

**Programme Outcomes(POs)**  
**Programme Specific Outcomes(PSOs)**  
**Course Outcomes(Cos)**  
**For**  
**UG/PG Courses**  
**2025-26**



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## DEPARTMENT OF SCIENCE

### Programme Name: Bachelor of Science

#### (B.Sc. Physical Science)

#### Program Outcomes (POs)

| POs  | After completing this programme students will be able to:                                                                |
|------|--------------------------------------------------------------------------------------------------------------------------|
| PO 1 | To demonstrate, solve and have an understanding of major fundamental concepts in all disciplines of basic sciences.      |
| PO 2 | To solve the problem by thinking methodically, strategically, independently and draw a logical conclusion                |
| PO 3 | Students become eligible to serve in DRDO, defense, public sector and private Sector.                                    |
| PO 4 | Students become eligible to join as Quality Control Manager in private Sector (Industries) as well as government sector. |

#### Program Specific Outcomes (POs)

#### Name of Programme: B.Sc. (Physical Science)

##### 1. Programme Specific Outcomes (PSOs) of Chemistry

| PSOs  | After completing this programme students will be able to:                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | Students become eligible to join as Quality Control Manager in private Sector (Industries) as well as government sector.                                                                                                                                                                                                                                                                                                                                                                                                                |
| PSO 2 | To acquire the knowledge of States of matter, Chemical Thermodynamics, Kinetics, Equilibrium, Electrochemistry, Distribution Law, Quantum Mechanics, Statistical Mechanics, Photochemistry, Solutions, Organic and Inorganic Synthesis, Atomic Structure, Periodic Table, Chemical Bonds, Qualitative and Quantitative Analysis of compounds, Metal Complexes, Organometallic Compounds, Bioinorganic Chemistry, Stereochemistry, Hydrocarbons and their Derivatives, Spectroscopy, Biomolecules, Heterocyclic Compounds, Polymers etc. |
| PSO 3 | Explore the jobs related to chemistry in public and private sectors such as chemists, food inspector, lab technician, etc.                                                                                                                                                                                                                                                                                                                                                                                                              |
| PSO 4 | Ability to apply reasoning to assess the different issues related to society and the consequent responsibilities relevant to the professional scientific practices.                                                                                                                                                                                                                                                                                                                                                                     |
| PSO 5 | Have the ability to synthesize, separate and characterize compounds using laboratory and instrumentation techniques.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| PSO 6 | To employ critical thinking, systematic approach and scientific knowledge to design, carry out, observe and analyze the results of chemical reactions and Capability of applying knowledge to solve scientific and other problems                                                                                                                                                                                                                                                                                                       |

## 1. Programme Specific Outcomes (PSOs) of Physics

| PSOs  | After completing this programme students will be able to:                                                                                                                                                                                                                                                           |
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| PSO 1 | The students will acquire a scientific knowledge of the fundamental principles of Physics through study of Classical Mechanics, Electromagnetic Theory, Optics, Heat and Thermodynamics, Statistical Mechanics, Solid State Physics, Nuclear Physics, Modern Physics, Quantum Mechanics and other areas of Physics. |
| PSO 2 | The students will learn effective communication skill to present their knowledge of physics from basic concepts to specific advanced areas in the form of preparation of laboratory note book, project work, seminar presentation, poster presentation, wall magazines, models and other modes.                     |
| PSO 3 | To understand the application of physical techniques to various field such as medical, Pharmaceutical, electronics and communication etc.                                                                                                                                                                           |
| PSO 4 | The student will acquire a purposeful knowledge of scientific literature and ethical issues related to physics.                                                                                                                                                                                                     |
| PSO 5 | To understand impact of physics and science on society                                                                                                                                                                                                                                                              |

## COURSE OUTCOMES (COs)

**Name of Programme: B.Sc. (Physical Science)**

### 1. Course Outcomes (COs) of B.Sc.(Physical Science) Chemistry

| SEMESTER 1 (NEP)   |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code        | Course Name        | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>B23-CHE-101</b> | <b>Chemistry I</b> | <b>After completing this course, the learner will be able to:</b><br>1. Enable to understand the basis of quantum mechanics and structural idea and relevance in describing shapes of s, p and d orbitals.<br>2. To learn about role of temperature and pressure to establish the state of gases and describe the concept of critical constants of real gases.<br>3. Get knowledge about the electrophile/nucleophile and its role in mechanism of preparation of organic compounds.<br>4. To know the physical properties, morphology and crystalline study of liquid and different type of solids.<br>5*. Hand on practice in preparation of solutions, compounds, estimation and determination of physical |

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|                    |                          | properties of some compounds.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>B23-CHE-103</b> | <b>Minor Chemistry-I</b> | <p>After completing this course, the learner will be able to:</p> <ol style="list-style-type: none"> <li>1. To understand the basics of Covalent bonding in simple molecules.</li> <li>2. To get the basics of rates of chemical reactions and factors affecting it.</li> <li>3. To learn about the nomenclature, classification and methods of preparation of alkenes.</li> <li>4. To learn about qualitative knowledge of conductors, semiconductors and insulates.</li> </ol> |

#### **SEMESTER II (NEP)**

|                    |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>B23-CHE-201</b> | <b>Chemistry-II</b>       | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                    |                           | <ol style="list-style-type: none"> <li>1. Able to understand the theories which governs the shape, structure and ionic behavior, polarizability, ionic structures and concept of Lattice energy of crystals of molecules.</li> <li>2. To know the basics of rates of chemical reactions ,the laws and solubility behavior of solutes in different compositions of solvents</li> <li>3. To know about alkanes, alkene, cycloalkanes and their chemical reactions.</li> <li>4. To understand about weak interactions and bonding in metals.</li> <li>5*. Hand on practice for estimation and determination of viscosity, specific refractivity properties of some compounds.</li> </ol> |
| <b>B23-CHE-203</b> | <b>Minor Chemistry-II</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. To know the basics of periodic properties and hybridization.</li> <li>2. To learn about the ionic solids.</li> <li>3. Understand about the semiconductors and metallic bonds.</li> <li>4. Get the knowledge of stereochemistry of simple</li> </ol>                                                                                                                                                                                                                                                                                                                |

|  |  |                                                                                                                                                          |
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|  |  | organic molecules.<br>5*. Hand on practice in preparation of solutions, compounds, estimation and determination of physical properties of some compounds |
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**SEMESTER III (NEP)**

| <b>Course Code</b>  | <b>Course Name</b>         | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B23-CHE-301</b>  | <b>Chemistry-III</b>       | <ol style="list-style-type: none"> <li>1. To learn about the structure of S and P-block elements, their properties and discuss their use in daily life as well as industrial applications.</li> <li>2. To understand about various laws and theories related to eletrochemistry-I and know about their thermodynamic properties.</li> <li>3. To understand about variation of conductance studies with concentration and explain with many phenomenon.</li> <li>4. The fundamental properties, structures and reactivity of organic compounds such alkene, alkyne arenes, alkyl and aryl halide etc.</li> <li>5. Learning about reaction mechanism and predict the outcome of the reactions.</li> <li>6. How to distinguish between the organic compounds by use of different chemical tests.</li> <li>7.</li> </ol> |
| <b>Course Code</b>  | <b>Course Name</b>         | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>B23- CHE-304</b> | <b>Minor Chemistry-III</b> | <ol style="list-style-type: none"> <li>1. To learn about the structure of S and P-block elements, their properties and discuss their use in daily life as well as industrial applications.</li> <li>2. To understand about various laws and theories related to electrochemistry-I and know about their thermodynamic properties.</li> <li>3. To understand the concepts of thermodynamics.</li> <li>4. To understand and apply the fundamental concepts and thermodynamic properties of reactions/systems involved in physical/chemical transformations including types of reactions and reactive intermediates.</li> </ol> <p>5*To understand and apply the laboratory skills to make common chemical products and simple inorganic compounds in the lab and gain practical</p>                                    |

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|                          |                     | skills by measuring things like solubility and heat changes in chemical reactions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SEMESTER IV (NEP)</b> |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Course Code</b>       | <b>Course Name</b>  | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-CHE-401</b>       | <b>Chemistry-IV</b> | <ol style="list-style-type: none"> <li>1. Classify d block and f block elements and also know their properties.</li> <li>2. Learn about the basic idea of analysis with respect to qualitative as well as quantitative measures.</li> <li>3. Know about the first and second law of thermodynamics and also their implications and also know about the concept of chemical equilibrium.</li> <li>4. Know about the alcohols, phenols, aldehydes and ketones with respect to their general characteristics and their important reactions.</li> <li>5. To get knowledge about identification and confirmation of acidic and basic radicals in a given inorganic salts/mixtures</li> </ol> |
| <b>SEMESTER V (NEP)</b>  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Course Code</b>       | <b>Course Name</b>  | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-CHE-501</b>       | <b>Chemistry-V</b>  | <ol style="list-style-type: none"> <li>1. Enable to understand the basis of coordination chemistry of complexes.</li> <li>2. To learn about role of thermodynamics and equilibrium in predicting various physical properties of systems.</li> <li>3. Get knowledge about the quantum mechanical properties and analysis of diatomic molecules by spectroscopy.</li> <li>4. To understand the synthesis and mechanism of some organic reactions and heterocyclic compounds.</li> <li>5. 5*. Hand on practice in preparation of metal complexes, identification of organic and measurement of surface tension of solutions.</li> </ol>                                                    |
| <b>SEMESTER VI (NEP)</b> |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Course Code</b>       | <b>Course Name</b>  | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                          |                     | <ol style="list-style-type: none"> <li>1. Enable to understand the chemistry of bioinorganic molecules.</li> <li>2. To learn about fundamentals of photochemistry and</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| <b>B23-CHE-601</b>  | <b>Chemistry-VI</b>       | <p>photophysical processes.</p> <ol style="list-style-type: none"> <li>3. To understand the concept of IR and NMR spectroscopy of organic compounds.</li> <li>4. Enable to understand the synthesis and other properties of amino acids, carbohydrates and their derivatives</li> <li>5. Hand on practice in preparation of organic/inorganic compound, and determination of strength of various types of solutions using various instruments.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B-23 CHE-609</b> | <b>Minor Chemistry-IV</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the chemistry of d-block elements.</li> <li>2. To learn about fundamentals of photochemistry and photophysical processes.</li> <li>3. To understand the nature of chemical bonding, resonance, and electronic effects, and apply these concepts to predict the reactivity and orientation of aromatic compounds in electrophilic substitution reactions.</li> <li>4. To understand the classification, structure, and biological roles of key biomolecules such as carbohydrates, proteins, and nucleic acids, and learn how these molecules function in living organisms.</li> <li>5. Students will gain hands-on experience in classical and instrumental analytical techniques such as conductometry, potentiometry, polarimetry, organic and inorganic synthesis, and photochemical analysis.</li> </ol> |

## 2. Course Outcomes (COs) of B.Sc. (Physical Science) Physics

| SEMESTER I (NEP) |             |                                                                                                                                                                                                                                                                                                                                                                                                            |
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| Course Code      | Course Name | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                      |
|                  |             | <ol style="list-style-type: none"> <li>1. Understand the dynamics of system of particles, conservation of energy and momentum application of both translational and rotational dynamics motions simultaneously in analyzing rolling with slipping.</li> <li>2. Differentiate between elastic and plastic body. Elastic constants, determination and their physical significance. Torque and its</li> </ol> |

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| <b>B23-PHY-101</b>        | <b>Mechanics</b>                            | <p>significance.</p> <p>3. Familiar about the special theory of relativity and its applications. Michelson's Morley experiments and its finding.</p> <p>4. Analyze the two body Central Force problem and its applications.</p> <p>5. Learn to present observations, results, analysis and different concepts related to experiments of Mechanics.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>SEMESTER II (NEP)</b>  |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>B23-PHY-201</b>        | <b>Electricity, Magnetism and EM Theory</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>1. Explain and differentiate the vector and scalar formalisms of electrostatics. Also be able to apply Gauss's Divergence &amp; Stokes theorem to solve various problems in electrostatics.</p> <p>2. Describe the magnetic materials &amp; important properties of magnetic field. Understand the properties and theories of dia-, para- &amp; ferromagnetic materials.</p> <p>3. Derive Maxwell equations and their physical significance and familiar about the propagation of electromagnetic waves i.e. boundary conditions at the interface between different media. The students will also be able to have basic idea about the propagation of electromagnetic waves in free space and in medium.</p> <p>4. Understand D.C. and A.C. circuits, able to apply and analyse using networks. Analyze DC/AC circuits consisting of parallel and/or series combinations of voltage sources and resistors and to describe the graphical relationship of resistance, capacitor and inductor.</p> <p>5. Learn to present observations, results, analysis and 34(577) different concepts related to experiments of Electricity and Magnetism.</p> |
| <b>SEMESTER III (NEP)</b> |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                           |                                             | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>1. Understand and describe the basic concepts and laws of thermodynamics.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>B23-PHY-301</b>       | <b>Thermodynamics &amp; Statistical Physics</b> | <p>2. Apply the laws of thermodynamics to develop Maxwell's thermodynamic relations be able to understand their physical interpretations.</p> <p>3. Appreciate cellular nature of phase space and Have better knowledge of classical statistics which would result in greater insight into solutions of various complex problems.</p> <p>4. Have better understanding of quantum statistics and are in a position to extend the treatment to the analysis of complex problems</p> <p>5. Learn to present observations, results, analysis and different concepts of experiments related to Thermodynamics &amp; Statistical Physics</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SEMESTER IV (NEP)</b> |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>B23-PHY-401</b>       | <b>Waves and Optic</b>                          | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>1. Have understanding of Interference - by Division of Wave front, by Division of Amplitude and Interference due to transmitted light &amp; reflected light.</p> <p>2. Learn about Huygens-Fresnel's theory, diffraction at a straight edge and at a circular aperture, diffraction due to a narrow slit and due to a narrow wire. Understand and explain the Fraunhofer diffraction, dispersive power of grating, Rayleigh's criterion and resolving power of telescope &amp; a grating.</p> <p>3. Understand the theories and laws of polarization along with understanding of the production and detection of (i) Plane polarized light (ii) Circularly polarized light and (iii) Elliptically polarized light.</p> <p>4. Understand and appreciate the applications of Lasers in developing LED, Holography, in materials processing, in Medicine, Industry and Military. Have the idea of optical fibres, their properties and principle of propagation of electromagnetic waves through optical fibres.</p> <p>5. Understand various optical phenomena, principles, workings and applications</p> |

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|                          |                              | optical instruments through Experiments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SEMESTER V (NEP)</b>  |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>B23-PHY-501</b>       | <b><u>Modern Physics</u></b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the need for Quantum Mechanics, Heisenberg's uncertainty principle, time dependent and time independent Schrodinger equation, expectation values of position and momentum, particle confined in one dimensional box.</li> <li>2. Familiar about the crystalline state, basis, crystal lattices, Reciprocal lattice to sc, bcc and fcc lattices.</li> <li>3. Analyze the Hydrogen atom problem based on Sommerfeld theory, Vector Atom Model, LS&amp;JJ coupling.</li> <li>4. Familiar about various Nuclear Models, Magic Numbers, Classification of fundamental particles and Strange particles.</li> <li>5. *Learn to present observations, results, analysis and different concepts related to experiments of Quantum Mechanics and Solid State physics.</li> </ol> |
| <b>SEMESTER VI (NEP)</b> |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Paper PH 601</b>      | <b>Electronics</b>           | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the operation of pn junction, use of diode as Rectifier, voltage multiplier circuits, Zener Diode, Photo diode, solar cell, clipping and clamping circuits.</li> <li>2. Familiar about Bipolar Junction Transistor, use of transistor as Amplifier in CB, CE and CC configurations.</li> <li>3. Understand the concept of feedback in amplifiers, its types and effect of negative feedback on characteristics of amplifiers.</li> <li>4. Analyze the operation of oscillators, classification of oscillators as LC oscillators, RC oscillators and crystal oscillators.</li> <li>5. * Learn to present observations, results, analysis and different concepts related to experiments of Electronics.</li> </ol>                                                       |
| <b>Paper</b>             | <b>Basic</b>                 | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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| <b>PH 607</b> | <b>Electronics</b> | <ol style="list-style-type: none"> <li>1. Understand the operation of pn junction, use of diode as Rectifier, voltage multiplier circuits, Zener Diode, Photo diode, solar cell, clipping and clamping circuits.</li> <li>2. Familiar about Bipolar Junction Transistor, use of transistor as Amplifier in CB, CE and CC configurations.</li> <li>3. Understand the concept of feedback in amplifiers, its types and effect of negative feedback on characteristics of amplifiers.</li> <li>4. Analyze the operation of oscillators, classification of oscillators as LC oscillators, RC oscillators and crystal oscillators.</li> <li>5. Learn to present observations, results, analysis and different concepts related to experiments of Electronics.</li> </ol> |
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### **Programme Name: Bachelor of Science (B.Sc.Life Science)**

#### **Program Outcomes (POs)**

| <b>POs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                     |
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| PO 1       | To demonstrate, solve and have an understanding of major fundamental concepts in all disciplines of basic sciences.                                                                                  |
| PO 2       | To create awareness on ethical issues, good laboratory practices and biosafety.                                                                                                                      |
| PO 3       | To solve the problem by thinking methodically, strategically, independently and draw a logical conclusion.                                                                                           |
| PO 4       | To develop ability in youth for understanding basic scientific To learning and effective communication skills.                                                                                       |
| PO 5       | To develop skills in graduate students to be able to acquire theoretical and practical knowledge in fundamentals of biology in respective disciplines of plants, animals, microbes, and environment. |
| PO 6       | To be able to perform jobs in different fields like education, research, industries, civil service, survey, banking, business, public service etc.                                                   |
| PO 7       | To inculcate ability to critically evaluate problems and apply lateral thinking and analytical skills for professional development.                                                                  |
| PO 8       | To provide to learning experience in students that in stills deep interest in biological science for the benefit of society                                                                          |
| PO 9       | To apply the knowledge and insist the significance of conserving a clean environment for perpetuation and sustainable development.                                                                   |
| PO 10      | To apply the knowledge of Effective Communication; Successful transfer of scientific to knowledge both orally and in writing.                                                                        |

## **Program Specific Outcomes (POs)**

### **Name of Programme: B.Sc. Life Science**

#### **1. Programme Specific Outcomes (PSOs) of Zoology**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                                |
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| PSO 1       | To be capable of using knowledge of subject and analytical methods in identifying and solving various complex situations of living forms and environment taking into consideration ethics and responsibilities. |
| PSO 2       | To gain knowledge to develop acquaintance of animal species around them and variations in their life cycles/biology and their interaction with the environment.                                                 |
| PSO 3       | To develop ability in youth to have To understanding of basic Zoology with effective communication ability.                                                                                                     |
| PSO 4       | To develop personnel who will be capable of doing Masters in the subject and can develop career as teacher, in industry or as entrepreneur in the realms of the subject                                         |
| PSO 5       | To develop youth who is aware of natural resources and their sustainable utilization                                                                                                                            |

#### **2. Programme Specific Outcomes (PSOs) of Botany**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                        |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1       | To understand the biodiversity, cell biology, ecology, and physiology, biochemistry and plant pathology.                                                |
| PSO 2       | To perform experiments as per laboratory standards in field of taxonomy, plant ecology, plant physiology, biochemistry and economic botany              |
| PSO 3       | To analyse the relationship among plants, animals and environment.                                                                                      |
| PSO 4       | To understand the applications of biological sciences in agriculture, medicine, apiculture and environmental pollution.                                 |
| PSO 5       | To build life skills in edible mushroom cultivation, Biofertilizer production, Greenhouse maintenance and Seed technology through value- added courses. |

#### **3. Programme Specific Outcomes (PSOs) of Chemistry**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1       | Students become eligible to join as Quality Control Manager in private Sector (Industries) as well as government sector.                                                                                                                                                                                                                                                                                                                                                                                                           |
| PSO 2       | To acquire the knowledge of States of matter, Chemical Thermodynamics, Kinetics, Equilibrium, Electrochemistry, Distribution Law, Quantum Mechanics, Statistical Mechanics, Photochemistry, Solutions, Organic and Inorganic Synthesis, Atomic Structure, Periodic Table, Chemical Bonds, Qualitative and Quantitative Analysis of compounds, Metal Complexes, Organometallic Compounds, Bioinorganic Chemistry, Stereochemistry, Hydrocarbons and their Derivatives, Spectroscopy, Biomolecules, Heterocyclic Compounds, Polymers |

|       |                                                                                                                                                                                                                                      |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | etc.                                                                                                                                                                                                                                 |
| PSO 3 | Explore the jobs related to chemistry in public and private sectors such as chemists, food inspector, lab technician, etc.                                                                                                           |
| PSO 4 | Ability to apply reasoning to assess the different issues related to society and the consequent responsibilities relevant to the professional scientific practices.                                                                  |
| PSO 5 | Have the ability to synthesize, separate and characterize compounds using laboratory and instrumentation techniques.                                                                                                                 |
| PSO 6 | To employ critical thinking, systematic approach and scientific To knowledge to design, carry out, observe and analyse the results of chemical reactions and Capability of applying knowledge to solve scientific and other problems |

#### 4. Programme Specific Outcomes (PSOs) of Physics

| PSOs  | After completing this programme students will be able to:                                                                                                                                                                                                                                                           |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | The students will acquire a scientific knowledge of the fundamental principles of Physics through study of Classical Mechanics, Electromagnetic Theory, Optics, Heat and Thermodynamics, Statistical Mechanics, Solid State Physics, Nuclear Physics, Modern Physics, Quantum Mechanics and other areas of Physics. |
| PSO 2 | The students will learn effective communication skill to present their knowledge of physics from basic concepts to specific advanced areas in the form of preparation of laboratory note book, project work, seminar presentation, poster presentation, wall magazines, models and other modes.                     |
| PSO 3 | To understand the application of physical techniques to various field such as medical, Pharmaceutical, electronics and communication etc.                                                                                                                                                                           |
| PSO 4 | The student will acquire a purposeful knowledge of scientific literature and ethical issues related to physics.                                                                                                                                                                                                     |
| PSO 5 | To understand impact of physics and science on society                                                                                                                                                                                                                                                              |

## **COURSE OUTCOMES (COs)**

**Name of Programme: B.Sc. Life Science**

### **1.Course Outcomes (COs) of (B.Sc. Life Science) Zoology**

| <b>SEMESTER I (NEP)</b>   |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Course Code</b>        | <b>Course Name</b>                       | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>B23-ZOO-101</b>        | <b>Animal Diversity of Non-Chordates</b> | <ol style="list-style-type: none"><li>1. Student will be able to understand about phylum Protozoa and Porifera.</li><li>2. Student will be able to understand about phylum Coelenterata and Helminthes.</li><li>3. Student will be able to understand about phylum Annelida and Arthropoda.</li><li>4. Student will be able to understand about phylum Mollusca, Echinodermata and Hemichordates.</li><li>5. Students will be capable of identifying the characters and classification of Non-C</li></ol>                                                                                                                                                                                                  |
| <b>SEMESTER II (NEP)</b>  |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-ZOO-201</b>        | <b>Animal Diversity of Chordates</b>     | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"><li>1. Student will be able to describe unique characters and recognize life functions of Urochordates.</li><li>2. Student will be able to describe unique characters and recognize life functions of Pisces.</li><li>3. Student will be able to describe unique characters and recognize life functions of Amphibians &amp; Reptiles.</li><li>4. Student will be able to describe unique characters and recognize life functions of Birds &amp; Mammals.</li><li>5. Students will be capable of identifying the characters and classification of Chordates</li></ol> |
| <b>SEMESTER III (NEP)</b> |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-ZOO-301</b>        | <b>Cell Biology and Animal Genetics</b>  | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"><li>1. Students will understand the nature and basic concept of cell biology and genetics.</li><li>2. Students will be able to apply the knowledge of internal structure of cell and their role in many metabolic function of organism.</li><li>3. Students will have acquaintance with the basic causes associated with inborn errors and other genetic disorder and will be able to give counseling to general people.</li></ol>                                                                                                                                    |

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|                          |                                              | <ol style="list-style-type: none"> <li>Students will be able to explain the concept of gene interactions, Sex linked inheritance and their role in medical sciences.</li> <li>Students will be able to conduct the morphometric analysis of chromosomes and demonstrate cell division</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>B23-SEC-323</b>       | <b>Genetic Engineering</b>                   | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand about different terminology related to genetic engineering and tools used for it.</li> <li>Understand about isolation, sequencing and synthesis of genes.</li> <li>Know the techniques for transfer and expression of cloned gene.</li> <li>Apply the knowledge of genetic engineering in biological research.</li> <li>Develop the skills to isolate DNA from plants and bacteria, plasmid DNA; Demonstrate the making and transforming competent cells.</li> </ol>                                                                                                                                                                                               |
| <b>SEMESTER IV (NEP)</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>B23-ZOO-401</b>       | <b>Biomolecules and Mammalian Physiology</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Students will be able to understand and explain the mechanism that works to keep the human body functioning.</li> <li>Students will be able to explain the interaction and interdependence of physiological and biochemical processes.</li> <li>It will make the students understand the appropriate functioning of each body system in animals and mechanism of working.</li> <li>Students will be able to explain the mechanism of action of hormones and related molecules involved in various physiological processes.</li> <li>Students will be able to understand and perform biological and analytical techniques in labs to explain biological activities.</li> </ol> |
| <b>B23-VAC-407</b>       | <b>Ecology and Environment</b>               | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Know about basics of ecological science</li> <li>Understand various strategies for research and development on ecological succession and dynamics.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                          |                                              | <ol style="list-style-type: none"> <li>3. Improve their knowledge about conservation science.</li> <li>4. Describe about various conservation projects.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SEMESTER V (NEP)</b>  |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>B23-ZOO-501</b>       | <b>Ecology and Environment</b>               | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to describe interactions and relation between abiotic and biotic factors.</li> <li>2. Students will able to describe about ecosystem and Biogeochemical cycles.</li> <li>3. Students will be able to describe about population characteristics &amp; biodiversity.</li> <li>4. Students will be able to understand the causes of different types of pollution.</li> <li>5. Students will be able to practical approaches of natural resources and their conservation</li> </ol>                   |
| <b>SEMESTER VI (NEP)</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>B23-ZOO-601</b>       | <b>Developmental Biology &amp; Evolution</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to describe origin of life and theories of evolution.</li> <li>2. Students will able to describe concept of speciation and evolution of horse and man.</li> <li>3. Students will be able to describe different stages during fertilization.</li> <li>4. Students will be able to describe the different stages in the development of chick and frog.</li> <li>5. Students will be able to describe to understand how evolution and development leads to a sustainable life in species.</li> </ol> |

## 2. Course Outcomes (COs) of (B.Sc. Life Science) Botany

| SEMESTER I (NEP)   |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Course Code        | Course Name                                                  | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-BOT-101</b> | <b>Diversity of Microbes, Algae, Fungi and Archegoniates</b> | <ol style="list-style-type: none"> <li>1. Students will be able to understand the general characteristics of bacteria, actinobacteria, viruses and fungi.</li> <li>2: Students will develop a conceptual understanding of Phycology.</li> <li>3: Students will gain knowledge on the concepts of Bryology.</li> <li>4: Basic understanding of the biology of pteridophytes will be developed by the students.</li> <li>5*. Students will gain the knowledge of practical aspects of microorganisms, algae, fungi, lichens, bryophytes, and pteridophytes</li> </ol>                                                                                                                                                                             |
| SEMESTER II (NEP)  |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>B23-BOT-201</b> | <b>Plant taxonomy and ecology</b>                            | <ol style="list-style-type: none"> <li>1. Students will gain knowledge about taxonomy, including the rules of nomenclature and other essential aspects.</li> <li>2: Students will acquire a conceptual understanding of angiosperm classification systems and the diversity of families within them.</li> <li>3. Students will gain knowledge about Ecology and Environmental interactions.</li> <li>4: Students will acquire a conceptual understanding of ecosystem structure, environmental pollution and biodiversity conservation.</li> <li>5*. Students will gain the knowledge about the diagnostic features, morphology, internal structure, economic value of angiosperms and ecological concepts and biodiversity indices.</li> </ol> |
| SEMESTER III (NEP) |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>B23-BOT-301</b> | <b>Plant Physiology</b>                                      | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Students will acquire an understanding of various physiological process in plants.</li> <li>2: Students will develop a comprehensive knowledge of plant hormones.</li> <li>3: Students will learn about photomorphogenesis and its significance.</li> <li>4: Students will gain a conceptual understanding of plant growth and senescence, including the natural aging process of plants.</li> </ol>                                                                                                                                                                                                                         |

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|                          |                                                | 5*. Students will be able to demonstrate practical aspects and learn the basic concepts of various physiological and biochemical process of plant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>SEMESTER IV (NEP)</b> |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>B23-BOT-401</b>       | <b>Cytology and Genetics</b>                   | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Students will understand the fundamental characteristics of cells.</li> <li>2: Students will acquire comprehensive knowledge about cell division and the central dogma of molecular biology.</li> <li>3: Students will learn about the principles of inheritance in biology.</li> <li>4: Students will develop a thorough understanding of mutations, chromosomal aberrations, and the concept of linkage.</li> <li>5*. Students will be able to understand the basic principles of laws of inheritance, stains &amp; staining techniques, cell division processes, chromosome mapping, and chromosomal aberration</li> </ol> |
| <b>B23-VOC-217</b>       | <b>Nursery and Gardening</b>                   | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Students will be able to understand the infrastructure of nursery, seed production technology.</li> <li>2. Students will develop a conceptual understanding the gardening procedure and, management of pest and diseases.</li> <li>3. Students will gain knowledge about the vegetative propagation methods.</li> <li>4. Students will learn about cultivation of different vegetables and flowers.</li> <li>5. *Students will gain the knowledge of practical aspects of management of nursery, gardens, vegetative propagation methods, and cultivation of different vegetables and flowers.</li> </ol>                     |
| <b>SEMESTER V (NEP)</b>  |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>B23-BOT-501</b>       | <b>Economic Botany and Plant Biotechnology</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand origin, distribution, cultivation and uses of cereals, millets, pulses, fibres and oil yielding crops.</li> <li>2. Understand cultivation and uses of spices,</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                          |                                     | <p>condiments, medicinal plants, rubber-yielding plants, beverages and timber yielding plants.</p> <ol style="list-style-type: none"> <li>3. Get acquainted with concepts of tissue culture and tissue culture techniques including micro propagation, callus culture</li> <li>4. Understand different strategies of genetic engineering in plants and its applications</li> <li>5. *Understand lab techniques of tissue culture; get acquainted with equipments and instruments required for gene transfer techniques; culture media preparation; study of economically important plants. Students will be able to describe interactions and relation between abiotic and biotic factors.</li> </ol>                                                                                                                                                                                                                   |
| <b>SEMESTER VI (NEP)</b> |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>B23-BOT-601</b>       | <b>Plant Anatomy and Embryology</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Describe and differentiate various categories of plant tissues, their functions and anatomical features of plant parts and their applications in various branches of botany; general mechanism of secondary growth in plants.</li> <li>2. Develop their competency on understanding morphology and anatomy of leaves and root system of plants.</li> <li>3. Understand self incompatibility, pollen-pistil interaction, microsporogenesis, pollination and palynology.</li> <li>4. Understand concepts of megasporogenesis, double fertilisation, embryo development, fruit types, embryo culture and anther culture.</li> <li>5. *Get acquainted with practical aspects of permanent tissues, types of ovules, pollination mechanism and embryo development...</li> </ol> |

### 3. Course Outcomes (COs) of B.Sc.( Life Science) Chemistry

| SEMESTER 1 (NEP)   |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| Course Code        | Course Name  | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| B23-CHE-101        | Chemistry I  | After completing this course, the learner will be able to:<br>1. Enable to understand the basis of quantum mechanics and structural idea and relevance in describing shapes of s, p and d orbitals.<br>2. To learn about role of temperature and pressure to establish the state of gases and describe the concept of critical constants of real gases.<br>3. Get knowledge about the electrophile/nucleophile and its role in mechanism of preparation of organic compounds.<br>4. To know the physical properties, morphology and crystalline study of liquid and different type of solids.<br>5*. Hand on practice in preparation of solutions, compounds, estimation and determination of physical properties of some compounds. |
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| SEMESTER II (NEP)  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| B23-CHE-201        | Chemistry-II | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                    |              | 1. Able to understand the theories which governs the shape, structure and ionic behavior, polarizability, ionic structures and concept of Lattice energy of crystals of molecules.<br>2. To know the basics of rates of chemical reactions ,the laws and solubility behavior of solutes in different compositions of solvents<br>3. To know about alkanes, alkene, cycloalkanes and their chemical reactions.<br>4. To understand about weak interactions and bonding in metals.<br>5*. Hand on practice for estimation and determination of viscosity, specific refractivity properties of some compounds.                                                                                                                          |
| SEMESTER III (NEP) |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Course Code        | Course Name  | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>B23-CHE-301</b> | <b>Chemistry-III</b> | <ol style="list-style-type: none"> <li>1. To learn about the structure of S and P-block elements, their properties and discuss their use in daily life as well as industrial applications.</li> <li>2. To understand about various laws and theories related to eletrochemistry-I and know about their thermodynamic properties.</li> <li>3. To understand about variation of conductance studies with concentration and explain with many phenomenon.</li> <li>4. The fundamental properties, structures and reactivity of organic compounds such alkene, alkyne arenes, alkyl and aryl halide etc.</li> <li>5. Learning about reaction mechanism and predict the outcome of the reactions.</li> <li>6. How to distinguish between the organic compounds by use of different chemical tests.</li> </ol> |
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#### SEMESTER IV (NEP)

| <b>Course Code</b> | <b>Course Name</b>  | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>B23-CHE-401</b> | <b>Chemistry-IV</b> | <ol style="list-style-type: none"> <li>1. Classify d block and f block elements and also know their properties.</li> <li>2. Learn about the basic idea of analysis with respect to qualitative as well as quantitative measures.</li> <li>3. Know about the first and second law of thermodynamics and also their implications and also know about the concept of chemical equilibrium.</li> <li>4. Know about the alcohols, phenols, aldehydes and ketones with respect to their general characteristics and their important reactions.</li> <li>5. To get knowledge about identification and confirmation of acidic and basic radicals in a given inorganic salts/mixtures</li> </ol> |

#### SEMESTER V (NEP)

| <b>Course Code</b> | <b>Course Name</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                               |
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|                    |                    | <ol style="list-style-type: none"> <li>1. Enable to understand the basis of coordination chemistry of complexes.</li> <li>2. To learn about role of thermodynamics and equilibrium in predicting various physical properties of systems.</li> <li>3. Get knowledge about the quantum mechanical</li> </ol> |

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| <b>B23-CHE-501</b> | <b>Chemistry-V</b> | <p>properties and analysis of diatomic molecules by spectroscopy.</p> <p>4. To understand the synthesis and mechanism of some organic reactions and heterocyclic compounds.</p> <p>5*. Hand on practice in preparation of metal complexes, identification of organic and measurement of surface tension of solutions.</p> |
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**SEMESTER VI (NEP)**

| <b>Course Code</b> | <b>Course Name</b>  | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>B23-CHE-601</b> | <b>Chemistry-VI</b> | <p>1. Enable to understand the chemistry of bioinorganic molecules.</p> <p>2. To learn about fundamentals of photochemistry and photophysical processes.</p> <p>3. To understand the concept of IR and NMR spectroscopy of organic compounds.</p> <p>4. Enable to understand the synthesis and other properties of amino acids, carbohydrates and their derivatives</p> <p>5*. Hand on practice in preparation of organic/inorganic compound, and determination of strength of various types of solutions using various instruments.</p> |

**SEMESTER VI (NEP) PHYSICS**

|                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Paper PH 607</b> | <b>Basic Electronics</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the operation of pn junction, use of diode as Rectifier, voltage multiplier circuits, Zener Diode, Photo diode, solar cell, clipping and clamping circuits.</li> <li>2. Familiar about Bipolar Junction Transistor, use of transistor as Amplifier in CB, CE and CC configurations.</li> <li>3. Understand the concept of feedback in amplifiers, its types and effect of negative feedback on characteristics of amplifiers.</li> <li>4. Analyze the operation of oscillators, classification of oscillators as LC oscillators, RC oscillators and crystal oscillators.</li> <li>5. Learn to present observations, results, analysis and different concepts related to experiments of Electronics.</li> </ol> |
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## 2. Programme Specific Outcomes (PSOs) of Mathematics (B.Sc. Physical Science)

| PSOs  | After completing this programme students will be able to:                                                                                         |
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| PSO 1 | To enhance aptitude of applying and solving mathematical problems by choosing appropriate analysis and modelling methods, inculcates in students. |
| PSO 2 | Think in a critical manner.                                                                                                                       |
| PSO 3 | To become capable to conduct interdisciplinary work effectively as an individual and as a team member.                                            |
| PSO 4 | Understand, formulate and use quantitative models arising in social science, business and other contexts.                                         |
| PSO 5 | To formulate a process, phenomenon and the relationships between various mathematical objects increases in To learners.                           |
| PSO 6 | To be able To understand the basic concepts of number system and number theory and their applications in practical life.                          |

## COURSE OUTCOMES (COs)

**Name of Programme: B.Sc. (Physical Science)**

### 3. Course Outcomes (COs) of B.Sc. (Physical Science) Mathematics

| SEMESTER I (NEP) |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Course Code      | Course Name | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| B23-MAT-101      | Calculus    | <ol style="list-style-type: none"> <li>1. Gain knowledge of the concepts and theory of limit, continuity and differentiability of functions. Attain skills of calculating the limit of functions and examining the continuity and differentiability of different types of functions, and perform successive differentiation of functions. To apply the procedural knowledge to obtain the series expansions of functions which find multidisciplinary applications.</li> <li>2. Understand concepts of asymptotes and curvature, the geometrical meaning of these terms and to have procedural knowledge to solve related problems.</li> <li>3. Determine singular points of a curve and classify them. Understand the concept of rectification of curves and derive the reduction formulae.</li> <li>4. Have theoretical knowledge and practical skills to evaluate the area bounded by the curves, and</li> </ol> |

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|  |  | <p>volume and surface area of solids formed by revolution of curves.</p> <p>5. Attain cognitive and technical skills required for solving different problems of calculus associated with 34(952) tracing of curves, determination of curvature, and rectification of curves, volume and surface area of solids of revolution. Have technical and practical skills of solving calculus problems related to differentiation and integration of functions by using MAXIMA software.</p> |
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#### SEMESTER II (NEP)

|                    |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>B23-MAT-201</b> | <b>Algebra and<br/>Number Theory</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of the concepts of symmetric, skew-symmetric, Hermitian, skew-Hermitian, Orthogonal and Unitary matrices, Linear dependence and independence of rows and columns of a matrix. Have knowledge of procedure and cognitive skills used in calculating rank of a matrix, eigen values, characteristic equation, minimal polynomial of a matrix and technical skills used in solving problems based on Cayley- Hamilton theorem.</li> <li>2. Have knowledge of the concepts used in solving problems based on relations between the roots and coefficients of general polynomial equation in one variable, solutions of polynomial equations having conditions on roots, common roots and multiple roots. Understand Descarte's rule of signs and learn cognitive and technical skills required in assessing nature of the roots of an equation and solving problems based on these.</li> <li>3. Have deeper and procedural knowledge required for solving cubic and biquadratic equations used in Mathematics as well as many other learning fields of study. To understand the basic concepts of number theory and their applications in problem solving and life- long learning.</li> </ol> |
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|                                                    |                                                   | <p>4. Have knowledge of concepts, facts, principles and theories of Linear Congruences, Fermat's theorem, Euler's theorem, Wilson's theorem and its converse, Chinese Remainder theorem. Attain cognitive skills used in solving linear Diophantine equations in two variables.</p> <p>5. Attain cognitive and technical skills required to formulate and solve practical problems involving rank of a matrix, inverse of a matrix, Cardon's method, Ferrari's method, Descarte's method, Cayley-Hamilton theorem, Euler's theorem and Chinese Remainder theorem. Have technical and practical skills required for solving algebraic equations, finding inverse and eigen values of matrices by using built in functions of MAXIMA software.</p>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-SEC-225</b>                                 | <b>Numerical Ability Enhancement Skills (SEC)</b> | <p><b>After completing this course, the learner will be able to:</b></p> <p>1. Understand real number system, fundamental arithmetical operations, use of BODMAS rule and solve typical expressions accurately and fast.</p> <p>2. Acquire skill to identify types of given sequences/series and apply suitable method to find a particular term, sum of specific number of terms and practice this learning in real life mathematical problems.</p> <p>3. To formulate equations for specific mathematical problem and making use of mathematical skills to solve that.</p> <p>4. Have a deeper and comprehensive understanding of the basic concepts of Percentage, Profit &amp; Loss, Alligation or mixture, Averages and acquire skill to use this knowledge in real life problems.</p> <p>5. Attain cognitive and analytical skills to identify, analyze and generate solutions to realistic problems by exploring procedural knowledge associated with the problems. Have analytical skills to compare and recognize various geometrical figures available in surroundings with mathematical figures and determine areas and volumes of the same.</p> |
| <b>B.Sc. Physical Science (SEMESTER III) (NEP)</b> |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>B23-MAT-</b>                                    | <b>Differential</b>                               | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| 301                | <b>Equations-1</b>                 | <p>1. Gain knowledge of the basic concepts of ordinary differential equations and learn various techniques of finding exact solutions of certain solvable first order differential equations.</p> <p>2. Have procedural knowledge and cognitive and technical skills of solving homogeneous and nonhomogeneous second order linear ordinary differential equations with constant coefficients and with variable coefficients.</p> <p>3. Gain knowledge of theory of total differential equations and basic concepts of partial differential equations. To learn methods and techniques for solving linear PDEs of first order and to acquire technical skills for accomplishing assigned tasks relating to formulation and solution of PDEs in broad multidisciplinary contexts.</p> <p>4. Have knowledge of concepts and theories of second order PDEs and to apply theory of PDEs to determine integral surfaces through a given curve and to find orthogonal surfaces. To understand compatible systems and to learn cognitive and technical skills required for selecting and using relevant Charpit method, Jacobi method methods to assess the appropriateness of approaches for solving PDEs.</p> <p>5. To attain cognitive and technical skills required for selecting and using relevant methods and techniques to assess the appropriateness of approaches to solving problems associated with the differential equations. To attain technical skill of solving differential equations by using built in functions of MAXIMA software.</p> |
| <b>B23-SEC-326</b> | <b>Quantitative Aptitude (SEC)</b> | <p><b>After completing this course, the learner will be able to:</b></p> <p>1. Comprehend the formulation of equations for specific mathematical problems and use mathematical skills to solve those.</p> <p>2. Acquire the procedural knowledge to analyze and solve problems related to work &amp; time, work and wages and apply those in real life situations.</p> <p>3. To get deeper knowledge and understanding of concepts of Simple interest, Compound Interest, Partnership, Work and time and use this procedural knowledge to perform assigned tasks of solving such problems.</p> <p>4. Familiarize and get acquainted with various</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                          |                                                  | <p>measures of central tendency and using cognitive skills to choose better of these for the available data and draw the inferences/results.</p> <p>5. Attain a range of cognitive and technical skills to analyze and comprehend various numerical concepts, e.g., Formulation of equations, S.I. &amp; C.I., Work &amp; time, Work &amp; Wages, Set theory etc. and apply these learned skills and techniques to solve daily life mathematical problems.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SEMESTER IV (NEP)</b> |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23-MAT-401</b>       | <b>Analytical Geometry &amp; Vector Calculus</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of the concept of different conic sections, their classification and properties. Understand various terms related to conic sections and gain skills to use them in problem solving.</li> <li>2. Have knowledge of general form of equation of a sphere and attain procedural knowledge required for solving problems related to intersection of spheres, tangent plane and line, orthogonality, length of tangent and co-axial system of spheres. Learn about equations of cones and apply knowledge for problem solving.</li> <li>3. Have deeper knowledge and understanding of cylinder, enveloping cylinder, concepts of conicoids, tangent plane, director sphere, normal, envelope and to make further use thereof.</li> <li>4. Understand and solve problems related to scalar and vector product of vectors, vector differentiation, directional derivatives, gradient, divergence and curl operators. Have deeper understanding of line, surface and volume integrals, their evaluation, proof of Gauss Divergence, Green's and Stoke's theorems and gain theoretical and technical knowledge in computing different surface flux integrals, volume integrals and line integrals used in other disciplines also.</li> <li>5. Attain cognitive and technical skills required for solving practical problems related to assessing nature of conicoid, their characteristics. Learn skills to formulate and solve real life practical problems on sphere, cone and cylinder; to generate solutions of</li> </ol> |

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|                          |                                   | practical problems involving complex line, surface and volume integral using Gauss Divergence theorem, Stoke's theorem, Green's theorem in a very easy manner.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>SEMESTER V (NEP)</b>  |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>B23-MAT-501</b>       | <b>Sequences and Series</b>       | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand basic concepts of real number system, set theory and preliminary results on neighbourhood of a point, interior and limit points, open sets, closed sets etc.</li> <li>2. Learn about denumerability of subsets of real numbers, sequences, their limits, boundedness and convergence. Determine the convergence and divergence of a sequence. Understand Cauchy sequence and Cauchy general principle of convergence of sequence.</li> <li>3. Attain skills to determine convergence of a series of real numbers by applying various tests.</li> <li>4. To know absolute and conditional convergence of alternating series and apply theory to check the convergence of arbitrary series.</li> <li>5*Attain cognitive and technical skill required to check the convergence of sequences and infinite series and verify the same by applying various available tests and tools.</li> </ol> |
| <b>SEMESTER VI (NEP)</b> |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>B23-MAT-601</b>       | <b>Numerical Analysis (Major)</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the different types of errors, learn techniques to obtain numerical solutions of algebraic and transcendental equations.</li> <li>2. Have the knowledge and attain numerical skills to find solutions of system of linear equations by different methods.</li> <li>3. Gain the knowledge to understand the concept of interpolation and extrapolation. Learn various numerical methods to find the value of function and their derivatives using interpolation concept.</li> <li>4. Have the procedural knowledge and acquire the skills to apply numerical methods for evaluating definite integrals. Learn single step</li> </ol>                                                                                                                                                                                                                                                        |

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|                    |                                 | <p>and multi-step methods to solve first order ordinary differential equations.</p> <p>5* Attain cognitive and technical skills required to solve scientific problems by applying numerical techniques. Learn to write and execute program of numerical methods based on C language.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>B25-MAT-607</b> | <b>Numerical Method (Minor)</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the different types of errors, learn techniques to obtain numerical solutions of algebraic and transcendental equations.</li> <li>2. Have the knowledge and attain numerical skills to find solutions of system of linear equations by different methods.</li> <li>3. Gain the knowledge to understand the concept of interpolation and extrapolation. Learn various numerical methods to find the value of function and their derivatives using interpolation concept.</li> <li>4. Have the procedural knowledge and acquire the skills to apply numerical methods for evaluating definite integrals. Learn single step and multi-step methods to solve first order ordinary differential equations.</li> </ol> <p>5* Attain cognitive and technical skills required to solve scientific problems by applying numerical techniques. Learn to write and execute program of numerical methods based on C language.</p> |

### Course Outcomes (COs) of Bachelor of Computer Applications

| SEMESTER I         |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B23-CAP-104</b> | <b>Mathematical Foundations for Computer Science-I</b> | <ol style="list-style-type: none"> <li>1. Gain the knowledge of set theory, types of sets and operations on sets. Understand various concepts of matrices and determinants, and acquire the cognitive skills to apply different operations on matrices and determinants.</li> <li>2. Have the knowledge of the basic concepts of complex numbers and acquire skills to solve linear quadratic equations.</li> <li>3. Gain the knowledge of the concepts of</li> </ol> |

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|                    |                                                        | <p>Arithmetic progression, Geometric progression and Harmonic progression, and find A.M., G.M. and H.M. of given numbers.</p> <p>4. Understand the concept of differentiation</p> <p>5. Attain the skills to make use of the learnt concepts of Introductory Mathematics in multidisciplinary learning contexts and to know their applications.</p>                                                                                                                                                                                                           |
| <b>SEMESTER II</b> |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>B23-CAP-204</b> | <b>Mathematical Foundation for Computer Science-II</b> | <ol style="list-style-type: none"> <li>1. Understand the concept of integration.</li> <li>2. Understand and perform Basic Statistics: Preparing Frequency Distribution Table and Cumulative frequency,</li> <li>3. Demonstrate Measure of Central Tendency, Types: Arithmetic mean, Geometric Mean, Harmonic Mean, Median, Mode.</li> <li>4. Demonstrate Measure of Dispersion: Range, Quartile Deviation, mean deviation, Coefficient of mean Deviation, Standard Deviation.</li> <li>5. To understand the concept of Correlation and Regression.</li> </ol> |

## Course Outcomes(CO's ) of Computer Science

| SEMESTER I          |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Course Code         | Course Name                       | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>B23-CSE-101</b>  | <b>Problem Solving Through C</b>  | <ol style="list-style-type: none"> <li>1. Understand the concept of input and output devices of computer</li> <li>2. Explain functional units and classify types of computers, how they process information.</li> <li>3. Understand an operating system and its working and solve common problems related to operating system</li> <li>4. Possess the knowledge of basic hardware peripherals.</li> <li>5. Develops basic understanding of computers, the concept of algorithm and algorithmic thinking</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>B23- CSE-103</b> | <b>Basics of Computer Science</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. <b>Understand the Fundamentals of Computers</b><br/>Students will be able to describe the basic structure, functions, and components of a computer system.</li> <li>2. <b>Explain the Concept of Hardware and Software</b><br/>Students will differentiate between hardware and software, and understand their roles in computing systems.</li> <li>3. <b>Understand Number Systems and Data Representation</b><br/>Students will be able to convert and perform operations on binary, decimal, octal, and hexadecimal number systems.</li> <li>4. <b>Familiarize with Operating Systems</b><br/>Students will understand the functions of operating systems and their types (e.g., Windows, Linux, macOS).</li> <li>5. <b>Work with Basic Computer Applications</b><br/>Students will demonstrate proficiency in using basic application software like MS Word, Excel, PowerPoint, and web browsers.</li> <li>6. <b>Understand the Basics of Programming and Algorithms</b><br/>Students will be introduced to basic</li> </ol> |

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|  |  | <p>programming concepts and the role of algorithms in problem-solving.</p> <p>7. <b>Learn About Computer Networks and the Internet</b><br/>Students will understand how computer networks function, including the basics of internet, web browsing, email, and cybersecurity awareness.</p> <p>8. <b>Recognize the Role of Databases</b><br/>Students will understand the purpose of databases and how data is organized, stored, and accessed.</p> <p>9. <b>Appreciate the Impact of Computers in Society</b><br/>Students will be able to discuss the ethical, social, and environmental implications of computer technology.</p> <p>10. <b>Develop Basic Problem-Solving and Logical Thinking Skills</b><br/>Students will use logical reasoning and basic computer skills to solve simple computational problems.</p> |
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## SEMESTER II

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| <b>B23-CSE-201</b> | <b>Web Technologies Fundamentals (Major)</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Learn the basics of web development.</li> <li>2. Understand different types of web pages and web sites.</li> <li>3. Implement HTML and CSS for web page designing.</li> <li>4. Understand the design of web crawlers and search engines.</li> <li>5. To implement the programs based on various concepts of web development.</li> </ol> |
| <b>B23-CSE-203</b> | <b>Programming Methodologies (Minor)</b>     | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Design a step-by-step solution to realistic problems</li> <li>2. Develop flow chart / algorithm for the solution</li> <li>3. Identify the common constructs shared by all programming languages</li> <li>4. Enable the student to write programs for</li> </ol>                                                                         |

|                            |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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|                            |                                          | an algorithm in his/her language of choice                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>B23-CSE-203</b>         | <b>Programming Methodologies (Minor)</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Design a step-by-step solution to realistic problems</li> <li>2. Develop flow chart / algorithm for the solution</li> <li>3. Identify the common constructs shared by all programming languages</li> <li>4. Enable the student to write programs for an algorithm in his/her language of choice</li> </ol>                                                               |
| <b>SEMESTER - III</b>      |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>B23-CSE-301 (Major)</b> | <b>Operating System</b>                  | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the role and purpose of operating systems.</li> <li>2. Analyze and explain process management concepts.</li> <li>3. Apply concurrency and synchronization mechanisms.</li> <li>4. Understand memory management techniques.</li> <li>5. Understand file systems and storage management.</li> <li>6. Understand input/output and device management..</li> </ol> |
| <b>B23-CSE-301 (Minor)</b> | <b>Operating System</b>                  | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the role and purpose of operating systems.</li> <li>2. Analyze and explain process management concepts.</li> <li>3. Apply concurrency and synchronization mechanisms.</li> <li>4. Understand memory management techniques.</li> <li>5. Understand file systems and storage management.</li> <li>6. Understand input/output and device management..</li> </ol> |
| <b>SEMESTER-IV</b>         |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>B23-CSE-401</b>         | <b>Data Management with DBMS</b>         | <b>Course Outcomes: After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand fundamental database</li> </ol>                                                                                                                                                                                                                                                                                                                                |

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|                     |                                  | <p>concepts and architecture.</p> <ol style="list-style-type: none"> <li>2. Design relational database schemas using ER models..</li> <li>3. Apply normalization techniques to ensure database integrity.</li> <li>4. Write and optimize SQL queries for data manipulation and retrieval.</li> <li>5. Implement constraints, joins, subqueries, and aggregate functions.</li> <li>6. Understand transaction management and concurrency control.</li> <li>7. Explore indexing and query optimization techniques.</li> </ol>                                                                                                                                                                                                                                                                                                                  |
| <b>B23-VOC-216</b>  | <b>Software Testing</b>          | <p><b>Course Outcomes:</b> After successfully completing this course, students will be able to</p> <ol style="list-style-type: none"> <li>1. Understand the principles and objectives of software testing.</li> <li>2. Identify and apply appropriate software testing techniques.</li> <li>3. Design and execute effective test cases.</li> <li>4. Analyze code to design white-box tests.</li> <li>5. Evaluate and manage testing activities across the software lifecycle.</li> <li>6. Understand levels and types of testing.</li> <li>7. Use testing tools to automate testing tasks.</li> <li>8. Understand debugging and defect management processes.</li> <li>9. Apply standards and best practices in software testing.</li> <li>10. Collaborate effectively in teams on testing projects and communicate test results.</li> </ol> |
| <b>SEMESTER - V</b> |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| B23-CSE-501         | Data Structures and Applications | <p><b>Course Outcomes :</b> After successfully completing this course, students will be able to</p> <ol style="list-style-type: none"> <li>1. Understand different methods of organizing large amount of data using data structure.</li> <li>2. Implement abstract data types using arrays and linked list.</li> <li>3. Apply the different linear data structures like stack and queue to various computing problems.</li> <li>4. Implement different types of trees and apply</li> </ol>                                                                                                                                                                                                                                                                                                                                                  |

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|             |                          | <p>them to problem solutions.</p> <ol style="list-style-type: none"> <li>Discuss graph structure and understand various operations on graphs and their applicability.</li> <li>Analyze the various sorting and searching algorithms.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| B23-VOC-132 | <b>Office Automation</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the concept of Office Automation, its benefits, tools, and modern office appliances.</li> <li>Identify and differentiate between various automation software used in offices.</li> <li>Demonstrate proficiency in MS-Word for document creation, formatting, tables, mail merge, headers/footers, and file operations.</li> <li>Apply editing and proofreading tools such as spell check, find &amp; replace, auto-correct, cut/copy/paste, and drag &amp; drop.</li> <li>Use MS-Excel worksheets effectively, including data types, formulas, functions, tables, charts, and formatting.</li> <li>Perform basic calculations and data analysis using Excel functions and macros</li> </ol> |

## SEMESTER VI

|             |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| B23-CSE-601 | <b>Computer network</b>    | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the fundamental concepts of computer networks.</li> <li>Learn about network protocols, architectures, and applications.</li> <li>Develop skills for designing and managing networks.</li> <li>Learn about network security and wireless networks.</li> <li>Understand the practical aspects of computer</li> </ol> |
| B23-VOC-330 | Internet and Web Designing | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the fundamental concepts of the Internet, computer networks, and Internet services</li> </ol>                                                                                                                                                                                                                      |

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|  |  | <p>including URL, ISP, VPN, intranet, and extranet.</p> <p><b>2:</b> Identify and use various Internet applications such as WWW, email, FTP, search engines, video conferencing, e-commerce, e-learning, e-governance, and e-banking.</p> <p><b>3:</b> Design and develop basic web pages using HTML, including text formatting, lists, images, and hyperlinks.</p> <p><b>4:</b> Create static web pages incorporating tables, forms, graphics, background colors, and multimedia elements.</p> <p><b>5:</b> Apply CSS to develop dynamic and visually appealing web pages using internal and external style sheets.</p> |
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## **DEPARTMENT OF COMMERCE**

### **Programme Name: Bachelor of Commerce**

#### **Program Outcomes (POs)**

| <b>POs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                            |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO 1       | Gain thorough knowledge of the fundamentals of commerce and, management, finance, economics, law and accounting.                                                                                            |
| PO 2       | Analyse relationship among commerce, trade, industry, services and management                                                                                                                               |
| PO 3       | Understand application of knowledge of concepts of advertising, finance, entrepreneurship in business.                                                                                                      |
| PO 4       | Think about commercial and professional way or point of view.                                                                                                                                               |
| PO 5       | Understanding legal issue/ law relating to banking and insurance sector.                                                                                                                                    |
| PO 6       | Applications of techniques for managing office work efficiently                                                                                                                                             |
| PO 7       | The course provides a platform for experimental learning and grooms students towards industry specific curriculum with focused approach on specific areas which are crucial in the management of companies. |
| PO 8       | The course provides exposure to students in the latest trends in relevant branches of knowledge giving them the needed competence and creativity to face global challenges.                                 |

#### **Program Specific Outcomes (POs)**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                                            |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1       | The course provides exposure to students in the latest trends in relevant branches of knowledge giving them the needed competence and creativity to face global challenges. |
| PSO 2       | Develop communication skills and computer awareness and rules of income tax Act.                                                                                            |
| PSO 3       | Perform all accounting activities and handling business well.                                                                                                               |
| PSO 4       | Students will be familiarized with the provisions of Company Law and Business                                                                                               |

|       |                                                                            |
|-------|----------------------------------------------------------------------------|
|       | Law.                                                                       |
| PSO 5 | Application of mathematical and statistical tools in commerce and industry |
| PSO 6 | To apply the computer skills in managing accounts of a business            |

### Course Outcomes (COs) of Bachelor of Commerce

| SEMESTER I                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Course Code                        | Course Name                    | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>CC-1</b><br><b>B23-COM-101</b>  | <b>Financial Accounting</b>    | <ol style="list-style-type: none"> <li>1. Recognize the basic accounting concept and conventions</li> <li>2. Cultivate accounting skills to manage the profits and losses of any trading organization</li> <li>3. Apply the rules of double entry book keeping for the preparation of final accounts</li> <li>4. To understand the concepts of branch &amp; consignment accounts</li> </ol>                                                                                                                                                                                                                                                                                                    |
| <b>CC-2</b><br><b>B23-SEC-102</b>  | <b>Business Laws</b>           | <ol style="list-style-type: none"> <li>1. To understand the basic concepts of Law.</li> <li>2. To understand meaning of Agreement and Contract and their difference and essential elements of the contract to make contract legally enforceable by law.</li> <li>3. To know sale of Goods Act gives the knowledge about the contract of sale and its essential elements, conditions and warranties under a contract of sale, transfer of ownership at the time of sale of goods. This act is very useful to students as a buyer of goods.</li> <li>4. To Know the information Technology Act.</li> <li>5. Apply skills to initiate entrepreneurial ventures as partnership and LLP.</li> </ol> |
| <b>CC-3</b><br><b>B23-COM-103</b>  | <b>Business Management</b>     | <ol style="list-style-type: none"> <li>1. Apply managerial roles and managerial skills</li> <li>2. Evaluate different approaches for organizational control</li> <li>3. Recognize the theory of management and manager's role in organization</li> <li>4. To understand the evolution and importance of globalization in today's business world.</li> </ol>                                                                                                                                                                                                                                                                                                                                    |
| <b>CC-M1</b><br><b>B23-COM-104</b> | <b>Business Mathematics-I</b>  | <ol style="list-style-type: none"> <li>1. To equip students with concepts of differentiation and integration</li> <li>2. To understand about solution of a system of linear equations</li> <li>3. Students will be able to understand about different types of matrices and determinants</li> <li>4. To familiarize with calculus</li> </ol>                                                                                                                                                                                                                                                                                                                                                   |
| SEMESTER II                        |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>CC-4</b><br><b>B23-</b>         | <b>Computerized Accounting</b> | <ol style="list-style-type: none"> <li>1. Apply fundamental accounting concept to real -world scenarios through computerized systems.</li> <li>2. Gain proficiency in accounting software and its applicatioun</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <b>COM<br/>- 201</b>                         | <b>System</b>                           | <p>in business operations.</p> <ol style="list-style-type: none"> <li>Learn to create and manage companies, ledgers and vouchers in the accounting system.</li> <li>Generate key financial reports such as profit &amp; loss statement, balance sheet and cash flow statement using computerized accounting software.</li> </ol>                                                                                                                                                                                          |
| <b>CC-5<br/>B23-<br/>COM<br/>- 202</b>       | <b>Company<br/>Law</b>                  | <ol style="list-style-type: none"> <li>Understand the concept of company as form of business organization, regulatory framework and the process of incorporation.</li> <li>Elaborate on important documents of the company and their operational usefulness.</li> <li>Understand the procedure of raising capital, knowing rights &amp; duties of Directors and Company Secretary.</li> <li>Apply the understanding of the regulatory provisions relating to dividend decisions and winding up of the company.</li> </ol> |
| <b>CC-6<br/>B23-<br/>COM<br/>- 203</b>       | <b>Principles of<br/>Marketing</b>      | <ol style="list-style-type: none"> <li>Understand the concept of company as form of business organization, regulatory framework and the process of incorporation.</li> <li>Elaborate on important documents of the company and their operational usefulness.</li> <li>Understand the procedure of raising capital, knowing rights &amp; duties of Directors and Company Secretary.</li> <li>Apply the understanding of the regulatory provisions relating to dividend decisions and winding up of the company.</li> </ol> |
| <b>CC-<br/>M2<br/>B23-<br/>COM<br/>- 204</b> | <b>Business<br/>Mathematics<br/>-II</b> | <ol style="list-style-type: none"> <li>Identify the limit of function</li> <li>Apply the differentiation rules to determine a derivative</li> <li>Identify extreme and critical point of function</li> <li>Interpret the definite integrals</li> <li>To understand the algebraic situation algebraically and graphically</li> </ol>                                                                                                                                                                                       |
| <b>SEMESTER III</b>                          |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>CC-7<br/>B23-<br/>COM<br/>-301</b>        | <b>Corporate<br/>Accounting-I</b>       | <ol style="list-style-type: none"> <li>Understand the principles and practices of corporate accounting</li> <li>Prepare and analyze financial statements of companies</li> <li>Apply accounting standards and regulatory requirements to corporate accounting</li> <li>Evaluate the financial performance and position of companies</li> </ol>                                                                                                                                                                            |
| <b>CC-8<br/>B23-<br/>COM<br/>-302</b>        | <b>Income Tax<br/>Law-I</b>             | <ol style="list-style-type: none"> <li>Understand the basics of income tax law and its application</li> <li>Explain the concepts of income, deductions, and exemptions</li> <li>Analyze the tax implications of different types of income and investments</li> <li>Apply income tax laws and regulations to individual and business taxation</li> </ol>                                                                                                                                                                   |

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| <b>CC-9<br/>B23-<br/>COM<br/>-303</b>       | <b>Banking and<br/>Insurance</b>             | <ol style="list-style-type: none"> <li>1. Understand the structure and functioning of Indian capital markets</li> <li>2. Explain the different types of securities and investment products</li> <li>3. Analyze the role of capital markets in mobilizing savings and allocating resources</li> <li>4. - Evaluate the regulatory framework and market mechanisms in Indian capital markets</li> </ol>                                                                                                                                  |
| <b>CC-<br/>M3<br/>B23-<br/>COM<br/>-304</b> | <b>Business<br/>Economics</b>                | <ol style="list-style-type: none"> <li>1. Understand the principles of microeconomics and macroeconomics</li> <li>2. Analyze the behaviour of consumers, firms, and markets</li> <li>3. Evaluate the impact of economic policies and external factors on business decisions</li> <li>4. - Apply economic concepts and theories to business problems and decisions Understand the principles of microeconomics and macroeconomics</li> </ol>                                                                                           |
| <b>SEMESTER IV</b>                          |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>CC-<br/>10<br/>B23-<br/>COM<br/>-401</b> | <b>Corporate<br/>Accounting-II</b>           | <ol style="list-style-type: none"> <li>1. To understand the methods of shares and goodwill.</li> <li>2. To understand the basics of debentures and valuation of debentures.</li> <li>3. To understand and prepare the accounts of banking and insurance companies</li> <li>4. To understand and prepare the accounts of holding companies and accounting treatment liquidation of companies.</li> </ol>                                                                                                                               |
| <b>CC-<br/>11<br/>B23-<br/>COM<br/>-402</b> | <b>Income Tax<br/>Law-II</b>                 | <ol style="list-style-type: none"> <li>1. Understand the deductions from gross total income of individuals, HUFs and firms.</li> <li>2. Compute the total income and tax liability of individuals, HUFs and Firms.</li> <li>3. Understand the filing of returns and working of Income Tax department.</li> <li>4. Understand the assessments, defaults and consequences.</li> </ol>                                                                                                                                                   |
| <b>CC-<br/>12<br/>B23-<br/>COM<br/>-403</b> | <b>Entrepreneurs<br/>hip<br/>Development</b> | <ol style="list-style-type: none"> <li>1. Understand the concept of company as form of business organization, regulatory framework and the process of incorporation.</li> <li>2. Elaborate on important documents of the company and their operational usefulness.</li> <li>3. Understand the procedure of raising capital, knowing rights &amp; duties of Directors and Company Secretary.</li> <li>4. Apply the understanding of the regulatory provisions relating to dividend decisions and winding up of the company.</li> </ol> |
| <b>VAC-<br/>4<br/>B23-<br/>VAC-<br/>414</b> | <b>Logistic<br/>Management</b>               | <ol style="list-style-type: none"> <li>1. To give insight about logistic management.</li> <li>2. To outline key logistic management concepts and its application to market</li> <li>3. To analyse and examine the implementation of logistic management concept and strategy to firms.</li> <li>4. To attain organizational goals using logistic management techniques in proper way.</li> </ol>                                                                                                                                      |

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| <b>VOC-4<br/>B23-VOC-227</b> | <b>Marketing Communication</b> | <ol style="list-style-type: none"> <li>1. Understand the conceptual framework of marketing communication</li> <li>2. Comprehend the objectives, needs, and budgeting for marketing communication.</li> <li>3. Know the tools used for marketing communication.</li> <li>4. Learn about contemporary digital technologies of marketing communication.</li> <li>5. Students will be able to handle marketing communication decision-making through solving case studies and project reports.</li> </ol>                                     |
| <b>SEMESTER V</b>            |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>B23-COM-501</b>           | <b>Cost Accounting</b>         | <ol style="list-style-type: none"> <li>1. Illustrate the understanding of theoretical framework of basics of cost accounting and be able to classify the manufacturing cost of products.</li> <li>2. Apply the knowledge and skills to control material and labor costs.</li> <li>3. Understand the procedure of allocation, apportionment and absorption of overheads.</li> <li>4. Integrate the Cost Accounting Techniques in various Industries.</li> </ol>                                                                            |
| <b>B23-COM-502</b>           | <b>Goods and service tax</b>   | <ol style="list-style-type: none"> <li>1. Recognize the basic accounting concept and conventions.</li> <li>2. Cultivate accounting skills to manage the profits and losses of any trading organization.</li> <li>3. Apply the rules of double entry book keeping for the preparation of final accounts.</li> <li>4. To understand the concepts of branch &amp; consignment accounts.</li> </ol>                                                                                                                                           |
| <b>M24-COM-303</b>           | <b>Investment Management</b>   | <ol style="list-style-type: none"> <li>1. To Help students to familiar with investment environment</li> <li>2. To develop an understanding of fundamental &amp; technical analysis and investment strategies</li> <li>3. Enable to evaluate portfolios along with deep understanding of capital market</li> <li>4. Familiarize with financial derivatives and option pricing model.</li> </ol>                                                                                                                                            |
| <b>M24-COM-305</b>           | <b>Service Marketing</b>       | <ol style="list-style-type: none"> <li>1. Understand the conceptual framework buyer behavior and marketing mix of services.</li> <li>2. Apply the knowledge of service relationship marketing and service development delivery.</li> <li>3. Describe and demonstrate the understanding of service recovery, physical environment of services,</li> <li>4. Communication and pricing of services. Describe and demonstrate the understanding of distribution of services, management of service employees as well as customers.</li> </ol> |

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| <b>M24-COM-308</b> | <b>Management of Industrial Relations</b>    | <ol style="list-style-type: none"> <li>1. Acquire theoretical and practical perspective on many aspects of industrial relations.</li> <li>2. Understand the key participants, institutions, relationships and processes in employment relations.</li> <li>3. Understand Trade union act in Indian context.</li> </ol>                                                                                                                                                                                            |
| <b>M24-COM-309</b> | <b>Consumer Behaviour</b>                    | <ol style="list-style-type: none"> <li>1. Understand the nature of consumer behavior and process of consumer buying.</li> <li>2. Explore the underlying variables resulting into differences in consumer decision making.</li> <li>3. Comprehend the influence of external factor on consumer behavior</li> <li>4. Gain insight into models of buyer behaviour</li> </ol>                                                                                                                                        |
| <b>SEMESTER VI</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>M24-COM-401</b> | <b>IT Applications in Business</b>           | <ol style="list-style-type: none"> <li>1. Use online tools to improve productivity</li> <li>2. Communicate and collaborate using the online and cloud-based tools.</li> <li>3. Manage online resources for marketing communication.</li> <li>4. Comprehend AI tools for students.</li> <li>5. Will be able to apply various IT tools in real life situation.</li> </ol>                                                                                                                                          |
| <b>M24-COM-402</b> | <b>Multinational Financial Management</b>    | <ol style="list-style-type: none"> <li>1. Analyze the impact of GAAP application for reporting and compliance.</li> <li>2. Study accounting methods for business combinations and corporate restructuring.</li> <li>3. Understand accounting statements for business groups and joint ventures.</li> <li>4. Know about the recent developments for corporate reports</li> </ol>                                                                                                                                  |
| <b>M24-COM-403</b> | <b>Corporate Reporting Practices</b>         | <ol style="list-style-type: none"> <li>1. Analyze the impact of GAAP application for reporting and compliance.</li> <li>2. Study accounting methods for business combinations and corporate restructuring.</li> <li>3. Understand accounting statements for business groups and joint ventures.</li> <li>4. Know about the recent developments for corporate reports</li> </ol>                                                                                                                                  |
| <b>M24-COM-405</b> | <b>Sales Management</b>                      | <ol style="list-style-type: none"> <li>1. Acquaint with sales planning, sales quotas, sales territories and sales budgets.</li> <li>2. Know about the recruitment, selection, placement, induction, training and development of the sales force.</li> <li>3. Comprehend the concepts of training, motivation, evaluation and control of sales force</li> </ol>                                                                                                                                                   |
| <b>M24-COM-407</b> | <b>Organizational Change and Development</b> | <ol style="list-style-type: none"> <li>1. Understand the concept, nature, and importance of organizational change and development in modern organizations.</li> <li>2. Explain various models of change management such as Lewin's Change Model and Kotter's 8-Step Model.</li> <li>3. Evaluate the role of leadership, communication, and organizational culture in successful change implementation.</li> <li>4. Develop skills to plan, implement, and manage change effectively in organizations.</li> </ol> |
| <b>M24-</b>        | <b>Event</b>                                 | <ol style="list-style-type: none"> <li>1. Understand the concept, nature, and importance of</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <b>COM-409</b>     | <b>Management</b>                                | <p>organizational change and development in modern organizations.</p> <ol style="list-style-type: none"> <li>2. Explain various models of change management such as Lewin's Change Model and Kotter's 8-Step Model.</li> <li>3. Evaluate the role of leadership, communication, and organizational culture in successful change implementation.</li> <li>4. Develop skills to plan, implement, and manage change effectively in organizations.</li> </ol> |
| <b>M24-COM-411</b> | <b>Employability and Entrepreneurship skills</b> | <ol style="list-style-type: none"> <li>1. Do career planning and improve self Esteem.</li> <li>2. Do time management and improve leadership skills.</li> <li>3. Inculcate listening, speaking and test taking skills.</li> <li>4. Creative thinking &amp; writing skills and by understanding cultural diversity and relevance of managing relationships</li> </ol>                                                                                       |

### Course Outcomes (COs) of MDC(Commerce)

| <b>SEMESTER I</b>             |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Code</b>            | <b>Course Name</b>                           | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                           |
| <b>MDC-1<br/>B23-COM-105</b>  | <b>Personal Finance</b>                      | <ol style="list-style-type: none"> <li>1. Understand the basic knowledge of personal finance and financial planning.</li> <li>2. To know about the different investment avenues and knowledge about investment and managing finance.</li> <li>3. To know about risk and return aspects of investment.</li> </ol>                                                                                                                      |
| <b>SEMESTER II</b>            |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MDC-2<br/>B23-COM- 205</b> | <b>Fundamentals of Banking and Insurance</b> | <ol style="list-style-type: none"> <li>1. The learner will become literate about the banking terminology</li> <li>2. The learner will become literate about the importance of insurance in their life</li> <li>3. The learner will be able to understand various policies offered, risk faced by insurance companies.</li> <li>4. They will also understand various principles, provisions that govern insurance companies</li> </ol> |
| <b>SEMESTER III</b>           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MDC-3<br/>B23-COM-305</b>  | <b>Fundamentals of Indian Capital Market</b> | <ol style="list-style-type: none"> <li>1. Understand the structure and functioning of Indian capital markets</li> <li>2. Explain the different types of securities and investment products</li> <li>3. Analyze the role of capital markets in mobilizing savings and allocating resources</li> <li>4. - Evaluate the regulatory framework and market mechanisms in Indian</li> </ol>                                                  |

|  |  |                 |
|--|--|-----------------|
|  |  | capital markets |
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### Course Outcomes (COs) of Skill Enhancement Course

| SEMESTER I                     |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code                    | Course Name                                  | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Paper-V<br/>B23-SEC-101</b> | <b>Office and spreadsheet Tools Learning</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the working of input/output devices commonly used in a computer system.</li> <li>2. Understand the concept of operating system and use Windows OS.</li> <li>3. To learn &amp; understand the basics of computer i.e., word pad, paint, calculator etc.</li> <li>4. To understand the concept of MS office.</li> </ol> |
| SEMESTER II                    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SEC-2</b>                   | <b>Business Communication</b>                | <ol style="list-style-type: none"> <li>1. To develop communication skills of students</li> <li>2. To equip students with formal communication techniques for use in corporate world.</li> <li>3. Skills of writing business letters, e-mails, notices, circulars, memos and reports</li> </ol>                                                                                                                                                                          |

## DEPARTMENT OF COMPUTER APPLICATIONS

### Programme Name: Bachelor of Computer Applications

#### Program Outcomes (POs)

| Pos  | After completing this programme students will be able to:                         |
|------|-----------------------------------------------------------------------------------|
| PO 1 | Attain employability skills to serve Software, IT industry and government sector. |

|      |                                                                                                                                      |
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| PO 2 | <b>PO2 Attain entrepreneurship skills to open their own venture in the area of hardware, software and networking.</b>                |
| PO 3 | Obtain analytical and problem-solving skills to understand, analyze and develop real life applications for the benefit of society    |
| PO 4 | Attain ability to apply knowledge of computer science, applications and mathematics in practice.                                     |
| PO 5 | Attain strong base to pursue higher education in the field of Computer Applications, Computer Science, IT and Management.            |
| PO 6 | Attain skill to use modern computing tools and techniques for learning and developing software solutions.                            |
| PO 7 | Become civilized citizen bundled with human values, professional ethics, environment consciousness and sensitive to societal issues. |
| PO 8 | Develop effective communication skills                                                                                               |

### Program Specific Outcomes (POs)

|             |                                                                                                                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                                      |
| PSO 1       | Attain skills to work in latest technologies and programming languages.                                                                                                                                               |
| PSO 2       | Attain technical skills for software development, testing, problem analysis, hardware troubleshooting, web designing, web development project management, database management, network management and office support. |
| PSO 3       | Attain communication and personality development skills                                                                                                                                                               |
| PSO 4       | Attain knowledge of open-source technology.                                                                                                                                                                           |

### Course Outcomes (COs) of Bachelor of Computer Applications

| SEMESTER I         |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code        | Course Name                           | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>B23-CAP-101</b> | <b>Problem Solving Through C</b>      | <ol style="list-style-type: none"> <li>1. Explain about the basic concepts of program development statements and its syntax.</li> <li>2. Understand algorithms and flowchart for solving problems using computers.</li> <li>3. Understand and can choose the loops and decision-making statements to solve the problem.</li> <li>4. Explain the various types of arrays and its structure. Discuss about the various types of Functions and String handling mechanisms.</li> <li>5. Explain the Concepts of structures and Unions. Illustrates the various operations performed on different types of files.</li> </ol> |
| <b>B23-CAP-102</b> | <b>Foundation of Computer Science</b> | <b>Course Outcomes: After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the basics of computer</li> <li>2. Learn about I/O devices and operating systems</li> <li>3. Understand internet and its services</li> </ol>                                                                                                                                                                                                                                                                                                                           |

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|                    |                                                        | <p>4. Learn about the threats and security concepts on computers.</p> <p>5. To understand the working of operating system, internet and security related concepts.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>B23-CAP-103</b> | <b>Logical Organization of Computers</b>               | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the working of different Sequential logic circuits.</li> <li>2. Understand working operations of different types of Flip flops as a basic building block.</li> <li>3. Know the operations of shift registers and Binary Counters.</li> <li>4. Understand the basic Computer System and general organization of different blocks.</li> </ol> <p>Understand the organization of memory in the Computer system and know different types of Memories.</p>                                                                                                                                                                                                                                                                                                             |
| <b>B23-CAP-104</b> | <b>Mathematical Foundations for Computer Science-I</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain the knowledge of set theory, types of sets and operations on sets. Understand various concepts of matrices and determinants, and acquire the cognitive skills to apply different operations on matrices and determinants.</li> <li>2. Have the knowledge of the basic concepts of complex numbers and acquire skills to solve linear quadratic equations.</li> <li>3. Gain the knowledge of the concepts of Arithmetic progression, Geometric progression and Harmonic progression, and find A.M., G.M. and H.M. of given numbers.</li> <li>4. Understand the concept of differentiation</li> <li>5. Attain the skills to make use of the learnt concepts of Introductory Mathematics in multidisciplinary learning contexts and to know their applications.</li> </ol> |
| <b>B23-CSE-104</b> | <b>Fundamentals of Computer Science</b>                | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand the basics of computer and working of Operating System.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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| (MDC)              |                                              | 2. To acquire basic Programming skills.<br>3. To apply computing in problem solving.<br>4. Possess the knowledge of basic hardware peripherals.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>SEMESTER II</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>B23-CAP-201</b> | <b>Object Oriented Programming Using C++</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand OOPs Concept, C++ language features. Able to Understanding and Applying various Datatypes, Operators, Conversions in program design.</li> <li>2. Understand and apply the concepts of Classes &amp; Objects, friend function, constructors &amp; destructors in program design.</li> <li>3. Design &amp; implement various forms of inheritance, String class, calling base class constructors.</li> <li>4. Apply &amp; Analyze operator overloading, runtime polymorphism, Generic Programming.</li> <li>5. Analyze and explore various Stream classes, I/O operations and exception handling.</li> </ol> |
| <b>B23-CAP-202</b> | <b>Introduction to Web Technologies</b>      | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Learn the basics of web development.</li> <li>2. Understand different types of web pages and web sites.</li> <li>3. Implement HTML and CSS for web page designing.</li> <li>4. Understand the design of web crawlers and search engines.</li> <li>5. To implement the programs based on various concepts of web development.</li> </ol>                                                                                                                                                                                                                                                                               |
| <b>B23-CAP-203</b> | <b>Concepts of Operating System</b>          | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the basic concepts of operating systems and its services along with process management..</li> <li>2. Understand concept of process scheduling and acquire knowledge of process synchronization</li> <li>3. Learn about memory management and virtual memory concepts.</li> <li>4. Learn to work with directory structure and security aspects.</li> <li>5. to implement the programs based on operating systems..</li> </ol>                                                                                                                                                                               |
| <b>B23-CAP-</b>    | <b>Mathematical</b>                          | <b>Course Outcomes : After successfully completing this</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>204</b>               | <b>Foundation for Computer Science-II</b> | <p><b>course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the concept of integration.</li> <li>2. Understand and perform Basic Statistics: Preparing Frequency Distribution Table and Cumulative frequency,</li> <li>3. Demonstrate Measure of Central Tendency, Types: Arithmetic mean, Geometric Mean, Harmonic Mean, Median, Mode.</li> <li>4. Demonstrate Measure of Dispersion: Range, Quartile Deviation, mean deviation, Coefficient of mean Deviation, Standard Deviation.</li> <li>5. To understand the concept of Correlation and Regression.</li> </ol>                                                                                                                                                                                                                                                                                                 |
| <b>B23-CSE-204 (MDC)</b> | <b>Web Technologies Fundamentals</b>      | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Learn the basics of web development.</li> <li>2. Understand different types of web pages and web sites.</li> <li>3. Implement HTML and CSS for web page designing.</li> <li>4. Understand the design of web crawlers and search engines.</li> <li>5. To implement the programs based on various concepts of web development.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SEMESTER III</b>      |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>B23-CAP-301</b>       | <b>Java OOP Foundations</b>               | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand key Object-Oriented Programming (OOP) concepts – classes, objects, inheritance, polymorphism, abstraction, and encapsulation in Java.</li> <li>2. Apply OOP principles to design and develop structured Java programs using classes, interfaces, and packages.</li> <li>3. Develop Java applications with exception handling, file input/output, and basic Graphical User Interface (GUI) elements.</li> <li>4. Utilize Java Collections Framework and generics for efficient data management in programs.</li> <li>5. Analyze, test, and debug Java programs for correctness, performance, and reusability using development tools.</li> <li>6. Collaborate effectively in teams or work independently to build and document Java-based</li> </ol> |

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|                    |                                           | applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>B23-CAP-302</b> | <b>Linux and Shell programming</b>        | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the structure, features, and functionalities of the Linux operating system.</li> <li>2. Execute basic and advanced Linux commands to perform system operations and manage files and processes.</li> <li>3. Write shell scripts using different shells (like bash) to automate tasks and manage system operations.</li> <li>4. Develop shell programs using decision-making, loops, and functions to solve real-world problems.</li> <li>5. Demonstrate the ability to manage users, file permissions, and system resources through shell commands and scripts.</li> <li>6. Apply Linux and shell scripting concepts to troubleshoot and optimize system performance in a multi-user environment.</li> </ol>     |
| <b>B23-CAP-303</b> | <b>Data Base Technologies</b>             | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand fundamental concepts of database systems, data models, schemas, and architectures.</li> <li>2. Design and create relational database schemas using Entity-Relationship (ER) modeling and normalization techniques.</li> <li>3. Develop and execute queries using Structured Query Language (SQL) for data manipulation and retrieval.</li> <li>4. Implement database programming techniques using procedures, functions, triggers, and cursors.</li> <li>5. Demonstrate knowledge of transaction management, concurrency control, and database recovery techniques.</li> <li>6. Explore emerging database technologies such as NoSQL, distributed databases, and cloud-based data storage solutions.</li> </ol> |
| <b>B23-CAP-304</b> | <b>Basics of Data Science Using Excel</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. <b>CO1:</b> Understand the fundamentals of data science and the role of Excel in data analysis.</li> <li>2. <b>CO2:</b> Perform data cleaning, transformation, and organization using Excel tools and functions.</li> <li>3. <b>CO3:</b> Apply statistical functions and descriptive analytics to interpret data effectively.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                   |

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|                    |                                  | <ol style="list-style-type: none"> <li><b>CO4:</b> Use Excel features such as pivot tables, charts, and conditional formatting for data visualization.</li> <li><b>CO5:</b> Develop basic predictive models using Excel tools like trendlines, regression analysis, and forecasting functions.</li> <li><b>CO6:</b> Analyze real-world datasets and generate actionable insights through Excel-based reports and dashboards.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                             |
| B23-CSE-303        | Programming with C               | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the concept of input and output devices of computer</li> <li>Explain functional units and classify types of computers, how they process information.</li> <li>Understand an operating system and its working and solve common problems related to operating system</li> <li>Possess the knowledge of basic hardware peripherals.</li> </ol> <p>Develops basic understanding of computers, the concept of algorithm and algorithmic thinking</p>                                                                                                                                                                                                                               |
| <b>SEMESTER IV</b> |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| B23 -CAP - 401     | Data Structures and Applications | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li><b>CO1:</b> Understand the basic concepts of data structures, their classification, and applications.</li> <li><b>CO2:</b> Implement linear data structures such as arrays, linked lists, stacks, and queues.</li> <li><b>CO3:</b> Apply non-linear data structures like trees and graphs to solve real-world problems.</li> <li><b>CO4:</b> Develop algorithms for searching, sorting, and traversing using appropriate data structures.</li> <li><b>CO5:</b> Analyze time and space complexity to evaluate the performance of data structure operations.</li> <li><b>CO6:</b> Select and apply suitable data structures for problem-solving in various application domains.</li> </ol> |
| B23 -CAP - 402     | Front -end Development           | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li><b>CO1:</b> Understand the fundamentals of web development, including HTML, CSS, and JavaScript.</li> <li><b>CO2:</b> Design and develop responsive web pages using HTML5 and CSS3.</li> <li><b>CO3:</b> Apply JavaScript to add interactivity and</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|                          |                              | <p>dynamic behavior to web pages.</p> <ol style="list-style-type: none"> <li><b>CO4:</b> Use front-end frameworks/libraries (such as Bootstrap or React) to build modern and responsive UIs.</li> <li><b>CO5:</b> Implement form validation, event handling, and DOM manipulation for enhanced user experiences.</li> <li><b>CO6:</b> Develop, test, and deploy user-friendly front-end web applications following industry best practices.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>B23 -CAP<br/>-403</b> | <b>Computer<br/>Graphics</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li><b>CO1:</b> Understand the basic principles and components of computer graphics systems.</li> <li><b>CO2:</b> Apply mathematical concepts such as geometry and linear algebra for graphical transformations.</li> <li><b>CO3:</b> Implement 2D and 3D transformations, viewing, and projection techniques.</li> <li><b>CO4:</b> Develop algorithms for drawing basic shapes, clipping, filling, and curve generation.</li> <li><b>CO5:</b> Explore 3D object modeling, rendering, and lighting techniques.</li> <li><b>CO6:</b> Design and develop simple graphics applications using graphics programming libraries (e.g., OpenGL or similar).</li> </ol>                                                                                                                                                     |
| <b>B23-VOC-<br/>216</b>  | <b>Software Testing</b>      | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li><b>Understand Software Testing Fundamentals</b><br/>Students will be able to explain the basic concepts, principles, and importance of software testing in the software development lifecycle.</li> <li><b>Differentiate Types of Testing</b><br/>Students will distinguish between various types of testing such as manual, automated, functional, non-functional, black-box, and white-box testing.</li> <li><b>Develop Test Cases and Test Plans</b><br/>Students will learn how to design effective test cases and test plans to ensure comprehensive coverage of software requirements.</li> <li><b>Apply Testing Techniques and Strategies</b><br/>Students will apply different testing techniques like boundary value analysis, equivalence partitioning, decision table testing, and state</li> </ol> |

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|                   |                         | <p>transition testing.</p> <p>5. <b>Use Testing Tools</b><br/>Students will gain hands-on experience with popular software testing tools (e.g., Selenium, JUnit, QTP, LoadRunner) to automate testing processes.</p> <p>6. <b>Perform Bug Tracking and Reporting</b><br/>Students will learn how to identify, document, and track defects using bug tracking tools and communicate findings effectively.</p> <p>7. <b>Understand Test Automation Frameworks</b><br/>Students will understand the basics of test automation frameworks and their role in improving software quality and testing efficiency.</p> <p>8. <b>Evaluate Software Quality</b><br/>Students will evaluate the quality of software products based on test results and quality metrics.</p> <p>9. <b>Work in Testing Teams</b><br/>Students will develop skills to collaborate effectively in software testing teams and contribute to quality assurance processes.</p> |
| <b>SEMESTER V</b> |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| B23-CAP-501       | Software Engineering    | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Learn the various models used for software development.</li> <li>2. Understand how to analyze software requirements.</li> <li>3. Plan and design software while managing associated risks.</li> <li>4. Test and validate software systems.</li> <li>5. Implement various tools and techniques used in software engineering.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| B23-CAP-502       | Backend Web Development | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To learn different types of operating systems along Understand the principles of back-end development.</li> <li>2. Use back-end programming languages and frameworks effectively.</li> <li>3. Design and manage databases.</li> <li>4. Develop and use back-end applications.</li> <li>5. Gain practical knowledge of back-end programming.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| B23-CAP-          | Network                 | <b>Course Outcomes : After successfully completing this</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| 503                | Infrastructure &<br>Data<br>Communication<br>Technologies | <p><b>course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the basic concepts and principles of computer networks.</li> <li>2. Describe analog and digital communication concepts.</li> <li>3. Evaluate data link layer designs and LAN technologies.</li> <li>4. Analyze routing algorithms and understand application layer concepts.</li> <li>5. Use networking infrastructure and its applications effectively.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| B23-VOC-132        | Office Automation                                         | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the <b>concept of Office Automation</b>, its benefits, tools, and modern office appliances.</li> <li>2. Identify and differentiate between <b>various automation software</b> used in offices.</li> <li>3. Demonstrate proficiency in <b>MS-Word</b> for document creation, formatting, tables, mail merge, headers/footers, and file operations.</li> <li>4. Apply <b>editing and proofreading tools</b> such as spell check, find &amp; replace, auto-correct, cut/copy/paste, and drag &amp; drop.</li> <li>5. Use <b>MS-Excel</b> worksheets effectively, including data types, formulas, functions, tables, charts, and formatting.</li> <li>6. Perform basic <b>calculations and data analysis</b> using Excel functions and macros.</li> <li>7. Create professional <b>PowerPoint presentations</b> with appropriate formatting, layouts, and slide designs.</li> <li>8. Apply <b>animations, transitions, multimedia elements</b> (graphics, audio, video) and slide show timings in PPT.</li> <li>9. Use different <b>PowerPoint views</b> and manage presentations on <b>desktops and mobile devices</b>, including mobile apps.</li> <li>10. Understand <b>file management</b> concepts related to office documents and presentation</li> </ol> |
| <b>SEMESTER VI</b> |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| B23-CAP-601        | Programming using Python                                  | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. understand the basic concepts of Python programming</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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|             |                           | <ol style="list-style-type: none"> <li>2. learn various data structures used in Python programming.</li> <li>3. develop the simple programs of Python using arrays and functions.</li> <li>4. illustrate the process of data file manipulations using python</li> <li>5. develop the programs using Python.</li> </ol>                                                                                                                                                                                                                        |
| B23-CAP-602 | Advanced Web Development  | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. gain proficiency in advanced web development frameworks and tools.</li> <li>2. understand the principles of responsive design and progressive web apps.</li> <li>3. learn best practices for database management and full-stack development.</li> <li>4. know about optimization and devops.</li> <li>5. To work on real-world projects and develop a comprehensive web application.</li> </ol> |
| B23-CAP-603 | Artificial Intelligence   | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. learn the basic Artificial Intelligence (AI) concept and its application areas.</li> <li>2. acquire the knowledge of heuristic search and approaches for knowledge representations.</li> <li>3. understand the idea of natural language processing and predicate logic</li> <li>4. gain the knowledge of learning technologies &amp; build expert systems.</li> </ol>                           |
| B23-CAP-604 | Data Science using Python | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the fundamental concepts of data science and the role of Python in data analysis.</li> <li>2. To learn data cleaning, preparation, and visualization techniques using Python.</li> <li>3. To apply statistical analysis and predictive modeling using Python</li> </ol>                                                                                                              |
| B23-VOC-308 | Digital Marketing         | <ol style="list-style-type: none"> <li>1. Understand the basic concept of digital marketing and</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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|  |  | <p>the road map for successful digital marketing strategies.</p> <ol style="list-style-type: none"> <li>2. Know the concept and usage of search engine optimization.</li> <li>3. Use social media as a tool for marketing communication.</li> <li>4. Analyse the effectiveness of digital marketing using various metric tools.</li> </ol> |
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## DEPARTMENT OF MASS COMMUNICATION

**Programme Name: Bachelor of Arts**

**(MASS COMMUNICATION)**

### **Program Outcomes (POs)**

| <b>POs</b> | <b>After completing this programme students will be able to:</b>                            |
|------------|---------------------------------------------------------------------------------------------|
| PO 1       | Acquire knowledge related to the discipline under study                                     |
| PO 2       | Communicate and reflect effectively and efficiently on the issues related to the discipline |
| PO 3       | Explore analyse and provides solution to the problems related to the discipline             |

|      |                                                                                              |
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|      | and life                                                                                     |
| PO 4 | Develop exposure to actual working environment leading to employability and entrepreneurship |
| PO 5 | Apply the knowledge and skills acquired in blind organising evaluation and decision making   |
| PO 6 | Recognise appreciate and follow ethical issues relating to the discipline and society        |
| PO 7 | Exhibit the professional skills and competencies acquired during the program of study        |

### Program Specific Outcomes (POs)

| PSOs  | After completing this programme students will be able to:                                                                 |
|-------|---------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | Acquire fundamental knowledge of mass communication and journalism and related study areas                                |
| PSO 2 | Learn communication and professional skills related to various fields of mass communication                               |
| PSO 3 | Become competent enough to undertake professional job as per demands and requirements of media and entertainment industry |
| PSO 4 | Become ethically committed media professional and herring to the human values and the values of the Indian culture        |
| PSO 5 | Acquire the primary research skills, understand the importance of innovation and reference and global vision              |

### Course Outcomes (COs) of Bachelor of Arts (Mass Communication)

| SEMESTER I         |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| Course Code        | Course Name                          | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>B23-JMC-101</b> | <b>Introduction to Communication</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Introduction to process of communication, elements of communication and barriers in communication</li> <li>2. Concept of listening: developing effective listening, active listening, listening habits &amp; importance of feedback in communication</li> <li>3. Knowledge about the mass communication and factors affecting group performance</li> <li>4. Know about responsibility of a public speaker</li> </ol> |

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|------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                             | audience relationship                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>B23-JMC-102</b>     | <b>INTRODUCTION TO JOURNALISM</b>           | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. To understand the basic concept and values of journalism including Indian perspective.</li> <li>2. To study contemporary issues of journalism and relevance of media literacy in society.</li> <li>3. To understand types of journalism</li> <li>4. To enhance understanding of new trends and terminologies of journalism</li> </ol> |
| <b>B23-JMC-103</b>     | <b>HISTORY OF MEDIA</b>                     | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. To learn about the history and development of print media in India.</li> <li>2. To understand the origin and development of radio in India.</li> <li>3. To know about the history and development Television and Cinema in India.</li> <li>4. To learn about various types of popular traditional media.</li> </ol>                   |
| <b>B23-JMC-104</b>     | <b>Computer Applications</b>                | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. To understand the basic knowledge of computer system.</li> <li>2. To know about the functioning of different parts of computer.</li> <li>3. To know about Software and Operating System.</li> <li>4. To understand the basics of Application Software.</li> </ol>                                                                     |
| <b>B23-JMC-105 MDC</b> | <b>Public speaking and Art of Anchoring</b> | <b>Course Outcomes : After successfully completing this course student will be able to:</b> <ol style="list-style-type: none"> <li>1. To develop interpersonal and effective communication skills.</li> <li>2. To develop program solving skills and understand its influence on behaviour.</li> <li>3. Learn about the qualities and skill set required for reporting and anchoring.</li> <li>4. Acquire an idea about the technology.</li> </ol>                           |
| <b>SEMESTER II</b>     |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>B23-JMC-201</b>     | <b>WRITING FOR MEDIA</b>                    | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. To understand different forms of writing.</li> <li>2. To know about radio writing.</li> <li>3. To understand different TV writing techniques</li> <li>4. To develop skills for ad and online writing</li> </ol>                                                                                                                       |
|                        | <b>BASICS OF</b>                            | <b>Course Outcomes : After successfully completing this</b>                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>B23-JMC-202</b>  | <b>REPORTING AND EDITING</b>                   | <p><b>course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand the basics of reporting</li> <li>2. To understand different types of beat reporting</li> <li>3. To know basic concept of editing for print.</li> <li>4. To learn basics of newspaper designing. UNIT Topic</li> </ol>                                                                                                                                     |
| <b>B23-JMC-203</b>  | <b>INTRODUCTION TO RADIO AND TV JOURNALISM</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand basics of radio journalism and trends in radio broadcasting.</li> <li>2. To understand the set up and functioning of radio studio and radio newsroom.</li> <li>3. To understand TV studio set up and different types of cameras</li> <li>4. To understand TV newsroom and its functioning</li> </ol> |
| <b>B23-JMC-204</b>  | <b>INTRODUCTION TO GRAPHICS DESIGN</b>         | <p><b>Course outcomes: After successfully completing this course, student will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand basic concept of Graphic Design.</li> <li>2. To know about the levels of colours.</li> <li>3. To develop ability to explore, discover and understand the fundamentals used in design.</li> <li>4. To enhance image editing by using design application</li> </ol>                                      |
| <b>B23-JMC-205</b>  | <b>Media literacy skills</b>                   | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand how media messages create meaning.</li> <li>2. Identify to creates messages and what are tools of persuasion</li> <li>3. Identify bias and misinformation.</li> <li>4. Understand how to Avaluate and create media messages.</li> </ol>                                                                 |
| <b>SEMESTER III</b> |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>B23-JMC-301</b>  | <b>Radio Production</b>                        | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1: To understand script writing for various radio programmes</li> <li>2: To understand the set up and working of a radio studio.</li> <li>3: To know about stages of radio programme production.</li> <li>4: To undertake radio programme production in different formats</li> </ol>                                  |
| <b>B23-JMC-302</b>  | <b>Newspaper Design and Production</b>         | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p>                                                                                                                                                                                                                                                                                                                                                              |

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|                              |                                    | <p>1: To inculcate the knowledge of dummy and layout.</p> <p>2: To learn the basic principles of designing.</p> <p>3: To understand photo-editing and photo caption writing.</p> <p>4: To learn applications of newspaper designing software.</p>                                                                                                                                                                                                                                                                                |
| <b>B23-JMC-303</b>           | <b>Introduction to Advertising</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>1: To nurture a deep sense and understanding about basic concepts of advertising</p> <p>2: To develop understanding about structure and functioning of advertising agency.</p> <p>3: To be familiarized with the concept of campaign planning</p> <p>4: To understand the concept of advertising research</p>                                                                                                             |
| <b>B23-JMC-304</b>           | <b>Components of Multimedia</b>    | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>1: To know the basic elements of multimedia and hardware-software requirements.</p> <p>2: To understand the primary elements of multimedia i.e. text and image for the multimedia applications and projects.</p> <p>3: To study the relation of necessary elements Le. audio and video and audio-visual media,</p> <p>4: To understand the animation concepts and the importance of animation in multimedia industry.</p> |
| <b>B23-JMC-305<br/>MDC-3</b> | <b>Photography</b>                 | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>1. To learn basic concepts and importance of Photography</p> <p>2. To learn mobile photography</p> <p>3. To learn uses of lights in photography</p> <p>4. To learn photo editing and new trends in photography</p>                                                                                                                                                                                                        |

| SEMESTER IV         |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>B23-JMC-401</b>  | <b>TV production</b>                    | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand television journalism and learn how to handle and use various television gadgets in TV studio</li> <li>2: Write scripts for various television programmes.</li> <li>3: Learn techniques and skills for presentation, anchoring for television programm.</li> <li>4: Undertake television programme production in different format sand use different softwares forting television programmes.</li> </ol> |
| <b>B23-JMC -402</b> | <b>Introduction to Public relations</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Acquire knowledge about the definition and concept of public relations publicity propaganda advertising and e-PR.</li> <li>2. Understand the basic tools of public relations.</li> <li>3. Learn about PR setup in various sectors and PR Strategies for campaign planning.</li> <li>4. Learn the ethics and laws of public relations.</li> </ol>                                                                    |
| <b>B23-JMC -403</b> | <b>Current Affairs</b>                  | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Learn the functioning of the system of India.</li> <li>2. Learn the important issues affecting the society.</li> <li>3. Learn the wide coverage of important issues in media.</li> <li>4. Learn the critical understanding of media coverage.</li> </ol>                                                                                                                                                            |
| <b>B23 JMC-212</b>  | <b>Photo and Video Editing</b>          | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Learn basic concept and importance of photography.</li> <li>2. Work as a photo journalist.</li> <li>3. Develop self employment and creative skills.</li> <li>4. Student will sequire skills and learn to use different software's for editing television programs.</li> </ol>                                                                                                                                       |
| SEMESTER V          |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23-JMC-501</b>  | <b>New Media</b>                        | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the concept and features of new media.</li> <li>2. Identify different types of new media platforms such as websites, social media, blogs, and podcasts.</li> </ol>                                                                                                                                                                                                                                       |

|                    |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                    | <ol style="list-style-type: none"> <li>Students will be able to analyze applications of New Media in print, radio, television and digital platforms.</li> <li>Students will develop skills to use social media, blogging, podcasting and participatory journalism tools effectively.</li> </ol>                                                                                                                                                                                                                                                    |
| <b>B23-JMC-502</b> | <b>Indian Constitution , Media Laws and Ethics</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the basic feature of the Indian Constitution related to media and freedom of expression.</li> <li>Identify the constitutional rights and duties relevant to media professionals.</li> <li>Understand the basic media laws such as freedom of the press, defamation, contempt of court, and copyright.</li> <li>Recognize the ethical principles of journalism and media practice.</li> </ol> |
| <b>B23-JMC-503</b> | <b>Development Communication</b>                   | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the concept and meaning of development communication.</li> <li>Identify the role of communication in social and national development.</li> <li>Understand the use of media in development programmes and campaigns</li> <li>Recognize the importance of communication for awareness and social change.</li> </ol>                                                                            |
| <b>B23-VOC-112</b> | <b>Photography</b>                                 | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>Understand the basic concept and importance of photography.</li> <li>Identify the main parts of a camera and their functions.</li> <li>Learn the basic camera settings such as ISO, aperture and shutter speed.</li> <li>Develop skills in lighting, composition, and photo</li> </ol>                                                                                                                  |

|                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                                                         | editing techniques.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Internship</b>  | <b>Internship</b>                                       | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain practical experience in newsroom operations and print media workflows.</li> <li>2. Develop skills in news reporting, writing, and editing for newspapers and magazines.</li> <li>3. Apply ethical standards and professional practices in real media situations.</li> <li>4. Improve communication, teamwork, and time management skills in a professional environment.</li> </ol> |
| <b>SEMESTER VI</b> |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>B23-JMC-601</b> | <b>Communication Skills And Personality Development</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand basics of communication</li> <li>2. Improve verbal and non-verbal skills</li> <li>3. Develop effective writing skills</li> <li>4. Build presentation and speaking confidence</li> </ol>                                                                                                                                                                                      |
| <b>B23-JMC-602</b> | <b>Online Journalism</b>                                | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Create and write blogs for online platforms.</li> <li>2. Write news reports suitable for web media.</li> <li>3. Analyze challenges, risks, and career opportunities in online journalism.</li> <li>4. Understand the structure, functioning and role of digital media platforms in journalism.</li> </ol>                                                                               |
| <b>B23-JMC-603</b> | <b>Media Management &amp; Entrepreneurship</b>          | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand media entrepreneurship concepts and scope.</li> <li>2. Identify opportunities in print, broadcast, and new media.</li> <li>3. Develop freelancing skills, personal branding and online portfolio.</li> <li>4. Analyze media entrepreneurs and apply entrepreneurial knowledge.</li> </ol>                                                                                    |
| <b>B23-JMC-</b>    | <b>Artificial Intelligence and</b>                      | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|----------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>604</b>           | <b>Cyber Security</b>          | <ol style="list-style-type: none"> <li>1. Use AI tools for content, image and design creation.</li> <li>2. Apply AI prompts for story, script and storyboard development.</li> <li>3. Perform basic image, sound and poster enhancement using AI.</li> <li>4. Understand cyber safety, phishing awareness and secure internet use.</li> </ol>                                                                                                                                |
| <b>B23-Voc - 316</b> | <b>Digital film Production</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Learn basic concepts and importance of Photography.</li> <li>2. Work as a photo journalist.</li> <li>3. Apply photography, video production, and editing techniques using appropriate tools and software.</li> <li>4. Create and edit visual content with proper composition, storytelling, and technical accuracy.</li> </ol> |

## **Programme Name: Bachelor of Arts (BA)**

**Name of Programme: B.A. (General)**

**Programme Outcomes (POs) of B.A. (General)**

|            |                                                                                          |
|------------|------------------------------------------------------------------------------------------|
| <b>POs</b> | <b>After completing this programme students will be able to:</b>                         |
| PO 1       | To acquaint with the historical, economic, social and political thinking and traditions. |

|       |                                                                                                                                                                                                                                                                                                                           |
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| PO 2  | To train the students in the subject and enable them to use the skills and disciplinary insights, so that they can critically examine, assess and explain the political phenomenon according the situations.                                                                                                              |
| PO 3  | To develop the understanding skills for acquiring theoretical and practical To knowledge of the discipline, the main focus will be on to demonstrate To knowledge of historical emergence and distinctive contributions of the social science disciplines to the analysis of human behavior, political and social issues. |
| PO 4  | To create job opportunities is the main task that is why the main focus on to develop the soft skill of 3R - reading, writing and reasoning.                                                                                                                                                                              |
| PO 5  | To Enhance and understanding of inter relationship between man, society, state and inter-states and will be achieved through a comprehensive teaching and learning of all these concepts.                                                                                                                                 |
| PO 6  | To acquire knowledge in the field of social science, humanities and literature, which make them sensitive and sensible citizen. For this purpose focus will be on creating awareness regarding socio-political dimensions those govern all related activities.                                                            |
| PO 7  | To provide a solid foundation to the students who can take forward their learned skills and to knowledge for higher research in the discipline and its associated domains.                                                                                                                                                |
| PO 8  | To lay the foundation to become a responsible and meaningful citizen for the society.                                                                                                                                                                                                                                     |
| PO 9  | To give exposure to creative environment which sparks their thought process and help to think of the solutions of various problems.                                                                                                                                                                                       |
| PO 10 | To enable the students to acquire the knowledge with various human values and theories like political socialization, modernization, development, political cultural, values, ethos and principles and framing the base to deal with various problems in life with courage.                                                |

|       |                                                                                                                       |
|-------|-----------------------------------------------------------------------------------------------------------------------|
| PO 11 | To display an ability to read and understand various literary genres and write critically.                            |
| PO 12 | To prepare for diverse competitive examinations, as well as, choose any post graduate programmes of their own choice. |
| PO 13 | To Enhance the vocabulary for linguistic competence and effective communication.                                      |
| PO 14 | To become aware of the moral, cultural values through the stories and chapters prescribed in their course.            |
| PO 15 | To be able to write, expand an idea and contract a passage.                                                           |
| PO 16 | To apply the basic grammatical rules to be learnt.                                                                    |

## **Program Specific Outcomes (PSOs)**

### **Name of Programme: Bachelor of Arts (BA)**

#### **1. Programme Specific Outcomes (PSOs) of English**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                             |
|-------------|------------------------------------------------------------------------------------------------------------------------------|
| PSO 1       | To make learn about Indian Novel tradition in English through the text.                                                      |
| PSO 2       | To familiarize students with skill development in reading, analyzing and writing about Poetry and familiarity related terms. |
| PSO 3       | To instil in students a readerly skill enhancement in Poetry and Prose.                                                      |

|       |                                                                                                                                                 |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 4 | To familiarize them with the convention of diverse textual genres of Fiction, Non-fiction poetry and short stories.                             |
| PSO 5 | To help the students understand the creative resources of language in Poetry, drama, Fiction, Prose and how it expresses the human experiences. |
| PSO 6 | To make students have an insight into advance learning and Practice of RP through Language Resource Centre (LRC).                               |
| PSO 7 | To help them apply critical, analytical framework to analyze cultural, historical background of texts written in English.                       |

## 2. Programme Specific Outcomes (PSOs) of Economics

| PSOs  | After completing this programme students will be able to:                                                                                                                                                                                                                                                                                                                       |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To understand the impact of government policies and will be able to assess the consequences of the policies on the different stakeholders and sectors involved.                                                                                                                                                                                                                 |
| PSO 2 | To familiarize with the knowledge and application of Micro and Macro Economic theories for the formulation of policies and planning at individual as well as at economy level. To understand economic terms, methodologies, tools and various economic analysis procedures.                                                                                                     |
| PSO 3 | To learn to apply economic theories and concepts to contemporary economic and social issues, as well as analysis of various economic policies.                                                                                                                                                                                                                                  |
| PSO 4 | To understand economic terms, methodologies, tools and various economic analysis procedures.                                                                                                                                                                                                                                                                                    |
| PSO 5 | To develop an awareness of career choices and the option for higher studies in economics                                                                                                                                                                                                                                                                                        |
| PSO 6 | To contain the fields like micro economics, macro economics, international trade and public finance principles, it enhances students to analyse and assess the real situation of the economy including the size and changes of population, income pattern, and rate of development with pattern of savings and investments and social security measures adopted in the country. |

### 3. Programme Specific Outcomes (PSOs) of Political Science

| PSOs  | After completing this programme students will be able to:                                                                                                                               |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To empower the graduates to appear for various competitive examinations and choose the post graduate Programmes of their choice.                                                        |
| PSO 2 | To sensitize with the ideological tradition, historical, social, economical and political thinking.                                                                                     |
| PSO 3 | To encourage to think and work over for the appropriate solution of various problems existed in the human life in the society.                                                          |
| PSO 4 | To educate the young minds about the parliamentary procedures and constitutional position of the country and develop their mind that politics is part of social services to the people. |
| PSO 5 | To enable the students to acquire the knowledge with human values framing the base to deal with various problems in life with humanity and courage.                                     |
| PSO 6 | To provide them the base to be the responsible citizen                                                                                                                                  |
| PSO 7 | To apply methods appropriate for accumulating and interpreting data applicable to the discipline of political science.                                                                  |
| PSO 8 | To develop the feeling of common goods, common sufferings and common interests at all level in the political domination.                                                                |

### 4. Programme Specific Outcomes (PSOs) of History

| PSOs  | After completing this programme students will be able to:                                            |
|-------|------------------------------------------------------------------------------------------------------|
| PSO 1 | To know the value of diversity.                                                                      |
| PSO 2 | To distinguish between primary and secondary sources.                                                |
| PSO 3 | To present clear and compelling arguments, based on critical analysis of diverse historical sources. |
| PSO 4 | To know the basic tools of historical analysis.                                                      |

|       |                                                                                             |
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| PSO 5 | To understand and evaluate different historical ideas, various arguments, and point of view |
|-------|---------------------------------------------------------------------------------------------|

## 5. Programme Specific Outcomes (PSOs) of Geography

| PSOs  | After completing this programme students will be able to:                                                        |
|-------|------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To have basic understanding of fundamental concepts of geography as an earth science                             |
| PSO 2 | To clearly formulate and solve real life challenges with respect to human environment interactions.              |
| PSO 3 | To effectively communicate the knowledge of geography to the society for safe guarding the physical environment. |
| PSO 4 | To apply fundamental principles of geography for the betterment of human society.                                |
| PSO 5 | To help us understand basic physical system that affects everyday life.                                          |

## 6. Programme Specific Outcomes (PSOs) of Mathematics

| PSOs  | After completing this programme students will be able to:                                                                |
|-------|--------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To conduct interdisciplinary work effectively as an individual and as a team member.                                     |
| PSO 2 | To recognize all aspects of a concept or relation.                                                                       |
| PSO 3 | To formulate a process, phenomenon and the relationships between various mathematical objects increases in learners.     |
| PSO 4 | To apply and solve mathematical problems by choosing appropriate analysis and modelling methods, inculcates in students. |
| PSO 5 | To enhance the reasoning, thinking and understanding of mathematical problems.                                           |

|       |                                                                                                                        |
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| PSO 6 | To understand the basic concepts of number system and number theory and their applications in practical life.          |
| PSO 7 | To understand various numerical methods and will be able to apply these methods for future use in scientific problems. |

## 7. Programme Specific Outcomes (PSOs) of Sanskrit

| PSOs  | After completing this programme students will be able to:                                                                                                                                                                                                                                  |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To ensure a high standard of Behavioral attitude in students through the study of ancient books and shaping them into socially responsible citizens. Besides, it is also spreading the message of kindness, humility, compassion, human values, and moral code of conduct to the students. |
| PSO 2 | To make them eligible for higher education.                                                                                                                                                                                                                                                |
| PSO 3 | To understand multi-disciplinary relevance of Vedic Studies, a huge volume of literature of Sanskrit like Prose, Poetry, Drama, Philosophy, Grammar, Kavya Shastras, Darshan and Logic Dharma, and Smriti, shastras etc.                                                                   |
| PSO 4 | To impart an in-depth knowledge of the Core Areas of the subject.                                                                                                                                                                                                                          |
| PSO 5 | To develop a strong concept of ancient Indian history, philosophy, Literature, Astrology, Economic & Political policies, Yoga, Ayurveda, and many ancient Indian sciences among students.                                                                                                  |
| PSO 6 | To enhance communication skills-Listening, Speaking, Reading, and Writing among students.                                                                                                                                                                                                  |
| PSO 7 | To develop research aptitude and independent thinking.                                                                                                                                                                                                                                     |

## 8. Programme Specific Outcomes (PSOs) of Physical Education

| PSOs  | After completing this programme students will be able to:                                                                                                                                       |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To apply knowledge of physical education, growth and development, play, sports and games knowledge, history of physical education and yoga to explain aim and objectives of physical education. |

|       |                                                                                                                                                              |
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| PSO 2 | To be able Tunderst and psychology, learning, learning curve, motivation, instinct, and emotion, stress, personality and sociological aspects etc.           |
| PSO 3 | To enable the students know the basics of anatomy, physiology, exercise physiology, muscular- skeletal system & circulatory system, respiratory.             |
| PSO 4 | To learn health, health education, personal hygiene, health problems prevention and control, physical fitness and wellness, health and first-aid management. |
| PSO 5 | To use understanding of history of yoga, astanga yoga to effectively know about yoga in everyday life, further study in physical                             |
| PSO 6 | To have hands of experience to perform gymnastics, yogasana. They will be having the concepts of asana, pranayam, suryanamaskar etc.                         |

## 9. Programme Specific Outcomes (PSOs) of Music

| PSOs  | After completing this programme students will be able to:                                                                              |
|-------|----------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To give a practical demonstration of ragas for a period of at least half an hour.                                                      |
| PSO 2 | To be able to study the basic terminologies of Indian music.                                                                           |
| PSO 3 | To be able learn to write the practical compositions according to the Notation system.                                                 |
| PSO 4 | To be able to study about the theoretical aspects of the prescribed ragas.                                                             |
| PSO 5 | To make an analytical study of various musical forms of Hindustani music.                                                              |
| PSO 6 | To learn about the music in Vedic period, medieval period, and Modern period and also studies the works of music scholars of the past. |
| PSO 7 | To be able to study about the compositional forms and notation systems of Hindustani music.                                            |

## 10. Programme Specific Outcomes (PSOs) of Hindi

| PSOs | After completing this programme students will be able to: |
|------|-----------------------------------------------------------|
|------|-----------------------------------------------------------|

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|-------|--------------------------------------------------------------------------|
| PSO 1 | हिंदीसाहित्यकीविविधविधाओंकापरिचय (काव्य, कहानी, नाटकआदि) प्राप्तकरना     |
| PSO 2 | हिंदीबोलनेलिखनेऔरसीखनेकेकौशलकोविकसितकरना                                 |
| PSO 3 | प्रयोजनमूलकएवंव्यावहारिकहिंदीकेज्ञानमेंबढ़ोतरीकरना                       |
| PSO 4 | कंप्यूटरईमेलआदिमेंहिंदीभाषाकेप्रयोगकोबढ़ाना                              |
| PSO 5 | हिंदीसाहित्यकेमाध्यमसेछात्रोंमेंसामाजिकसांस्कृतिकप्रतिबद्धताकोविकसितकरना |
| PSO 6 | हिंदीसाहित्यकेमाध्यमसेजीवनउपयोगीमानवीयमूल्योंकोविद्यार्थियोंमेंपैदाकरना  |
| PSO 7 | व्यक्तित्वविकासभाषिकज्ञानप्रभावीसंप्रेषणरोजगारआदिमेंसहायकहोना            |

## 1. Course Outcomes (COs) of Bachelor of Arts (English)

| SEMESTER I  |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code | Course Name                                        | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| B23-Eng-103 | English (Minor)                                    | <ol style="list-style-type: none"> <li>1. Understand and appreciate the thoughts and imagination contained in the poems.</li> <li>2. Understand and explain the relevance of literary essays.</li> <li>3. Understand the basics of English Grammar.</li> <li>4. Enhance their speaking skills and increase English vocabulary.</li> </ol>                                                                                                                                                                                   |
| B23-Eng-101 | English (Major)                                    | <ol style="list-style-type: none"> <li>1. The students will be able to understand different forms and techniques of short fiction.</li> <li>2. To help them apply a critical analytical framework to analyse the cultural historical background of the text written in english.</li> <li>3. The students will be able to write paragraphs, essays, letters,precis and resume.</li> <li>4. The students will be able to develop reading and writing skills.</li> </ol>                                                       |
| B23-AEC-111 | English Language and Communication Skills: Level-1 | <ol style="list-style-type: none"> <li>1. Understand and use verbal and non-verbal forms of communication effectively.</li> <li>2. Develop workplace and interpersonal communication skills such as introducing oneself and others, making requests, offering help, congratulating, making enquiries, and seeking permission.</li> <li>3. Understand effective listening skills, barriers to listening, and note-taking techniques.</li> <li>4. Apply the practical use of parts of speech in language learning.</li> </ol> |
| SEMESTER II |                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|---------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B23-Eng-203         | <b>English<br/>(Minor)</b>                                             | <ol style="list-style-type: none"> <li>1. Identify literary techniques and creative uses of language in literary texts.</li> <li>2. Understand the relevance of literary essays.</li> <li>3. Understand, respect and appreciate the rich Indian culture through short stories.</li> <li>4. Understand how grammar and vocabulary choices together create a range of different meanings.</li> </ol>                                                                                                                                                      |
| B23-Eng-201         | <b>English<br/>(Major)</b>                                             | <ol style="list-style-type: none"> <li>1. To make them learn and understand about indian essays tradition in english through the text.</li> <li>2. The students will be able to apply critical, analytical framework to analyze cultural historical background of texts written in English.</li> <li>3. The students will be able to understand parts of speech, voice and narration.</li> <li>4. The students will be able to apply basics of grammar.</li> </ol>                                                                                      |
| B23-AEC-211         | English<br>Language and<br>Communication<br>Skills: Level<br>2(AEC- 2) | <ol style="list-style-type: none"> <li>1. Identify and articulate the sounds of the English language, understand phonetic symbols, and accurately transcribe one- and two-syllable words</li> <li>2. Develop fluency and confidence in spoken English</li> <li>3. Apply the rules of punctuation and capitalization correctly to produce clear, coherent, and grammatically accurate written English</li> <li>4. Understand and use basic English tenses appropriately in both spoken and written communication.</li> </ol>                             |
| <b>SEMESTER III</b> |                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| B23-Eng-301         | <b>English</b>                                                         | <ol style="list-style-type: none"> <li>1. Understand and appreciate the thoughts and imagination contained in the poems.</li> <li>2. The students will be able to correct English sounds. They will develop fluency and clarity of speech. They will be able to use Phonetics to improve their pronunciation.</li> <li>3. Understand the basics of English Grammar.</li> <li>4. The student Will be able to write phonetic transcription and word stress.</li> </ol>                                                                                    |
| ENG-311-AEC         | English<br>Language and<br>Communication<br>Skills:<br>Level 3         | <ol style="list-style-type: none"> <li>1. Demonstrate a clear understanding of basic English grammar and sentence structures for effective communication.</li> <li>2. Develop proficiency in the four language skills—listening, speaking, reading, and writing—in academic and real-life contexts.</li> <li>3. Read and comprehend a variety of literary and non-literary texts, identifying main ideas and supporting details.</li> <li>4. Communicate effectively in spoken English with improved fluency, pronunciation, and confidence.</li> </ol> |

**SEMESTER IV**

|                    |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B23-Eng-401</b> | <b><u>English</u></b>                                    | <ol style="list-style-type: none"><li>1. The students will be able to understand various components of drama.</li><li>2. They will have knowledge of different dramatic style.</li><li>3. The student Will be able to write paragraphs, essays, letters and precis.</li><li>4. The student Will be able to write speeches and resume.</li></ol>                                                                                                                              |
| <b>B23-AEC-411</b> | <b>English language and communication skills (AEC-4)</b> | <ol style="list-style-type: none"><li>1. Develop a strong vocabulary base by understanding word formation, roots, prefixes, and suffixes and applying them correctly in context</li><li>2. Identify and use different types of sentences and perform sentence transformation.</li><li>3. Demonstrate effective public speaking and persuasive skills</li><li>4. Write coherent and unified paragraphs using appropriate transition words and contextual vocabulary</li></ol> |

**SEMESTER V**

|                    |                                                         |                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B23-ENG-501</b> | <b>Introduction to Short Novel and Advanced Grammar</b> | <ol style="list-style-type: none"><li>1. The students will be able to understand various components of short novel.</li><li>2. They will have knowledge of different prose styles.</li><li>3. The students will be able to analyse structure, plot, characters, themes and motif in a short novel.</li><li>4. The students will be able to identify cluses, use phrasal verbs, etc.</li></ol> |
|--------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**SEMESTER VI**

|                    |                                                              |                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>B23-ENG-601</b> | <b>Introduction to Life Writing and Advanced Composition</b> | <ol style="list-style-type: none"><li>1. The students will be able to understand various componants of life writing.</li><li>2. They will have knowledge of different genres of life writing.</li><li>3. The students will be able to find common errors in sentences.</li><li>4. The students will be able to learn and write different types of sentences.</li></ol> |
|--------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 2. Course Outcomes (COs) of Bachelor of Arts (Hindi)

| Course Code                | Course Name                                  | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SEMESTER I</b>          |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| B23-HIN-101                | <b>Hindi<br/>bhasha:AadhunikKavita</b>       | <ol style="list-style-type: none"> <li>1. Comprehend different forms and techniques of Language</li> <li>2. The students will be able to understand exploration of Poetry</li> <li>3. The students will get knowledge about the Poets</li> <li>4. The students will be able to understand critical and objective questions</li> </ol>                                                                                                                                            |
| <b>MINOR</b>               |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| B23-HIN-103                | <b>Hindi<br/>kavyavaharikvyakara<br/>n</b>   | <ol style="list-style-type: none"> <li>1. The students will be introduced to the Hindi Grammar.</li> <li>2. They will learn various aspects of writing of Hindi.</li> <li>3. They will learn the practical use of punctuation and spelling.</li> <li>4. They will have the comprehensive knowledge of capitalization.</li> </ol>                                                                                                                                                 |
| <b>SEMESTER II (MINOR)</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| B23-HIN-202                | <b>Rajbhasha Hindi<br/>pravdhanaurprayog</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. The students will be introduced to the Official Hindi.</li> <li>2. They will learn various aspects of writing skills and their use in communication.</li> <li>3. They will learn the practical use of official languages in different disciplines.</li> <li>4. They will have comprehensive knowledge of Official Hindi.</li> </ol> |
| <b>SEMESTER II (MAJOR)</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| B23-HIN-302                | <b>Madhyakalin Hindi kavita</b>                                | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. The students will be able to understand various components of poetics</li> <li>2. Perusal of poetics will enrich their knowledge of poetics</li> <li>3. The students will understand literary criticism</li> <li>4. The students will be able to various aspects of poetics &amp; literary criticism</li> </ol>              |
| <b>Semester 2 (AEC)</b>    |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| B23-AEC-HIN-221            | <b>Hindi bhashaaur sampreshan<br/>n<br/>maukhik sampreshan</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Students will be introduced to communication in Hindi language.</li> <li>2. They will learn various aspects of speaking skills and their use in communication.</li> <li>3. They will learn the practical use of punctuation and explanation.</li> <li>4. They will have comprehensive knowledge of communication.</li> </ol> |
| <b>Semester –III major</b> |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| B23-HIN-301                | <b>Aadhunik gadhyasahitya</b>                                  | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. The students will be able to understand various components of Prose.</li> <li>2. Perusal of essays type will enrich their knowledge of different Prose.</li> <li>3. The students will be acquainted with Writers of Prose.</li> <li>4. The students will be able to understand critical aspects of Prose..</li> </ol>        |
| <b>Semester3 (SEC)</b>     |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| B23-HIN-309     | Anuvadkla                                   | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand various aspects of Translation.</li> <li>2. To acquaint the students with the basic skills: Translation and writing.</li> <li>3. To explain the differences in writing for various literary and social media contexts.</li> <li>4. To enhance the creative and critical abilities of the students.</li> </ol> |
| B23-AEC-HIN-421 | Hindi bhasha aursampreshan : vyaktitvaVikas | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand the nature and importance of writing and effective communication.</li> <li>2. To develop proficiency in official writing skills.</li> <li>3. To acquire knowledge of news and editorial writing.</li> <li>4. To understand the practical aspects of translation work.</li> </ol>                              |
| SEMESTER V      |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| B23-Hindi-501   | Samkalin Hindi kavita                       | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Knowledge of contemporary Hindi poetry.</li> <li>2. Understanding the contribution of contemporary Hindi poets.</li> <li>3. Proficiency in the modern period of Hindi literature.</li> <li>4. Competence in Hindi journalism.</li> </ol>                                                                                    |
| SEMESTER VI     |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| B23-Hindi-601   | NavratraGadhy Gora                          | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Knowledge of medieval poetry.</li> <li>2. Research on medieval poetry.</li> <li>3. Understanding of the modern period of Hindi literature.</li> <li>4. Proficiency in translation skills.</li> </ol>                                                                                                                        |

### 3. Course Outcomes (COs) of Bachelor of Arts (Psychology)

| SEMESTER I            |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code           | Course Name               | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| B23-PSY-101           | Foundations of psychology | <ol style="list-style-type: none"> <li>1. The learner will be able to demonstrate an understanding of foundational concepts of psychology and human behaviour able to understand theoretical concepts of emotion and motivation. They will understand the structure and function of sensory processes. And test related to foundation of Psychology.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SEMESTER II           |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| B23-PSY-201           | Social psychology         | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. It demonstrate an understanding of foundational concepts of social behaviour and methods to study behaviour. Like different types of psychological test related to social phenomenon. They understand about their interpersonal attraction, socialization process. Like aggression, leadership and pro-social and many more.</li> </ol>                                                                                                                                                                                                                                                                                                                                 |
| SEMESTER III          |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| CC\MCC<br>B23-psy-301 | Experimental Psychology   | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. .Students will be able to demonstrate an understanding of the major concepts, theoretical perspectives and historical trends in experimental psychology. The experimental method in psychology helps us learn more about how people think and why they behave the way they do. Experimental psychologists can research a variety of topics using many different experimental methods. Each one contributes to what we know about the mind and human behavior.</li> <li>2. Experimental psychology is concerned with testing theories of human thoughts, feelings, actions, and beyond develop understanding regarding experimental procedure and perception.</li> </ol> |

**SEMESTER IV**

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| CC\MCC<br>B23-psy- 401 | Developmental<br>Psychology | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"><li>1. develop understanding regarding concepts, process, domains and different perspectives of human development. Developmental psychology courses generally aim to equip students with an understanding of how humans change and grow across the lifespan, including physical, cognitive, and socioemotional development</li><li>2. grasp understanding of beginning of human life and birth process.</li><li>3. inculcate knowledge regarding nature of development across life Span</li><li>1. To understand the transitional processes during adolescence and old age.</li><li>4. conduct tests related to their theory paper.</li></ol> |
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**SEMESTER V**

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| B23-PSY-601 | Counselling<br>Psychology | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"><li>1. Have understanding of Nature, Scope and Principles of Guidance.</li><li>2. Develop understanding of Process of Guidance and Role of Assessment in Guidance.</li><li>3. Gain Knowledge regarding various types of Guidance.</li><li>4. Have in depth understanding of areas of Guidance.</li><li>5. Conduct experiments and tests related to Guidance.</li></ol> |
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**SEMESTER VI**

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| <b>B23-PSY-501</b> | <b>Psychological Testing</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Acquaint with the meaning, Characteristics of Psychological Test.</li> <li>2. Will be able to learn the meaning and methods of determining reliability and validity.</li> <li>3. Will be able to understand about construction and standardization of test and about various Intelligence Tests.</li> <li>4. Will get knowledge about various personality tests.</li> </ol> |
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#### 4. Course Outcomes (COs) of Bachelor of Arts (Political Science)

| <b>SEMESTER I(Major)</b>           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Course Code</b>                 | <b>Course Name</b>                           | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>CC\MCC<br/>B23-<br/>POL-101</b> | <b>Priniples of Political Science-I</b>      | <ol style="list-style-type: none"> <li>1. Understand the preamble and features of the Indian Constitution and develop an understanding of Fundamental Rights and Directive Principles of State Policy.</li> <li>2. Develop an understanding of the powers, position and functions of the Union and the State Executive.</li> <li>3. Comprehend the functioning of the Union and State legislatures and local self-government.</li> <li>4. Comprehend the functioning of the Indian judicial system.</li> </ol>                                                                                 |
| <b>CC-M<br/>B23-<br/>POL-103</b>   | <b>Fundamental of Political Science-I</b>    | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Understand the meaning, nature and scope of Political Science.</li> <li>2. Understand the elements, function and origin of the State.</li> <li>3. Comprehend the concepts of power, authority and legitimacy.</li> <li>4. Develop an understanding of the concepts rights, liberty and equality</li> </ol>                                                                                                                                                                  |
| <b>SEMESTER II (Minor)</b>         |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>MCC\CC<br/>B23-POL-<br/>204</b> | <b>Fundamentals of Political Science- II</b> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Comprehend the functioning of the executive, legislature and judiciary.</li> <li>2. Understand the nature and functioning of unitary, federal, parliamentary and presidential form of government.</li> <li>3. Develop an understanding of the role of political parties, pressure groups and bureaucracy in a political system.</li> <li>4. Comprehend the functioning of monarchy, totalitarianism and democratic political regimes.</li> </ol> |
| <b>SEMESTER II(Major)</b>          |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| <b>(CC/MCC)<br/>B23-POL-201</b> | <b>Principles of political science - II</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Develop a thorough understanding of the theory and practice of government, separation of powers and rule of law.</li> <li>2. Understand the various forms of government in a political system.</li> <li>3. Understand the nature and operation of political parties, pressure groups, representation and bureaucracy.</li> <li>4. Comprehend the functioning of monarchy, totalitarianism, military rule and democratic political regimes.</li> </ol>                                          |
| <b>SEMESTER III</b>             |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23-POL-301</b>              | <b>Indian Constitution</b>                  | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the preamble and features of the Indian Constitution and develop an understanding of Fundamental Rights and Directive Principles of State Policy.</li> <li>2. Develop an understanding of the powers, position and functions of the Union and the State Executive.</li> <li>3. Comprehend the functioning of the Union and State legislatures and local self-government.</li> <li>4. Comprehend the functioning of the Indian judicial system.</li> </ol> |
| <b>SEMESTER IV</b>              |                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <b>B23-POL-401</b> | <b>Indian Government and Politics</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <p>After completing this course, the learner will be able to:</p> <ol style="list-style-type: none"> <li>1. Understand the theory and practice of Federalism in India.</li> <li>2. Comprehend the process and dynamics of elections in India.</li> <li>3. Understand the nature and role of party system, interest and pressure groups in India.</li> <li>4. Develop an understanding of the socio-political factors that influence Indian politics along with its emerging trends.</li> </ol> |
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### **SEMESTER - V**

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| <b>B23-POL-501</b> | <b>Understanding Political Thought</b> | <p><b>Course Completing this comes, the learner will be:</b></p> <ol style="list-style-type: none"> <li>1. Critically mere and Mans and Arimus, uning the contributions to Winters political bought and Ser influence on contemporary political analysis</li> <li>2. Demonstrate and understanding of the political philosophies of Hobbes, Locke, and RousSES particularly their concepts of the social contract, state of nature, and the development of modem democratos theory</li> <li>3. Gain a deep understanding of Kautilya's Arthashas and Gandhi's philosophy of nonviolence, and will be able to apply these Indian political theories to contemporary issues in international relations and foreign policy.</li> <li>4. Evaluate the revolutionary and reformist political ideas of M.N. Roy and B.R. Ambedkar, examining their impact on Indian political thought and their relevance to modem debates on democracy, human rights, and social justice.</li> </ol> |
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### **SEMESTER - VI**

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| <b>B23-POL-601</b> | <b>Introduction to International Relation</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Understand the nature, scope, historical development and Autonomy debate of International Relations.</li> <li>2. Understand different approaches to the study of international relations, including idealism, realism, system theory, and Marxist-Leninist perspectives.</li> <li>3. Examine and assess the concept of national power with its limitations such as international law. international morality and world public opinion.</li> <li>4. Explain and critically assess major concepts and issues in international relations, such as the balance of power. collective security, international terrorism, and</li> </ol> |
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### 5. Course Outcomes (COs) of Bachelor of Arts (Economics)

| <b>SEMESTER I</b>                       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Course Code</b>                      | <b>Course Name</b>      | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>MCC<br/>Course code- B23-ECO-101</b> | <b>Microeconomics-I</b> | <ol style="list-style-type: none"> <li>1. Understand the nature and scope of Economics, including the meaning of economics, its methods, and why it is studied.</li> <li>2. Analyze the role of an economist, including the ability to think like an economist, the economist as a scientist, and as a policy advisor.</li> <li>3. Evaluate the different types of economic activities and systems, including the organization of economic activities and the evolution of present economic systems.</li> <li>4. Apply the concepts of demand and supply, elasticity, consumer equilibrium, production analysis, and cost and revenue analysis to real-world economic situations.</li> </ol> |
| <b>SEMESTER II</b>                      |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>MCC<br/>B23-<br/>ECO-201</b> | <b>Macroeconomics<br/>-1</b>   | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Have insight of Basic concepts of macroeconomics- its nature and scope, methodology; national income and circular flow of national income in an economy.</li> <li>2. Have understandings of macroeconomic behavior in terms of classical theory of employment, say's law, Keynes's theory of equilibrium, level of income and employment.</li> <li>3. Have knowledge about consumption behaviour at macroeconomic level, Keynes's psychological law of consumption, hypothesis about long run income-consumption relationship.</li> <li>4. Have understanding about capital and investment, decision to invest at macroeconomic level, determinants of induced investment, concept of MEC.</li> </ol>                                                                                                                                       |
| <b>SEMESTER III</b>             |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>B23-ECO-301</b>              | <b>Microeconomics-1</b>        | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand the concepts in consumer and producer Theory like surplus, economies, iso-quants, iso-cost lines etc</li> <li>2. To understand market conditions of perfect competition, monopoly and monopolistic competition.</li> <li>3. To understand few models of oligopoly.</li> <li>4. To understand how factor prices are determined</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>SEMESTER IV</b>              |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>B23-ECO-401</b>              | <b>Macroeconomics<br/>- II</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the concept of multiplier and its relation with MPC and MPS, demonstrate the working of multiplier.</li> <li>2. Understand and Acceleration principle and the concept of Super Multiplier.</li> <li>3. Demonstrate the demand for and supply of money, high powered money, illustrate various version of quantity theory of money, Keynesian Liquidity theory of Money.</li> <li>4. Illustrate the classical theory of inflation understand the meaning of inflation, identify different types of inflation, causes and effects of inflation on different sectors of the economy.</li> <li>5. Examine different phases of trade cycle, demonstrate various trade cycle theories, understand the impact of cyclical fluctuation on the growth of business, and elaborate classical and Keynesian theories of interest..</li> </ol> |
| <b>Semester – V</b>             |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <b>CC-5</b><br><b>B23-ECO-501</b> | <b>Economics of Growth and development</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. To understand the concept growth and development</li> <li>2. Analyse various resources as well as challenges in context of economic development</li> <li>3. To understand the process of economic growth as explained by various classical economists</li> <li>4. Comprehend various development strategies and their applications</li> </ol> |
| <b>Semester - VI</b>              |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>CC-6</b><br><b>B23-ECO-601</b> | <b>Indian Economy</b>                      | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand the Indian economy's features, historical evolution, economic planning, and key indicators like GDP and inflation</li> <li>2. Recognize the role of agriculture and challenges</li> <li>3. Grap industrialization phases and service sector growth</li> <li>4. Understand India's foreign trade structures.</li> </ol>             |

## 6. Course Outcomes (COs) of Bachelor of Arts (Commercial Art)

| SEMESTER I                                                                                                                                                                      |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Course Code                                                                                                                                                                     | Course Name                     | Course Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Paper( Theory)</b><br><b>Name of the course-</b><br><b>Fundamental of Arts</b><br><b>Course Code-B23-</b><br><b>COA-101</b><br><br><b>Course Type- CC-</b><br><b>1/MCC-1</b> | <b>Commercial</b><br><b>Art</b> | <ol style="list-style-type: none"> <li>1. Knowledge of communicate the content, context, and process of their art work visually, orally and in writing.</li> <li>2. Knowledge of different element of Arts studies and continuing throughout the development of advance capabilities for pleasure &amp; mental relaxation.</li> <li>3. Understanding the basic and valuable knowledge of the principles of arts.</li> <li>4. To enhance skills, artistic ability, creativity, analytical thinking and leadership.</li> </ol> |
| <b>Paper( Practical)</b><br><b>Object Drawing and</b><br><b>Still Life</b><br><br><b>B23-COA-101</b>                                                                            | <b>Commercial</b><br><b>Art</b> | <ol style="list-style-type: none"> <li>1. Development of Art with different Creative Drawing, Medium and developing Artistic Skills.</li> <li>2. Functional knowledge of tradition and evolution of the discipline as related to issue of representation and illusion.</li> <li>3. To develop confidence in their ability to be inventive and resourceful.</li> <li>4. Producing arts based on both traditional still life images and contemporary design ideas.</li> </ol>                                                  |
| SEMESTER II                                                                                                                                                                     |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Paper( Theory)</b><br><b>Name of the course-</b><br><b>Basics of Drawing</b><br><b>Course Code-B23-</b><br><b>COA-201</b><br><br><b>Course Type- CC-</b><br><b>2/MCC-3</b>   | <b>Commercial</b><br><b>Art</b> | <ol style="list-style-type: none"> <li>1. Knowledge from established practice, using materials &amp; processes.</li> <li>2. Gain understanding of established Designing methods.</li> <li>3. To develop confidence in their ability to be inventive and resourceful.</li> <li>4. Producing a Design based on both traditional images and contemporary ideas.</li> </ol>                                                                                                                                                      |

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| <b>Paper( Practical)</b><br><b>Name of the course-</b><br><b>2D,3D Design &amp;</b><br><b>Freehand Design</b><br><b>Course Code-B23-</b><br><b>COA-201</b>                          | <b>Commercial</b><br><b>Art</b> | <ol style="list-style-type: none"> <li>1. Fundamental theories and principals of Design as well as hands on training &amp; practices</li> <li>2. Acquire critical thinking skills in the development and resolution of concepts related to visual media</li> <li>3. Understanding the relevance of design principals in historic and contemporary art &amp; design.</li> <li>4. Enhances scientific temperament by application of Design.</li> </ol>      |
| <b>SEMESTER III</b>                                                                                                                                                                 |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Paper( Theory)</b><br><b>Name of the course-</b><br><b>Advertising and Society</b><br><b>Course Code-B23-COA-</b><br><b>301</b><br><br><b>Course Type- CC-</b><br><b>3/MCC-4</b> | <b>Commercial Art</b>           | <ol style="list-style-type: none"> <li>1. Student will be able to describe Different Form of Advertisement.</li> <li>2. Student will be able to describe Communication Process.</li> <li>3. Student will be able to describe the Relation of Advertising and Society.</li> <li>4. Student will be able to describe the Importance of Advertising in the Society.</li> <li>5. Students will be capable to understand the Poster Design Process.</li> </ol> |
| <b>SEMESTER IV</b>                                                                                                                                                                  |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <b>Paper( Theory)</b><br><b>Name of the course-</b><br><b>Advertising</b><br><b>Profession</b><br><b>Course Code-B23-</b><br><b>COA-401</b><br><br><b>Course Type- CC-</b><br><b>4/MCC-6</b> | <b>Commercial</b><br><b>Art</b>    | <ol style="list-style-type: none"> <li>1. Student will be able to describe Professional advertising at the macro level of advertising industry</li> <li>2. Student will be able to describe the techniques of advertising</li> <li>3. Student will be able to describe the Marketing, Advertising &amp; Market Research</li> <li>4. Student will be able to describe the Ethics in Advertising</li> <li>5. Students will be capable to understand the Poster Design Process.</li> </ol> |
| <b>SEMESTER V</b>                                                                                                                                                                            |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>B23-COA-501</b>                                                                                                                                                                           | <b>Advertising</b><br><b>Media</b> | <ol style="list-style-type: none"> <li>1. Student will be able to describe Advertising and Media</li> <li>2. Student will be able to describe the Role of advertising in Media</li> <li>3. Student will be able to describe the Traditional Media of advertising</li> <li>4. Student will be able to describe the digital Media of advertising</li> <li>5. Students will be capable to understand the social and productive ad Process. .</li> </ol>                                    |
| <b>SEMESTER VI</b>                                                                                                                                                                           |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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| <b>B23-COA-6 01</b> | <b>Trademark Design</b> | <ol style="list-style-type: none"> <li>1. Student will be able to describe Trademark Design.</li> <li>2. Student will be able to learn about function, Objective, trademark law and regulations of Trademark.</li> <li>3. Student will be capable to understand the Different Types of Trademark.</li> <li>4. Student will be able to describe Advantages and Disadvantages of trademark.</li> <li>5. Students will be able to understand the Applications of Trademark design.</li> </ol> |
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### 7. Course Outcomes (COs) of Bachelor of Arts (Home Science)

| <b>SEMESTER I</b>          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Course Code</b>         | <b>Course Name</b>             | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>B23-HSC-101</b>         | <b>Home and interior Decor</b> | <ol style="list-style-type: none"> <li>1. To encourage experimentation with traditional and contemporary material, technical processes and methods.</li> <li>2. To impart knowledge and skills for making different floor plans for different income groups.</li> <li>3. To develop skills, abilities and knowledge that enable artistic production and creative problems solving skills.</li> <li>4. To develop and apply concepts of art and design to create aesthetically pleasing interiors.</li> </ol> |
| <b>SEMESTER I(MDC)</b>     |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>B23-HSE-101</b>         | <b>Basic of Home Science I</b> | <ol style="list-style-type: none"> <li>1. To acquire knowledge of various concepts of food &amp; nutrition Science</li> <li>2. To enable the students to have basic knowledge of textile fibers, yarn and various stitches</li> <li>3. To have knowledge of and basic concepts related to human development</li> </ol>                                                                                                                                                                                       |
| <b>SEMESTER II (Major)</b> |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <b>B23-HSC-201</b>       | <b>Nutrition Science</b>                                    | <ol style="list-style-type: none"> <li>1. To understand basic concepts of nutrition and importance of water and carbohydrates.</li> <li>2. To understand the functions, sources, requirements and effects of excess and deficiency of different nutrients.</li> <li>3. The students will able to know the functions sources requirements and effects of excess and deficiency of different vitamins.</li> <li>4. To understand the functions, source, requirements of excess deficiency of different minerals.</li> </ol> |
| <b>SEMESTER II(MDC)</b>  |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| B23-HSE-203              | Basics of Home Science II                                   | <ol style="list-style-type: none"> <li>1. To obtain knowledge about dietary management of diseases and modifications of normal diet for therapeutic purposes and preservation.</li> <li>2. To impart knowledge about traditional Embroideries of India and stain removal.</li> <li>3. To inculcate the skills of guidance &amp; counselling</li> </ol>                                                                                                                                                                    |
| <b>SEMESTER III</b>      |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>B23-HSC-301</b>       | <b>Basic Of Clothing Construction And Apparel Designing</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Acquire the knowledge of application of elements of arts and principles of design in clothing construction and techniques of dress designing</li> <li>2. Students get aware about the fabric construction technique and non-woven fabrics</li> <li>3. Gain information about the methods of developing design</li> </ol>                                                     |
| <b>SEMESTER III(MDC)</b> |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>B23-HSE-302</b>       | <b>Basics of Home Science III</b>                           | <ol style="list-style-type: none"> <li>1. To obtain knowledge about dietary management of diseases and modifications of normal diet for therapeutic purposes and preservation.</li> <li>2. To impart knowledge about traditional Embroideries of India and stain removal.</li> <li>3. To inculcate the skills of guidance &amp; counseling.</li> <li>4. Basics of clothing construction and apparel designing</li> </ol>                                                                                                  |
| <b>SEMESTER IV</b>       |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| <b>B23-<br/>HSC-<br/>401</b> | <b>Advance<br/>Apparel And<br/>Textile<br/>Designing</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge about different types of finishes give to fabrics</li> <li>2. Get acquainted with different types of dyes and method of dyeing</li> <li>3. Acquire the technique of different types of printing</li> <li>4. Equipped with the knowledge of laundry process, soap making, stiffening and bluing agents</li> <li>5. Students become able to do the drafting of various sleeves, collars and implement the technique of tie/die and printing on fabric, and acquire knowledge of the process of stain removal</li> </ol> |
| <b>SEMESTER V(VOC)</b>       |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23-<br/>VOC-<br/>203</b> | <b>Chocolate<br/>Craft</b>                               | <ol style="list-style-type: none"> <li>1. To understanding the processing of cocoa beans and various types of chocolates.</li> <li>2. To understanding the process of chocolate making.</li> <li>3. To understand various defects in chocolate and type of moulds.</li> <li>4. To understanding the various aspects and importance of chocolate packaging</li> </ol>                                                                                                                                                                                                                                                                                                              |
| <b>B23-<br/>VOC-<br/>220</b> | <b>Fashion<br/>Jewellery<br/>Making</b>                  | <ol style="list-style-type: none"> <li>1. Prepare various types of jewellery with different materials.</li> <li>2. Sketch, paint and prepare fashion accessories.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>SEMESTER V</b>            |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23-<br/>HSE-<br/>501</b> | <b>Normal and<br/>Therapeutic<br/>Nutrition</b>          | <ol style="list-style-type: none"> <li>1. To understand nutritional requirements across various stages of life.</li> <li>2. To develop the skills for meal planning at various life stages using recommended dietary intake and reference values.</li> <li>3. To understand the diet modifications for therapeutic purposes and gain knowledge about dietary management of diseases.</li> <li>4. To modify normal diets to best suit therapeutic conditions.</li> <li>5. To acquire practical knowledge in planning and preparing both normal and therapeutic diets</li> </ol>                                                                                                    |
| <b>SEMESTER V (VOC)</b>      |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <b>B23-<br/>VOC-103</b>      | <b>Baking<br/>Techniques</b>  | <ol style="list-style-type: none"> <li>1. To have knowledge of ingredients used in baking.</li> <li>2. To know about role of leavening and Moistening agents.</li> <li>3. To obtain knowledge about cake preparation, their faults and decoration ideas.</li> <li>4. To enable the students to have knowledge of bread-making.</li> <li>5. To have practical knowledge of baking and preparation of bakery items.</li> </ol>                                                                                                                                                                                                                                                                                                        |
| <b>B23-<br/>VOC-111</b>      | <b>Skin and hair<br/>care</b> | <ol style="list-style-type: none"> <li>1. Analyze skin, suggest appropriate beauty regimens and perform facials, massages and other skin care treatments.</li> <li>2. Improve personal appearance and profession.</li> <li>3. Develop skills that are related to business management and retail sales.</li> <li>4. Apply knowledge of the skin and hair treatments and aesthetic applications with hands-on training.</li> <li>5. Perform specialized skin and hair care procedures, such as hair styling, facials, massage, scalp treatment, manicures, pedicure</li> </ol>                                                                                                                                                        |
| <b>SEMESTER VI</b>           |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>B23-<br/>HSE-<br/>601</b> | <b>Human<br/>Development</b>  | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Describe the stages of human development and associated tasks and problems.</li> <li>2. Understand key psychological concepts related to child behaviour and learning.</li> <li>3. Explain intelligence and personality development and their influencing factors.</li> <li>4. Evaluate the importance of maternal care and nutrition in early development.</li> <li>5. Apply skills of observation, report writing and communication through community-based practical and understand ground level challenges and practice related to public health and child development.</li> </ol> |
| <b>B23-<br/>VOC-<br/>303</b> | <b>Food<br/>Packaging</b>     | <ol style="list-style-type: none"> <li>1. Know about the Basics of Food Packaging</li> <li>2. Understand about the different materials used in Food packaging.</li> <li>3. Acquire knowledge about innovative and smart packaging.</li> <li>4. Know about the applications of packaging in various fields.</li> <li>5. Prepare different kinds of packages for food.</li> </ol>                                                                                                                                                                                                                                                                                                                                                     |

## **8. Course Outcomes (COs) of Bachelor of Arts (Music)**

| <b>SEMESTER 1</b>  |                    |                                                                                              |
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| <b>Course Code</b> | <b>Course Name</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> |
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| <b>Paper 1</b><br><b>course code</b><br><b>B23- BMV-</b><br><b>101</b> | <b>Musicology</b>                                                  | <div>1. इसमें बच्चो को इतिहास के वैदिक काल से लेकर 12 वी शताब्दी तक संगीत की दशा का पता चला।</div> <div>2. इसमें बच्चो को भारतीय संस्कृति में प्रचलित शास्त्रीय संगीत और लोक संगीत के अंतर का पता चला।</div> <div>3. बच्चो को ताल के बारे में अवगत कराया गया जिससे उनकी अवनद्ध वाद्य मेरुचि उत्पन्न हुई।</div>                          |
| <b>SEMESTER II</b>                                                     |                                                                    |                                                                                                                                                                                                                                                                                                                                         |
| <b>Paper 1</b>                                                         | <b>Historical study of the Musical Terms</b>                       | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                            |
| <b>Course code</b><br><b>B23 – BMV-</b><br><b>201</b>                  |                                                                    | <div>1 . इसमें बच्चो को राष्ट्रीय एकता में संगीत की भूमिका के बारे में पता चला।</div> <div>2 . इसमें बच्चो को गायकों में गुणों के प्रकार से उत्पन्न होते हैं इसकी जानकारी दी गई।</div> <div>3 . अलंकार से बच्चो को रियाज करने के तरीके का पता चलता है।</div> <div>4. संगीत प्रत्येक व्यक्ति का मनोरंजन का सटीक साधन है।</div>           |
| <b>SEMESTER III</b>                                                    |                                                                    |                                                                                                                                                                                                                                                                                                                                         |
| <b>Paper 1</b>                                                         | <b>Genral introduction to Musical forms , terms and techniques</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                            |
| <b>Course code - B23- BMV-301</b>                                      |                                                                    | <div>1. इसमें बच्चो के संगीत के शैक्षिक और सांस्कृतिक पहलुओं को बढ़ावा देने में विज्ञान की कितनी भूमिका है इसके बारे में जानकारी प्राप्त हुई है।</div> <div>2. संगीत में राग गायन के अभ्यास के द्वारा श्वास पर नियंत्रण व फेफड़ों को सशक्त बनाया जा सकता है।</div> <div>3. संगीत मन को शांति प्रदान करता है और एकाग्रता बढ़ती है।</div> |
| <b>SEMESTER IV</b>                                                     |                                                                    |                                                                                                                                                                                                                                                                                                                                         |
|                                                                        |                                                                    | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                             |

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| <b>Paper 1</b>                            |                                                                        | 1 इसमेंबच्चोकोमध्ययूगिनकालसंगीतकेइतिहासकीजानकारीप्राप्तहुई।<br>2. संगीतमेंभैरवतथाअन्यरागोंसेअनिद्रादूरहोतीहैऔरतनावमुक्तकरतेहैं।<br>3.संगीतकेद्वाराविद्यार्थियोंमेंभावपक्षकीवृद्धिहोतीहै।<br>4.संगीतमनकोशांतिप्रदानकरताहैऔरएकाग्रताबढ़तीहै।         |
| <b>Course code -<br/>B23-BMV-401</b>      | <b>Applied Music<br/>theory</b>                                        |                                                                                                                                                                                                                                                    |
| <b>SEMESTER V</b>                         |                                                                        |                                                                                                                                                                                                                                                    |
| <b>(CC-A6)</b><br><b>B23-BMV-601</b>      | <b>Fundamentals<br/>of Music</b>                                       | <b>Course Outcomes: After successfully completing<br/>this course, students will be able to</b>                                                                                                                                                    |
|                                           |                                                                        | 1. Understand Indian music concepts and Ragas.<br>2. Write Khayal and Taal notation.<br>3. Explain musical terms and contributions.<br>4. Perform prescribed Ragas and Taals.                                                                      |
| <b>SEMESTER VI</b>                        |                                                                        |                                                                                                                                                                                                                                                    |
| <b>(CC-A5)</b><br><b>B23-BMV-<br/>501</b> | <b>Life and<br/>contribution of<br/>Musicians and<br/>Musicologist</b> | <b>Course Outcomes: After successfully completing<br/>this course, students will be able to</b>                                                                                                                                                    |
|                                           |                                                                        | 1. Understand advanced ragas and detailed raga<br>analysis.<br>2. Gain knowledge of complex talas and layakari.<br>3. Learn various classical vocal forms and<br>compositions.<br>4. Understand contribution of eminent musicians<br>and gharanas. |

## 9. Course Outcomes (COs) of Bachelor of Arts (History )

## Course Outcomes (COs) of Bachelor of Arts

| <b>SEMESTER I (CC/MCC)</b>  |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Course Code</b>          | <b>Course Name</b>                  | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>B23-HIS-101</b>          | <b>IDEA OF BHARAT</b>               | <ol style="list-style-type: none"> <li>1. Acquaint with the concept of Bharat/Bharatvarsha and its eternity and major Knowledge Traditions and Educational System in ancient India.</li> <li>2. Understand the concepts, ideas and developments in the spheres of Dharma, Philosophy, Art and Culture in ancient India.</li> <li>3. Grasp the concepts, ideas and developments in the spheres of Science, Environment, Polity and Economy in ancient India.</li> <li>4. Demonstrate the Political Contours of ancient Bharatvarsha; Places of ancient Indian Arts; Important ancient Janpadas and ancient Maritime Commerce on the outline map of India and also explicate it historically.</li> </ol>                                                                                                                                                                                                                     |
|                             |                                     | <b>SEMESTER I (CC-M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23-HIS 103</b>          | <b>Indian History &amp; Culture</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Acquaint with the Idea of History in India; Ancient Indian Literature and its Historicity, and Myths and Reality vis-à-vis Historical Understanding in India.</li> <li>2. Understand the deep rooted impact of social inequalities based on Class, Caste &amp; Gender in shaping historically the Culture of India.</li> <li>3. Grasp the Cultural Assimilation and Cultural Heritage in India with particular reference to Great &amp; Little 10 Traditions; Emergence of Composite Culture; Main Components of Cultural Heritage in India, and Built Heritage and Historical Tourism in Indian Context.</li> <li>4. Familiar with the Cultural Forms and Cultural Expressions like Performing Arts, Fairs &amp; Festivals, and the issues of Cultural Identity in the era of Globalization</li> </ol> |
| <b>SEMESTER II (CC/MCC)</b> |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| <b>B23-<br/>HIS-<br/>201</b> | <b>HISTORY<br/>OF INDIA<br/>(From<br/>Earliest<br/>Times to<br/>1206)</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Learn about the Sources for reconstructing the history of Ancient India and also know the major historical developments from the origins of Harappan Civilization upto the rise of Magdha Empire in ancient India.</li> <li>2 Understand the major historical developments pertaining to the rise of Mauryan Empire, Post-Mauryan states like Kushana and Satvahana, rise of Gupta Empire, and PostGupta Powers in ancient India.</li> <li>3. Grasp the major historical developments pertaining to the Triangular Struggle for Hegemony of Kannauj among Palas, Pritiharas and Rashtrakutas; Polity and Administration of Cholas; Rise of Rajputs, and invasions 16 of Mahmood Ghaznavi and Muhammad Ghori in India.</li> <li>4 Demonstrate the sites of Harappan Civilization, extent of Ashoka's Empire, extent of Kanishka's Empire and extent of Harsha's Empire on the outline map of India and also explicate it historically.</li> </ol> |
|                              |                                                                           | <b>SEMESTER II (CC-M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>B23-<br/>HIS-<br/>202</b> | <b>Orality and<br/>Oral Culture<br/>in India</b>                          | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Acquaint with the different Definitions of Orality and History/Historiography of Orality.</li> <li>2. Grasp the Theatrical Debate on Power/Knowledge Paradigm and Control as well as Ideology, Identity and Knowledge Production with special reference to Gender and Caste.</li> <li>3. Understand the historical significance of Life Stories and its Sociological Aspects with special reference to the Autobiographies of Women &amp; Dalits and the Method how to Record Life Histories.</li> <li>4. Familiar with the Research Methodologies of Oral History and different forms of Documentation, particularly Written &amp; Visual Representations.</li> </ol>                                                                                                                                                                                                                                                                           |
|                              |                                                                           | <b>SEMESTER III (CC/MCC)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| <b>B23-<br/>HIS-<br/>301</b>  | <b>History of<br/>India (1206-<br/>1757)</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Learn the major historical developments pertaining to the Emergence and Consolidation of Delhi Sultanate; State Apparatus of the Sultanate; rise of Bahmani and Vijaynagar Empires, and the growth of Bhakti and Sufi Movements in medieval India.</li> <li>2. Understand the major historical developments pertaining to the Establishment of Mughal Rule; rise of Shershah Suri and his Administration; Polity and Policies of the Great Mughals; the features of Mughal Systems, and Society and Economy under Mughals.</li> <li>3. Grasp the Disintegration of Mughal Empire, Emergence of Regional Powers in 18th century; Rivalry between European Powers in India and Wars of Carnatic, and Conquest of East India Company over Bengal.</li> <li>4. Demonstrate the Expansion of AlauddinKhilji's Empire, Political Conditions of India in 1526, Extent of Mughal Empire at the Death of Akbar (1605) and Extent of Mughal Empire at the Death of Aurangzeb (1707) on the outline map of India and also explicate it historically.</li> </ol> |
|                               |                                              | <b>SEMESTER III (CC-M)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>B23 -<br/>HIS-<br/>301</b> | <b>History of<br/>India(1206-<br/>1757)</b>  | <p><b>After completing this course, the learner will beable to:</b></p> <ol style="list-style-type: none"> <li>1. Learn the major historical developments pertaining to the Emergence and Consolidation of Delhi Sultanate; State Apparatus of the Sultanate; rise of Bahmani and Vijaynagar Empires, and the growth of Bhakti and Sufi Movements in medieval India.</li> <li>2. Understand the major historical developments pertaining to the Establishment of Mughal Rule; rise of Shershah Suri and his Administration; Polity and Policies of the Great Mughals; the features of Mughal Systems, and Society and Economy under Mughals.</li> <li>3. Grasp the Disintegration of Mughal Empire, Emergence of Regional Powers in 18th century; Rivalry between European Powers in India and Wars of Carnatic, and Conquest of East India Company over Bengal.</li> <li>4. Demonstrate the Expansion of AlauddinKhilji's Empire, Political Conditions of India in 1526, Extent of Mughal Empire at the Death of Akbar (1605) and Extent of Mughal Empire at the Death of Aurangzeb (1707) on the outline map of India and also explicate it historically.</li> </ol>  |
| <b>SEMESTER IV (CC/MCC)</b>   |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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| <b>B23-HIS-401</b>   | <b>History of India(1757-1947)</b>   | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Learn the major historical developments pertaining to the Establishment, Expansion and Consolidation of the British Rule in India and different Tools/Methods used for it by the British, and their Policy towards Princely States upto 1857.</li> <li>2. Understand the major historical developments pertaining to the Uprising of 1857; Beginning of the Crown's Rule; Impact of Social Reform Movements like BrahmoSamaj, Arya Samaj, SatyashodhakSamaj and Ramkrishan Mission; Emergence of Indian National Movement under the Congress, and the Political Reforms of 1909 and 1919.</li> <li>3. Grasp the major historical developments related to role of Revolutionaries in National Movement; the rise of Depressed Class Movement; Role of Mahatma Gandhi in National Movement; Role of Subhash Chandra Bose and INA in freedom struggle; Prajamandal Movements in Princely States and, the circumstances leading to the Partition and Independence of India.</li> <li>4. Demonstrate the Expansion of the British Empire upto 1856, Centers of the Uprising of 1857, Centers of Revolutionary Movement and Centers of Gandhian Movements on the outline map of India and also explicate it historically.</li> </ol> |
| <b>SEMESTER V</b>    |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>B23 - HIS-501</b> | <b>History of Europe (1789-1914)</b> | <ol style="list-style-type: none"> <li>1. Learn the major historical developments pertaining to the Context, Causes, Course and Consequences of the French Revolution; rise of Napoleon</li> <li>2. Bonaparte and his Domestic and Foreign Policies, and the Congress of Vienna (1815) and its Impact on Europe.</li> <li>3. Understand the major historical developments pertaining to the Metternich System and the Conservative Era (1815-1830); European Revolutions</li> <li>4. of 1830 and 1848 and its aftermath in France; Impact of Industrial Revolution on Europe, and Unification of Germany and Italy.</li> <li>5. Grasp the major historical developments related to the growing Imperialist Rivalries and Partition of Africa; formation of Diplomatic Alliances like</li> <li>6. Triple Alliance and Triple Antente, and Rise of Eastern Question and its impact on the Balkan region.</li> <li>7. Demonstrate the Political Conditions of Europe in 1789, Continental System of Napoleon Bonaparte, Reconstruction of Europe by Vienna Congress,</li> <li>8. Political Conditions on the eve of World War - I on the outline map of Europe and also explicate it historically</li> </ol>                                                                                                                                         |
| <b>SEMESTER VI</b>   |                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <b>B23-<br/>HIS-<br/>601</b> | <b>History of<br/>Europe<br/>(1914-1945)</b> | <p><b>After completing this course, the learner will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Peace Settlement and its Long Term Effects, and Causes, Course and Consequences of Bolshevik Revolution in Russia.</li> <li>2. Understand the historical developments related to the Liberal and Socialist Movements; Working of League of Nations, and Effects of the Great Depression of 1929 in Europe.</li> <li>3. Grasp the historical developments-concerning the Rise of Totalitarianism in the forms of Nazism and Fascism Formation of Tripartite Pact and Grand Alliance ,and Cause ,Course and Consequences of World War-II .</li> <li>4. Demonstrate the Political Conditions after Paris Peace Settlement, European Powers involved in Tripartite Pact, European Powers involved in Grand Alliance and Political Conditions on the Eve of World War-II on the outline map of Conditions on the Eve of World War-II on the outline map of Europe and also explicate it historically.</li> </ol> |
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## 10.Course Outcomes (COs) of History and Foundations of Physical Education

| SEMESTER – I                                                                 |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>PAPER -1</b><br><br><b>MAJOR CORE COURSE -1</b><br><br><b>B23-PED-101</b> | <b>History and Foundations of Physical Education</b> | <b>After completing this course the learner will be able to:</b> <ol style="list-style-type: none"> <li>1. Describe the Aims, Objectives and scope of Physical Education</li> <li>2. Explain the historical development of Physical Education in India</li> <li>3. Illustrate the basic knowledge of biological aspects of Physical Education</li> <li>4. Tell the various Career opportunities in Physical Education and Sports.</li> <li>5. Know the basic specifications of court/ground, general rules and demonstrate the basic skills of Kho Kho and Badminton.</li> </ol> |
| SEMESTER - II                                                                |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>PAPER -1</b><br><br><b>MAJOR CORE COURSE -1</b><br><br><b>B23-PED-201</b> | <b>Basic Anatomy and Physiology</b>                  | <b>After completing this course the learner will be able to:</b> <ol style="list-style-type: none"> <li>1. Describe the Anatomy, Physiology and structure of Cells.</li> <li>2. Explain the structure of Joints and Muscular System</li> <li>3. Illustrate the basic knowledge about Anatomy, Physiology of Circulatory and Digestive Systems of human body</li> <li>4. Explain the Anatomy, Physiology of Respiratory and Excretory Systems of human body</li> <li>5. Identify name and locations of bones, muscles and organs of various systems of human body.</li> </ol>     |
| SEMESTER - III                                                               |                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>PAPER -1</b><br><br><b>MAJOR CORE</b><br><b>COURSE -1</b><br><br><b>B23-PED-301</b> | <b>EXERCISE</b><br><b>PHYSIOLO</b><br><b>GY</b>     | <b>After completing this course the learner will be able to:</b><br><br>1. Describe the Exercise Physiology, Body Composition and types of muscle contractions<br><br>2. Explain the effect of exercise on the various aspects of Skelton muscles<br><br>3. Illustrate the effects of various aspects of circulatory system<br><br>4. Tell the various Effects of exercise on the various capacities and volumes of lung.<br><br>5. Know the basic specifications of court/ground, general rules and demonstrate the basic skills of Football and Boxing/Wrestling/Judo |
| <b>SEMESTER - IV</b>                                                                   |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>PAPER -1</b><br><br><b>MAJOR CORE</b><br><b>COURSE -1</b><br><br><b>B23-PED-401</b> | <b>Basics of</b><br><b>Sports</b><br><b>Fitness</b> | <b>After completing this course the learner will be able to:</b><br><br>1. Describe meaning, importance and norms of Physical Fitness.<br><br>2. Illustrate meaning, principles and methods of warming up.<br><br>3. Explain meaning, principles and methods of cooling down. 4. Describe the health related and skill related components of fitness<br><br>5. Demonstrate the techniques of measuring strength, flexibility, agility and hand eye coordination.                                                                                                        |
| <b>SEMESTER - V</b>                                                                    |                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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| <b>CC-5</b><br><br><b>B23-Phy.ED.-501</b> | <b>Sports Training</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Describe the meaning ,aims, and objectives of sports training</li> <li>2. Explain the importance and principles of sports training</li> <li>3. Understanding the meaning and types of Physical fitness</li> <li>4. Identify and explain the meaning, types, and factors affecting training load</li> <li>5. Explain the meaning, types and principals involved in the formulation of training plans</li> </ol> |
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**SEMESTER –VI**

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| <b>CC-6</b><br><br><b>B23-Phy.Ed.-601</b> | <b>Organizational and Administration</b> | <p><b>Course Outcomes: After successfully completing this course, students will be able to :</b></p> <ol style="list-style-type: none"> <li>1. To understand importance, scope, natureand functions of sports management</li> <li>2. To learn about importance, types, care and maintenance of sports management</li> <li>3. .To understand need of Leadership in sports</li> <li>4. To learn about financial management, its objectives, need and functions in sports</li> </ol> |
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## 11. Course Outcomes (COs) of Bachelor of Arts (Sociology)

| SEMESTER – I(CC/MCC)  |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| Course Code           | Course Name                               | COs: After successfully completing this course,students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>B23- SOC-101</b>   | <b>Introduction to Sociology</b>          | <ol style="list-style-type: none"> <li>1. Demonstrate an understanding of core sociological concepts and theories.</li> <li>2. Explain the role of sociology in understanding social behavior and institutions.</li> <li>3. Apply major sociological theories to real-world situations.</li> <li>4. Analyze the impact of social inequality and diversity.</li> <li>5. Use the sociological imagination to connect personal experiences to larger social structures.</li> <li>6. Demonstrate basic understanding of sociological research methods.</li> </ol> |
| SEMESTER – II(CC/MCC) |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Course Code           | Course Name                               | COs: After successfully completing this course,students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>B23- SOC-201</b>   | <b>Foundation of Sociological Thought</b> | <ol style="list-style-type: none"> <li>1. Learn about various aspects and role of positivism in sociology as a discipline</li> <li>2. Know about the function a list perspective in sociology in the opinion of its pioneers.</li> </ol>                                                                                                                                                                                                                                                                                                                      |
| SEMESTER- III         |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Course Code           | Course Name                               | COs: After successfully completing this course,students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| <b>B23- SOC-301</b> | <b>Indian Society</b> | <ol style="list-style-type: none"> <li>1. Understand the historical and cultural context of Indian society.</li> <li>2. Analyze the structure and diversity of Indian society.</li> <li>3. Examine the processes of social change in India.</li> <li>4. Evaluate the impact of social institutions in India.</li> <li>5. Understand the nature and consequences of social problems in India.</li> <li>6. Discuss the Constitution and its role in promoting social justice.</li> </ol> |
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#### SEMESTER IV

| <b>Course Code</b>  | <b>Course Name</b>          | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                           |
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| <b>B23- SOC-401</b> | <b>Research Methodology</b> | <ol style="list-style-type: none"> <li>1. Understand the fundamentals of research and its significance.</li> <li>2. Formulate research problems and hypotheses..</li> <li>3. Review relevant literature effectively.</li> <li>4. Understand and apply appropriate research designs.</li> <li>5. Learn sampling techniques and their applications.</li> <li>6. Collect data using various tools and techniques.</li> </ol> |

#### SEMESTER V

| <b>Course Code</b> | <b>Course Name</b> | <b>COs: After successfully completing this course, students will be able to</b> |
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| <b>B23-SOC-501</b> | <b>Modern Sociological Thought-1</b> | <ol style="list-style-type: none"> <li>1. Understand foundations of modern sociological thought .</li> <li>2. Explain contributions of major modern sociologists.</li> <li>3. Analyze key modern sociological theories.</li> <li>4. Examine concepts like power, ideology, and social action.</li> <li>5. Compare classical and modern perspectives.</li> <li>6. Apply modern sociological ideas to contemporary society.</li> </ol> |
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**SEMESTER VI**

| <b>Course Code</b> | <b>Course Name</b>                    | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                     |
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| <b>B23-SOC-601</b> | <b>Modern Sociological Thought-II</b> | <ol style="list-style-type: none"> <li>1. Understand key concepts of modern sociological thought</li> <li>2. Explain contributions of modern sociologists</li> <li>3. Analyze contemporary sociological theories</li> <li>4. Compare classical and modern perspectives</li> <li>5. Evaluate relevance of modern theories in present society</li> <li>6. Apply modern sociological ideas to social issues</li> </ol> |

## 12. Course Outcomes (COs) of Bachelor of Arts (Geography)

| <b>SEMESTER – I</b>   |                           |                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Course Code</b>    | <b>Course Name</b>        | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                          |
| <b>B23-GEO-101</b>    | <b>Physical Geography</b> | <ol style="list-style-type: none"> <li>1. Understand different theories of the earth.</li> <li>2. Develop History and idea about concept of earth's movements and related topography.</li> <li>3. Acquire knowledge about different processes of denudation.</li> </ol>                                                                                                                                  |
| <b>SEMESTER – II</b>  |                           |                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Course Code</b>    | <b>Course Name</b>        | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                          |
| <b>B23-GEO-201</b>    | <b>Human Geography</b>    | <ol style="list-style-type: none"> <li>1. Gain knowledge about major themes of human geography.</li> <li>2. Develop an idea about space and society.</li> <li>3. Build an idea about population growth and distribution of population.</li> <li>4. Know about population –resource relationship.</li> </ol>                                                                                              |
| <b>SEMESTER – III</b> |                           |                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Course Code</b>    | <b>Course Name</b>        | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                          |
| <b>B23-GEO-301</b>    | <b>Geography Of India</b> | <ol style="list-style-type: none"> <li>1. Understand the processes of erosion, deposition and resulting landforms.</li> <li>2. Explain the development of drainage system in unilineal and folded structure.</li> <li>3. Understand concept of normal cycle of erosion and its interruption.</li> <li>4. Develop an idea about types of coastal landforms. Acquire knowledge about hydrology.</li> </ol> |
| <b>SEMESTER – IV</b>  |                           |                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Course Code</b>    | <b>Course Name</b>        | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                          |

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| <b>B23-GEO-401</b> | <b>Economic Geography</b> | <ol style="list-style-type: none"> <li>1. Gain knowledge about major themes of human geography.</li> <li>2. Develop an idea about space and society.</li> <li>3. Build an idea about population growth and distribution of population.</li> <li>4. Know about population –resource relationship.</li> </ol> |
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#### **SEMESTER –V**

| <b>Course Code</b>          | <b>Course Name</b>                      | <b>COs: After successfully completing this course, students will be able to</b>                                                                                                                                          |
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| <b>CC-5<br/>B23-GEO-501</b> | <b>Statistical Methods In Geography</b> | <ol style="list-style-type: none"> <li>1. To understand the basic of quantitative methods</li> <li>2. To enrich understanding about types of all</li> <li>3. To skilled 10 data analysis and its presentation</li> </ol> |

#### **SEMESTER –VI**

| <b>Course Code</b>          | <b>Course Name</b>                   | <b>COs: After successfully completing this course, students will be able to</b>                                                                           |
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| <b>CC-6<br/>B23-GEO-601</b> | <b>Fundamental of Remote Sensing</b> | <ol style="list-style-type: none"> <li>1. To understand the concept of remote sensing</li> <li>2. To acquaint with the various space programme</li> </ol> |

### **13. Course Outcomes (COs) of Bachelor of Arts (Mathematics)**

| <b>SEMESTER I</b>  |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Course Code</b> | <b>Course Name</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>B23-MAT-101</b> | <b>Calculus</b>    | <p>1. Gain knowledge of the concepts and theory of limit, continuity and differentiability of functions. Attain skills of calculating the limit of functions and examining the continuity and differentiability of different types of functions, and perform successive differentiation of functions. To apply the procedural knowledge to obtain the series expansions of functions which find multidisciplinary applications.</p> <p>2. Understand concepts of asymptotes and curvature, the geometrical meaning of these terms and to have procedural knowledge to solve related problems.</p> <p>3. Determine singular points of a curve and classify them. Understand the concept of rectification of curves and derive the reduction formulae.</p> <p>4. Have theoretical knowledge and practical skills to evaluate the area bounded by the curves, and volume and surface area of solids formed by revolution of curves.</p> <p>5. Attain cognitive and technical skills required for solving different problems of calculus associated with 34(952) tracing of curves, determination of curvature, and rectification of curves, volume and surface area of solids of revolution. Have technical and practical skills of solving calculus problems related to differentiation and integration of functions by using MAXIMA software.</p> |

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| <p><b>B23-MAT-103</b></p> | <p><b>Basic Calculus</b></p> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of the concepts of limit, continuity and differentiability of functions, calculate the limit of functions and examine the continuity and differentiability of different types of functions, and perform successive differentiation of functions and obtain their series expansions, which find multidisciplinary applications within the chosen field of learning.</li> <li>2. Have deeper understanding of Taylor's and Maclaurin's theorem and use this knowledge for series expansion of various functions, which find multidisciplinary applications within the chosen field of learning.</li> <li>3. Understand and acquire procedural skills required for accomplishing assigned tasks of determining asymptotes and analyze them geometrically.</li> <li>4. Comprehend the process of deriving reduction formulae and use this skill to solve typical integrals easily and quickly.</li> <li>5. Attain cognitive and theoretical skills to find successive derivatives of a function, higher derivative of the product of two functions using Leibnitz's rule and apply this skill for expansion of functions. Have technical and practical skills of solving problems related to differentiation and integration of functions by using built in functions of MAXIMA software.</li> </ol> |
| <p><b>SEMESTER II</b></p> |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p><b>B23-MAT-201</b></p> | <p><b>Algebra and Number Theory</b></p> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of the concepts of symmetric, skew-symmetric, Hermitian, skew-Hermitian, Orthogonal and Unitary matrices, Linear dependence and independence of rows and columns of a matrix. Have knowledge of procedure and cognitive skills used in calculating rank of a matrix, eigen values, characteristic equation, minimal polynomial of a matrix and technical skills used in solving problems based on Cayley- Hamilton theorem.</li> <li>2. Have knowledge of the concepts used in solving problems based on relations between the roots and coefficients of general polynomial equation in one variable, solutions of polynomial equations having conditions on roots, common roots and multiple roots. Understand Descarte's rule of signs and learn cognitive and technical skills required in assessing nature of the roots of an equation and solving problems based on these.</li> <li>3. Have deeper and procedural knowledge required for solving cubic and biquadratic equations used in Mathematics as well as many other learning fields of study. To understand the basic concepts of number theory and their applications in problem solving and life- long learning.</li> <li>4. Have knowledge of concepts, facts, principles and theories of Linear Congruences, Fermat's theorem, Euler's theorem, Wilson's theorem and its converse, Chinese Remainder theorem. Attain cognitive skills used in solving linear Diophantine equations in two variables.</li> <li>5. Attain cognitive and technical skills required to formulate and solve practical problems involving rank of a matrix, inverse of a matrix, Cardon's method, Ferrari's method, Descarte's method, Cayley-Hamilton theorem, Euler's theorem and Chinese Remainder theorem. Have technical and practical skills required for solving algebraic equations, finding inverse and eigen values of matrices by using built in functions of MAXIMA software.</li> </ol> |
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| <p><b>B23-MAT-203</b></p>  | <p><b>Basic Algebra</b></p> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of facts, principles and theories to determine rank of a matrix, eigen values, eigen vectors, characteristic equation and minimal polynomial of square matrices.</li> <li>2. Have procedural knowledge, cognitive and technical skills of solving problems based on Cayley-Hamilton theorem. Gain knowledge about unitary and orthogonal matrices and have skills to solve problems related to them.</li> <li>3. Understand consistency of homogeneous and non-homogeneous system of linear equations and to learn cognitive and technical skills required for solving such type of problems using matrices.</li> <li>4. Have procedural knowledge to determine relation between roots and coefficients of a general polynomial and find solutions of polynomial equations having conditions on roots.</li> <li>5. Attain cognitive and technical skills required for using relevant methods and procedures to solve algebraic equations, finding inverse and eigen values of matrices. Have technical and practical skills of solving algebraic equations, finding inverse and eigen values of matrices by using built in functions of MAXIMA software.</li> </ol> |
| <p><b>SEMESTER III</b></p> |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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| <p><b><u>B23-</u></b><br/><b><u>MAT-301</u></b></p> | <p><b>Differential Equations-1</b></p> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of the basic concepts of ordinary differential equations and learn various techniques of finding exact solutions of certain solvable first order differential equations.</li> <li>2. Have procedural knowledge and cognitive and technical skills of solving homogeneous and nonhomogeneous second order linear ordinary differential equations with constant coefficients and with variable coefficients.</li> <li>3. Gain knowledge of theory of total differential equations and basic concepts of partial differential equations. To learn methods and techniques for solving linear PDEs of first order and to acquire technical skills for accomplishing assigned tasks relating to formulation and solution of PDEs in broad multidisciplinary contexts.</li> <li>4. Have knowledge of concepts and theories of second order PDEs and to apply theory of PDEs to determine integral surfaces through a given curve and to find orthogonal surfaces. To understand compatible systems and to learn cognitive and technical skills required for selecting and using relevant Charpit method, Jacobi method methods to assess the appropriateness of approaches for solving PDEs.</li> <li>5. To attain cognitive and technical skills required for selecting and using relevant methods and techniques to assess the appropriateness of approaches to solving problems associated with the differential equations. To attain technical skill of solving differential equations by using built in functions of MAXIMA software.</li> </ol> |
| <p><b>SEMESTER IV</b></p>                           |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| <p><b>B23-<br/>MAT-401</b></p> | <p><b>Analytical<br/>Geometry &amp;<br/>Vector Calculus</b></p> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Gain knowledge of the concept of different conic sections, their classification and properties. Understand various terms related to conic sections and gain skills to use them in problem solving.</li> <li>2. Have knowledge of general form of equation of a sphere and attain procedural knowledge required for solving problems related to intersection of spheres, tangent plane and line, orthogonality, length of tangent and co-axial system of spheres. Learn about equations of cones and apply knowledge for problem solving.</li> <li>3. Have deeper knowledge and understanding of cylinder, enveloping cylinder, concepts of conicoids, tangent plane, director sphere, normal, envelope and to make further use thereof.</li> <li>4. Understand and solve problems related to scalar and vector product of vectors, vector differentiation, directional derivatives, gradient, divergence and curl operators. Have deeper understanding of line, surface and volume integrals, their evaluation, proof of Gauss Divergence, Green's and Stoke's theorems and gain theoretical and technical knowledge in computing different surface flux integrals, volume integrals and line integrals used in other disciplines also.</li> <li>5. Attain cognitive and technical skills required for solving practical problems related to assessing nature of conicoid, their characteristics. Learn skills to formulate and solve real life practical problems on sphere, cone and cylinder; to generate solutions of practical problems involving complex line, surface and volume integral using Gauss Divergence theorem, Stoke's theorem, Green's theorem in a very easy manner.</li> </ol> |
| <p><b>SEMESTER V</b></p>       |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>B23-<br/>MAT-501</b></p> | <p><b>Sequences and<br/>Series</b></p> | <ol style="list-style-type: none"> <li><b>1. Course Outcomes: After successfully completing this course, students will be able to</b></li> <li>2. Understand basic concepts of real number system, set theory and preliminary results on neighbourhood of a point, interior and limit points, open sets, closed sets etc.</li> <li>3. Learn about denumerability of subsets of real numbers, sequences, their limits, boundedness and convergence. Determine the convergence and divergence of a sequence. Understand Cauchy sequence and Cauchy general principle of convergence of sequence.</li> <li>4. Attain skills to determine convergence of a series of real numbers by applying various tests.</li> <li>5. To know absolute and conditional convergence of alternating series and apply theory to check the convergence of arbitrary series.</li> <li>6. 5*Attain cognitive and technical skill required to check the convergence of sequences and infinite series and verify the same by applying various available tests and tools.</li> </ol> |
| <p><b>SEMESTER VI</b></p>      |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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| <p><b>B23-<br/>MAT-601</b></p> | <p><b>Numerical<br/>Analysis<br/>(Major)</b></p> | <p><b>Course Outcomes: After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>5. Understand the different types of errors, learn techniques to obtain numerical solutions of algebraic and transcendental equations.</li> <li>6. Have the knowledge and attain numerical skills to find solutions of system of linear equations by different methods.</li> <li>7. Gain the knowledge to understand the concept of interpolation and extrapolation. Learn various numerical methods to find the value of function and their derivatives using interpolation concept.</li> <li>8. Have the procedural knowledge and acquire the skills to apply numerical methods for evaluating definite integrals. Learn single step and multi-step methods to solve first order ordinary differential equations.</li> </ol> <p>5* Attain cognitive and technical skills required to solve scientific problems by applying numerical techniques. Learn to write and execute program of numerical methods based on C language.</p> |
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## 14. Course Outcomes (COs) of Sanskrit

| SEMESTER I                                                      |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Course Code                                                     | Course Name                                                     | Course Outcomes : After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>B23-SKT-101</b><br><br>Course - Core<br>Courses CC-1<br>CC-1 | Paper- B23-SKT-101<br><br>Name of Paper-<br>नीतिसाहित्यव्याकरणच | <ol style="list-style-type: none"> <li>1. संस्कृतभाषामेंज्ञानकीसरलमनोवैज्ञानिकविधियोंके द्वाराछात्रोंकोबोधकरानेकेलिएअनेकग्रंथकहानीके रूपमेंलिखेगएजैसेपंचतंत्र, हितोपदेशआदि। इसघटकमेंहितोपदेशकेमित्रलाभ प्रकरणसेछात्रोंकोसंस्कृतभाषामेंप्रवेशकरवायाजा ताहै।</li> <li>2. नीतिशतकभारतीयनीतिशास्त्रतथासुभाषितकेरूप मेंजानाजाताहै। भर्तृहरिद्वारचितनीति - शतककेप्रथम 50 श्लोकोंकेमाध्यमसेछात्रोंकोन्यायएवंनीतिसेसमाज बोधकीशिक्षादेनेकाप्रयासकियागयाहै।</li> <li>3. संस्कृतभाषामेंप्रवेशकेलिएछात्रोंकोव्याकरणकेप्रथ मसोपानधातुरूपतथाशब्दरूपोंकाज्ञानहोनाआव श्यकहै। इसघटकमेंछात्रोंकोसरलधातु - रूपोंसेपरिचयकरवायाजाताहैताकिवेसंस्कृतभाषा समझनेमेंतत्परहोसके।</li> <li>4. भाषामेंसंधियोंकाप्रयोगपरमआवश्यकहै। इसघटक मेंछात्रोंकोसंस्कृतभाषाकीसंधियोंकाबोधकरवाया जाताहैताकिवेभाषाकोआसानीसेजानाजासकताहै। जानाजासकताहै। समझसकेक्योंकिसंधिमेंपदोंकोअ लग - अलगकरकेअर्थकोआसानीसेजानाजासकताहै।</li> </ol> |
| SEMESTER II                                                     |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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| B23-SKT-201  | Sanskrit<br>(Major) | <ol style="list-style-type: none"> <li>1. गीता भारतीय संस्कृति तथा ज्ञान का उत्कर्ष है। गीता को कर्म तथा ज्ञान के सम्यक् बोध के रूप में जाना जाता है। गीता के द्वितीय अध्याय को 'सांख्य-योग' के नाम से जाना जाता है। इस अध्याय में जोवन के मर्म को जान कर कर्म करने की प्रेरणा दी गई है। यह सभी मनुष्यों को जानना चाहिए।</li> <li>2. महर्षि चरक द्वारा वर्णित चरक संहिता के स्वस्थवृत्त के अनुसार आचरण करना। स्वस्थमष्टिष्क में स्वस्थमन का निवास करता है,<br/>इस उद्देश्य से उत्तम स्वास्थ्य प्राप्ति में लाभदायक नियमों को आत्मसात करना।</li> <li>3. संस्कृत धातुरूपों के ज्ञान के अभाव में भाषा को नहीं समझा जा सकता। धातुप्रत्ययों का बोध इस घटक में दिया गया है। संस्कृत में धातुओं की संख्या दो हजार के आसपास है। अतः इनका बोध भाषा को सरल रूप में समझने में सहायक है।</li> <li>4. संस्कृत भाषा में साहित्य को लिखने की तीन विधियाँ हैं, पद्य, गद्य तथा दोनों का मिश्रण। पद्यों में रचना के लिए छन्दों का ज्ञान आवश्यक है। कविता छंद के बिना नहीं हो सकती। अतः छात्रों को आरम्भिक छंदों का ज्ञान इस घटक में दिया जाता है। छात्रों की रुचिकविता में ही ऐसी छंदों के ज्ञान से संभव है।</li> </ol> |
| SEMESTER III |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| Paper-I     | Sanskrit | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. महाभारतविश्वप्रसिद्धमहाकाव्यहै।इसेपञ्चमवेदकी संज्ञादीगईहै।महाभारतकेवनपर्वमेंयक्षयुधिष्ठिरसंबा दकेमाध्यमसेधर्म-अधर्म, नीति- अनीतिइत्यादिकाप्रश्नोत्तरकेमाध्यमसेछात्रोंकोन्याय, नीतिसम्बन्धीशिक्षादीजातीहै।</li> <li>2. रामायणलौकिकसाहित्यकामहत्त्वपूर्णग्रन्थहै।रामाय णभारतीयपरम्पराकाजीवन्तग्रन्थहै।इसघाटकमेंरा मकेगुण, कार्यऔरउसकेराष्ट्रप्रेमसेछात्रोंकोअवगतकरवाया जाताहै।व्याकरणकेबिनाभाषाअधूरीहै।संस्कृतव्या करणकाआदिग्रंथअष्टाध्यायीहैजोवैज्ञानिकआधारर खताहै।</li> <li>3. प्रस्तुतघटकमेंसमासोंकेमाध्यमसेछात्रोंकोभाषाका संक्षेपीकरणएवंसरलबोधकरवायाजाताहै।</li> <li>4. व्याकरणकेआरम्भमेंमहेश्वरसूत्रहैजोसंस्कृतभाषाकी वैज्ञानिकवर्णमालाकहलातीहै।इसमेंसभीवर्णोंकास मावेशभाषावैज्ञानिकआधारपरकियागयाहै।इससे छात्रोंकोवर्णमालाएवंउच्चारणबोधमेंमहत्त्वपूर्णसहा यतामिलतीहै।पत्रलेखनकेमाध्यमसेछात्रसंस्कृतभा षामेंपत्रव्यवहारसीखतेहैं।</li> </ol> |
| SEMESTER IV |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p><b>Paper-I</b></p>    | <p><b>Sanskrit</b></p> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <p>Name of Paper- महाकाव्यम्उपन्यासः एवंशब्दप्रक्रिया</p> <ol style="list-style-type: none"> <li>1. संस्कृतसाहित्यमेंमहाकाव्यकाव्यकामहत्त्वपूर्णभाग है।महाकाव्यमेंइतिहासप्रसिद्धव्यक्तिकेचरित्रपरप्रकाशडालाजाताहै।कालिदासरचितरावंशमहाकाव्य इतिहासप्रसिद्धहै।इसमेंअनेकराजाओंकेजीवनचरितपरहैएवंवर्तमानसमयकीभौगोलिकराजनीति, सामाजिक, आर्थिकबिन्दुओंपरप्रकाशडालाजाताहैजिससेछात्रों मेंसमझउत्पन्नहोतीहै।प्रकाशडालागया</li> <li>2. आधुनिकभारतकेइतिहासकेसाथ- साथप्राचीनभारतकाइतिहासभीअबिकादत्तव्यासके उपन्यासमेंदेखनेकोमिलताहै।वर्तमानभारतकीदुर्दशातथाप्राचीनभारतकोसमृद्धपरम्पराकेमाध्यमसे छात्रोंकोदेशभक्तिएवंप्राचीनभूतोंसेसीखलेनेकोशिक्षाइसमेंमिलतीहै।</li> </ol> |
| <p><b>SEMESTER V</b></p> |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <p><b>B23-SKT-501</b></p> | <p>वैदिकसाहित्यपरिचयः<br/>नाटकम्वेवव्याकरणम्</p> <p><b>Sanskrit</b></p> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. नाट्यकलाएवसामाजिकचेतना</li> <li>2. छात्रनाट्यशास्त्रकीशास्त्रीयबारीकियोंऔरभारतीय समाजकेप्रतिबिंबकेरूपमेंनाटककेमहत्वकोसमझेंगे।<br/>'अभिज्ञानशाकुन्तलम्'<br/>केविशेषअध्ययनकेमाध्यमसेवेमानवीयसंवेदनाओं, प्रकृतिप्रेमऔरतत्कालीनसामाजिकमूल्योंकाआलोचनात्मकविश्लेषणकरनेमेंसक्षमहोंगे।</li> <li>3. कालिदासकीसाहित्यिकविरासतएवंकाल - बोध</li> <li>4. छात्रमहाकविकालिदासकेजीवन, रचना - शैली (वैदर्भीरीति) औरउनकेकाल-निर्धारणसेसंबंधितविभिन्नमतोंकातुलनात्मकअध्ययनकरेंगे।इससेछात्रोंमेंसंस्कृतसाहित्यकीउत्कृष्टकाव्यशैलीऔररस-योजनाकोसमझनेकीदृष्टिविकसितहोगी।</li> <li>5. वैदिकवाङ्मयएवंसांस्कृतिकविकास</li> <li>6. छात्रविश्वकेप्राचीनतमसाहित्य 'वेदों' कीसंरचना, संहिताओं, ब्राह्मणोंऔरउपनिषदोंकेआधारभूतस्वरूपसेपरिचितहोंगे।यहघटकछात्रोंकोभारतीयसंस्कृतिऔरदर्शनकेमूलस्रोतोंकोसमझनेतथाउनकेऐतिहासिकमहत्वकोपहचाननेमेंसहायताकरेगा।</li> <li>7. व्याकरणिकदक्षताएवंभाषाईशुद्धता</li> <li>8. व्याकरणकेनियमों (संधि, समासयाकारकआदिजोपाठ्यक्रममेंहैं) केमाध्यमसेछात्रसंस्कृतभाषाकेसंरचनात्मकढांचेकोसमझेंगे।इससेछात्रोंमेंशुद्धउच्चारण, लेखनऔरवाक्योंकेसटीकविश्लेषणकीक्षमताउत्पन्नहोगी।</li> <li>9. व्यावहारिकव्याख्याएवंविश्लेषणात्मककौशल</li> <li>10. पाठ्यक्रमकेअंतमेंछात्रवैदिकसूक्तोंऔरसंस्कृतनाटकोंकेश्लोकोंकीसप्रसंगव्याख्याकरनेमेंनिपुणहोंगे। वेप्राचीनज्ञानकोआधुनिकपरिप्रेक्ष्यमेंजोड़नेऔरसंस्कृतसाहित्यकेतत्वोंकोशोधपरकदृष्टिसेदेखनेकाकौशलप्राप्तकरेंगे।</li> </ol> |
| <p><b>SEMESTER VI</b></p> |                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**B23-SKT-  
601**

**नाटकं व्याकरणं निबन्धश्च  
Sanskrit**

**Course Outcomes : After successfully  
completing this course, students will be able to**

1. नाट्यकौशल एवं सामाजिक जीवन का अनुशीलन छात्र कालिदास कृत 'अभिज्ञानशाकुन्तलम्' के माध्यम से संस्कृत नाट्य परंपरा की विशिष्टताओं का विश्लेषण कर सकेंगे। इस घटक के अध्ययन से छात्र प्राचीन भारतीय सामाजिक संरचना, आश्रम व्यवस्था और मानवीय मूल्यों का समकालीन संदर्भ में मूल्यों को कनकरने में सक्षम होंगे।
2. कालिदासीय जीवन - दर्शन एवं राष्ट्रबोध छात्र महाकवि कालिदास के साहित्य में निहित राष्ट्रीय चेतना, प्रकृतिक प्रतिमान वीर्यसंवेदनशीलता और उनके उदात्त जीवन - दर्शन को समझ सकेंगे। यह छात्रों में न केवल सौंदर्यशास्त्रीय दृष्टि विकसित करेगा, बल्कि उनमें पर्यावरण संरक्षण और सांस्कृतिक गौरव की भावना का भी संचार करेगा।
3. व्याकरणिक संरचना एवं स्त्रीप्रत्यय विज्ञान छात्र 'लघुसिद्धान्तकौमुदी' के आधार पर स्त्रीप्रत्ययों (टाप्, डीप्, डीष् आदि) के सूत्रों की व्याख्या और उनके व्यावहारिक प्रयोग में निपुणता प्राप्त करेंगे। इस से छात्रों की संस्कृत पद - रचना की समझ सुदृढ़ होगी और वे भाषा के शुद्ध स्वरूप का प्रयोग करने में सक्षम होंगे।
4. प्राचीन भारतीय ज्ञान परंपरा एवं वैचारिक बोध छात्र वेदों, वेदांगों और संस्कृत के वैश्विक महत्व से परिचित होकर भारतीय ज्ञान परंपरा (IKS) के आधारभूत सिद्धांतों को समझ सकेंगे। यह घटक छात्रों को प्राचीन वैज्ञानिक और दार्शनिक दृष्टिकोण को आधुनिक विषयों के साथ जोड़ने की क्षमता प्रदान करेगा।
5. रचनात्मक लेखन एवं अभिव्यक्ति आत्मकौशल पाठ्यक्रम के अंत में छात्र विभिन्न शास्त्रीय और समसामयिक विषयों पर संस्कृत में निबंध लेखन का कौशल विकसित करेंगे। इस से छात्रों की मौखिक सोच का विस्तार होगा और उनमें संस्कृत भाषा के माध्यम से अपने विचारों को तार्किक एवं प्रभावशाली ढंग से प्रस्तुत करने की दक्षता आएगी।

## 15 Course Outcomes(CO's ) of Bachelor of Arts (Computer Science)

| <b>SEMESTER I</b>  |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Code</b> | <b>Course Name</b>                           | <b>Course Outcomes : After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>B23-CSE-101</b> | <b>Problem Solving Through C</b>             | <ol style="list-style-type: none"> <li>1. Understand the concept of input and output devices of computer</li> <li>2. Explain functional units and classify types of computers, how they process information.</li> <li>3. Understand an operating system and its working and solve common problems related to operating system</li> <li>4. Possess the knowledge of basic hardware peripherals.</li> <li>5. Develops basic understanding of computers, the concept of algorithm and algorithmic thinking</li> </ol> |
| <b>SEMESTER II</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>B23-CSE-201</b> | <b>Web Technologies Fundamentals (Major)</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Learn the basics of web development.</li> <li>2. Understand different types of web pages and web sites.</li> <li>3. Implement HTML and CSS for web page designing.</li> <li>4. Understand the design of web crawlers and search engines.</li> <li>5. To implement the programs based on various concepts of web development.</li> </ol>                                     |

|                                |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>B23-CSE-301<br/>(Major)</b> | <b>Operating System</b>          | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the role and purpose of operating systems.</li> <li>2. Analyze and explain process management concepts.</li> <li>3. Apply concurrency and synchronization mechanisms.</li> <li>4. Understand memory management techniques.</li> </ol>                                                                                                                              |
| <b>SEMESTER-IV</b>             |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>B23-CSE-401</b>             | <b>Data Management with DBMS</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand fundamental database concepts and architecture.</li> <li>2. Design relational database schemas using ER models.</li> <li>3. Apply normalization techniques to ensure database integrity.</li> <li>4. Write and optimize SQL queries for data manipulation and retrieval.</li> <li>5. Implement constraints, joins, subqueries, and aggregate functions.</li> </ol> |
| <b>B23-VOC-216</b>             | <b>Software Testing</b>          | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the principles and objectives of software testing.</li> <li>2. Identify and apply appropriate software testing techniques..</li> <li>3. Design and execute effective test cases.</li> <li>4. Analyze code to design white-box tests.</li> </ol>                                                                                                                    |
| <b>SEMESTER V</b>              |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <b>Paper-I</b>     | <b>Fundamental of Database Management System</b> | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the fundamental concepts of database.</li> <li>2. Understand user requirements and frame it in data model.</li> <li>3. Understand creations, manipulation and querying of data in databases.</li> <li>4. Solve real world problems using appropriate set, function, and relational models.</li> <li>5. Design E-R Model for given requirements and convert the same into database tables. O</li> <li>6. Use SQL commands.</li> </ol>                   |
| <b>Paper-II</b>    | <b>Web Designing</b>                             | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Understand the fundamentals of Internet, and the principles of web design.</li> <li>2. Understand the principles of creating an effective web page</li> <li>3. Explain the fundamental tags used in HTML.</li> <li>4. Develop the web page in various applications.</li> <li>5. Develop the web page using various ordered and unordered listing commands and tables.</li> <li>6. Develop the web page using frame concepts with multi-media handling.</li> </ol> |
| <b>SEMESTER VI</b> |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Paper-I</b>     | <b>Computer network</b>                          | <b>Course Outcomes : After successfully completing this course, students will be able to</b> <ol style="list-style-type: none"> <li>1. Explain the local, metropolitan and wide area networks using the Standard OSI Reference Model.</li> <li>2. Discussion of various networking technologies.</li> <li>3. Explain the concepts of protocols, network interfaces and design of performance issues in local area networks and wide area networks.</li> </ol>                                                                                                                                            |

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| <p><b>Paper-II</b></p> | <p><b>Relational database management system</b></p> | <p><b>Course Outcomes : After successfully completing this course, students will be able to</b></p> <ol style="list-style-type: none"> <li>1. Design E-R Model for given requirements and convert the same into database tables.</li> <li>2. To apply knowledge of Programming in SQL &amp; PL/SQL including stored function and trigger.</li> <li>3. Students will get to know how to apply DML/DDDL commands on database.</li> <li>4. Explain transaction Management in relational database System.</li> <li>5. Use advanced database Programming concepts.</li> </ol> |
|------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## DEPARTMENT OF ENGLISH

**Programme Name: Masters of Arts**

### ENGLISH

| POs  | After completing this programme students will be able to:                                                                                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO 1 | Students will demonstrate an appropriate level of expertise in literary history, literary theory, and rhetoric                                                                                                                                                                            |
| PO 2 | Students will demonstrate high-level proficiency in literary research and in the synthesis of research.                                                                                                                                                                                   |
| PO 3 | Students will demonstrate critical and analytical skills in the interpretation and evaluation of literary texts.                                                                                                                                                                          |
| PO 4 | Students will demonstrate a command of written academic English, including the abilities to a) organize and present material in a cogent fashion, b) formulate and defend original arguments, c) employ effectively the language of their discipline and d) write under time constraints. |

#### **Program Outcomes (POs)**

#### **Program Specific Outcomes (PSOs)**

| PSOs  | After completing this programme students will be able to:                                                                                                            |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1 | To familiarise with the writers of English literature across different ages and continents, their theories, perspectives, models and methods.                        |
| PSO 2 | To be able to demonstrate competence in analysis and critically analyse scholarly work in the areas of English language teaching, literary research and translation. |
| PSO 3 | Application of the knowledge of Literature, theories, research and skills in different fields of literary practice.                                                  |
| PSO 4 | To develop the technical skills and ethical decisions appropriate for the holistic professional development in the field.                                            |

## Course Outcomes (COs) of Masters of English (M.A.)

| <b>SEMESTER I</b>  |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Code</b> | <b>Course Name</b>                       | <b>Course Outcomes: After successfully completing this course, students will be able to</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>M24-ENG-101</b> | <b>Literature in English (1550-1660)</b> | <ol style="list-style-type: none"> <li>1. To analyse the texts critically and will understand the social, historical and political conditions of European as well as English society.</li> <li>2. To understand European as well as English drama.</li> <li>3. To understand different styles of poetry written during the English Renaissance.</li> <li>4. They will examine the history of English literature from medieval to Elizabethan age .</li> </ol>                                                                                                                                                                                                   |
| <b>M24-ENG-102</b> | <b>Literature in English (1660-1798)</b> | <ol style="list-style-type: none"> <li>1. They will learn about the Classical and Neo-Classical Age in English literature.</li> <li>2. They will understand the different styles of poetry written during the age.</li> <li>3. They will examine the history of English literature from Elizabethan age to Restoration period.</li> </ol>                                                                                                                                                                                                                                                                                                                       |
| <b>M25-ENG-103</b> | <b>Literature in English (1798-1914)</b> | <ol style="list-style-type: none"> <li>1. Gain insights into the unique traits of the literary movement of “Romanticism” through the representative works of eminent writers like William Wordsworth and John Keats. To distinguish between neo-classical and romantic poetry</li> <li>2. To understand the Victorian novel and examine the social, political and religious conditions of Victorian era</li> <li>3. To introduce the major movements and figures of English literature through a study of prescribed literary texts</li> <li>4. To learn the scientific temperament of the period and understand the effect of industrial revolution</li> </ol> |
| <b>M24-ENG-104</b> | <b>Literature in English (1914-2000)</b> | <ol style="list-style-type: none"> <li>1. Students will have knowledge of literary terms.</li> <li>2. Read fiction and poetry with analytical proficiency.</li> <li>3. Analyse the functions of texts and their relations with historical, social, and political contexts.</li> <li>4. Prepare and deliver effective oral presentations.</li> </ol>                                                                                                                                                                                                                                                                                                             |

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| <b>M24-<br/>ENG-105</b> | <b>Study of a<br/>Genre:<br/>Fiction</b>         | <ol style="list-style-type: none"> <li>1. To know about Fiction and its different types.</li> <li>2. To differentiate British novelists and American novelists.</li> <li>3. To develop their own point of view related to fictional theories.</li> <li>4. To analyse other fictional texts and their relations with</li> <li>5. contemporary society.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>SEMESTER II</b>      |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>M24-<br/>ENG-201</b> | <b>Literature in<br/>English<br/>(1550-1660)</b> | <ol style="list-style-type: none"> <li>1. Know about the culture of renaissance time period.</li> <li>2. Critically analyse the different forms of plays, novels and poetry of Renaissance time.</li> <li>3. 3. Present PPTS confidently and accurately.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>M24-<br/>ENG-202</b> | <b>Literature in<br/>English<br/>(1660-1798)</b> | <ol style="list-style-type: none"> <li>1. Study the new prose forms such as periodicals, criminal biographies, travelogues, political allegories and romantic tales.</li> <li>2. Know the history of Augustine age in English literature and why this age is called Neo-classical age.</li> <li>3. Study the predominance of satire which is an important literary characteristic of this age.</li> <li>4. Know the concept of individualism versus society</li> </ol>                                                                                                                                                                                                                                                                                                                                                                      |
| <b>M24-<br/>ENG-203</b> | <b>Literature in<br/>English<br/>(1798-1914)</b> | <ol style="list-style-type: none"> <li>1. Able to learn about Victorian poetry and familiarize with dramatic monologue and the theme of optimism</li> <li>2. Appreciate female voices of the Victorian period and understand the position of females in the society, the tension between the private domestic sentiments and larger public concerns</li> <li>3. Analyse the significance of fate, destiny and coincidence in Thomas hardy's craft of storytelling and examine Hardy's portrayal of the main protagonist and his treatment of women in the novel</li> <li>4. Able to learn scientific explorations, expeditions and development</li> <li>5. Able to analyse distinctive historical, traditional and social situations of English literature and analyse literary text in the light of their historical background</li> </ol> |

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| <b>M24-<br/>ENG-204</b> | <b>Literature in<br/>English<br/>(1914-2000)</b>                       | <ol style="list-style-type: none"> <li>1. To know in detail the factors underlying the definition of 20th century as a specific aesthetic period and be able to define and comment on those factors and contrast them with those corresponding to the previous historical periods.</li> <li>2. To acquaint the students with the development, definitions and characteristics of different genres of literature.</li> <li>3. To introduce the students with the representative writers of the age other than British as Indian writers in English, American writers in English and French writers in English</li> <li>4. To get them acquainted with the evolution of Absurd Movement and its basic characteristics</li> </ol> |
| <b>M24-<br/>ENG-205</b> | <b>Study of a<br/>Genre:<br/>Fiction-II</b>                            | <ol style="list-style-type: none"> <li>1. To know about Fiction and its different forms.</li> <li>2. To know about new trends and Movements related to various cultures and societies</li> <li>3. To know about the development of Fiction in Modern and Post-Modern Age.</li> <li>4. To developed a better understanding of the concepts of Sex, Gender, human behavioural patterns etc.</li> </ol>                                                                                                                                                                                                                                                                                                                           |
| <b>SEMESTER III</b>     |                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>M24-ENG-<br/>307</b> | <b>Colonial and<br/>Post-Colonial<br/>Studies (Part-I)<br/>(DEC-5)</b> | <ol style="list-style-type: none"> <li>1. The students will be able to make use of the ideas and concepts to analyse cultural dimensions of the effects of colonialism in post-colonial world.</li> <li>2. They will be able to analyze the cultural, social, and political conditions in today's global world.</li> <li>3. They will be able to critique the specific meanings of the post-colonial condition.</li> <li>4. They will be able to examine how the notions of the 'post-colonial' negotiate among different histories.</li> </ol>                                                                                                                                                                                |
| <b>M24-ENG-<br/>304</b> | <b>Indian Writing<br/>in English</b>                                   | <ol style="list-style-type: none"> <li>1. The students will be able to understand socio-cultural history reflected in Indian writing in English.</li> <li>2. They will be able to appreciate Indian women poets and their sensibility.</li> <li>3. They will be able to make distinction between pre and post - Independence Indian writing in English.</li> <li>4. They will be able to learn Reform Movements in India.</li> </ol>                                                                                                                                                                                                                                                                                           |

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| <b>M24-ENG-305</b> | <b>Literature and Gender (Part-I)</b>                 | <ol style="list-style-type: none"> <li>1. The students will be able to learn the concepts like sex and gender; feminism; women and the canon of Gynocriticism etc.</li> <li>2. They will be able to evaluate sexual, social, class and national perspectives reflected in their writings.</li> <li>3. They will be able to know the developments, themes and narrative strategies of women writings.</li> </ol>                            |
| <b>M24-ENG-302</b> | <b>English Language (Part-I)</b>                      | <ol style="list-style-type: none"> <li>1. The students will be able to know the development of English Language.</li> <li>2. They will be able to understand appropriate pronunciation of English Language.</li> <li>3. They will be familiarized with the etymology of the words in English Language.</li> <li>4. They will be able to learn the different parameters of translation.</li> </ol>                                          |
| <b>SEMESTER IV</b> |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>M24-ENG-401</b> | <b>Literary Criticism and Theory (Part-II)(CC-11)</b> | <ol style="list-style-type: none"> <li>1. The students will be able to develop an understanding of Victorian and modern literary criticism.</li> <li>2. They will be able to learn how to apply the various theories on literature.</li> <li>3. They will be able to know the role of language in understating literature.</li> <li>4. They will be able to analyse theories and discipline-specific skills.</li> </ol>                    |
| <b>M24-ENG-402</b> | <b>English Language (Part-II)</b>                     | <ol style="list-style-type: none"> <li>1. The students will be familiarized with the principles of ELT in India</li> <li>2. They will be able to learn various teaching techniques and digital learning to enjoy reading, writing and teaching.</li> <li>3. They will be able to enrich their communicative skills..</li> <li>4. They will be familiarized with different approaches to analyse different genres of literature.</li> </ol> |

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| <b>M24-<br/>ENG-404</b> | <b>Indian Writings<br/>in English<br/>(Part-II)</b> | <ol style="list-style-type: none"> <li>1. The students will be able to learn the effects of partition on the lives of people.</li> <li>2. They will be able to understand the emergence of drama in post independent India.</li> <li>3. They will be able to analyse counter-discourse, subaltern and Identity movements.</li> <li>4. They will be able to evaluate the representation of culture, national and gender politics.</li> </ol> |
| <b>M24-<br/>ENG-405</b> | <b>Literature and<br/>Gender<br/>(Part-II)</b>      | <ol style="list-style-type: none"> <li>1. The students will be able to understand the concepts of Feminism, Femininity and Feminist.</li> <li>2. They will be able to understand the means and ways of marginalization.</li> <li>3. They will be able to evaluate culturally and historically specific constructions of gender.</li> <li>4. They will be able to research in the field of gender and cultural studies.</li> </ol>           |

## **Programme Name: Masters of Arts**

### **ECONOMICS**

#### **Program Outcomes (POs)**

| <b>Pos</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                                           |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO 1       | Studying economics can make the students to understand the theoretical background of the economy. They can bridge the gap between the theory and practical related to real economic situations.                            |
| PO 2       | Acquire a sound knowledge related to key sectors of the economy and policy making at the macro level; The policy framework including monetary and fiscal policies and also other policy can be understood in a better way. |
| PO 3       | Students can work as teachers, professors, officers at RBI, Banks and Managers at various business houses, IES officers, Insurance officers etc.                                                                           |
| PO 4       | They further go through research such as Phd.                                                                                                                                                                              |

#### **Program Specific Outcomes (PSOs)**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                          |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PSO 1       | To impart in depth knowledge to students about economic theory regarding utilization and allocation of resources including labour, natural resources and capital.                                         |
| PSO 2       | To develop students understanding about how market for goods and services function and how income is generated and distributed.                                                                           |
| PSO 3       | To give students depth knowledge into specific field of choice like agriculture economics, industrial economics, development economics, mathematical economics, international trade, urban economics etc. |
| PSO 4       | Students would know how the economy is influenced by economic policy, technological advances and demographic conditions.                                                                                  |

## Course Outcomes (COs) of Master of Arts (Economics)

| SEMESTER I         |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Code        | Course Name                       | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>M24-ECO-101</b> | <b>Micro Economics analysis-I</b> | <ol style="list-style-type: none"> <li>1. CLO1 principles of demand and supply so that they are able to apply the understanding analyze economic After completing this course ,the to comprehend real world problems along with the ability to think critically and of these concepts learner will be able to: problems.</li> <li>2. CLO 2. Understand the core principles of production and costs so that they are able to apply the understanding of these concepts to comprehend real world problems along with the ability to think critically and analyze economic problems.</li> <li>3. CLO 3. Analyze given situations in a variety of markets on a microeconomics level. Understand the internal structure and assumptions of the different analytical frameworks of market conditions, their explanatory power and limitations.</li> <li>4. CLO 4 Learn and apply relevant optimization techniques for analysis of microeconomic implications and ethical as well as value part of it. behaviour of consumer, producer and firm.</li> </ol> |
| <b>M24-ECO-102</b> | <b>Macro Economics analysis-1</b> | <ol style="list-style-type: none"> <li>1. CLO 1: Understand classical &amp; Keynesian theories of output and employment Aanalyse their differences, and assess their role in economic fluctuation</li> <li>2. CLO 2:</li> <li>3. Explaining the behaviour of macroeconomic variables by identifying and understanding the extended model. CLO 3:</li> <li>4. Analyse output, price, and employment under flexible prices in IS- LM. Explore effects of wages, interest rates, and policy on equilibrium</li> <li>5. CLO 4: To understand the theories of consumption and investment and their</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>M24-ECO-</b>    | <b>Mathematics for</b>            | <ol style="list-style-type: none"> <li>1. CLO 1: Perform matrix operations, solve</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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| <b>103</b>         | <b>economists</b>                      | <p>simultaneous equations, and apply course, the learner will be able matrix algebra techniques to input-output analysis.</p> <ol style="list-style-type: none"> <li>2. CLO 2: Apply rules of differentiation and optimization techniques to solve economic problems effectively.</li> <li>3. CLO 3: Compute the consumer's surplus and producer's surplus by utilizing the tool of integral calculus and develop the ability to solve differential equations.</li> <li>4. CLO 4: Understand and solve difference equations and linear programming problems using graphical method.</li> </ol>                                                                                                                                                                                                                                                              |
| <b>M24-ECO-104</b> | <b>Data Analytics for economists-1</b> | <ol style="list-style-type: none"> <li>1. CLO 1: Understand, apply and solve the problems on revenue, completing this course, the learner will be able profits, utility and linear programming.</li> <li>2. CLO 2: Understand and compute break even, LP, sensitivity analysis and assignment problems.</li> <li>3. CLO 3: Understand and solve linear and non linear optimization problems.</li> <li>4. CLO 4: Understand and solve path analysis and inventory problems</li> <li>5. CLO 5: Demonstrate the ability to solve the problems mentioned in through software</li> </ol>                                                                                                                                                                                                                                                                         |
| <b>M24-ECO-105</b> | <b>Public economics</b>                | <ol style="list-style-type: none"> <li>1. CLO 1 : Explain the concepts of efficiency along with various solutions of market failure and interpret the welfare distribution aspects in context of public goods besides grasping the preference revelation mechanisms.</li> <li>2. CLO 2: Apply economic perspectives on activities of the government sector to become well-informed and engaged participants (citizens, voters, politicians and/or civil servants) in society.</li> <li>3. CLO 3: Draw the economic implications of various taxes along with their positive as well as normative analysis. and thus become able to design an efficient and equitable taxation system.</li> <li>4. CLO 4: Analyze the theories of fiscal federalism, public debt, and pricing in public enterprises, and solve the concerned policy issues. Theory</li> </ol> |
| <b>M24-ECO-109</b> | <b>Seminar</b>                         | <ol style="list-style-type: none"> <li>1. CLO 1: Prepare and Present the given content to demonstrate the After completing this course, the learner will be</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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|                    |                                         | able to: ability of effective communication.<br>2. CLO 2: To develop confidence to tackle queries and analytical ability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SEMESTER II</b> |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>M24-ECO-201</b> | <b>Micro Economics analysis-II</b>      | <ol style="list-style-type: none"> <li>1. CLO 1.Understand new advances in the theory of firm and think critically analyze economic problems in the context of firm.</li> <li>2. CLO 2. Adopt different analytical concepts and models in framing development and policy- relevant problems particularly factor pricing and income distribution.</li> <li>3. CLO3. Understand the effects of various decisions on welfare of people through general equilibrium analysis.</li> <li>4. CLO 4. Apply Microeconomic tools to solve real life problems especially under uncertainty and game theory.</li> </ol>                       |
| <b>M24-ECO-202</b> | <b>Macro-Economics analysis-II</b>      | <ol style="list-style-type: none"> <li>1. CLO 1:Understand money choices: Explore the Theory of Demand for this course, the learner will be able to: Money</li> <li>2. CLO 2:Able to learn the theories of money supply and interest rates</li> <li>3. CLO 3:Identify the phases of the business cycle/inflation and the problems caused by cyclical fluctuations in the market economy and to show an ability to reflect on how economic shocks affect aggregate economic performance in the short and long term</li> <li>4. CLO 4:Explain the components of aggregate economic activity in an open economy framework</li> </ol> |
| <b>M24-ECO-203</b> | <b>Statistics for economists -II</b>    | <ol style="list-style-type: none"> <li>1. CLO 1: Analyze various data types and sampling techniques proficiently. burse, the learner will be able to:  CLO 2: Estimate parameters accurately and construct confidence intervals effectively.</li> <li>2. CLO 3: Conduct hypothesis tests confidently using parametric methods and understand the Neyman-Pearson nonparametric tests based on data</li> <li>3. COL 4: Choose and apply appropriate Lemma. characteristics with confidence.</li> <li>4. CLO 5: Demonstrate the ability to solve the problems mentioned in CLO 1-4 through software. Theory Practical</li> </ol>     |
| <b>M24-ECO-204</b> | <b>Data analytics for economists-II</b> | <ol style="list-style-type: none"> <li>1. CLO 1: Understand, apply and solve the problems on univariate and bivariate data besides hypothesis testing in a software.</li> <li>2. CLO 2: Understand and compute various</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                           |                                                       | <p>regressions in a software.</p> <p>3. CLO 3: Understand and compute the problems of Autocorrelation, Multicollinearity and heteroskedasticity using a software.</p> <p>4. CLO 4: Understand and compute future value, present value and financial ratios using a software.</p> <p>5. CLO 5: Demonstrate the ability to solve the contents using a software</p>                                                                                                                                                                                                                                                                     |
| <b>M24-ECO-205</b>        | <b>Demography</b>                                     | <p>1. CLO I: Draw on demographic concepts and population theories to able explain past and present population characteristics.</p> <p>2. CLO 2: Analyze the world population growth and trends and distinguish between the populations patterns of developed and less developed countries</p> <p>3. CLO 3: Understand and analyze various demographic issues in India.</p> <p>4. CLO 4: Understand how to use empirical evidence to evaluate an economic argument.</p>                                                                                                                                                               |
| <b>M24-CHM-201</b>        | <b>Constitutional, human and moral values and IPR</b> | <p>1. CLO-1: Learn the different Constitutional Values, Fundamental rights and After completing this course, the learner will be able to: duties enshrined in the India Constitution.</p> <p>2. CLO-2: Understand humanism, human virtues and values, and of International peace</p> <p>3. CLO-3: Grasp the basic concepts of Moral Values and Professional Conduct which are required to become a part of the civil society and developing professionalism.</p> <p>4. CLO-4: Understand concepts of Intellectual Property Rights, Copyright./ Patent, Trademark etc., and about threats of Plagiarism. Credits Theory Practical</p> |
| <b>SEMESTER III</b>       |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>M24-ECO-301 (CC-9)</b> | <b>International Trade</b>                            | <p>1. Understand, explain, compare and critically evaluate the classical and neo classical trade theories of International Trade.</p> <p>2. Learn, compare and critically evaluate the new trade theories and their relevance in today's scenario.</p>                                                                                                                                                                                                                                                                                                                                                                               |

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|                            |                                      | <ol style="list-style-type: none"> <li>Understand the pattern, scope, potential and related issues of trade.</li> <li>Understand the theories of protection and develop the ability to appreciate the economic integration and its impacts.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                   |
| <b>M24-ECO-302 (CC-10)</b> | <b>Development Economics (CC-10)</b> | <ol style="list-style-type: none"> <li>To appreciate and interpret the nature of Economic Growth &amp; Development with learner's view to measure and mark its trajectory.</li> <li>Appreciate the methods of measuring economic development.</li> <li>Comprehend various development strategies and their applicability.</li> <li>To deduce the approaches to economic development with a view to apply them Practically.</li> </ol>                                                                                                                                                                                    |
| <b>M24-ECO-304 (DEC-3)</b> | <b>Agricultural Economics</b>        | <ol style="list-style-type: none"> <li>Understand how farmers allocate resources, manage risk, and respond to market forces.</li> <li>Explore how different approaches can improve farming practices, create jobs, and boost food production.</li> <li>Understand, analyze the present concepts of agricultural production functions and factor product relationships using the tools of micro economics and diversification in agriculture,</li> <li>To learn various issues in Indian Agriculture.</li> </ol>                                                                                                          |
| <b>M24-ECO-308 (DEC-4)</b> | <b>Industrial Economics</b>          | <ol style="list-style-type: none"> <li>Learn the scope and breadth of industrial economics and able to use the tools of economic analysis and the classical theory of markets in the analysis of organizations</li> <li>Comprehend, compare and present the theories of industrialization and location along with their technical applications.</li> <li>Understand market structure-conduct-performance and appreciate the concept of sellers' concentration along with its measurement using adequate techniques.</li> <li>Understand, compare and analyse various product pricing methods along with their</li> </ol> |

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|                            |                                                            | merits and limitations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>M24-ECO-313 (DEC-5)</b> | <b>Economic Policy Analysis</b>                            | <ol style="list-style-type: none"> <li>1. To understand the basics and theoretical constructs of policy analysis.</li> <li>2. To learn to analyse Agriculture and Industrial Sector Policies in India</li> <li>3. To learn to analyse social Sector Policies in India</li> <li>4. To learn to analyse macroeconomic and financial Sector Policies in India..</li> </ol>                                                                                                                                                         |
| <b>SEMESTER IV</b>         |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>M24-ECO-401 (CC-11)</b> | <b>Indian Economic Policy</b>                              | <ol style="list-style-type: none"> <li>1. Understand the performance of the Indian economy since independence.</li> <li>2. To comprehend the performance and policies for different sectors of the Indian economy.</li> <li>3. Explore the composition of Indian financial system, including the central bank, commercial banks, money and capital markets, fiscal policy, and public debt.</li> <li>4. Grasp India's international economic engagements through trade, investment, and foreign exchange management.</li> </ol> |
| <b>M24-ECO-402 (CC-12)</b> | <b>Environmental Economics and Sustainable Development</b> | <ol style="list-style-type: none"> <li>1: Understand the dynamics of economy-Environment interaction.</li> <li>2: Analyze environmental challenges and solutions.</li> <li>3: Examine Policy instruments for environmental Management.</li> <li>4: Understand the limits to growth and sustainability.</li> </ol>                                                                                                                                                                                                               |
| <b>M24-ECO-401 (CC-11)</b> | <b>Indian Economic Policy</b>                              | <ol style="list-style-type: none"> <li>1: Understand the performance of the Indian economy since independence.</li> <li>2: To comprehend the performance and policies for different sectors of the Indian economy.</li> <li>3: Explore the composition of Indian financial system, including the central bank, commercial banks, money and capital markets, fiscal policy, and public debt.</li> <li>4: Grasp India's international economic engagements through trade, investment, and foreign exchange management.</li> </ol> |
| <b>M24-ECO-</b>            | <b>International</b>                                       | 1: Understand, explain and present various                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| <b>403 (DEC-6)</b>         | <b>Finance</b>                | <p>approaches of foreign exchange rate determination especially in a forward market.</p> <p>2: Comprehend various models of balance of payment adjustment.</p> <p>3: Learn and explain macro adjustment policies in an open economy framework.</p> <p>4: Understand and analyze the working of International Financial Management and Institutions.</p>                                                                          |
| <b>M24-ECO-407 (DEC-7)</b> | <b>Economic Growth Models</b> | <p>1: Understand the basic concepts and tools used in growth models.</p> <p>2: To understand the classical growth models, role of innovations and stages of growth with their historical origins.</p> <p>3: To comprehend the neo-classical and Cambridge growth models with mathematical treatment.</p> <p>4: To be aware of the new growth theory with focus on human resource development, knowledge, technical progress.</p> |
| <b>M24-ECO-411 (DEC-8)</b> | <b>Financial Derivatives</b>  | <p>1: Understand the meaning and types of financial derivatives along with pricing of forward and futures.</p> <p>2: Understand how the hedging is done using futures?</p> <p>3: Understand options mechanism along with their pricing.</p> <p>4: Understand Greeks and various options trading strategies.</p> <p>5: Demonstrate the ability to solve the problems mentioned in contents with the help of software.</p>         |

## DEPARTMENT OF MATHEMATICS

**Programme Name: Masters of Science (MATHEMATICS)**

**Program Outcomes (POs)**

**Program Specific Outcomes (PSOs)**

| PSOs  | After completing this programme students will be able to:                                             |
|-------|-------------------------------------------------------------------------------------------------------|
| PSO 1 | To understand the fundamental axioms in Mathematics and capability of developing ideas based on them. |
| PSO 2 | To inculcate mathematical reasoning.                                                                  |
| PSO 3 | To assimilate complex mathematical ideas and arguments.                                               |
| PSO 4 | To prepare and motivate students for research studies in mathematics and related fields.              |

| POs  | After completing this programme students will be able to:                                                                                                                                                                                                                                                                                                                                                                        |
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| PO 1 | To be able to understand various branches of Mathematics are so selected and designed for M.Sc. Mathematics course aiming at mathematical reasoning, sophistication in thing and acquaintance with enough number of subjects including application-oriented ones to suit the present needs of various allied branches in Engineering and Science as well as provision of opportunities to pursue research in higher mathematics. |
| PO 2 | To be able to understand Problem Solving Skills                                                                                                                                                                                                                                                                                                                                                                                  |
| PO 3 | To be able to understand Analytical & Logical Thinking:- The student will be able to develop logical reasoning techniques and techniques for analyzing the situation                                                                                                                                                                                                                                                             |
| PO 4 | To be able to understand Advanced Algebra:- The students shall appreciate the necessity of various Algebraic structures with binary operations such as Groups, Rings and Fields, Non-commutative rings that lead to new ideas in algebra for their future research in advanced topics of algebra.                                                                                                                                |
| PO 5 | To get an insight into the behaviour of curves defined on a closed and bounded interval and some important properties of continuous, monotonic, and differentiable functions defined on a closed and bounded interval and also their metric space analog.                                                                                                                                                                        |
| PO 6 | To develop the ability for generation of mathematical model to a given real life situation as well as To learn new areas of mathematics in the future either for                                                                                                                                                                                                                                                                 |

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|      | teaching or for research.                                                                                                                                                             |
| PO 7 | To demonstrate the ability to conduct research independently and pursue higher studies towards a Ph.D. degree in mathematics.                                                         |
| PO 8 | To be able to understand evaluating capability:- The student shall acquire the capability to evaluate hypotheses, methods and evidence within their proper contexts in any situation. |
| PO 9 | To apply the knowledge acquired in mathematics in science, technology as well as research and its extensions                                                                          |

## Course Outcomes (COs) of Master of Science (Mathematics)

| SEMESTER I         |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| Course Code        | Course Name                                      | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>M24-MAT-101</b> | <b>REAL ANALYSIS</b>                             | <p>1: Understanding the Riemann-Stieltjes integral, its properties, and the integration of vector-valued functions with application to rectifiable curves.</p> <p>2: Understanding and handling convergence of sequences and series of functions. This includes constructing continuous nowhere-differentiable functions and demonstrating knowledge of the Weierstrass approximation theorem.</p> <p>3: Understanding the concepts of differentiability and continuity of functions of several variables, and applying the knowledge to prove inverse and implicit function theorems.</p> <p>4: Formulating convergence problems related to Fourier series, understanding the summability of Fourier series, and applying concepts like the Fejer theorem, Bessel's inequality, and others.</p> |
| <b>M24-MAT-102</b> | <b>COMPLEX ANALYSIS</b>                          | <p>1. Understand the fundamental concepts of limit, continuity, differentiation, and integration for functions defined over the complex plane, as well as for elementary functions.</p> <p>2. Solve complex integrals of various types using the application of relevant theorems, formulas, and power series expansions.</p> <p>3. Analyze complex functions that have singularities, including zeroes and residues at poles, and apply these analyses to solve improper integrals.</p> <p>4. The student will be able to solve complex improper integrals using indentation, transformation, or mapping of integration paths to avoid singularities and branch points/cuts.</p>                                                                                                                |
| <b>M24-MAT-103</b> | <b>Theory of Ordinary Differential Equations</b> | <p>1. Understand the concepts of initial value problems, including their exact and approximate solutions, existence and uniqueness, and the continuation of solutions for first-order differential equations. Students will also apply relevant theorems and solve related exercises.</p> <p>2. Have deep understanding of the theory of linear differential equations of higher order. This includes knowledge of basic theory, Wronskian theory, fundamental sets, adjoint equations, and standard theorems. Students will apply techniques like reduction of order and variation of parameters to solve both linear and non-linear differential equations, especially those with constant coefficients.</p>                                                                                   |

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|                    |                            | <p>3. Understand preliminary concepts, oscillation theory, and Sturm's theory related to second-order ordinary differential equations and comparison theorems. They will apply this knowledge to problems involving oscillatory behavior, common zeros, and the use of Prüfer transformations.</p> <p>4. Have strong understanding of boundary value problems for second-order differential equations, their classification, and solutions. They will also appreciate and apply the concept of Green's function, gaining skills to solve boundary value problems commonly used in applied mathematics, science, and engineering.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>M24-MAT-104</b> | <b>Mechanics of Solids</b> | <p>1. Understand the concept of tensors as a generalized form of directional entities, and learn their properties through algebraic and calculus operations.</p> <p>2. Understand affine transformation and infinitesimal deformation analysis of strain and stress tensors. They will build a strong foundation to learn the theory of elasticity and apply it to solve scientific problems.</p> <p>3. Relate strain and stress tensors through anisotropic elastic moduli, apply reflection/rotational symmetries to define elastic isotropy, and use relevant theorems/principles to explore their roles in strain energy, compatibility conditions, and uniqueness of solutions.</p> <p>4. Learn variational methods to solve boundary value problems in elasticity. They will understand and prove standard theorems in variational theory, apply these methods to minimize potential/strain/complementary energies, and use them to solve scientific problems in the mechanics of solids. The student will also gain exposure to research in elasticity and understand wave propagation in infinite elastic media.</p> |
| <b>M24-MAT-105</b> | <b>ABSTRACT ALGEBRA</b>    | <p>1. Understand the concepts of normal subgroup, quotient group, isomorphism, automorphism, conjugacy, G-sets, normal series, composition series, solvable group, nilpotent group, and the refinement theorem.</p> <p>2. Learn about cyclic decomposition, alternating group <math>A_n</math>, the simplicity of <math>A_n</math> for <math>n \geq 5</math>, and Sylow's theorem along with its applications.</p> <p>3. Understand the concepts of modules, submodules, direct sum, R-homomorphism, quotient modules, completely reducible modules, free modules, and the</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                    |                    | <p>representation of linear mappings along with their ranks.</p> <p>4. Learn about similar linear transformations, triangular form, nilpotent transformations, primary decomposition theorem, Jordan form, rational canonical form, and elementary divisors.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Practical-1</b> | <b>M24-MAT-106</b> | <p>1. Solve practical problems related to theory courses undertaken in Semester-I from the application point of view.</p> <p>2. Understand the syntax of expressions, statements, and structures, and write source code for a program in C.</p> <p>3. Edit, compile, and execute source programs to achieve the desired results.</p> <p>4. Debug, verify/check, and obtain the output of results.</p>                                                                                                                                                                                                                                                                                                                                               |
| <b>M24-MAT-107</b> | <b>Seminar</b>     | <p>1. Identify an area of interest and select a topic therefrom, realizing ethical issues related to one's work and unbiased truthful actions in all aspects of work, and to develop research aptitude.</p> <p>2. Have deep knowledge and understanding of a particular topic in core or applied areas of Mathematics, imbibe research orientation, and attain the capacity of investigating a problem.</p> <p>3. Obtain capability to read and understand mathematical texts from books/journals/e-contents, and to communicate through write-ups/reports and oral presentations.</p> <p>4. Demonstrate knowledge, capacity of comprehension, precision, defense, capability to work independently, and a tendency towards life-long learning.</p> |
| <b>SEMESTER II</b> |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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| <b>M24-MAT-201</b> | <b>FIELD THEORY</b>            | <p>1. Understand concepts of normal subgroup, quotient group, isomorphism, automorphism, conjugacy, G-sets, normal series, composition series, solvable group, nilpotent group and refinement theorem.</p> <p>2. Learn about cyclic decomposition, alternating group, simplicity of <math>A_n</math> for <math>n \geq 5</math>, Sylow's theorem and its applications.</p> <p>3. Understand concepts of modules, submodules, direct sum, R-homomorphism, quotient module, completely reducible modules, free modules, representation of linear mappings and their ranks.</p> <p>4. Learn about similar linear transformation, triangular form, nilpotent transformation, primary decomposition theorem, Jordan form, rational canonical form and elementary divisors.</p>                                                                                                           |
| <b>M24-MAT-202</b> | <b>MEASURE AND INTEGRATION</b> | <p>1. Understand the concepts of measurable sets and Lebesgue measure; construct a non-measurable set; apply the knowledge to solve relevant exercises.</p> <p>2. Know about Lebesgue measurable functions and their properties; and apply the knowledge to prove Egoroff's theorem, Lusin's theorem and F. Riesz theorem.</p> <p>3. Understand the requirement and the concept of the Lebesgue integral (as a generalization of the Riemann integration) along its properties and demonstrate understanding of the statements and proofs of the fundamental integral convergence theorems.</p> <p>4. Know about the concepts of differentiation of monotonic function, functions of bounded variations, differentiation of integral, absolutely continuous functions; apply the knowledge to prove specified theorems and study <math>L^p</math>-spaces.</p>                      |
| <b>M24-MAT-203</b> | <b>TOPOLOGY</b>                | <p>1. Know about topological spaces, understand neighbourhood system of a point and its properties, interior, closure, boundary, limit points of subsets, and base and sub-base of topological spaces; apply the knowledge to solve relevant exercises.</p> <p>2. Learn alternate methods of defining a topology using properties of neighbourhood system, interior operator, closed sets, Kuratowski closure operator and know about first and second countable spaces, separable and Lindelöf spaces, continuous functions and their characterizations.</p> <p>3. Know about the Tychonoff product topology and its characterization as the smallest topology such that the projection maps are continuous; connectedness and its relation with continuity.</p> <p>4. Have understanding of the separation axioms and their properties; know about the quotient topology and</p> |

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|                    |                                         | demonstrate understanding of the statements and proofs of Embedding theorem and Urysohn's Lemma.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>M24-MAT-204</b> | <b>Advanced Differential Equations</b>  | <p>1. Learn about the system of linear differential equations of first order and its preliminary concepts, homogeneous and non-homogeneous linear systems, existence and uniqueness theory, fundamental matrix, theory of adjoint systems, linear systems with constant coefficients and with periodic coefficients. Attain the skill to obtain the fundamental matrix of such a given linear system to demonstrate problem solving.</p> <p>2. Understand systems of differential equations and its existence theory, dependence of solution of an IVP on initial parameters, extremal solutions, upper and lower solutions so as to be able to develop research aptitude in this area.</p> <p>3. Know critical points of linear and non-linear systems of differential equations, their types and stability. Understand concepts of potential energy function, limit cycles, semi orbit and limit sets. Apply the gained knowledge to determine the type and stability of critical points and check for existence of limit cycles of given systems.</p> |
| <b>M24-MAT-205</b> | <b>Computer Programming With MATLAB</b> | <p>1. Get familiar with the importance and working of MATLAB as a computation platform through the knowledge of characters, variables, operators, functions, and expressions as used for elementary operations in matrix algebra along with the editing, load/save data, and compilation/execution/quitting of source programs.</p> <p>2. Learn the process of writing a source program in MATLAB as a programming language, making use of the statements for input/output, conditional/non-sequential processing involving functions, arrays, and structures.</p> <p>3. Learn the plotting of the curves and surfaces, which can be edited, modified, accumulated, handled, printed, and exported.</p> <p>4. Write source programs with objects, variables, expressions, abstract functions, math functions in symbolic form and their subsequent use for the operations/concepts/problems in calculus, linear algebra, and differential equations.</p>                                                                                                 |
| <b>M24-MAT-206</b> | <b>Practical-2</b>                      | <p>1. Solve practical problems related to theory courses undertaken in Semester-II from an application point of view.</p> <p>2. Know the syntax of expressions, statements, data types, structures, commands, and write source code for a program in MATLAB/SCILAB/Octave.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|                     |                            | <p>3. Edit, compile/interpret, and execute the source program to get the desired results.</p> <p>4. Debug, verify/check to obtain and store the output of results.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SEMESTER III</b> |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>M24-MAT-301</b>  | <b>Fluid Mechanics</b>     | <ol style="list-style-type: none"> <li>1. Be familiar with continuum model of fluid flow, classify fluid/flows, Stream, path and streak lines, rotational and irrotational motion. Understand Euclidian and Lagrangian descriptions of fluid motion, law of conservation of mass and boundary surfaces. Attain ability to derive equation of continuity and problem solving.</li> <li>2. Learn to derive equations of motion, Bernouli equation, vorticity equation corresponding to different problems of fluid dynamics and to solve those equations. Prove theorems on circulation and energy in fluid flow. Make strong foundation for doing research in the area of fluid mechanics and bio-mechanics.</li> <li>3. Understand motion of sphere in a fluid and fluid flow past a sphere at rest; sources, sinks, doublets and their images. Learn to solve three dimensional flow problems of fluid dynamics.</li> <li>4. Understand two dimensional flow problems, stream function, axi-symmetric flow, complex potential, source, sink and doublets in two dimensions, Milne-Thomson circle theorem, Blasius theorem. Attain skills to solve fluid flow problems in two dimensions. Get exposure to research problems in fluid dynamics.</li> </ol> |
| <b>M24-MAT-302</b>  | <b>Functional Analysis</b> | <ol style="list-style-type: none"> <li>1. Know about the requirements of a norm; completeness with respect to a norm; understand relation between compactness and dimension of a space; check boundedness of a linear operator and relate to continuity; convergence of operators by using a suitable norm; apply the knowledge to compute the dual spaces.</li> <li>2. Extend a linear functional under suitable conditions; apply the knowledge to prove Hahn Banach Theorem for further application to obtain the representation of bounded linear functionals on <math>C[a,b]</math>; know about adjoint of operators; understand reflexivity of a space and demonstrate understanding of the</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|                    |                           | <p>statement and proof of uniform boundedness theorem.</p> <ol style="list-style-type: none"> <li>3. Know about the notions of strong and weak convergence; understand open mapping theorem, bounded inverse theorem and closed graph theorem; distinguish between Banach spaces and Hilbert spaces; decompose a Hilbert space in terms of orthogonal complements.</li> <li>4. Understand totality of orthonormal sets and sequences; represent a bounded linear functional in terms of inner product; classify operators into self-adjoint, unitary and normal operators.</li> </ol>                                                                                                                                                                                                 |
| <b>M24-MAT-306</b> | <b>Elasticity</b>         | <ol style="list-style-type: none"> <li>1. Understand concepts of extension and torsion and learn to solve different elastostatics problems of extension and torsion of beams.</li> <li>2. Learn techniques to make use of complex analysis (analytic functions, conformal mappings) for solving elastostatics problems. Be familiar with flexure of beams of different cross-sections.</li> <li>3. Understand plane deformation, plain stress and Airy Stress function and attain capability to solve two dimensional problems in elasticity for analytical solutions.</li> <li>4. Learn techniques for solving some scientifically important elastodynamics problems in three-dimensions and understand vibrations of elastic solids and wave propagation in such solids.</li> </ol> |
| <b>M24-MAT-310</b> | <b>NUMBER THEORY</b>      | <ol style="list-style-type: none"> <li>1. Understand concept of greatest integer function, arithmetic function, mobius inversion formula, recurrence function, combinatorial number theory.</li> <li>2. Find solution of Diophantine equations and rational points on curve.</li> <li>3. Understand concept of Farey fractions, irrational numbers and geometry of numbers.</li> <li>4. Have deep understanding of simple continued fractions, approximation to irrational number, Pell's equation.</li> </ol>                                                                                                                                                                                                                                                                        |
| <b>M24-MAT-313</b> | <b>INTEGRAL EQUATIONS</b> | <ol style="list-style-type: none"> <li>1. Understand the concept of integral equations to identify different constituents to classify them and to apply the eigen-system method</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|                    |                                       | <p>for solving the Fredholm type with separable kernel.</p> <ol style="list-style-type: none"> <li>Derive procedures for iterative methods to solve integral equations of both Fredholm and Volterra types without restricting the kernel to be separable and proving specific theorems of Fredholm's theory.</li> <li>Design methods for solving the integral equations with symmetric kernels as linear/bilinear expansions over an orthonormal system of functions and to prove various theorems to analyse these methods. Apply the knowledge to solve problems.</li> <li>Learn the use of numerical methods for finding an eigenvalue and the analytical methods to solve the singular integral equations from Cauchy-type to Hilbert-type, which involve Cauchy's principal value, closed/open contours and the Riemann Hilbert problem.</li> </ol> |
| <b>M24-MAT-315</b> | <b>Practical -3</b>                   | <ol style="list-style-type: none"> <li>Understand the algorithms for solving listed mathematical problems and to solve practical problems related to core courses undertaken in the Semester-III from application point of view.</li> <li>Write source codes using either of MATLAB/SCILAB/Octave programming.</li> <li>Edit, compile/interpret and execute the source program for desired results.</li> <li>Verify/check results using built-in MATLAB/SCILAB/Octave functions.</li> </ol>                                                                                                                                                                                                                                                                                                                                                               |
| <b>SEMESTER IV</b> |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>M24-MAT-401</b> | <b>PARTIAL DIFFERENTIAL EQUATIONS</b> | <ol style="list-style-type: none"> <li>: Classify the PDE of different orders into elliptic/ parabolic/ hyperbolic types and work on the methods to solve homogeneous and non-homogeneous elliptic equations.</li> <li>Understand the role of Green's function in solving PDE and work on the methods/principle used to derive formulas for solutions of homogeneous and non-homogeneous parabolic/heat equations.</li> <li>Use various methods to solve the homogeneous and nonhomogeneous wave equations, one to three dimensional, in different coordinate systems. Capacity to apply those techniques/methods to numerous problems that arise in science, engineering and</li> </ol>                                                                                                                                                                  |

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|                    |                                               | <p>other disciplines.</p> <ol style="list-style-type: none"> <li>Learn to solve non-linear first order PDEs through complete integrals, envelopes, characteristics and solve Laplace, heat and wave equations using method of separation of variables and using integral transforms.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>M24-MAT-402</b> | <b>MECHANICS AND CALCULUS OF VARIATIONS</b>   | <ol style="list-style-type: none"> <li>Understand moments and products of inertia, kinetic energy of a rigid rotating body, Laws of conservation of momentum, angular momentum and energy. Demonstrate knowledge to solve related problems of mechanics.</li> <li>Learn about three-dimensional rigid body dynamics and generalized coordinates.</li> <li>Understand Lagrange's equation for potential forces, Variational principles, Hamiltonian, Canonical transformations and Hamilton Jacobi equation.</li> <li>Understand concepts calculus of variations and to solve variational problems of different forms of functionals.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>M24-MAT-405</b> | <b>GENERAL MEASURE AND INTEGRATION THEORY</b> | <ol style="list-style-type: none"> <li>Understand the concept of measure defined on a ring of sets, its properties; extension, uniqueness and completeness of measures; measurable spaces, measurable and simple functions.</li> <li>Have deep understanding of the concepts of convergence in measure, almost uniform convergence; apply the knowledge to prove Egoroff's theorem, Riesz-Weyl theorem; learn about integrable functions, indefinite integrals; demonstrate understanding of the statement and proof of the monotone convergence theorem. demonstrate understanding of the statement and proof of the JordanHahn decomposition, Radon-Nikodym theorem.</li> <li>Understand the concepts of product measures; apply the knowledge to prove Fubini's theorem; understand signed measures;demonstrate understanding of the statement and proof of the JordanHahn decomposition, Radon-Nikodym theorem.</li> <li>Know about the concepts of Baire sets, Baire measures, regularity of measures on locally compact spaces; apply the knowledge to prove Riesz-Markoff representation theorem related to the representation of a bounded linear</li> </ol> |

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|                    |                                | functional on the space of continuous functions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>M24-MAT-410</b> | <b>BOUNDARY VALUE PROBLEMS</b> | <ol style="list-style-type: none"> <li>1. Reduce boundary value problems involving ODEs to the equivalent integral and to solve such problems with Green's function and Modified Green's function approaches. Apply these techniques in problem solving.</li> <li>2. Learn to find solutions of boundary value problems involving Laplace's equation, Poisson's equation and Helmholtz's equation by using theory of integral equations and Green's function. Attain skill to solve such BVP which arise frequently in different branches of engineering and sciences.</li> <li>3. Learn to solve the integral equations by integral transform methods. Apply the gained knowledge in solving mixed boundary problems.</li> <li>4. Understand Perturbation methods and attain capability to apply perturbation techniques in solving different listed boundary value problems of Electrostatics, Hydrodynamics and Elasticity.</li> </ol>                                                                                                                                                                                                                |
| <b>M24-MAT-411</b> | <b>BIO-MATHEMATICS</b>         | <ol style="list-style-type: none"> <li>1. Derive population growth laws/models regulated through logistic equation, involving species competition, Lotka-Volterra predator-prey equations to develop the theory of age-structured populations using both discrete- and continuous-time models for their applications in life cycle of a hermaphroditic worm.</li> <li>2. Model smaller populations those exhibit stochastic effects so as to analyze births rates in finite populations for their role in mathematical models of infectious disease epidemics and endemics so as to predict the future spread of a disease and to develop strategies for containment and eradication.</li> <li>3. Learn the mathematical modeling of the evolution/maintenance of polymorphism to understand population genetics, influence of natural selection, genetic drift, mutation, and migration (i.e., evolutionary forces) in changing the Allele frequencies.</li> <li>4. Derive mathematical models for biochemical reactions, including catalyzed by enzymes, based on the law of mass action, enzyme kinetics, fundamental enzymatic properties</li> </ol> |

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|                    |                                                  | (i.e., competitive inhibition, allosteric inhibition, cooperativity) so as to know about DNA chemistry and the genetic code for alignment of DNA/RNA sequences by brute force, dynamic programming or gaps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>M24-MAT-415</b> | <b>Practical -4</b>                              | <ol style="list-style-type: none"> <li>1. Solve practical problems related to core courses undertaken in the Semester-IV from application point of view.</li> <li>2. Understand the basics of R programming language including data types, variables, operators, expressions, input/output statements, control structures and functions.</li> <li>3. Understand built in functions and tools of general use in R and know how to use those.</li> <li>4. Learn entering, plotting, manipulation and interpretation of data using statistical functions of R.</li> </ol>                                                                                                                                                                                                                                                            |
| <b>M24-MAT-416</b> | <b>EMPLOYABILITY SKILLS IN MATHEMATICS (EEC)</b> | <p>After completing this course, the learner will be able to:</p> <ol style="list-style-type: none"> <li>1. Understand concepts of different probability distributions for discrete variables and their implementation in R.</li> <li>2. Understand concepts of different probability distributions for continuous variables and their implementation in R. CLO</li> <li>3. Learn about consistency and sufficiency of Estimators, Method of Moments, Basic Concepts of Confidence Interval Estimation and to attain skills to implement these techniques in R.</li> <li>4. Have understanding of basics of Tests of Hypothesis and Decision Rules, Test Procedures, Sample Test for Mean with Known and Unknown Variances, Test of Hypothesis for Variance in hypothesis testing with one sample and two sample test.</li> </ol> |

## **DEPARTMENT OF COMMERCE**

### **Programme Name: Masters of Commerce**

#### **Program Outcomes (POs)**

| <b>POs</b> | <b>After completing this programme students will be able to:</b>                                                                                                                                                                                 |
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| PO 1       | Development of language abilities of students. Development of numerical abilities of students.                                                                                                                                                   |
| PO 2       | Development of numerical abilities of students.                                                                                                                                                                                                  |
| PO 3       | Develops self-confidence, inter personal skills, leadership quality, time management etc.                                                                                                                                                        |
| PO 4       | All courses of master of commerce offer a number of values based and job-oriented courses ensure that students are trained into up-to-date.                                                                                                      |
| PO 5       | Development of various skills like accounting skills, managerial skills, Commercial sense, Entrepreneurial skill, Budgeting ability, Human Resources Management skills, communication skills and overall personality development of the students |
| PO 6       | In advanced accounting courses beyond the basic level, effective development will also progress to the valuing and organization levels.                                                                                                          |

#### **Program Specific Outcomes (PSOs)**

| <b>PSOs</b> | <b>After completing this programme students will be able to:</b>                                                                                              |
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| PSO 1       | Development of various soft skills and expertise in commerce and business field.                                                                              |
| PSO 2       | Development of career skills. Students by applying both qualitative and quantitative knowledge to their future careers in business.                           |
| PSO 3       | Makes understanding of role of businessmen, accountant, auditor, managers, consultant, economist which helps to possess knowledge to apply in decision making |
| PSO 4       | Makes understanding of role of businessmen, accountant, auditor, managers, consultant, economist which helps to possess knowledge to apply in decision making |
| PSO 5       | Development of skills like effective communication, critical thinking, decision                                                                               |

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|        | making, problem solving in day to day business affairs.                                                                                                                                                           |
| PSO 6  | Inculcating different skills for analysis and interpretation of financial data to understand financial health of an organization and ensure that resources are being used to achieve the organization objectives. |
| PSO 7  | Exposed students about entrepreneurship.                                                                                                                                                                          |
| PSO 8  | Developing knowledge about cost ascertainment and fixation of selling price and cost control.                                                                                                                     |
| PSO 9  | Development ability to work in teams with enhanced communication and inter-personal skills.                                                                                                                       |
| PSO 10 | Getting familiar with the procedure of preparation of financial statement                                                                                                                                         |
| PSO 11 | Enhances confidence level to do higher education and advance research in the field of commerce                                                                                                                    |

### Course Outcomes (COs) of Master of Commerce

| SEMESTER I  |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Course Code | Course Name                       | Course Outcomes: After successfully completing this course, students will be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| M24-COM-101 | Organizational Behaviour (CC-1)   | <ol style="list-style-type: none"> <li>1. Understand the basic ideas of Organizational Behaviour and how a person's personality affects work in an organization.</li> <li>2. Learn how individuals behave at work, including how they learn, think, and feel about things (attitude and perception).</li> <li>3. Understand how people behave in groups and teams and how to analyze group behaviour using simple tools.</li> <li>4. Learn how to deal with problems and changes in organizations, like handling conflicts and managing change smoothly.</li> </ol> |
| M24-COM-102 | Financial Management (CC-2)       | <ol style="list-style-type: none"> <li>1. Know what financial management is and learn about the latest updates in this field.</li> <li>2. Make financial plans for running a business properly.</li> <li>3. Understand how to make decisions about long-term and short-term investments.</li> <li>4. Learn how companies decide on giving dividends and understand different models for dividend decisions</li> </ol>                                                                                                                                               |
| M24-COM-103 | Indian Business Environment(CC-3) | <ol style="list-style-type: none"> <li>1. Understand what a business environment is and how it works.</li> <li>2. Learn how to study the environment for business and plan for the economy.</li> </ol>                                                                                                                                                                                                                                                                                                                                                              |

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|                    |                                                             | <p>3. Know about different government policies related to economy and technology that affect businesses.</p> <p>4. Understand the important laws related to the Indian business environment.</p>                                                                                                                                                                                                                                     |
| <b>M24-COM-104</b> | <b>Business Research Methods (CC-4)</b>                     | <p>1. Create a research problem and find out the key variables to study.</p> <p>2. Understand different ways to design and plan research work.</p> <p>3. Learn how to do background study (literature review) as part of the research process.</p> <p>4. Analyze the data collected and explain the results in a proper way.</p> <p>5. Use statistical tools and software to apply different statistical techniques in research.</p> |
| <b>M24-COM-105</b> | <b>Retailing (CC-5)</b>                                     | <p>1. Understand the basic structure and working system of retail businesses.</p> <p>2. Learn how to make decisions related to store location and planning.</p> <p>3. Know how retailers use marketing tools and strategies to connect with customers.</p> <p>4. Understand retail pricing, operations policies, and how things are managed in stores.</p>                                                                           |
| <b>M24-COM-107</b> | <b>Strategic Management (DEC-1)</b>                         | <p>1. Understand the process of strategic management and learn how to create a business vision, mission, and goals.</p> <p>2. Know the different levels of strategies and the common options available to businesses.</p> <p>3. Learn how to make smart strategic choices for a business.</p> <p>4. Understand the problems in putting strategies into action and learn how to evaluate and control them effectively.</p>            |
| <b>SEMESTER II</b> |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>M24-COM-201</b> | <b>Human Resource Management (CC-6)</b>                     | <p>1. To understand the concept of human resource management in India and global context.</p> <p>2. To learn about manpower planning.</p> <p>3. To gain insight of hr Development and career planning.</p> <p>4. To develop the understanding of performance appraisal and compensation decision.</p>                                                                                                                                |
| <b>M24-COM-202</b> | <b>Fraud Investigation &amp; Forensic Accounting (CC-7)</b> | <p>1. To understand the fraud red flags and basic fraud examination concepts.</p> <p>2. Critically evaluate the various kinds of corporate frauds.</p> <p>3. Comprehend the concept of forensic accounting in context of corporate frauds.</p> <p>4. Gain insights about forensic accounting techniques and legal issues.</p>                                                                                                        |
| <b>M24-COM-</b>    | <b>International</b>                                        | <p>1. Students will demonstrate an understanding of key</p>                                                                                                                                                                                                                                                                                                                                                                          |

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| 203         | <b>Business (CC-8)</b>                          | <p>concepts and terminologies in international business, including the importance of international trade.</p> <p>2. Students will be able to evaluate and select the most suitable mode of entry into international business, considering various factors and situations.</p> <p>3. Students will analyze and discuss the impact of macro factors (PESTEL) on the international business environment.</p> <p>4. Students will examine and elaborate on the role of various government institutions in India that support international trade.</p> <p>5. Students will demonstrate an understanding of recent EXIM policy concepts in India, relating them to the flow of Foreign Direct Investment (FDI) and the direction of Indian foreign trade.</p> |
| M24-COM-204 | <b>Stock Market Operations (CC-9)</b>           | <p>1. To gain knowledge about financial literacy and investment awareness.</p> <p>2. To explore career opportunities in the stock market and finance sector.</p> <p>3. To understand various investment avenues and key stock market terminologies.</p> <p>4. To gain Knowledge about making investment decisions for wealth appreciation in the future.</p>                                                                                                                                                                                                                                                                                                                                                                                            |
| M24-COM-205 | <b>Supply Chain Management (CC-10)</b>          | <p>1. Understand the fundamental concepts, scope, and importance of supply chain management in a business.</p> <p>2. Analyze the key processes involved in supply chain management, including logistics, procurement, and operations.</p> <p>3. Evaluate the role of technology and information systems in optimizing supply chain performance.</p> <p>4. Apply strategies for effective supply chain design, planning, and execution.</p> <p>5. Assess the impact of supply chain management on customer satisfaction and overall business profitability.</p>                                                                                                                                                                                          |
| M24-COM-207 | <b>Advertising and Personal Selling (CC-11)</b> | <p>1. Analyze the structure and functioning of the advertising industry, including types of media, agency roles, and ethical considerations.</p> <p>2. Develop the ability to design and evaluate advertising campaigns with strategic planning, budgeting, and message development.</p> <p>3. Examine consumer behaviour and apply psychological principles in creating persuasive advertising and personal</p>                                                                                                                                                                                                                                                                                                                                        |

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|                     |                                           | <p>selling techniques.</p> <p>4. Understand the personal selling process, including prospecting, approaching, presenting, handling objections, and closing the sale.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SEMESTER III</b> |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>M24-COM-301</b>  | <b>Financial Institutions and Markets</b> | <ol style="list-style-type: none"> <li>1. Enable to understand the working of financial Institutions and markets both individually and as an interlinked system.</li> <li>2. Develop an understanding of the organization, role, functioning and need for regulation of different types of financial markets in India.</li> <li>3. Familiarize the students with the role of commercial banks, NBFCs and development banks in India.</li> <li>4. To acquaint the learners with the concept of financial services with special emphasis on merchant banking and mutual funds and recent developments.</li> </ol> |
| <b>M24-COM-302</b>  | <b>Financial Analysis and Reporting</b>   | <ol style="list-style-type: none"> <li>1. Analyze and interpret financial statements.</li> <li>2. Understand the concept of mandatory and voluntary disclosures.</li> <li>3. Gain insights on Indian Accounting standards and IFRS.</li> <li>4. Critically evaluate the contemporary issues in financial reporting.</li> </ol>                                                                                                                                                                                                                                                                                  |
| <b>M24-COM-303</b>  | <b>Investment Management</b>              | <ol style="list-style-type: none"> <li>5. To Help students to familiar with investment environment</li> <li>6. To develop an understanding of fundamental &amp; technical analysis and investment strategies</li> <li>7. Enable to evaluate portfolios along with deep understanding of capital market</li> <li>8. Familiarize with financial derivatives and option pricing model.</li> </ol>                                                                                                                                                                                                                  |
| <b>M24-COM-305</b>  | <b>Service Marketing</b>                  | <ol style="list-style-type: none"> <li>5. Understand the conceptual framework buyer behavior and marketing mix of services.</li> <li>6. Apply the knowledge of service relationship marketing and service development delivery.</li> <li>7. Describe and demonstrate the understanding of service recovery, physical environment of services,</li> <li>8. Communication and pricing of services. Describe and demonstrate the understanding of distribution of services, management of service employees as well as customers.</li> </ol>                                                                       |
| <b>M24-COM-308</b>  | <b>Management of Industrial Relations</b> | <ol style="list-style-type: none"> <li>4. Acquire theoretical and practical perspective on many aspects of industrial relations.</li> <li>5. Understand the key participants, institutions, relationships and processes in employment relations.</li> </ol>                                                                                                                                                                                                                                                                                                                                                     |

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|                    |                                              | 6. Understand Trade union act in Indian context.                                                                                                                                                                                                                                                                                                                                                        |
| <b>M24-COM-309</b> | <b>Consumer Behaviour</b>                    | 5. Understand the nature of consumer behavior and process of consumer buying.<br>6. Explore the underlying variables resulting into differences in consumer decision making.<br>7. Comprehend the influence of external factor on consumer behavior<br>8. Gain insight into models of buyer behaviour                                                                                                   |
| <b>SEMESTER IV</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>M24-COM-401</b> | <b>IT Applications in Business</b>           | 6. Use online tools to improve productivity<br>7. Communicate and collaborate using the online and cloud-based tools.<br>8. Manage online resources for marketing communication.<br>9. Comprehend AI tools for students.<br>10. Will be able to apply various IT tools in real life situation.                                                                                                          |
| <b>M24-COM-402</b> | <b>Multinational Financial Management</b>    | 5. Analyze the impact of GAAP application for reporting and compliance.<br>6. Study accounting methods for business combinations and corporate restructuring.<br>7. Understand accounting statements for business groups and joint ventures.<br>8. Know about the recent developments for corporate reports                                                                                             |
| <b>M24-COM-403</b> | <b>Corporate Reporting Practices</b>         | 5. Analyze the impact of GAAP application for reporting and compliance.<br>6. Study accounting methods for business combinations and corporate restructuring.<br>7. Understand accounting statements for business groups and joint ventures.<br>8. Know about the recent developments for corporate reports                                                                                             |
| <b>M24-COM-405</b> | <b>Sales Management</b>                      | 4. Acquaint with sales planning, sales quotas, sales territories and sales budgets.<br>5. Know about the recruitment, selection, placement, induction, training and development of the sales force.<br>6. Comprehend the concepts of training, motivation, evaluation and control of sales force                                                                                                        |
| <b>M24-COM-407</b> | <b>Organizational Change and Development</b> | 5. Understand the concept, nature, and importance of organizational change and development in modern organizations.<br>6. Explain various models of change management such as Lewin's Change Model and Kotter's 8-Step Model.<br>7. Evaluate the role of leadership, communication, and organizational culture in successful change implementation.<br>8. Develop skills to plan, implement, and manage |

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|                     |                                                  | change effectively in organizations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>M24-COM-409</b>  | <b>Event Management</b>                          | <ol style="list-style-type: none"> <li>5. Understand the concept, nature, and importance of organizational change and development in modern organizations.</li> <li>6. Explain various models of change management such as Lewin's Change Model and Kotter's 8-Step Model.</li> <li>7. Evaluate the role of leadership, communication, and organizational culture in successful change implementation.</li> <li>8. Develop skills to plan, implement, and manage change effectively in organizations.</li> </ol> |
| <b>M24-COM- 411</b> | <b>Employability and Entrepreneurship skills</b> | <ol style="list-style-type: none"> <li>5. Do career planning and improve self Esteem.</li> <li>6. Do time management and improve leadership skills.</li> <li>7. Inculcate listening, speaking and test taking skills.</li> <li>8. Creative thinking &amp; writing skills and by understanding cultural diversity and relevance of managing relationships</li> </ol>                                                                                                                                              |