Students were introduced to the modern theory of International Trade.

3) Students realised the gains of International Trade.

4) Students noticed the relationship between International Trade and economic development.

5) Students come to know about balance of payment.

Master of Arts (M. A.-Economics) II Semester – III
Course outcomes of Labour Economics

Course outcomes:

After completion of this course the Student will able to.

1) Understand Concepts, types, importance of labour and labour economics.

2) Gain a deeper understanding of mobility, efficiency of labour and causes and effects of Unemployment.

3) Understand the wage determinants & wage Policy in India.

4) Analyze consequences of absentee sum and trends and effects of Labour migration.

5) Get aware of Indian Labour market and issues their in.

Master of Arts (M. A.-Economics) II Semester – III
Course outcomes of Research Methodology for Economics

Course outcomes:

After completion of this course the Student will able to.

1) To understand the formulation and identification of the research problem.

2) 2) This course will help them to Select an appropriate research design.

3) With the help of this course students will be able to take up and implement a research project / study.

4) The course will also enable them to collect the data, edit it properly analyses it accordingly Thus it will facilitate students prosperity in higher education

5) Students will be able to demonstrate the ability to choose methods appropriate to research objectives.

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of Economic Growth , Development and Planning – II

Course Outcomes:

After the completion of course the Student will be able to.

1) Students get an idea about economic planning.

2) Students understood the theory of economic development.

3) Students got to know the pectoral aspects of economic development

4) Students noticed the relationship between international trade and economic development.

5) Students realized the economic development policy,

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of International Trade & Finance-II

Course Outcomes :

After the completion of this course the Students will be able to.

1) Students got to know about India's international trade policy.

2) Students get an idea of regional economic blocks.

3) Students came to know about WTO.

4) Students Understood the foreign Capital

5) Students realised the functions of MNCs.

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of Business Cycles

Course Outcomes

After completion of this course the Student will be able to

1) To understand the nature of Business cycle.

2) To know features of Business Cycle in 20th Century.

3) To know theories of Business cycle.

4) To understand the policies for controlling.

5) The student realized the Contribution of various economists in business cycle Controlling and forecasting.

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of Demography

Course outcomes:

After completion of this course the Student will able to.

1) To understand the formulation and identification of the research problem.

2) This course will help them to Select an appropriate research design.

3) With the help of this course students will be able to take up and implement a research project / study.

4) The course will also enable them to collect the data, edit it properly analyses it accordingly Thus it will facilitate students prosperity in higher education

5) Students will be able to demonstrate the ability to choose methods appropriate to research objectives.,

6) To explore various aspects of the population policy and to study its Impact on socio ecommic issues,

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of Research Project

Course outcomes:

After completion of this course the Student will able to:

1. Students will be introduced to the field of research.

2. Students will get hands-on research experience through research projects.

3. Research skills will be enhanced through implementation of research methodology.

4. Students will be motivated to do research for Ph.D.

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of Agriculture Marketing and Finance

Course outcomes:

After completion of this course the Student will able to:

1. Students will be able to acquire necessary theoretical and analytical skills to optimize Agriculture Production.

2. Students will be able to understand the structure of Agriculture Marketing Co-operatives in India & Critical appraisal of Agriculture Marketing & Finance .

3. Students will be able to understand the importance agricultural products produced by farmers and farm inputs and services required by them in the production of farm products.

4. Students will learn various schemes of Agriculture Finance and Crop Insurance.

Master of Arts (M. A.-Economics) II Semester – IV
Course outcomes of Data Collection and Analysis of Economic Research

Course outcomes:

After completion of this course the Student will able to:

1. To understand the identification of the research problem**.**

2. This course will help them to Select an appropriate research design.

3. The course will also enable them to collect the data, edit it properly analyses it accordingly Thus it will facilitate students prosperity in higher education

4. Students will be able to demonstrate the ability to choose methods appropriate to research

Programme Outcomes and Programme specific outcomes
Master of Arts M.A. (Political Science)

POs:

1. Familiarity with different approaches to the study of Political Science and an ability to apply this to contemporary political problems.

2. An ability to formulate and construct logical argument about political phenomena.

3. Comprehend the basic structure and functions of government systems and theoretical understandings.

4. Analyse political problems, argument, information, theories.

5. Apply methods appropriated for accumulating and interpreting data applicable to political science.

6. An ability to analyse the election data and to develop leadership qualities among students.

PSOs:

1. Ability to discuss about Indian Constitution and Political process. student to grasp knowledge of provisions in constitution of India regarding fundamental rights,Directive principles, Parliament, judiciary and executive body at centre and state.

2. Learn about the various Political thought in Maharashtra like Dr.B.R. Ambedkar,M.G.Ranade, Dr. Punjabrao Deshmukh, and Mahatma Phule etc.

3. Student are acquainted with the Indian political thought and western political thought various ideologies like Feminism, liberalism ,socialism, Environmentalism etc.

4. Student are acquainted with the Theories and aspects of international relations, nonalignment movement, new world economic order etc.

5. Learn about the political process in India and acquainted with Governance and public policy in India.

6. Students are able to develop leadership qualities and Election analysis.

7. Understanding & Analysing the nature and developments in national and international politics.

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of Research Methodology and IPR

Cos

1) The students will be able to understand the resarch in social sciences.

2) The students will analyse the knowledge of various research methology

3) Analyse and compare the concept and practicability of IPR .

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of Indian Political Thought (POLC01)

Cos

1) The students will be able to understand the contribution and thoughts of the makers of Modern India.

2) The students will analyse the knowledge of various Ideological Streams in Indian Political Thought.

3) Analyse and compare the ideas and theories of Indian Political Thinkers.

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of Indian Government and Politics(POLC02)

Cos

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

1) Understand &explan about constitutional Development in India.

2) To understand the philosophy of Indian constitutions.

3) To understand the various Government of Indian acts their provision and reforms

4) They also know about different constitutional authorities in India such as Election Commission, Finance Commission, and CAG.

5) Critically analyzing the important institutions of the Indian Union: the Executive: President; Prime Minister.

6) Assessing the nature of Indian Federalism with focus on Union-State Relations

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of Public Administration (POLC03)

Cos

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

1) Discuss the Evaiution of Public Administration.

2) Student can campair about private and public Administration.

3) The students will be explain & critical Anylesis about veriousApproches to the Public Administration.

4) The students will become familiar with details of administrative organisation.

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of MODERN POLITICAL IDEOLOGIES (POLE 01)

Cos

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

1) Understand key concepts, approaches and main problems of political Ideologies.

2) To think analytically on the concepts and issues involved in political ideology.

3) To explicate their own views in political ideology.

4) Able to compare various idealogies.

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of International Relations (POL E02)

Cos

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

1) Explaining scope and subject matter of International Relations as an autonomous academic discipline.

2) Critically analyze the theories of international politics.

3) Evaluate the concept of power and its changing nature.

4) Explore the instruments for the promotion of national interest.

5) To analyse the international security Arms Race. Arms control and Disarmament.

6) Understand about various dimensions and emerging issues of international politics.

7) To familiarize the students regarding different theories and the relvant debates in the discipline of International Politics

Master of Arts (M. A.- Political Science) I Semester-I
Course outcomes of LOCAL SELF INSTITUTIONS IN INDIA

Cos

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

1) Understand the democratic decentralization operating in India.

2) Student Understand Evolution of local Self Institutions in India.

3) To analyse Rural & Urbun Local Bodies power and Functions.

4) To critically studies the relationship between people’s bodies and bureaucracy.

Master of Arts (M. A.- Political Science) I Semester-II

Course outcomes of State Politics in India (POLC01)

Cos

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

1) understanding about the historical and emerging trends in political process in the India states.

2) explain various Patterns of state politics.

3) understand the constitutional system at state level, and the relation between state politics and national politics.

4) Explain Areas of state-centre conflict in Indian fedaretion, .

5) Critilly examine Issues of state politics like Linguistic, regional, religious

Master of Arts (M. A.- Political Science) I Semester-II

Course outcomes of Political Thought in Maharashtra(POLC01)

Cos

1) After the successful completion of the course the students will acquire an in depth knowledge on various political thoughts and movements in Maharashtra.

2) The students will be able to understand the contribution and thoughts of the marks of modern Maharashtra.

3) The students will analyses the various ideological streamsin Maharashtra Political Thought.

4) The students will be able to understand the contribution of Maharashtra Political thinkers in Nation building of India.

Master of Arts (M. A.- Political Science) I Semester-II

Course outcomes of MAJOR ISSUES IN CONTEMPORARY WORLD POLITICS (POLC03)

Cos

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

1) Explain the new world order in the context post cold war and crisis of globalization and the global pandemic

2) Examine Chinese challenge to US hegemony and its impact on world order

3) Explain and Critique Changing nature of Terrorism.

4) Student can analyse Changing nature of security.

5) Student Examining the issues of International Inequality, Dependency.

Master of Arts (M. A.- Political Science) I Semester-II

Course outcomes of Governance and Public Policy in India(POLE 02)

Cos

1) After the successful completion of the course the students will acquire anin depth knowledge of the Governance and Public Policy in India.

2) The students will be able to explain the functioning of the Governance and implementation Public Policy in India.

Master of Arts (M. A.- Political Science) I Semester-II
Course outcomes of Socio- Political Movements in India (POL E03)

Cos

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

1) Understand meaning & Nature of Social movement.

2) Explain various approches of social movement.

3) Analyse Social Movement and Social Change.

4) Comparative study of old and new social movement.

5) Develop a working knowledge on how the people of India are organizing to achieve social justice and working to find solutions to economic, social and political problems.

Master of Arts (M. A.- Political Science) II Semester-III
Course outcomes of RESEARCH METHODOLOGY

Cos

1) The students will be able to understand the meaning, nature and scope of research methodology.

2) The students will analyze the knowledge of various research methods of social sciences.

3) Analyses and compare the sources of Data collection.

Master of Arts (M. A.- Political Science) II Semester-III
Course outcomes of Diplomacy and Indian Foreign Policy

Cos

1) After the successful completion of the course the students will acquire an indepth knowledge on Diplomacy and Indian Foreign policy..

2) The students will be able to understand the types of diplomacy.

3) The students will analyses the recruitment and power of diplomat.

4) The students will be able to understand the concept of foreign policy

Master of Arts (M. A.- Political Science) II Semester-III
Course outcomes of Political Anthropology

Cos

1) After the successful completion of the course the students will acquire anin depth knowledge of the political anthropology.

2) The students will be able to explain the functioning of the human order. Socialization and problems of control in human society.

Master of Arts (M. A.- Political Science) II Semester-II

Course outcomes of Political Sociology

Cos

1) After the successful completion of the course the students will acquire anin depth knowledge of the basic features of political sociology.

2) The students will be able to understand the contribution of Karl Marx. Max weber and Moska

3) The students will analyses the knowledge of political socialization and political culture.

4) The students will be able to understand the political order and social stratification.

Master of Arts (M. A.- Political Science) II Semester-III

Course outcomes of International Law and International Organization

Cos

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

1) Understand the nature, scope and Sources of International Law.

2) Student can analyse the various Sources of International Law.

3) To analyses structure and functions of International Organization.

4) To explain the studies International Law and International Organization

Master of Arts (M. A.- Political Science) II Semester-IV

Course outcomes of Western Political Thought and Theory

Cos

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

1) Get the conceptual knowledge about Western Political Thought and Theory

2) Analyses the various Western Political Thought and Theory

3) Critically examine Western Political Thought and Theory

Master of Arts (M. A.- Political Science) II Semester-IV

Course outcomes of Research Methodology

Cos

1) The students will be able to understand the Research design and its importance.

2) The students will analyze the knowledge of various sources of data collection.

3) Analyses and compare the Sampling technique and Scaling Technique.

Master of Arts (M. A.- Political Science) II Semester-IV
Course outcomes of Diplomacy and Indian Foreign Policy

Cos

1) After the successful completion of the course the students will acquire an in depth knowledge on Diplomacy and Indian Foreign policy..

2) The students will be able to understand the types of diplomacy.

3) The students will analyses about the Indian foreign policy.

4) The students will be able to understand the India‟s relation with super power and neighbor countries.

Master of Arts (M. A.- Political Science) II Semester-IV
Course outcomes of Political Anthropology

Cos

1) After the successful completion of the course the students will acquire depth knowledge of the political anthropology.

2) The students will be able to explain the Problem of sacred and profane ,Order and disorder in Primitive society

Master of Arts (M. A.- Political Science) II Semester-IV
Course outcomes of Political Sociology

Cos

1. After the successful completion of the course the students will acquire depth knowledge of the Social basis of Political groups such as parties, pressure groups. Interest groups and movements.

2. The students will be able to understand the Elites in democratic and totalitarian political system

3. The students will analyses the knowledge of Bureaucracy in modern society. Social and political Development

Master of Arts (M. A.- Political Science) II Semester-IV
Course outcomes of International Law and International Organization

Cos

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

1) Understand the law of War.

2) Student can analyses the Neutrality.

3) To analyses structure and functions of UN.

4) To explain the studies International Law and International Organization

Programme Outcomes and Programme specific outcomes
Master of Arts (Programme - M.A. Marathi)

अभ्यासक्रमाची निष्पती (POS) :

१. जीवन व्यवहाराच्या विविध क्षेत्रांतील आंतरसंबंधाचे ज्ञान प्राप्त होईल. तसेच त्यातील गुंतागुंत समजून घेऊन वैश्विक मानवतेच्या व्यापक पटावर जीवनाचे आकलन करून घेण्याची दृष्टी प्राप्त होईल.

२. व्यक्तिगत आणि सार्वजनिक जीवनातील बदलत्या परिस्थितीचे आकलन करून त्यात विवेकपूर्ण विचार आणि व्यवहार करण्यासाठीची विचारप्रवणता आणि कृतिशीलता निर्माण होईल.

3. प्रतिष्ठापूर्ण आणि आत्मसन्मानाने स्वावलंबी जीवन जगण्याची व इतरांनाही त्या दृष्टीने सहकार्य करण्याची इच्छाशक्ती अंगी बाणवता येईल

४. संशोधक वृत्ती, जिज्ञासूपणा आणि जाननालमा वाढीस लागून ज्ञानाचे व्यावहारिक उपयोजन करता येईल.

५. चिकित्सक आणि तुलनात्मक अभ्यास दृष्टीचा विकास होईल. त्यामुळे जीवनातील सैद्धांतिक आणि प्रायोगिक पातळीवरील समस्यांचे कालसापेक्ष भान निर्माण होऊन सर्जनशील पर्याय देण्याची प्रक्रिया विकसित होईल.

६. भाषाभान जागृत होऊन मानवी सम्येतेतील आषेचे प्रयोजन आणि बदलत्या काळातील त्याचे उपयोजन करता येईल, शिवाय बहुभाषिक आणि बहुसास्कृतिक लौकिक प्राप्त करून घेता येईल,

७. विचार आणि भातपोषण योग्य पद्धतीने झाल्यामुळे आत्मविश्वासाने जीवन जगता येईल

८. माहिती व तंत्रज्ञानाची कौशल्ये विकसित करून रोजगार सक्षम होता येईल,

अभ्यासक्रमाची विशिष्ट निष्पती (PSOs):

१. संत गाडगे बाबा अमरावती विद्यापीठाच्या मानव विज्ञान शाखेतील एम.ए.मराठी अभ्यासक्रमाच्या अध्यायानामुळे विद्यार्थांची साहित्य हि संकल्पना सुस्पष्ट होऊन त्याची अभिरुची वृद्धिंगत होईल.

२. समकालीन बदलत्या संदर्भात मराठी समाज, भाषा, इतिहास,साहित्य आणि संस्कृतीचे चिकित्सक आकलन होईल.

3. आषा आणि साहित्याचा सामाजिक तसेच कलात्मक पातळीवर अभ्यास केल्याने विवेकपूर्ण तर्कसंगतता आणि कारन्यपूर्ण संवेदनशीलता निर्माण होऊन साहित्याचे व्यावहारिक उपयोजन करता येईल.

४. चिकित्सा ,तुलना आणि समीक्षा करण्याची दृष्टी विकसित झाल्यामुळे विविध साहित्य प्रकारातील लेखनाचे योग्य अध्ययन ,संशोधन आणि सर्जनशील निर्मिती करता येईल.

५. भाषेच्या तात्विक अभ्यासासह प्रतिष्ठापूर्ण रोजगार प्राप्तीसाठीचे भाषिक कौशल्य प्राप्त होतील.

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१) अभ्यासपत्रिका (MS11) संशोधन पद्धती आणि बौद्धिक संपदा अधिकार

अभ्यासपत्रिकेची निष्पती (COs)

१. संशोधनाचा अर्थ, स्वरूप आणि महत्व स्पष्ट होईल.
२. संशोधनाच्या विविध पद्धती आणि संशोधन समस्येनुसार त्यातील विशिष्ट पद्धतीचे उपयोजन करता येईल.
३. संशोधन पद्धतीचे आकलन झाल्यामुळे संशोधनात अभिरुची आणि गती प्राप्त होईल.
४. सभोवतालाकडे व प्राप्त माहितीकडे चिकित्सक, विश्लेषणात्मक व तुलनात्मक दृष्टीने पाहण्याची वृत्ती विकसित होईल.
५. पीएच.डी. साठी आणि संशोधन संस्थांच्या प्रकल्पांसाठी या ज्ञानाचा फायदा होईल.
६. बौद्धिक संपदा अधिकाराचे महत्व लक्षात येईल आणि त्यामुळे स्वतःच्या निर्मिती, उत्पादन, कृती यांबाबतच्या हक्कांबाबत विद्यार्थी जागरुक होईल.

२) अभ्यासपत्रिका (M512)

मराठी साहित्याची सांस्कृतिक व सामाजिक पार्श्वभूमी (आरंभ से १८१८)

अभ्यासपत्रिकेची निष्यती (COs)

१. साहित्याच्या सामाजिक व सांस्कृतिक पाश्र्वभूमीचा विद्याध्यौधा पाया पकाई
२. साहित्याविषयीची आकलनक्षमता वाढेल.
३. युपीएससी, एमपीएससी, नेट-सेट व इतर स्पर्धात्मक परीक्षांची तयारी होईल.
४. वृत्तपत्रीय लेखन-संपादन करण्यासाठी अभ्यासाचा उपयोग होईल.
५. अध्यापनाच्या व्यवसायात पदार्पण करायचे असल्यास ध्ज्ञानाच्या कक्षा अधिक रुंदावतात.

३) अभ्यासपत्रिका (MS13) साहित्यविचार

अभ्यासपत्रिकेची निष्पती (COS)

१. ललित साहित्य व इतर लेखन (वैचारिक साहित्य, इतिहास, तत्त्वज्ञान) यांमधील साम्यभेदांचे सखोल आकलन होईल.
२. साहित्यकृतीला प्रतिसाद देण्याची क्षमता विकसित होऊन साहित्यविषयक संवेदनशीलता अधिक सूक्ष्म आणि व्यापक होईल.

3. साहित्यकृतीकडे अधिक चिकित्सक दृष्टीने पाहता येऊन आपला प्रतिसाद तर्कशुद्ध रीतीने माडण्याची क्षमता निर्माण होईल.

४. साहित्यकृतीचे वर्णन, विश्लेषण व मूल्यमापन करता येईल

५. साहित्यकृतीवर रसग्रहणात्मक लेख लिहिता येईल.

६. साहित्य व जीवन याच्या परस्पर संबंधांची चिकित्सा करता येईल.

४) अभ्यासपत्रिका (MS14) लोकसाहित्य

अभ्यासपत्रिकेची निष्पत्ती (COs)

१) लोकसाहित्य म्हणजे काय, ते सांगता येईल.

२) लोकसाहित्यातील घटकांचा वस्तुनिष्ठ अभ्यास करता येईल.

3) लोकव्यवहाराला प्रभावित करणारे घटक सांगता येतील.

४) लोकसाहित्यातील घटकांचे मूल्यमापन करता येईल.

५) समाजहितकारक लोकतत्त्वे लोकापर्यंत पोचवता येतील.

६) कालबाह्य प्रथा-परंपराची लोकांना जाणीव करून देता येईल.

५) अभ्यासपत्रिका (MS15) संतसाहित्य

अभ्यासपत्रिकेची निष्पती (COs)

१. मध्ययुगीन काळातील मराठी साहित्यातील समृद्ध अशा वाङ्मयीन परंपरेची विद्यार्थ्यांना ओळख होईल.

२. संत ज्ञानेश्वर, संत नामदेव, संत एकनाथ, संत तुकाराम, संत रामदास यांच्या वाङ्मयीन आणि सांस्कृतिक कार्याचा विद्यार्थ्यांना परिचय होईल.

३. मध्ययुगीन कालखंडातील सामाजिक, सांस्कृतिक, धार्मिक परिस्थितीचे विद्यार्थ्यांना आकलन होईल.

४. संत वाङ्मयातील मानवतेची शिकवण, नीतिमूल्ये यांचा विद्यार्थ्यांच्या मनावर संस्कार होईल व त्यातून त्यांना जीवन जगण्यासाठी दिशा मिळेल.

५. संतांच्या लेखनशैलीचा अभ्यास झाल्याने विद्यार्थी उत्तम साहित्यनिर्मिती करू शकतील.

६) अभ्यासपत्रिका (MS16) महानुभाव साहित्य

अभ्यासपत्रिकेची निष्पती (COs)

१. मराठी साहित्यातील समृद्ध अशा वाङ्मयीन परंपरेची विद्यार्थ्यांना ओळख होईल

२. मध्ययुगीन कालखंडातील सामाजिक, सांस्कृतिक, धार्मिक परिस्थितीचे विद्यार्थ्यांना जान होईल.

३. श्री चक्रधर, श्री गोविंदप्रभू यांच्या क्रांतिकार्याचा विद्यार्थ्यांना परिचय होईल.

४. महानुभावीय गट्यवाङ्मयातून सत्य, अहिंसा, समता, बंधुता, दयाभाव इत्यादी नीतिमूल्यांची शिकवण विद्यार्थ्यांना मिळेल आणि त्याचा उपयोग जीवन उत्तम रितीने जगण्यासाठी होईल.

५. महानुभावीय साहित्याच्या अभ्यासाने विद्यार्थी उत्तम साहित्यनिर्मिती करू शकतील.

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१) अभ्यासपत्रिका (MS21) मराठी साहित्याची सांस्कृतिक व सामाजिक पार्श्वभूमी (१८१८ ते १९६०)

अभ्यासपत्रिकेची निष्पत्ती (COS)

१. साहित्याच्या सामाजिक व सांस्कृतिक पार्श्वभूमीचा विद्यार्थ्यांचा पाया पक्का होईल.
२. साहित्याविषयीची आकलनक्षमता वाढेल.
३. युपीएससी, एमपीएससी, नेट-सेट व इतर स्पर्धात्मक परीक्षांची तयारी होईल.
४. वृत्तपत्रीय लेखन-संपादन करण्यासाठी अभ्यासाचा उपयोग होईल.
५. अध्यापनाच्या व्यवसायात पदार्पण करायचे असल्यास ज्ञानाच्या कक्षा अधिक रुंदावतील.

२) अभ्यासपत्रिका (MS22) समीक्षाविचार

अभ्यासपत्रिकेची निष्पत्ती (COs)

१. समीक्षा ही संकल्पना स्पष्ट होऊन तिची उद्दिष्टे, महत्व आणि अपरिहार्यता यांचे आकलन वाढेल.
२. समीक्षाप्रक्रियेतील पायऱ्यांचे पृथ करण करता येईल.
३. विविध वाङ्मयीन वादांमधील साम्यभेदांची तुलना करता येईल व त्यांच्या ऐतिहासिक कार्याचे मूल्यमापन करता येईल.
४. साहित्याचे आकलन, वर्णन, आस्वादन, विश्लेषण आणि मूल्यमापन करण्याची क्षमता वाढून विद्यार्थ्यांची अभिरुची विकसित होईल.
५. गांधीवाद, आंबेडकरवाद आणि देशीवाद यांच्या मुळाशी असलेल्या मूल्यव्यवस्थेचा शोध घेऊन त्यावर टिपण लिहिता येईल.
६. एखाद्या वाङ्मयकृतीवर समीक्षणात्मक लेख लिहिता येईल.

३) अभ्यासपत्रिका (MS23) लोकसाहित्य

अभ्यासपत्रिकेची निष्पती (COs)

१. लोकवाङ्मय म्हणजे काय, ते सांगता येईल.
२. लोकवाङ्मयाच्या मौखिक परंपरेचा वस्तुनिष्ठ अभ्यास करता येईल.
३. लोकव्यवहाराला प्रभावित करणाऱ्या परंपरा सांगता येतील.
४. लोकवाङ्मयाचे व लोककलांचे मूल्यमापन करता येईल.
५. लोककलांच्या माध्यमातून लोकप्रबोधन करता येईल.

४) अभ्यासपत्रिका (M524) विशेष वाङ्मयप्रकार कविता

अभ्यासपत्रिकेची निष्पत्ती (COs)

१. काव्यविषयक जाणीव, आस्वादक्षमता समृद्ध होईल.
२. स्पर्धा परीक्षा अभ्यासक्रमातील कविता या वाङ्मयप्रकाराच्या अभ्यासाकरिता उपयुक्त ठरेल.
३. व्यावसायिकरित्या संपादक म्हणून काम करायचे असेल तर कवितेची समज समृद्ध होईल.
४. अध्यापनाचा व्यवसाय स्वीकारायचा असेल तर कवितेचा अभ्यास उपयोगी ठरेल.
५. कवितालेखन करायचे असेल तर काव्यविषयक जाणिवा समृद्ध होतील.

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१) अभ्यासपत्रिका (MS31): उपयोजित मराठी

अभ्यासपत्रिकेची निष्पत्ती (COs)

१. मराठी भाषेच्या उपयोजित क्षेत्राचा विद्यार्थ्यांना परिचय घडेल.
२. मराठी भाषेतील व्यावसायिक लेखन कौशल्ये तसेच कार्यालयीन लेखनकौशल्ये विद्यार्थी आत्मसात करतील.
३. सांस्कृतिक कार्यक्रमांचे सूत्रसंचालन, निवेदन करण्यासाठी, मुलाखती घेण्यासाठी तसेच भाषण करण्यासाठी विद्यार्थी सक्षम बनेल.
४. विद्यार्थ्यांना स्वतंत्रपणे ब्लॉग तयार करता येतील.
५. या पत्रिकेच्या अभ्यासाने विद्यार्थी रोजगार प्राप्त करू शकतील.

२) अभ्यासपत्रिका (MS32) भाषाविज्ञान

अभ्यासपत्रिकेची निष्पत्ती (COS)

१. भाषेची संकल्पना समजून घेता येईल.
२. भाषेचे स्वरूप व भाषेचे विविधांगी कार्य लक्षात येईल.
४. आषाविज्ञानाच्या अभ्यासक्षेत्राचा परिचय होऊन विविध भाषाभ्यास पद्धतीची वैशिष्टे लक्षात येतील. तसेच आषेच्या वस्तुनिष्ठ अभ्यासाचे जान होऊन भाषाभ्यासाला चालना मिळेल
४. वर्णनात्मक आषाविज्ञानाच्या साहाय्याने भाषेच्या सरचनेचा अभ्यास करता येईल.
५. मराठी आषेच्या अभ्यासासोबतच इतर आषाच्या अभ्यासाची दिशा मिळेल.

३) अभ्यासपत्रिका (MS33) विशेष ग्रंथकार संत जनाबाई

अभ्यासपत्रिकेची निष्पत्ती (COs)

१. वारकरी संप्रदायाचे स्वरूप सांगता येईल.
२. संत जनाबाईच्या कार्याचा परिचय करून देता येईल
३. सांप्रदायिक अभंगांचे वेगळेपण व महत्व सांगता येईल

४. संत जनाबाईच्या अभंगांचे मूल्यमापन करता येईल.

५. अभंगलेखन करता येईल.

६) अभ्यासपत्रिका (MS36)

वाङ्मयीन प्रवाह ग्रामीण साहित्य

१. विशिष्ट वाङ्मयीन प्रवाह म्हणून ग्रामीण साहित्याच्या प्रवाहाचा परिचय होईल.

२. ग्रामीण साहित्य, समाज आणि संस्कृती यांविषयीचे आकलन वाढेल.

३. ग्रामीण साहित्याच्या कथा, कादंबरी, कविता या वाङ्मयप्रकारांचे सामर्थ्य वाढेल.

४. ग्रामीण भागातील बोलीचे जतन करण्यासाठी आणि संवर्धन करण्यासाठी या अभ्यासाचा उपयोग होईल.

५. वाङ्मयनिर्मितीसाठी प्रेरणा मिळेल.

१०) अभ्यासपत्रिका (MS310) संशोधन प्रकल्प
अभ्यासपत्रिकेची निष्पत्ती)COS)

१ विद्यार्थांना संशोधन क्षेत्राचा परिचय होईल.
२ संशोधन प्रकल्पातून विद्यार्थी प्रत्यक्ष संशोधनकार्याचा अनुभव घेतील.
३.प्रकल्प अंमलबजावणीतून संशोधन कौशल्यांची संशोधन पद्धती वृद्धिंगत होईल.
४ .विद्यार्थांना पी.एच.डी. साठी संशोधन करण्याची प्रेरणा मिळेल.

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१) अभ्यासपत्रिका (MS41) संशोधन प्रक्रिया
अभ्यासपत्रिकेची निष्पती)COS)

१. संशोधनाचा अर्थ, स्वरूप आणि महत्व स्पष्ट होईल.
२. संशोधनाच्या विविध पद्धती आणि संशोधन समस्येनुसार त्यातील विशिष्ट पद्धतीचे उपयोजन करता येईल.
३. संशोधन पद्धतीचे आकलन झाल्यामुळे संशोधनात अभिरुची आणि गती प्राप्त होईल.
४. सभोवतालाकडे व प्राप्त माहितीकडे चिकित्सक, विश्लेषणात्मक व तुलनात्मक दृष्टीने पाहण्याची वृत्ती विकसित होईल.
५. पीएच.डी. साठी आणि संशोधन संस्थांच्या प्रकल्पांसाठी या ज्ञानाचा फायदा होईल.

२) अभ्यासपत्रिका (MS42) भाषाविज्ञान
अभ्यासपत्रिकेची निष्पती)COs)

१. ऐतिहासिक भाषाविज्ञानाच्या अभ्यासक्षेत्राचा परिचय घडेल

२. भाषाकुलांची माहिती होऊन मराठीचा विविध भारतीय भाषांशी असलेल्या जवळच्या संबंधाचा उलगडा होईल.

३. आषेच्या परिवर्तनाचे स्वरूप कळेल.

४. मराठी भाषेवर अन्य भाषांचा झालेला परिणाम समजेल व त्यातून भाषाभान वाढेल.

५. प्रमाण व बोली यांतील परस्परसंबंध लक्षात येईल तसेच बोलीच्या अभ्यासाची दृष्टी विकसित होईल,

४) अभ्यासपत्रिका (M544) मराठी वैचारिक साहित्य

अभ्यासपत्रिकेची निष्पती)COs)

१) वैचारिक साहित्याची संकल्पना स्पष्ट करता येईल.

२) वैचारिक साहित्याची पूर्वपरंपरा सांगता येईल.

३) वैचारिक साहित्याचे महत्व सांगता येतील.

४) अभ्यासक्रमाला नेमलेल्या कलाकृतीचे मूल्यमापन करता येईल.

५) विवेकी जीवन जगता येईल.

९) अभ्यासपत्रिका (M549) वाङ्मयेतिहासाचा अभ्यास

अभ्यासपत्रिकेची निष्पत्ती)COs)

१. वाङ्मयेतिहासाच्या संकल्पनेचा परिचय होईल.

२. वाङ्मयेतिहासाच्या विविध दृष्टिकोनांच्या अभ्यासाने विद्यार्थ्यांमध्ये ज्ञानात्मक भर पडेल.

३. वाङ्मयीन इतिहासातील दुर्लक्षित घटकांच्या अभ्यासाला चालना मिळेल.

४. वाङ्मयेतिहास लेखन करण्याची क्षमता विद्यार्थ्यांमध्ये निर्माण होईल.

५. विद्यार्थ्यांमध्ये संशोधनक्षमता विकसित होण्यासाठी या अभ्यासपत्रिकेची मदत होईल.

Programme Outcomes and Programme specific outcomes

Doctor of Philosophy in the Faculty of Humanities

Ph. D. (Marathi)

- To understand the basic conceptual knowledge, importance and its application to actual research
- To understand the importance in the study of research in Marathi literature
- To understand the literature review process and formulation of research problem
- To develop the skill of understanding resources, literatures, ability to review and capacity to explore the issues for research
- To equip with various tools and techniques of data collection, classification and verification, interpretation and recourse to resources for research
- To learn technical writing and ICT skills required for the research
- To create awareness about intellectual property rights and patents

Course outcomes

Doctor of Philosophy Ph. D. (Marathi)

Researcher will able to

- Gain the knowledge and skills for the awareness of each and every aspect related to the Marathi language
- Make career as a language expert, Marathi writer, translator, literary critic, teacher etc
- Undertake various roles in the domain associated with the uses of the Marathi language
- Develop an expertise in the language by getting into the insight of the language
- Create authentic content in the language for Marathi journals, newspaper and multimedia
- Make comprehensive and contrastive analysis of Marathi language and literature with other languages and literature in other languages
- Have a proficient and can work as a critic in Marathi literature
- Make the society sensitive and sensible through reading and writing

Programme Outcomes and Programme specific outcomes
Doctor of Philosophy in the Faculty of Humanities
Ph. D. (English)

- Acquire advanced knowledge of literary, cultural, and critical studies
- Demonstrate depth of knowledge in the field of specialization for research and teaching
- Develop skills in public and oral presentation through participation in seminars, conferences, and in course presentation
- Acquire ability to teach literature and culture at the university level and the society

Course outcomes
Doctor of Philosophy Ph. D. (English)
Researcher will able to

- Acquire subject specific knowledge and skills in the area of specialization and improving the research methodology
- Promote publications in scholar journals
- Ability to present research findings in academic context, the English literature
- Develop the personal skill for the successful career in research

Programme Outcomes and Programme specific outcomes
Doctor of Philosophy in the Faculty of Humanities
Ph. D. (Philosophy)

- Acquire the basic conceptual knowledge, importance and its application to actual research

- To equip with various tools and techniques of data collection, classification and verification, interpretation and recourse to resources for research
- To learn technical writing and ICT skills required for the research
- To create awareness about intellectual property rights and patents
- Gain the knowledge and skills for the awareness of each and every aspect related to the Philosophy
- To aware and acquire various skills of research methodology and implementation of various research techniques

Course outcomes

Doctor of Philosophy Ph. D. (Philosophy)

Researcher will able to

- Students can give a through detailed account of the history of philosophy
- Know the research ethics, IPR related mechanism, citation styles etc
- Enhance and facilitate educational, social and economic growth locally, nationally
- Develop competencies in the broad issues of conducting and evaluating research in education and develop the skills needed to develop a research problem
- Analyze critically synthesize and utilised information and data related to one's field of study
- Proficiently communicate information in a manner relevant to the field
- Prepare students for an academic career in philosophy and more specifically

Programme Outcomes and Programme specific outcomes

Doctor of Philosophy Ph. D. (Chemistry)

- To develop new technology for the waste water management.
- Think scientifically to solve the problems independently.
- Critical thinker to carryout environment friendly reactions, maintained all the data and analyse the result scientifically.
- Able to aware the community about the hazardous effect of chemistry to the environment.
- Able to carry out reaction via green chemistry route.
- Use advance techniques, instruments and Chemistry software's
- Gain the knowledge of research through experimental work.
- Able to elaborate the methodology of research, how to write research papers and short communications for society etc.
- Identify the methodology for the removal of heavy metal ions from the wastewater and design eco-friendly technique for the removal of heavy metal ions from the waste effluent from the industry.
- To reduce COD and TDS from the industrial wastewater.
- Understand good laboratory green practices.

Course outcomes
Doctor of Philosophy Ph. D. (Chemistry)

Researcher will able to

- Treatment of waste water by cheap adsorbents.
- Adsorption technique used for this process is eco-friendly, non-hazardous and cheap.
- Easily scale up from lab scale to industrial scale up.
- To analyse the concentration of toxic metal ions and various parameters in drinking water.

Programme Outcomes and Programme specific outcomes
Doctor of Philosophy Ph. D. (Botany)

- To develop theoretical and practical understanding through research into aspects of plant sciences
- Provides plant genetic engineering, plant development, plant ecology, plant taxonomy, plant physiology etc
- Understanding the biodiversity in relation to the flora in field and forest degradation
- Application of Botany in agriculture through the study of plant pathology

Course outcomes
Doctor of Philosophy Ph. D. (Botany)

Researcher will able to

- Analyze relevant literature and apply to the development of innovative research
- Develop abstraction and analytical procedures with an appropriate level of statistical validation
- Free in designing the original research and preparing that data in a format suitable for publication in Journals
- Enhance skills in time management, good laboratory practices, safety and planning a specific programmes of research
- Do research in Taxonomy of medicinal plants which India has huge Medicinal value related plants
- Have awareness among the techniques and suitability of crops
- Produce significant scientifically reliable research results
- Build up awareness and perspective as a member of a local, national and global scientific community

Programme Outcomes and Programme specific outcomes
Doctor of Philosophy Ph. D. (Electronics)

- To develop research tempo in students of rural region
- Design system for public safety and offer solutions to the social and environmental concerns

- Apply research based knowledge to conduct experiments, Analyze and interpret the data to develop electronics tool and applied them for social development
- Apply the contextual knowledge to access cultural, social, safety and health issues and endure the consequent responsibilities relevant to the professional engineering practice
- Share the science and engineering activities to technical society for documentation and presentation
- Develop ethical and professional responsibilities in science and technology
- Select advanced scientific and research based hardware and software tools to solve complex electronics and technological problem and used for industrial applications
- Apply the basic concept of electronics digital and communication in science and technology to design variety of components and system for applications including data acquisition, robotics, embedded system, signal processing, image processing, microcontroller based design, communication, networking, VLSI and control system
- Create awareness of professional science and engineering solutions in societal, environmental context, professional ethics and able to communicate effectively

Course outcomes

Doctor of Philosophy Ph. D. (Electronics)

Researcher will able to

Understood the basic knowledge about the various sensors and data acquisition system applied in sensor network

- Understood fundamental concepts of embedded and control system and studied parameters such as modelling, time response and frequency response etc
- Developed concepts of stability and its assessment
- Learn the various parameters and their interrelationship to solve electronics circuits with series, cascade and parallel connection using various parameters
- Used the concept of virtual instrumentation and developed circuits

Programme Outcomes and Programme specific outcomes

Doctor of Philosophy Ph. D. (Mathematics)

- Researcher undergoes relevant courses required for specialised research
- Articulating ideas and strategies for addressing the research problems
- Effective communicating research through Journals publications and conference presentations to the mathematics community
- Provide scope for interaction with international researchers and developing collaboration
- Produce next generation researchers in mathematics
- Researchers in mathematics will be able to think critically and creatively

- Researchers in mathematics will effectively communicate their field of study
- Researchers after completing the Ph. D. programme will obtain good jobs

Course outcomes

Doctor of Philosophy Ph. D. (Mathematics)

Researcher will able to

- Acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematics
- Have the thorough knowledge in abstract algebra of mathematics
- Have the knowledge gain in module theory as a linear algebra over the ring
- Acquire the knowledge of special class of modules like free modules, projective module etc
- Develop competency in handling problems involving module theory
- Deal with module theory which is indispensable in wide ranges of mathematical disciplines
- Understand tensor product in modules, category and functors, exact functors, Ext and Tor
- Extend the field of supplemented modules almost projective modules and almost injective modules.

Programme Outcomes and Programme specific outcomes

Doctor of Philosophy Ph. D. (Zoology)

- To initiate research in classical and modern aspects of life intricacies besides exploration, prevention and conservation of the local biological recourses.
- Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms
- To prepare the biodiversity register with the help of local people.
- Apply the knowledge of cell, its functions in control of various functions of organisms.
- To prepare the youths of the region to competes at National & International level through imparting training in fundamental and applied Zoology and allied disciplines to serve the society and the Nation.
- Understanding of environmental conservation processes and its importance and protection of endangered species
- Gain knowledge of culture, farming and vermicompost preparation.
- Understands about various concepts of genetics and its importance in human health
- To understand basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology

- Laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Fish biology, Animal biotechnology, Immunology and research methodology
- The student of rural backgrounds should extra acquire information more than they ordinals encountered in general biology course.
- To acquire knowledge about research methodologies

Course outcomes

Doctor of Philosophy Ph. D. (Zoology)

Researcher will able to

- Do the distribution of fauna in different realms interaction
- Understand Animal behavior and response of animals to different instincts
- Interaction of biota and abiota
- Understand Various kinds of Animal adaptations Animal Diversity ,Vertebrates & Developmental Biology:
- Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment
- Know the basic concepts of developmental biology Cell Biology, Genetics and Evolution: