Government Lal Chakradhar PG Shah College, Ambagarh Chowki

District :- Mohla-Manpur- Ambagarh Chowki (C.G.)

Session 2024-25

Government LCS College is affiliated to Hemchand Yadav (Durg) University, Durg.We follow the Syllabus of Hemchand Yadav University.Presently we have Following Program:

Undergraduate Level

1. B.A. (Hindi Literature, Economics, History, Political Science, HomeScience, Sociology, Geography, English Literature)
2. B.Com.
3. B.Sc. (Zoology, Botany, Chemistry)
4. B.Sc. (Mathamateics, Physics, Chemistry)

Postgraduate Level

1. M.A. (Economics)
2. M.A. (Hindi)
3. M.A. (History)
4. M.A. (Political Science)
5. M.Sc. (Botany)
6. M.Sc. (Chemistry)
7. M.Sc. (Zoology)
8. M.Com.

Department of Botany

Bachelor of Science :-

NEP-2020

Program Outcomes (PO):

- Demonstrate and apply the fundamental knowledge of the basic principles of major fields of biology
- Apply knowledge to solve the issues related to plant sciences with the help of computer technology
- Apply knowledge for conservation of endemic and endangered plant species

Program Specific Outcomes (PSO):

- Collaborate effectively on team-oriented projects in the field of life sciences.
- Communicate scientific information in a clear and concise manner both orally and in writing
- Explain Biodiversity, climate change and plant pathology.
- Apply Biotechnology, Ecology, Genetics and Plant breeding techniques in plant sciences
- Apply knowledge of Medicinal and Economic botany in day to day life.
- Apply the knowledge to develop the sustainable and eco-friendly technology.

Course Learning Outcomes (CLO)

BOSC/BOGE I T - Elementary Botany

At the end of this course, the students will be able to-

- Understand the Basics of Botany and its branches.
- Get acquainted with complex interrelationship between organisms and environment.
- Develop a comprehensive understanding of the identification, cultivation, andprocessing of medicinal plants, and their chemical constituents.
- Utilize plants resources for livelihood.
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BOSC/BOGE I P - Lab. Course-01 (Elementary Botany)

At the end of this course, the students will be able to-

- Understand structure of plant cell, prokaryotic cell and eukaryotic cell.
- Identify pteridophytes of college campus.
- Learn about the different types of plant tissues.
- Learn about Ayurvedic system of medicine.

BOSC/BOGE II T Microbes and Thallophyta

At the end of this course, the students will be able to-

- Understand about the Microbes and their Importance.
- Identify edible mushrooms and learn cultivation techniques.

- Learn about bio-fertilizers and their uses.
- Understand life cycles of different algae and fungi.

BOSC/BOGE II P Lab. Course-02 (Microbes and Thallophyta)

At the end of this course, the students will be able to-

- Understand the Viruses, Bacteria, Phycology, Mycology and Plant pathology
- Learn microbial techniques which will be beneficial for agriculture and industry.
- Learn life cycles of selected genera of different groups
- Understand etiology of plant diseases
- Apply their knowledge in the crop fields to eradicate or avoid the diseases

BOSC III TArchegoniate and Fossils

At the end of this course, the students will be able to-

- students will be familiar with amphibians and reptiles plants
- progressive evolution in plants
- relics of past plants
- diversity in plants
- Development of seeds.

BOSC III P Lab. Course-03 (Archegoniate and Fossils)

At the end of this course, the students will be able to-

- students will be familiar with amphibians and reptiles plants
- progressive evolution in plants
- relics of past plants
- diversity in plants
- Development of seeds.

BOSC IV T Angiosperms

At the end of this course, the students will be able to-

- Understand basics of plant identification, classification and nomenclature
- Understand the concept, diversity and evolution of Angiosperm plants.
- Become familiar with the internal structure of plants and concept of plant tissues with its revolutionary concept.
- Understand the reproductive system in flowering plants.

BOSC IV P Lab. Course-04 (Angiosperms)

At the end of this course, the students will be able to-

- Understand the systematic status of flowering plants.
- Learn collection of local flora, identification and herbarium preparation.
- Understand internal structure of different plant parts.
- Understand the pollination and seed dispersal mechanism.
- Understand about reproduction system in flowering plants.

BOSC V T Cytology and Genetics

At the end of this course, the students will be able to-

- Aquire knowledge of cell and its components
- Learn about the structure and function of membrane and cell division
- Interpret Mendalian and non Mendelian genetics
- Interpret linkage, crossing over and gene interaction

BOSC V P Lab. Course-05 (Cytology and Genetics)

At the end of this course, the students will be able to-

- Handle the Compound light Microscope and apply microscopy
- Achieve elaborate idea about cell staining procedures and mitotic plate observation &analysis
- Identify the various stages of cell division karyotype analysis Get practice of genetic crosses and genetic analysis.

BOSC VI T Plant Physiology and Economic Botany

At the end of this course, the students will be able to-

- Gain a deep understanding of the fundamental physiological processes in plants, including photosynthesis, respiration, transpiration, and nutrient uptake, and their regulation.
- Acquire practical skills in conducting experiments and using various techniques.
- Develop a comprehensive understanding of the economic value and utilization of plant resources.
- Acquire knowledge and skills to identify and classify economically important plant species.

BOSC VI P Lab. Course-06 (Plant Physiology and Economic Botany)

At the end of this course, the students will be able to-

- Acquire practical skills in conducting experiments and using various techniques to measure and analyze plant physiological parameters, enabling students to design and execute experiments in plant physiology research.
- Acquire knowledge and skills to identify, and classify economically important plant species, and understand their ecological requirements, cultivation techniques, and potential for sustainable utilization.

- Apply critical thinking and problem-solving skills to analyse and evaluate the impacts of human activities on plant resources, and develop strategies for the conservation, sustainable management, and utilization of plant biodiversity.

BOSC VII T Ecology and Phytogeography

At the end of this course, the students will be able to-

- The interrelationship between organisms and environment.
- Methods to study vegetation, community patterns and processes, ecosystem functions, and principles of phytogeography.
- Evolving strategies for sustainable natural resource management and biodiversity conservation.
- Climatic changes and its restoration
- Familiar with sustainable development

BOSC VII P Lab. Course-07 (Ecology and Phytogeography)

At the end of this course, the students will be able to-

- Students will be able to determine frequency, abundance and density of any area.
- Learn community relationships of plants.
- Understand IVI and biomass.
- Can determine diversity indices.
- Biodiversity of different ecosystems
- Interaction among different community
- Pollution and its effect

BOSC VIII T Molecular biology and Biostatistics

At the end of this course, the students will be able to-

- Students should know about cellular and gene regulation to understand genomic functions
- Understand the concept of 'one gene one enzyme hypothesis' along with the molecular mechanism of mutation
- Students will be familiar with the genetic material DNA structure its role and defects and repairing
- Students will be familiar with the RNA structure its role
- Students will be familiar with data handling.

BOSC VIII P Lab. Course-08 (Molecular biology and Biostatics)

At the end of the course, the students will be able:

- Isolate DNA from plant cell and E.Coli.
- Learn chimera formation in various plants.

- Understand the functioning and application of spectrophotometer.
- Understand the interpretation of data with the help of statistical data.

BOSE-01 T Natural resources and management (DSE)

At the end of this course, the students will be able to

- Understand natural resources and their sustainable utilization.
- Knowledge on land, water, energy, and forest resources.
- Students will learn about the practices of natural resource management.
- Knowledge on the international and national efforts of natural resource management.

BOSE-01 P Natural resources and management (DSE)

At the end of this course, the students will be able to

- To understand natural resources and their sustainable utilization.
- Acquire knowledge on land, water, energy, and forest resources.
- Students will learn about the practices of natural resource management.
- Acquire knowledge on the international and national efforts of natural resource management.

BOSE-02TMicrobiology and Phytopathology (DSE)

At the end of this course, the students will be able to

- Basic idea of different microbes present in biotic and abiotic environment.
- Knowledge of principle concept and methods in the field of Microbiology and Phytopathology
- Idea of living, non living and environmental causes of plant diseases.
- Knowledge of different technique to isolate microbes study their cultural characteristics,.
- How disease occurs by microbes, their identification and control measures.

BOSE-02p Microbiology and Phytopathology (DSE)

At the end of this course, the students will be able to

- Basic idea of microbes.
- Culture of microbes in the laboratory
- How disease occurs by microbes
- Basic idea of host parasite interrelationship
- Control measure of pathogen by different biological sources.

BOSE-03TPhytopaleontology and Evolutionary Botany(DSE)

At the end of this course, the students will be able to

- Have a basic idea of fossils and process of fossilization
- Describe how plants evolved including their origin and diversification Summarize and evaluate information from scientific literature

- Identify plat fossil through study of the remains of organisms, anatomical evidence and diversity
- Understand and track evolution of species over millions of years identify transional forms of life
- Understand how earth's environment has changed over geological time.

BOSE-03PPhytopaleontology and Evolutionary Botany(DSE)

At the end of this course, the students will be able to

- Understand evolutionary trends of plant development and diversification.
- Study remnant of past and its natural conservation.
- Phylogenetic relationship with the help of paleontological evidences
- Understand role of fossil as an educational tool promoting science literacy an appreciation for earth's rich biological heritage.

BOSE-04tEthnobotany and Medicinal plants(DSE)

At the end of this course, the students will be able to

- Develop a comprehensive understanding of the identification, cultivation, and processing of medicinal plants, and their chemical constituents responsible for therapeutic properties, enabling the evaluation of their potential for drug development and healthcare applications.

- Explore the integration of traditional medicine practices, ethnobotany, and pharmacological principles in the study of medicinal plants, enabling the critical evaluation of their efficacy, safety, and cultural significance in different healthcare systems.

BOSE-04PEthnobotany and Medicinal plants(DSE)

At the end of this course, the students will be able to get

- Acquire practical skills about the connection between plants and human society.
- Acquire knowledge of ethnobotanical research methods.
- Apply critical thinking and problem-solving skills of traditional plant uses.
- Idea about protection and conservation of medicinal and ethnobotanical plants.
- Documentation of cultural knowledge about healing.

BOSE-05tBiosystematics and Biodiversity(DSE)

At the end of this course, the students will be able to

- Understand different classification and nomenclature system in botany.
- Learn plant collection and preservation techniques.
- Get knowledge about the biodiversity and its importance.
- Analyse the different conservation practices for nature.

BOSE-05pBiosystematics and Biodiversity(DSE)

At the end of this course, the students will be able to get

- Understand collection and preservation techniques for plants.
- Learn use of flora for plant identification.
- Understand about protected area of the country
- Analyze various IUCN categories of threats.

BOSE-06t- Plant breeding and Seed technology(DSE)

At the end of this course, the students will be able to

- Gain knowledge and comprehension of the breeding systems
- knowledge of reproductive biology in angiosperms to address real-world challenges related to plant breeding, crop production, and conservation. provide students with a comprehensive understanding of plant breeding principles and techniques.

BOSE-06P-Plant breeding and Seed technology(DSE)

At the end of this course, the students will be able to

- Idea of seeds which carries a new generation.
- Knowledge of plant breeding techniques.
- Knowledge of breeding methods for stress tolerance.
- Idea of seed processing and certification of seeds.

BOSE-07T-Instrumentation and biochemical technology (DSE)

At the end of this course, the students will be able to

- Develop a solid understanding of different analytical methods and instruments used in plant sciences.
- Acquire practical skills in sample preparation, data collection, and data analysis using analytical techniques.
- Understand the working principles of important instrumentation tools.
- Understand modern technologies in the field of Biochemistry

BOSE-07p-Instrumentation and biochemical technology (DSE)
At the end of this course, the students will be able toget :

- Knowledge about Bio Instruments,
- Understand different parameters of instrumentation.
- Operation and handing of latest equipment

BOSE-08t-Growth and Stress Physiology(DSE)
At the end of this course, the students will be able toget :

- understand the role of Physiological and metabolic processes for plant growth and development under stress.
- Assimilate about biochemical constitution of plant diversity.
- Get acquired the students with complex interaction between organism and environment
- Understand about the role of hormones in plant development.

BOSE-08p- Growth and Stress Physiology (DSE)
At the end of this course, the students will be able toget :

- Understandthe role of Physiological and metabolic processes for plant growth and development under stress.
- Assimilate about biochemical constitution of plant diversity
- Effect of phytohormones on plants.
- Understand different physiological processes of plants.

BOSE-09 t- Plant Biotechnology and Crop Improvement(DSE)
At the end of this course, the students will be able to

- The basic concept, scope and significance of Biotechnology.
- Micropropagation using meristem and shoot cultureto produce large number of identical individuals.
- The role of biotechnology in crop improvement.
- Various applications of Biotechnology in different fields.

BOSE-09 P- Plant Biotechnology and Crop Improvement(DSE)
At the end of this course, the students will be able tounderstand :

- The basic techniques of Plant Tissue Culture.
- Screening programs of cells, rather than plants, for advantageous characters.
- The biochemical and physiological aspects of plant growth.
- How to explore entrepreneurship avenues in this field.

BOSE-10 t-Applied Botany and Intellectual Property Rights(DSE)
At the end of this course, the students will be able to :

- Understand the scope and importance of Social forestry and establishment of orchard.
- Learn silvics of some important timber plants of India.
- Learn post-harvestmanagement, marketing and value additionof commercial ornamental plants.
- Develop a deep understanding of different forms of intellectual property Rights (IPR)

BOSE-10 P-Applied Botany and Intellectual Property Rights(DSE)
At the end of this course, the students will be able to :

- Understand forest structure and composition.
- Get knowledge about phenology of various species.
- Learn nursery bed preparation technique.
- Analyze the density and moisture content of wood.

BOSE-11 t-Biochemistry and Enzymology(DSE)
At the end of this course, the students will be able to :

- Basic idea of life building block biomolecules.
- Energy status of the cell
- Basic carbohydrates, lipids and proteins structure

- Biocatalyst enzymes

BOSE-11 p-Biochemistry and Enzymology(DSE)
At the end of this course, the students will be able to :

- Students will be familiar with the common biobuilding block
- Biochemical analysis of common biomolecules
- Enzyme kinetics and its role
- Characterization of light harvesting molecule chlorophyll.

BOSE-12 t-Bioinformatics and Gene Technology(DSE)
At the end of this course, the students will be able to :

- Understand basics of bioinformatics and it's tools.
- Learn application of bioinformatics in various areas.
- Analyse and perform RAPD, RFLP, PCR etc.
- Understand GMO and ethics behind the cloning.

BOSE-12 p-(Bioinformatics and Gene Technology)(DSE)
At the end of this course, the students will be able to :

- Retrieve gene and protein from gene bank.
- Understand steps of production of GMO.
- Learn the isolation of plasmid DNA.
- Understand use and application of PCR.

BOVAC-01 Herbal Plant & Human Health Value Addition Course (BOVAC-01)
At the end of this course, the students will be able to :

- Understand the value of herbs, herbal medicine and use of herbal medicine.
- Know about botanical medicine professionals in the complementary and alternative medicine (CAM)
- Demonstrates the knowledge of the toxicity of plant and essential oil ingredients,
- Understand the possibility for allergic and unpleasant reactions to herbal products and the impact of herbal quality on potential toxicity.
- Use the herbal plants in their daily life
- Adopt the value of herbal medicine to save their health.

BOVAC – 02 Academic Research & Report Writing, Value Addition Course (VAC-02)
At the end of this course, the students will be able to :

- Understand the academic research and its scope & prospects.
- Know the Importance of Report writing in academic and Research and Necessity of report writing for achievement of academic & research goals
- Demonstrates the knowledge of the toxicity of plant and essential oil ingredients,
- Understand the kinds & characteristics of academic and research reports /presentation and its prospective application.
- Use the tools and techniques of academic research and report writing
- Adopt the skill of research designing and report/paper / thesis writing

BOSEC-01 Gardening and Floriculture Skill Enhance Course (BOSEC 01)
At the end of this course, the students will be able to :

- Understand the concept of Gardening & Floriculture
- Learn about the gardening technique and familiar with gardening tools
- Adopt the skill of gardening as well as floriculture
- Student may develop entrepreneurship in this field.

BOSEC-02 Flower Decoration Skill Enhance Course (SEC- 02)
At the end of this course, the students will be able to :

- Understand the concept of Flower arrangement & Decoration
- Learn the idea, design and style of Flower decoration and its importance
- Learn the skill of different types Flower arrangement with local/social application, commercial value and social demand
- Adopt the skill of Indian, Western, Japanese and other/local style of flower arrangement/decoration towards level of entrepreneurs' start-up

NON –NEP

Program Outcome(PO)
Major Program outcome of B.Sc Botany are to gain knowledge about:

- Structural organization and economic importance of microbes including Bacteria, Viruses, Mycoplasma, Cyanobacteria.
- Structure, development and economic importance of lower plants including Algae, Fungi, with practical knowledge.
- Structure, development and economic importance of Bryophytes and Pteridophytes.
- Structure, development and economic importance of Gymnosperms, Angiosperms and Flowering plants
- Plant physiology.
- Principles, techniques and application of genetic engineering and biotechnology.
- Environment, Ecology and Ecomonic importance of plants.

Program Specific Outcome(PSO)

B. Sc. Part-I

Paper-I:Bacteria, Viruses, Fungi, Lichens, and Algae

- Understanding the basic microbial characteristics, structure, reproduction and economic importance of Bacteria, Virus, Mycoplasma and Cyanobacteria.
- Know the classification, characteristic features, life history and economic importance of algae with practical knowledge.
- Know the General account, classification, characteristic features, structure, life history and economic importance of fungi with practical knowledge.

Paper-II:Bryophytes, Pteridophytes, Gymnosperms and Plaeobotany

- Know the classification, characteristic features, structure and life cycle of Bryophytes with practical knowledge.
- Know the classification, characteristic features, structure and life cycle of Pteridophytes with practical knowledge.

Lab Course

- Practical Skills in identification of Microorganisms,Bryophyta, Pteridophyta,Gymnosperm, Cytology, Speciemen identification based on theory

B. Sc. Part-II

Paper- I :Plant Systematics, Economic Botany And Ethnobotany

At the end of this course, the students will be able to

- Understand the Plant Taxonomy
- Learn the characteristics of families included
- Learn economic importance of different plants of the concerned families
- Understand the traditional knowledge about the plants and possible application of this knowledge

Paper-II: Plant Anatomy, Embryology and Plant Breeding

At the end of this course, the students will be able to

- Understand the internal structure of root, stem and leaves
- learn about the anomalous secondary growth of some plants
- understand the life cycle of angiospermic plants with details of microsporogenesis, megasporogenesis, fertilization and other developmental details up to embryogenesis
- understand concept of plant breeding and its application

Lab Course : Plant Identification and Embryology

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

- To learn how plant specimens are collected, documented, and curated for a permanent record.
- To observe, record, and employ plant morphological variation and the accompanying descriptive terminology.
- To gain experience with the various tools and means available to identify plants.
- To develop observational skills and field experience.
- To identify a taxonomically diverse array of native plants.
- To recognize common and major plant families.
- Comprehend the concepts of plant taxonomy and classification of Angiosperms

B.Sc. III

Paper –I (Plant Physiology and Ecology)

At the end of the course, the students will be able-

- Understand the role of Physiological and metabolic processes for plant growth and development.
- Learn the symptoms of Mineral Deficiency in crops and their management.
- Assimilate Knowledge about Biochemical constitution of plant diversity
- acquaint the students with complex interrelationship between organisms and environment;
- make them understand methods for studying vegetation, community patterns and processes, ecosystem functions, and principles of phytogeography.
- This knowledge is critical in evolving strategies for sustainable natural resource managementand biodiversity conservation.

Paper-II (Cytogenetics, plant tissue culture and biometry)

At the end of the course, the students will be able:

- Acquire knowledge on cell ultrastructure.
- Understand the structure and chemical composition of chromatin and concept of cell division.
- Interpret the Mendel's principles, acquire knowledge on cytoplasmic inheritance and sex-linked inheritance
- Understand the concept of 'one gene one enzyme hypothesis' along with the molecular mechanism of mutation.
- students will be familiar with data handling.

Lab Course

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

- Know and authentic the physiological processes undergoing in plants along with their metabolism
- Identify Mineral deficiencies based on visual symptoms
- Understand and develop skill for conducting molecular experiments for genetic engineering

Master of Science:-

Course Outcome (CO):

Upon completion of course the Student will be able:

- To acquire theoretical and Practical knowledge of Cell and Molecular Biology, Genetics, Biotechnology, Tissue culture Techniques
- To acquire knowledge about Taxonomy and Diversity of Bacteria, Virues, Fungi, Bryophyta, Pteridophyta, Gymnosperms and Angiosperms
- To acquire knowledge of Plant Physiology, Reproduction and Development
- To become aware of ecological issues like Pollution, Conservation etc.
- To acquire knowledge about Plant pathology

SCHEME OF EXAMINATION

M.Sc. I SEMESTER, BOTANY

THEORY PAPER	TITLE	MAX. MARKS	Internal Assessment/	Total marks

			seminar	
I	CYTOLOGY	80	20	100
II	GENETICS	80	20	100
III	MICROBIOLOGY,PHYCOLOGY AND MYCOLOGY	80	20	100
IV	BRYOPHYTA,PTERIDOPHYTA AND GYMNOSPERM	80	20	100

PRACTICAL

LAB COURSE-I	BASED ON PAPER I&III	80	20	100
LAB COURSE-II	BASED ON PAPER II&IV	80	20	100
TOTAL MARKS (Theory and Practical)				**600**

M.Sc. II SEMESTER, BOTANY

THEORY PAPER	TITLE	MAX. MARKS	Internal Assessment/ seminar	Total marks
I	TAXONOMY AND DIVERSITY OF PLANTS	80	20	100
II	MOLECULAR BIOLOGY	80	20	100
III	PLANT PHYSIOLOGY	80	20	100
IV	PLANT METABOLISM	80	20	100

PRACTICAL

LAB COURSE-I	BASED ON PAPER I&III	80	20	100
LAB COURSE-II	BASED ON PAPER II&IV	80	20	100
TOTAL MARKS (Theory and Practical)				**600**

M.Sc. III SEMESTER, BOTANY

THEORY PAPER	TITLE	MAX. MARKS	Internal Assessment/ seminar	Total marks
I	PLANT DEVELOPMENT & PLANT RESOURCES	80	20	100
II	PLANT ECOLOGY – I (**E**cosystem and vegetation ecology)	80	20	100

III	BIOTECHNOLOGY-I (Biotechnology and genetic engineering of plants and microbes)	80	20	100
IV	Molecular plant pathology-I	80	20	100

PRACTICAL

LAB COURSE-I	BASED ON PAPER I&III	80	20	100
LAB COURSE-II	BASED ON PAPER II&IV	80	20	100
TOTAL MARKS (Theory and Practical)				**600**

M.Sc. IV SEMESTER, BOTANY

THEORY PAPER	**TITLE**	**MAX. MARKS**	**Internal Assessment/ seminar**	**Total marks**
I	PLANT DEVELOPMENT & PLANT RESOURCES	80	20	100
II	PLANT ECOLOGY – II (Pollution and biodiversity conservation)	80	20	100
III	BIOTECHNOLOGY-II (Plant cell, tissue culture and organ culture)	80	20	100
IV	Molecular plant pathology-II	80	20	100

PRACTICAL

LAB COURSE-I	BASED ON PAPER I&III	80	20	100
LAB COURSE-II	BASED ON PAPER II&IV	80	20	100
TOTAL MARKS (Theory and Practical)				**600**

Program Outcome (PO)

Major Program outcome of M.Sc Botany are to gain knowledge about:

- Structural organization of Plant Cell and Genetics.
- Structure, development and economic importance of Bacteria, Viruses, Algae, Fungi, with practical knowledge.
- Structure, development and economic importance of Bryophytes and Pteridophytes.

- Structure, development and economic importance of Gymnosperms, Angiosperms and Flowering plants
- Plant Metabolism, Physiology and Ecology
- Biotechnology and Genetic engineering
- Management of Plant resources and Biodiversity Conservation.
- Different plant disease, cause and treatment.

Program Specific Outcome (PSO)
M. Sc.-I Semester

PSO: 01- Paper-I:CYTOLOGY

- Understand the structure of cell part as cell wall, plasma membrane and cell organelles like Mitochondria, Chloroplast, Plant vacuoles, Endoplasmic reticulum, lysosome, golgi bodies.
- Knowing the techniques in cell biology: Immune techniques, in situ hybridization to locate transcripts in cell types, Electron microscope, camera lucida, micrometry- stage and ocular microme.

PSO: 02- Paper-II:GENETICS

- Understand the chromatin Organization, Karyotype and idiogram, banding pattern, specialized types of chromosomes; polytene, lamp brush, ß chromosomes and sex chromosomes.
- Understood the method ofmapping of Bacteriophage genome,
- genetic transformation and transduction in bacteria,
- chromosomal aberration and polyploidy. Genetic recombination & genetic mapping.
- Understand the Plant breeding technique: Introduction, selection (pure line, mass, bulk), emasculation, bagging, tagging, hybridization (self / cross),
- mutation, resistant and susceptible, heterosis, inbreeding depression, chimera,
- Alien gene transfer through chromosome manipulation.

PSO: 03- Paper-III:MICROBIOLOGY, PHYCOLOGY AND MYCOLOGY

- Knowledge of General account, ultra structure, nutrition and reproduction,
- Biology and economic importance of Archaebacteria, Eubacteria, cyanobacteria, Viruses, Phytoplasma and mycoplasma.
- Knowledge ofdiversified habitats, thallus organization, cell ultra-structure, Pigmentation, Perennation,Classification and evolution and development of sex and reproduction in Algae.
- Understanding the general characters of fungi, substrate relationship in fungi, cell structure unicellular and multicellular organization, cell wall composition, reproduction,heterothallism, heterokaryosis, Para sexuality, fungi as biocontrol agent, economic importance of fungi, VAM fungus

PSO: 04- Paper-IV:BRYOPHYTA, PTERIDOPHYTA AND GYMNOSPERM

- Know the morphology, structure, reproduction, life history, distribution, classification. General account of some specific Bryophytes Economic and ecological importance. Progressive sterilization of sporogenous tissue, Spore dispersal mechanism, Thallus organization, Progressive and reduction theory of origin and development in bryophytes.
- Understand themorphology, anatomy and reproduction, classification, evolution of stele. Telome theory, concept of first vascular plants, Homospory, Heterospory and origin of seed habit.
- Understand the General characters, diversity, Classification, distribution, Economic importance of gymnosperm. Structure and theories regarding origin of Paleozoic ovule and Extinct gymnosperm

Practicals

- Practical Skills in identification of Microorganisms, Bryophyta, Pteridophyta,Gymnosperm,
- Cytology,
- Speciemen identification based on theory, Plant breeding techniques.

M. Sc.-II Semester

PSO: 05- Paper-I:TAXONOMY AND DIVERSITY OF PLANTS

- Know about Plant nomenclature, Plant identification, Taxonomic hierarchy, Taxonomic evidences Different Classification and Fossil angiosperm.
- Knowing the families of polypetalae, gamopatelae, Monochlamydae and monocot with particular reference to systematic position, phylogeny, evolutionary trends and economic importance.

PSO: 06- Paper-II:MOLECULAR BIOLOGY

- Understand the □ucleic acid type and structure□ □replication, damage and repair.
- Understanding the mechanism of Transcription, translation, RNA splicing, regulation of gene expression in prokaryotes and eukaryotes. Protein sorting and Mutation types and its effects.

PSO: 07- Paper-III:PLANT PHYSIOLOGY

- Understand the Membrane transport and translocation of water and solutes, overviewof Signal Transduction
- Understanding the mechanism of **Stress physiology :mineral nutrition in plants (excess and deficiency),** Sensory photobiology
- Know the flowering process, Photoperiodism ,endogeneous clock and its regulation, floral induction and development, Genetic, molecular analysis, role of vernalization.

PSO: 08- Paper-IV:PLANT METABOLISM

- Understanding the detailed mechanism of Photosynthesis , Respiration and lipid metabolism.
- Know the Nitrogen and Sulphur metabolism, Plant growth regulators and elicitors and its role
- Understood the Movements in plants-types and its measurement and Fundamentals of enzymology and its significance.

Practicals

- Practical Skills in field collection and documentation,
- Techniques of herbaria preparation,
- Morphological characterization and identification up to families.
- different types of DNA and RNA isolation,
- Separation of chlorophyll, Determination of R.Q. ,
- effect of quality of light on the rate of photosynthesis ,
- preparation of different type of solution ,
- Qualitative estimation of enzyme activity.

M. Sc.-III Semester

PSO: 09- Paper-I:PLANT DEVELOPMENT & PLANT RESOURCES

- Knowing the Unique features of plant development.
- Metabolism of nucleic acids,
- proteins and mobilization of food reserves, tropisms; control of cell division,
- Programmed cell death in the life cycle of plants, Seed germination,
- Hormonal control of Seedling growth.
- Seed dormancy, overcoming of seed dormancy, Bud dormancy.
- Understand the organization of Root Apical Meristem and Shoot Apical Meristem,
- Knowing the Leaf development, Flower development and Origin, Evolution, Cultivation and Uses of economically useful plants.

PSO: 10- Paper-II:PLANT ECOLOGY – I (Ecosystem and vegetation ecology)

- Understand the ecosystem organization,
- Ecosystem stability and management, concept of Ecological perturbations (natural and anthropogenic) and their impact on plants and ecosystems,
- Vegetation organization and vegetation development.

PSO: 11- Paper-III: BIOTECHNOLOGY-I (Biotechnology and genetic engineering of plants and microbes)

- Understand the basic concepts, principles and scope of Biotechnology, rDNA technology, construction of genomic / cDNA libraries.
- Knowing the technique of microbial genetic manipulation,
- Genetic engineering of plants DNA synthesis and sequencing genomics and proteomics.

PSO: 12- Paper-IV:Molecular plant pathology-I

- Understand the General Principles of plant pathology and classification of plant diseases, Diseases inciting organisms, Disease Syndrome and General Symptoms of plant diseases, Sources of Infection, Pathogenesis and Effect of environment on disease development
- Knowing the host parasites relationship, physiological specialization, recurrence of disease and methods of studying plant diseases.

Practicals

- Practical Skills in Anatomy of Stem and Root of Angiosperm, Important Economically beneficial Plants. Ecological techniques, Biotechnological techniques and Symptomological studies, culture techniques, Instrumentation etc.

M. Sc.-IV Semester

PSO: 13- Paper-I:PLANT REPRODUCTION AND UTILIZATION OF RESOURCES

- Understand the Reproduction mechanism, Male gametophyte, Female gametophyte,

- Seed and Fruit development in higher plants. Utilization of resources.

PSO: 14- Paper-II:PLANT ECOLOGY-II (Pollution and biodiversity conservation)

- Understanding the climate, soil and vegetation patterns of the world,
- Pollution, climate change and ecosystems, biological diversity.
- Know about Principles of conservation.
- In situ conservation and Ex situ conservation.

PSO: 15- Paper-III:BIOTECHNOLOGY-II (Plant cell, tissue culture and organ culture)

- Understanding the plants cells and tissue culture, tissue culture media, cell culture, clonal propagation.
- organogenesis and adventive embryogenesis, somatic embryogenesis and androgenesis,
- Somatic hybridization, cryopreservation and germplasm storage.
- Understanding the intellectual property rights , application of plant tissue culture , production of secondary metabilities / natural products, transgenics in crop improvement

PSO: 16- Paper-IV:Molecular plant pathology-II

- Understand the Epidemiology and disease forecasting, General principles of plant disease, Defense Mechanisms , Resistance and susceptibility
- Know the Wilt disease, Diseases due to fungi, Bacteria, Viruses, Mycoplasma and Nematode.

Practicals

- Practical Skills in Anatomy of flower of Angiosperm.
- Ecological techniques, Biotechnological techniques, culture media preparation and culture techniques.
- Instrumentation.
- Identification and characterization of different plant diseases etc.

Department of Zoology

Bachelor of Science :-

NEP-2020

Program Outcomes (PO):

- Demonstrate and apply the fundamental knowledge of the basic principles of major fields of Zoology and Modern tools and techniques
- Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment.
- Gain knowledge of small scale industries like sericulture, fish farming, bee keeping, aquaculture, animal husbandry, poultry farm.
- Apply the knowledge and understanding of Zoology to one's own life and work.
- Develops empathy and love towards the animals and consciousness for wildlife conservation

Program Specific Outcomes (PSO):

- Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Behaviour, Endocrinology, Immunology, Biostatistics, Parasitology, Biochemistry, Evolution, Developmental Biology, Animal biotechnology, Tools and Techniques of Zoology.
- Understand the applications of biological sciences in Apiculture, Aquaculture, Sericulture, Animal Husbandry, Poultry Farm.
- Understand the applications of Zoology in Medicine and daily life
- Contributes the knowledge for Nation building and sustainable development

Course LearningOutcomes (CLO)

ZOSC-01T/ ZOGE-01T :- LIFE ON EARTH AND UNIQUE ATTRIBUTES OF ANIMAL KINGDOM

After successfully completing this course, the students will be able to-

- Develop an understanding of concepts, mechanisms, evolutionary significance and relevance of Origin of life.
- Understand General Idea about Invertebrate and Vertebrate animals with special reference and their specific qualities.
- Understand and appreciate diversity of life forms.
- Apply the knowledge about animals Sciences in daily life.

ZOSC-01P / ZOGE-01P :- LIFE ON EARTH AND UNIQUE ATTRIBUTES OF ANIMAL KINGDOM

After successfully completing this course, the students will be able to-

- To demonstrate comprehensive understanding of the current theories and hypotheses regarding the origin of life on Earth,
- Understand diversity of life forms

- Identify some distinctive invertebrate and vertebrate animals
- Apply this Understanding to broader context of life

ZOSC-02T / ZOGE-02T :- CELL BIOLOGY AND HISTOLOGY

After successfully completing this course, the students will be able to-

- Acquire knowledge of Cell membrane and function
- Understand the functioning of nucleus and extra nuclear organelles and understand the intricate cellular mechanisms involved.
- Gain Knowledge of key processes like cell division,
- Learn about various tissues of body their structural significance

ZOSC-02P / ZOGE-02P :- CELL BIOLOGY AND HISTOLOGY

After successfully completing this course, the students will be able to-

- Understand ultra structure of prokaryote and Eukaryote cell, undertake microscopic study to gain knowledge
- learn to identify cell organelles
- Explain and demonstrate mitosis and meiosis division in onion root tip, Grass hopper testis, etc
- Gain knowledge of Microtomy

ZOSC-03T :- DIVERSITY OF INVERTEBRATES

After successfully completing this course, the students will be able to -

- Develop understanding on Invertebrate Animals on the basis of classification and Nomenclature.
- Develop understanding how simple/unicellular animals changed into multicellular and diploblastic forms through their anatomy and physiology.
- Gain Knowledge of key processes like formation of triploblastic animals (simple to complex form of body plan).
- Develop understanding on parasitic adaptations and life cycle of Helminthes.
- Develop understanding on the diversity in Arthropoda, Mollusca and Echinodermata.

ZOSC-03P :- DIVERSITY OF INVERTEBRATES

After successfully completing lab course the students will be able to-

- Develop understanding on the diversity of life with regard nonchordates.
- Gain Knowledge of grouping of animals on the basis of their morphological characteristics.
- A Develop critical understanding how animals have changed from simple form to complex body plan.
- Acquired the detailed knowledge to think and interpret different animal species individually.

ZOSC-04T :- DIVERSITY OF CHORDATES AND COMPARATIVE ANATOMY

After successfully completing this course, the students will be able to:

- Develop understanding of the characters used to classify and differentiate the organisms belonging to different taxa and the evolutionary history and relationship between the different classes of chordates.
- Acquire knowledge and Develop critical understanding of the comparative anatomy and functioning of complex systems of Pisces to Mammalia.
- Learn the comparative account of integument with its derivatives, digestive system and Skeletal and Muscular System.
- Understand the Digestive system and its anatomical specializations with respect to different diets and feeding habits and respiratory organs in vertebrates used in aquatic, terrestrial and aerial vertebrates.
- Understand the evolution of heart, aortic arches, and Learn the evolution of brain, sense organs and urinogenital system

ZOSC-04P :- DIVERSITY OF CHORDATES AND COMPARATIVE ANATOMY

After successfully completing lab course the students will be able to -

- A Develop understanding on the diversity of life with regard to different classes of vertebrates.
- Gain knowledge to identify and classify the animals on the basis of their morphological characteristics.
- Acquire the detailed knowledge about evolutionary history and relationship between the different classes of vertebrates through salient features some important animals.
- Learn comparative account of various systems in all the classes of vertebrates.

ZOSC-05T :- VERTEBRATE PHYSIOLOGY

After successfully completing this course, the students will be able to-

- Understand the physiological mechanism at cellular and system level.
- Learn the significance ofnutrients, breathing mechanism, blood coagulation.
- Understand the water balance in body and working of different senses response.
- Understand the reproductive physiology and muscles contraction.
- Apply this knowledge to understand working and disorders of physiological activities

ZOSC-05P :- VERTEBRATE PHYSIOLOGY

After successfully completing this course, the students will be able to-

- Perform and demonstrate some physiological exercises
- Learn to record Blood pressure and analyze it
- Calculate Oxygen Consumption in model animal
- Learn the structure and working of eye and ear.
- Apply this knowledge to identify tissues by learning Histological details

ZOSC-06T :- GENETICS

After successfully completing this course, the students will be able to:

- Understand and grasp the principles of Mendelian inheritance and interaction of genes.

- Understand the sources and consequences of genetic variation, including mutations, genetic recombination, and gene flow.
- Know various methods of sex determination in animal kingdom.
- Analyse the cause and effect of alterations in chromosome number and structure
- Understand DNA structure and function, gene expression, and genetic inheritance patterns
- Know the Recent Assisted Reproductive Techniques

ZOSC-06P :- GENETICS

After successfully completing this course, the students will be able to-

- Able to understand and explain Mendel's Law of Inheritance
- Capable to analyze inheritance of gene by pedigree analysis.
- Know laboratory culture of Drosophila.
- Understand and configuration for animal life.
- Capable to understand Human keryotype and Numerical alteration in chromosomes

ZOSC-07T :- BIOSYSTEMATICS AND TAXONOMY

After successfully completing this course the students will be able to -

- Comprehend the basic concepts of Biosystematics and Taxonomy.
- Understand and learn the Taxonomic Hierarchy in animal kingdom.Gain a basic knowledge and grasp the rules and philosophy of scientific nomenclature.
- Develop the critical understanding to identify the animals up to species level with the help of taxonomic keys.
- Learn the Newer trends in biosystematics and apply it in Research

ZOSC-07P :- BIOSYSTEMATICS AND TAXONOMY

After successfully completing this course the students will be able to

- Comprehend the basic concepts of Biosystematics and Taxonomy.
- Understand and learn the Taxonomic Hierarchy in animal kingdom.
- Gain a basic grasp on the rules and philosophy of scientific nomenclature.
- Develop the critical understanding to identify the animals up to species level with the help of taxonomic keys.
- Learn the Newer trends in biosystematics and apply it in Research.

ZOSC-08T :- BIOTECHNIQUES

At the end of course, students will be able to -

- Have comprehensive understanding of various tools and techniques commonly employed in scientific research across disciplines
- Learn utilizing essential laboratory instruments such as microscopes, pH meter, spectrophotometers, chromatography systems, and centrifuges.

- Understand cell culture techniques
- Develop skills in experimental design, data acquisition, and analysis using modern software tools.
- Develop critical thinking on the application of various modern instruments and correlate the knowledge for better development of society.

ZOSC-08P :- BIOTECHNIQUES

After successfully completing this course, the students will be able to:

- Understand the purpose of the technique, its proper use and possiblemodifications/improvement.
- Developed skills in handling instruments.
- Developed skills in the performance of experiments through scientific planning.
- Develop critical thinking on reviewing, discussing and reporting the results.
- Applied and Correlate the knowledge for better development of society.

ZOSE-01T :- PARASITOLOGY

- Students should comprehend the life cycles of various parasites, including their modes of transmission, intermediate hosts, and definitive hosts.
- Gain insights into the interactions between parasites and their hosts; including mechanisms of host invasion, evasion of host defenses, and pathogenesis.
- Develop the ability to recognize clinical manifestations associated with parasitic infections
- Understand the epidemiology of parasitic diseases
- Communicate effectively about parasitic diseases, including educating the public.

ZOSE-01P :- PARASITOLOGY

At the end of this course, the students will be able

- Identify common parasitic Protozoa and Helminth.
- Learn techniques for studying growth of bacteria and its staining.
- Learn the techniques for examine Sputum, Blood, Urine and Stool samples for pathology

ZOSE-02T :- ECOLOGY AND WILDLIFE CONSERVATION & MANAGEMENT

After successfully completing this course, the students will be able to

- Understand the concepts of fundamental ecological principles, including energy flow, nutrient cycling, and population dynamics.
- Apply the knowledge of ecology to understand equilibrium of nature.
- Analyze the strategies of Populations to survive and sustain.
- Evaluate the significance of biodiversity and its conservation.
- Create awareness about wildlife and nature.

ZOSE-02P :- ECOLOGY AND WILDLIFE CONSERVATION & MANAGEMENT

After successfully completing this course, the students will be able to:

- Understand practical fieldwork skills, including sampling techniques, data collection and methods of analysis used in ecological research.
- Learn to design and implement ecological experiments.
- Understand soil profile and characteristics.
- Analyse chemical parameters of various water bodies.
- Create awareness about local faunaand evaluate biodiversity of an area.

ZOSE-03T :- BIOCHEMISTRY

After successfully completing this course, the students will be able to-

- Understand the structure and biological significance of carbohydrates, amino acids, proteins, lipids and nucleic acids.
- Understand the concept of enzyme, its mechanism of action and regulation and its kinetics.
- Understand the process of DNA replication, transcription and translation.
- Learn the preparation of models of peptides and nucleotides.
- Analyze properties of biomolecules through biochemical tests for amino acids, carbohydrates, proteins and nucleic acids.

ZOSE-03P :- BIOCHEMISTRY

After successfully completing this course, the students will be able to-

- Learn qualitative analysis of biomolecules
- Students will use current biochemical and molecular techniques to plan and carry out experiments.
- They will undertake experiments to understand enzyme activity,
- Prepare models for biomolecules

ZOSE-04T :- EVOLUTIONARY BIOLOGY

After successfully completing this course the students will be able to-

- Understanding the historical concept of Evolution.
- Develop an understanding on the Evolutionary Concept and theories in evolution.
- Understanding on the different interacting evolutionary process by various examples.
- Learn animal phylogeny and adaptations.
- Develop an interest in the debates and discussion taking place in the field of evolutionary biology.

ZOSE-04P :- EVOLUTIONARY BIOLOGY

After successfully completing lab course the students will be able to-

- Understanding on the process evolutionary biology by the study of some animals.
- Learn the different interacting evolutionary process by various examples.
- Understand evolution through fossils Acquire an in-depth knowledge on the diversity and relationships in animal world through evolutionary process.

ZOSE-05T :- ENDOCRINOLOGY

After successfully completing this course, the students will be able to:

- Understand characters of hormones, their biochemical origin, functions and their role in physiology.
- Learn about the organization of endocrine glands and mechanism of hormone action.
- The learners will understand the hormonal disorders, and diseases.
- Comprehend about the role of hormone in healthy lifestyle.
- Develop insights on advancements in endocrinology.

ZOSE-05P :- ENDOCRINOLOGY

- Develop understanding of histological study of endocrine glands
- Learn the role anatomical aspects of various endocrine glands.
- Attain the fundamentals of applied endocrinology.
- Explore the operation of basic medical kits of routine usage.
- Create awareness towards lifestyle disorders related to hormones.

ZOSE-06T :- IMMUNOLOGY

After successfully completing this course, the students will be able to:

- Understanding of fundamental concepts of immunology.
- Gain knowledge on various immune cells, antigens and cytokines.
- Understand the structure and functions of Immunoglobulins and antibodies.
- Students will be able to describe the processes involved in immune system.
- Students will analyse the pathogenesis, clinical manifestations, and therapeutic approaches of various immune disorders and diseases and experimental techniques in Immunology.

ZOSE-06P :- IMMUNOLOGY

At the end of this course, the students will be able -

- Gain practical knowledge on various immune cells, antigens and antibodies.
- Identify the major cellular and tissue components which comprise the innate and adaptive immune system.
- Students will experimental techniques in Immunology.
- Understand how does the immune system distinguish self from non-self.
- Gain experience at reading and evaluating the scientific literature in the area.

ZOSE-07T :- BIOTECHNOLOGY AND GENETIC ENGINEERING

After successfully completing this course, the students will be able to-

- Define the concept of recombinant DNA and genetic engineering.
- Understand the molecular techniques and their proficiencies.
- Apply the knowledge of gene manipulation techniques.

- Analyze different prospects and applications of genetic engineering and bioinformatics.
- Develop understanding of ethical, social and legal implications of genetic engineering.

ZOSE-07P :- BIOTECHNOLOGY AND GENETIC ENGINEERING

After successfully completing this course, the students will be able to:

- Learn to prepare aseptic techniques in laboratory for biotechnology experiments.
- Understand the fundamental experiments &techniques of biotechnology &genetic engineering.
- Develop practical skills in genetic engineering techniques and laboratory procedures.
- Learn characteristics of genetic material.
- Analyze applications of diverse genetic engineering protocols.

ZOSE-08T :- APPLIED ZOOLOGY

After successfully completing this course, the students will be able to:

- Understand the culture techniques of prawn, pearl and fish, Lac culture.
- Understand silkworms rearing and their products.
- Understand the Bee keeping equipments and apiary management.
- Understand dairy animal's management.
- Learn the testing of egg and milk quality.
- Apply this knowledge for Setting up a self-employment venture in the field.

ZOSE-08P :- APPLIED ZOOLOGY

After successfully completing this course, the students will be able to:

- Know common species of carps, prawn, oyster.
- Understand and learn the culture techniques of prawn, pearl, fish, honey bee, silkworm, lac, vermicompost.
- Understand and Learn division of labor and identification of Honey bees
- Identify Lac insect, male female morphology,.
- Understand dairy management, breeds of Cow & diseases and learn to analyze to good quality of milk, egg and vermicompost.

ZOSE-09T :- BASICS OF COMPUTER AND BIOSTATISTICS

After successfully completing this course, the students will be able to:

- Understand the computer, its applications and use in biostatistics.
- Understand collection of biological data and analysis of the data.
- Learn about how the statistical data present.
- Developed critical thinking to analyze and represent the significance of the statistical data.
- Apply the knowledge in future for Research.

ZOSE-09P :- BASICS OF COMPUTER AND BIOSTATISTICS

After successfully completing lab course the students will be able to

- Understand the computer, its applications and use in biostatistics practically.
- Understand and learn collection of biological data and analyzes them.
- Learn to present and interpret the analyzed data.
- Developed critical thinking to assess the significance of the statistical data and discuss the result.
- Apply the knowledge in future for Research.

ZOSE-10T :- BEHAVIOUR AND CHRONOBIOLOGY

After successfully completing this course, the students will be able to-

- Learn a wide range of theoretical knowledge about the animal behavior.
- Develop skills, to understand the responses of animal according to stimuli.
- Objectively understand and evaluate information about animal behaviour and ecology encountered in our daily lives.
- Understand and be able to objectively evaluate the role of behaviour in the protection and conservation of animals in the wild.
- Consider and evaluate behaviour of all animals, including humans, in the complex ecological world, including the urban environment.

ZOSE-10P :- BEHAVIOUR AND CHRONOBIOLOGY

After successfully completing this course, the students will be able to-

- Learn a wide range of practical knowledge about the animal behavior.
- Develop skills, to understand the response of animals according to stimuli in lab.
- Objectively understand and evaluate information about animal behaviour and learn to form the ethogram.
- Understand and be able to objectively evaluate the role of behaviour in the protection and conservation of animals in the surroundings.
- Consider and evaluate behaviour of animals, including Human in the nature.

ZOSE-11T :- DEVELOPMENTAL BIOLOGY

After successfully completing this course, the students will be able to-

- Understand of the fundamental processes involved in embryonic development, including cell differentiation, morphogenesis, and patterning
- Explain mechanisms underlying developmental processes,
- Learn reproductive techniques commonly used in developmental biology
- Aware of current trends and advances in developmental biology research, including emerging technologies.
- Understand the relevance of developmental biology in medicine or its role in development of diseases.

ZOSE-11P :- DEVELOPMENTAL BIOLOGY

After successfully completing this course, the students will be able to-

- Acquire knowledge of the fundamental processes involved in embryonic development, Types of eggs
- Explain developmental processes and identify various stages of development through study of permanent slides,
- Learn experimental techniques commonly used in developmental biology
- Aware of current trends and advances in developmental biology research, including emerging technologies.

ZOSE-12T :- MOLECULAR BIOLOGY

After successfully completing this course, the students will be able to-

- Develop an understanding of concepts, mechanisms and evolutionary significance and relevance of molecular biology in the current scenario.
- Get well versed in recombinant DNA technology which holds application in biomedical & genomic science, agriculture, environment management, etc. Therefore, a fundamental understanding of Molecular Biology will help in career building in all these fields.
- Apply their knowledge in problem solving and future course of their career development in higher education and research.
- Get new avenues of joining research in related areas such as therapeutic strategies or related opportunities in industry.

ZOSE-12P :- MOLECULAR BIOLOGY

After successfully completing this course, the students will be able to-

- Mastery of fundamental laboratory techniques used in molecular biology, such as DNA extraction, PCR (Polymerase Chain Reaction), gel electrophoresis, DNA sequencing, and cloning.
- Ability to design experiments, including selecting appropriate methodologies, controls, and troubleshooting potential issues that may arise during experiments.
- Proficiency in analyzing experimental data, including interpreting
- Development of critical thinking skills to evaluate experimental results.

ZOVAC-01 :- PUBLIC HEALTH AND HYGIENE

- Understand the importance of hygiene.
- Identify current national and global public health problems.
- Aware about the issues of food safety, water safety, vaccination, and obesity.
- Create general medical awareness in daily life.
- Analyze the measures to live a healthy life.

ZOSEC-01 :- VERMICULTURE AND VERMICOMPOSTING

After successfully completing this course, the students will be able to:

- Learn the identifiable features of earthworm species for vermiculture and vermicomposting.
- Cultivate the skills of vermiculture.
- Understand the challenges in vermiculture and vermicomposting.
- Analyze the features of different vermicomposting methods.
- Create entrepreneurial prospects in this field.

NON-NEP

Program Outcome(PO)

Major Program outcome of B.Sc Zoology are to gain knowledge about:

- Taxonomy,Morphology, Anatomy, and Physiology of different Animal Phyla.
- Cell biology, Genetics
- Biochemistry and Biotechniques
- Ecology and Environmental biology

B. Sc. Part-I

PSO: 01- Paper-I: Cell Biology and Non Chordates

- To study the structure of the Cell and its constituents.
- Taxonomy and identification of Non chordates.
- Introduction to basic concepts of Immunology.
- Type study of representatives of Non-chordate phyla.

PSO: 02- Paper-II: Chordate and Embryology

- Taxonomy and identification of Chordates.
- To study basic concepts of embryology.
- To gainknowledge about theories of fertilization.
- To understand the concepts of Parental Care, Adaptation, Migration in higher Vertebrates.

Practicals

- Practical Skills in Dissection of Invertebrates, Cytology, Speciemen identification based on theory

B. Sc. Part-II

PSO: 03- Paper-I: Anatomy and Physiology

- Comparative anatomy and physiology of vertebrate organ systems.
- To study histology of endocrine glands.
- To study the physiology of Heart, Cardiac cycle and ECG.
- To study the structure and Function of Ear and Eye.

PSO: 04- Paper-II: Vertebrate Endocrinology, Reproductive Biology, Behaviour, Evolution and Applied Zoology

- To understand concepts of endocrinology.
- To understand concepts of Reproductive biology.
- To understand concepts of Ethology.
- To study basic concepts of Evolution.
- To study about various economically important animals and concept of pest management.

Practicals

- Practical Skills in identification of Chordates, Dissection of Chordates, Slide preparation, Mounting, Study of Limb girdles, Limb bones, Lifecycle of Honey bee, Silk worm.

B. Sc. Part-III

PSO: 05- Paper-I: Ecology, environmental biology, toxicology, microbiology and medical zoology

- To understand basic concepts of ecology, Biogeochemical cycles, Pollution and Succession.
- To understand concepts of Limiting factors, Energy flow and ecological pyramids.
- To understand principles of toxicology, toxins and animal poisons.
- General and applied microbiology.
- Pathogens and disease causing protozoans and helminthes, vector insects.

PSO: 06- Paper-II: Genetics, cell physiology, biochemistry, biotechnology and Bio techniques.

- To understand basic concepts of classical genetics.
- To understand basic concepts of Cellular physiology and Biochemistry.
- To study about concepts and scope of Biotechnology.
- To study about principles and working of basic Bio-intstruments.

Practicals

- Practical knowledge of Ecological, Haematological experiments, Identification of Bacteria using Gram staining, Chromatography, Bioinstrumentation.

Zoology

Master of Science:-

Course Outcome (CO):
Upon completion of course the Student will be able:

- To acquire knowledge about Taxonomy and Diversity of Vertebrate and Invertebrates
- To acquire knowledge of Animal Morphology, Physiology, Reproduction and Development, Behaviour, Immunology
- To acquire Theoratical and Practical knowledge about Molecular and Cell biology, Genetics, Biochemistry, Biotechnology and Biotechniques
- To become aware of Biodiversity, Environment Physiology and Population Ecology, Conservation
- To acquireTheoratical and Practical knowledge about Ichthyology, Entomology

Course and Examination Scheme

Our College follows the Syllabus of DurgUniverstiy for M.Sc Zoology.

The Course is divided in to 4 Semesters.

M.Sc. examination scheme of each Semesters consists of 4 Theory papers and 2 Lab courses.

Semester I

Paper	Course	Internal Marks	Theory	Total	
I	Biosystematics, Taxonomy and Biodiversity	20	80	100	
II	Structure and Function of Invertebrates	20	80	100	
III	Population Genetics and Evolution	20	80	100	
IV	Tools & Techniques in Biology	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

- **Semester II**

Paper	Course	Internal Marks	Theory	Total	
I	Molecular Cell Biology and Biotechnology	20	80	100	
II	General Physiology and Endocrinology	20	80	100	
III	Developmental Biology	20	80	100	
IV	Computers and Biostatistics	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

- **Semester III**

Paper	Course	Internal Marks	Theory	Total	
I	Comparative Anatomy	20	80	100	
II	Behaviour	20	80	100	
III	Environmental Biology	20	80	100	
IV	Immunology	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

- **Semester IV**

Paper	Course	Internal Marks	Theory	Total	
I	Biochemistry	20	80	100	
II	Neurophysiology	20	80	100	
III	Optionals	20	80	100	
IV	Optionals	20	80	100	

Practical	Lab Course I			100	
	Lab Course II			100	

Program Outcome(PO)

Major Program outcome of M.Sc Zoology are to gain knowledge about:

- Biosystematics and Biodiversity, Evolution
- Structural organization Invertebrates
- Molecular Cell Biology And Biotechnology
- Quantitative and Computer application in Biology
- Comparative anatomy, Biochemistry, Physiology, Ecology, Immunology and Animal behaviour
- Applied Zoology

Program Specific Outcome(PSO)
M. Sc.-I Semester

PSO: 01- Paper-I:Biosystematics, Taxonomy and Biodiversity

The Sudent will gain knowledge about:

- Definition and basic concepts of biosystematics and taxonomy
- Dimensions of speciation and taxonomic characters
- Procedure keys in taxonomy
- Biodiversity

PSO: 02- Paper-II: Structure and Function of Invertebrates

The Sudent will gain knowledge about:

- Organization of coelom
- Nutrition and Digestion, Respiration
- Excretion, Nervous System
- Invertebrate larvae

PSO: 03- Paper-III:Population Genetics and Evolution

The Sudent will gain knowledge about:

- Concepts of evolution and theories of organic evolution
- Hardy-Weinberg law of genetic equilibrium
- Patterns and mechanisms of reproductive isolation
- Gene Evolution
- Evolution of Species

PSO: 04- Paper-IV: Tools& Techniques in Biology

The Sudent will gain knowledge about:
Principles and Application of :

- Ultracentrifugation
- Electrophoresis
- Chromatography (various types)

- Colorimetry and spectrophotometry
- Flow cytometry.
- Light Microscopy and micrometry
- Phase Contrast microscopy
- Interference microscopy
- Fluorescence microscopy
- Transmission Electron microscopy.
- Scanning Electron microscopy.
- ELISA
- PCR
- Biological assays-in vivo and invitro

- Principles of cytological and cytochemical techniques
- Fixation: chemical basis of fixation by formaldehyde, gluteraldehyde, chromium salts, mercury salts, osmium salts, alcohol and acetone
- Chemical basis of staining of carbohydrate, protein lipids and nucleic acids.

Principle and techniques of

- Nucleic acid hybridization
- Sequencing of proteins and nucleic acids
- Cryopreservation
- Chromosomal isolation and preparation of Cladogram
- Separation of DNA from animal/human sample

Lab Course-I
Practicalsbasedon

- Biosystematics and Taxonomy
- Structure and Function of Invertebrates

Lab Course-II
Practicalsbased on

- Population genetics and evolution
- Tools and techniques in biology

M. Sc.-II Semester

PSO: 05- Paper-I:Molecular Cell Biology And Biotechnology

- DNA Replication
- Transcription, Translation
- C-DNA Library
- Applications of Molecular Biology

PSO: 06- Paper-II:General Physiology And Endocrinology

- Digestion, Metabolism
- Muscle Function

- Endocrinology

PSO: 07- Paper-III:Development Biology
- Gametogenesis
- Fertilization
- Formative Movments
- Differentiation,Teratology

PSO: 08- Paper-IV:Quantitative Biology And Computer Application
- Introduction to Computers and Application
- Organization of Data
- Statistical Analysis

Lab Course-I
Practicals based on
- Molecular Biology
- Physiology

Lab Course-II
Practicals based on
- Developmental Biology
- Computer and Biostatistics

M. Sc.-III Semester

PSO: 09- Paper-I:Comparative Anatomy of Vertebrates
- Origin and Classification of Vertebrates
- Comparative Anatomy of Vertebrate classes

PSO: 10- Paper-II:AnimalBehaviour
- Ethology
- Communication
- Learning behaviour
- Hormonal Control of Behaviour

PSO: 11- Paper-III:Environmental Physiology and Ecology
- Population dymanics
- Adaptations
- Stress physiology

PSO: 12- Paper-IV:Immunology
- Cells of Immune system
- Activation of Immune response
- MHC, Hypersensitivity, Autoimmunity
- Immuneresponse during disease and Infection

Lab Course-I

Practicals based on

- Vertebrates
- Behaviour

Lab Course-II

Practicals based on

- Imunology
- Environmental Biology

M. Sc.-IV Semester

PSO: 13- Paper-I:Biochemistry

Structure, Functions and Metabolism of

- Proteins
- Carbohydrates
- Lipids
- Vitamins

PSO: 14- Paper-II:Neurophysiology

- Structure of Nerves
- Spinal Cord
- Brain
- Autonomic nervous system
- Reflex action

PSO: 15- Paper-III: Optionals

III-A: Ichthyology

- Origin and Classification of fishes
- Structure and Functions of fishes
- Accesory respiratory organs, Luminous organs
- Migration and Behaviour

III-B: Cell Biology

- Structure and Function of DNA, Chromosomes and Genes
- Transcription and Translation
- Drosophila Genetics

III-C: Entomology

- Structure and Function physiology of Insects
- Embryonic Delvelopment
- Metamorphosis
- Pesticides

III-D: Wild Life Conservation

- Wild Life Conservation

- Population Dynamics and Ecology
- Eco tourism, Wild life Sancturies, Parks
- Diseases of Wild Animals

III-E: Vertebrate Immunology

- Cells and Tissues of Immune System
- Cell lineage and Activation
- Antigen Antibody, Antibody generation
- Hypersensitivity
- Techniques in Immunology

PSO: 16- Paper-IV: Optional

IV-A:Pisci culture and economic importance of fishes (Ichthyology)

- Collection Breeding and management of fishes
- Composite fish, prawn culture
- Coastal area, inland, sewage fish culture
- Fish preservation and economics of fisheries

IV-B: Cellular organization and molecular organization

- Genreral organization of Viruses, Yeast,
- Mitochondria Respiratory chain assembly
- Cell cycle, Cyto chemistry of Golgi
- Peroxisomes, Lysosomes
- Genome Complexity, Cell transformation
- Oncogenes, Tumor suppresor genes
- Ligand Receptor interaction

IV-C: Applied entomology

- Classification, Collection of insects
- Insect pest management, Biological Control
- Econimic importance of insects

IV-D: Environment and Biodiversity conservation

- Introduction, Scope and Importance of Environmental Biology
- Environmental Pollution, Global Warming, Disaster management
- Natural Resources importance and conservation

IV-E: Molecular endocrinology and reproductive technology

- Introduction to Endocrinology
- Hormones
- Receptors
- Signal Transduction
- Assisted Reproductive technology

Lab Course-I
Practicals based on

- Biochemistry
- Neurophysiology

Lab Course-II
Practicals based on Optional Choice papers

- Ichthyology
- Cell and Molecular Biology
- Entomology
- Wild life conservation

Department of Chemistry

Bachelor of Science:-

NEP-2020

ProgramOutcomes(PO)

PO-1:B.Sc. Chemistry curriculum is so designed to provide the students a comprehensive understanding about the fundamentals of chemistry covering all the principles and perspectives.

PO-2: The branches of Chemistry such as Organic Chemistry, Inorganic Chemistry, Physical Chemistry and Analytical Chemistry expose the diversified aspects of chemistry where the students experience a broader outlook of the subject.

PO-3: The syllabi of the B.Sc. Chemistry courseare discretely classified to give stepwise advancement of the subject knowledge right through the four years of the term.

PO-4: The practical exercises done in the laboratories impart the students the knowledge about various chemical reagents and reactions. They are also trained about the adverse effects of the obnoxious chemicals and the first aid treatment.

Program Specific Outcomes(PSO)

PSO-1: The students will understand the existence of matter in the universe as solids, liquids, and gases which are composed of molecules, atoms and sub atomic particles.

PSO-2: Students will learn to estimate inorganic salt mixtures and organic compounds both qualitatively and quantitatively using the classical methods of analysis in practical classes.

PSO-3: Students will learn grasp the mechanisms of different types of reactions both organic and inorganic and will try to predict the products of unknown reactions.

PSO-4: Students will learn to synthesize the chemical compounds by maneuvering the addition of reagents under optimum reaction conditions.

Course learning outcome (CLO)

CHSC -01T: FUNDAMENTAL CHEMISTRY-I

ThisCoursewillenablethestudentsto:

- To know the contributions of ancient Indian scientists, study atomic structure, and periodic properties.
- To explore the concept of chemical bonding, including ionic and covalent bonding, hybridization, molecular orbital theory and intermolecular interactions.
- To learn about reaction mechanisms of inorganic reaction and their stoichiometry.

- To learn basic principles of organic chemistry.

CHSC -01P: CHEMISTRY LAB COURSE-I

ThisCoursewillenablethestudentsto:

- Analyze mixtures for cations (NH_4^+, Pb^{2+}, etc.) & anions (CO_3^{2-}, S^{2-}, etc.) using H_2S or other methods.
- Perform titrimetric analysis (standardization, unknown conc. determination).
- Estimate the concentration of acetic acid in vinegar (using NaOH), alkali content in antacids (using HCl), and free alkali in soaps/detergents.
- Utilize complexometric titrations for calcium (Ca^{2+}), water hardness, Fe^{2+}, Fe^{3+}, and Cu^{2+}.

CHSC -02T: FUNDAMENTAL CHEMISTRY-II

ThisCoursewillenablethestudentsto:

- To understand different acid-base theories and solvent system.
- To learn the preparation, bonding and reactions of C-C σ- & π- bonding compounds.
- To understand the concept and chemistry of aromatic compounds and their reactions.
- To learn the basic concepts of various states of matter & understand the basic concepts of surface chemistry and chemical kinetics.

CHSC -02P: CHEMISTRY LAB COURSE-II

ThisCoursewillenablethestudentsto:

- Demonstrating and using common glassware for accurate measurements.
- Studying the functional group analysis of organic compounds.
- Determining melting points to assess compound purity and employing distillation and sublimation techniques to establish boiling points.
- Equipping with essential skills in measuring liquid surface tension and solution viscosity.

CHSC -03T: INORGANIC AND PHYSICAL CHEMISTRY-I

ThisCoursewillenablethestudentsto:

- Understand fundamental chemical concepts of transition elements and their applications.
- Master the principles of coordination chemistry.
- Grasp the core principles of thermodynamics and apply them to various phenomena.
- Explore the world of electrochemistry and its applications.

CHSC -03P: CHEMISTRY LAB COURSE-III

ThisCoursewillenablethestudentsto:

- Understand the principle of determining transition temperature of hydrated or other allotropic salts.
- Employ the principle of determination of solubility of a given salt at different temperatures.
- Apply Born-Haber cycle to determine enthalpy and lattice energy.
- Determine strength of an acid, ionization constant of weak acid and solubility product by conductometric or potentiometric titrations.

CHSC -04T: ORGANIC AND PHYSICAL CHEMISTRY-I

ThisCoursewillenablethestudentsto:

- Master the synthesis, properties, and reactivity of various functional groups and apply this knowledge to understand their significance in organic chemistry.
- Employ the principles of chemical/ionic equilibria, their influencing factors and applications.
- Interpret phase diagrams for one and two-component systems, determine degree of freedom, and identify the triple bond.
- Master the principles and applications of liquid-liquid mixtures using Raoult's law, henry's law, Nernst distribution law.

CHSC -04P: CHEMISTRY LAB COURSE-IV

ThisCoursewillenablethestudentsto:

- Understand the fundamentals of organic compounds analysis including preparation of sodium extract and detection of elements.
- Identify functional groups and prepare derivatives.
- Determine the pH of various samples like water/acid/base/soil etc.
- Apply the concepts of phase equilibria to determine critical solution temperature and study concepts of Nernst distribution law and determine equilibrium constant of various reactions.

CHSC -05T: ORGANIC AND INORGANIC CHEMISTRY-I

ThisCoursewillenablethestudentsto:

- Explore role of nitrogen in organic chemistry by studying N-containing compounds and heterocycles.
- Unravel molecular structures using techniques like rotational, vibrational, and Raman spectroscopy.
- Demystify bonding in transition metal complexes, including stability, lability, and magnetic properties.
- Understand the importance of organometallic and inorganic compounds in biological systems.

CHSC -05P: CHEMISTRY LAB COURSE-V

ThisCoursewillenablethestudentsto:

- To apply the knowledge of qualitative and quantitative estimations in real sample analysis.
- To get 'Hand on Training' and develop skill for synthesis of various inorganic compounds.
- To learn the concept of gravimetric estimation.
- To learn use of conductometer and spectrophotometer for titration.

CHSC -06T: ORGANIC AND PHYSICAL CHEMISTRY-II

ThisCoursewillenablethestudentsto:

- To understand role of quantum mechanics in chemistry.
- To know the organic compound in biological system.
- To know the polymers in chemistry, their preparation and application of polymer.
- To learn the techniques for studying the structure of chemical molecule.

CHSC -06P: CHEMISTRY LAB COURSE-VI

ThisCoursewillenablethestudentsto:

- To understand the basic principles involved in separation and identification of organic compound.
- To apply the knowledge of qualitative and quantitative estimations in real sample analysis.
- To learn the synthesis of organic compounds.
- To learn the use of conductometer and spectrophotometer in analysis.

CHSC -07T: INORGANIC AND PHYSICAL CHEMISTRY-II

ThisCoursewillenablethestudentsto:

- Study the formation, stability and electronic spectra of complexes.
- Analyze the chemistry of metal carbonyls and metal nitrosyls.
- Solve the Schrodinger equation for the hydrogen atom and utilize Huckel theory for conjugated systems.
- Analyze collision theory and transition state theory to understand chemical reactions.

CHSC -07P: CHEMISTRY LAB COURSE-VII

ThisCoursewillenablethestudentsto:

- Master separating and estimating acidic and basic radicals in inorganic mixtures.
- Apply qualitative and quantitative analysis skills to real samples.

- Inorganic Synthesis & Characterization.
- Gain hands-on experience synthesizing inorganic compounds and identify them using spectral analysis.
- Grasp basic physical chemistry concepts through practical experiments and learn to operate basic equipment.

CHSC -08T: ORGANIC AND INORGANIC CHEMISTRY-II

ThisCoursewillenablethestudentsto:

- Master mechanisms, kinetics, stability and reactivity factors in organic chemistry.
- Understand and predict regioselectivity in aromatic electrophilic substitution reactions.
- Utilize symmetry and group theory to analyze molecules and predict spectroscopic features.
- Understand and classify supramolecular chemistry.

CHSC -08P: CHEMISTRY LAB COURSE-VII

ThisCoursewillenablethestudentsto:

- To understand the basic principles involved in separation of organic binary mixture and identify the components by qualitative analysis.
- To get trained in one step/two-step synthesis of commercially important organic compounds based on different chemical processes.
- To learn about separation and purification of organic mixtures by chromatography.
- To identify and characterize prepared and separated compounds by IR spectral analysis.

CHSE -01T: BASIC ANALYTICAL CHEMISTRY

ThisCoursewillenablethestudentsto:

- To understand the sampling, procedure and treatment of sample.
- To understand the analytical techniques for analysis in different types f chemical reactions.
- To understand the volumetric analysis technique.
- To understand the gravimetric analysis technique.

CHSE -01P: BASIC ANALYTICAL CHEMISTRY LAB. COURSE

ThisCoursewillenablethestudentsto:

- To make the student aware of common analytical method.
- To demonstrate the volumetric titration.
- To demonstrate the students about gravimetric analysis.

- To learn the testing of solubility, pH of soil and water.

CHSE -02T: ENVIRONMENTAL CHEMISTRY

ThisCoursewillenablethestudentsto:

- To explore the environment through the lens of chemistry, examining interactions between the biosphere, lithosphere, hydrosphere, and atmosphere.
- To delve into ecological principles, biogeochemical cycles, and the challenges of thermal and noise pollution.
- To develop concept of water quality, water management and the multifaceted issue of water pollution.
- To investigate air pollution, soil composition, radiation chemistry and potential solutions for environmental challenges.

CHSE -02P: ENVIRONMENTAL CHEMISTRY LAB. COURSE

ThisCoursewillenablethestudentsto:

- To know the basic idea on techniques of water analysisand acidity alkalinity.
- To get experience with the calculations of BOD and COD.
- To understand the basics of soil analysis viz. pH, Conductivity.
- To have experience on the determination of heavy metals in soil and Colorimetric estimation of iron and manganese.
- To familiarize with interpretation of data.

CHSE -03T: DYES & POLYMER CHEMISTRY

ThisCoursewillenablethestudentsto:

- To know about various synthetic dyes and their structures.
- To understand classification, colour and chemical constitution of dyes.
- To know about various types of polymeric materials.
- To understand preparation, properties and application of polymers.

CHSE -03P: DYES & POLYMER CHEMISTRY LAB. COURSE

ThisCoursewillenablethestudentsto:

- To learn the synthesis of organic dyes in laboratory.
- To learn the synthesis of common drugs.
- To learn the synthesis of polymer.
- To make aware the student about polymer in our day-to-day life.

CHSE -04T: HETEROCYCLIC CHEMISTRY

ThisCoursewillenablethestudentsto:

- To apply Hantzsch-Widman and IUPAC nomenclature for heterocyclic compounds.
- To understand the concept of tautomerism in aromatic heterocycles and to analyze the influence of strain on small ring heterocycles.
- To learn the synthesis and reactions of three-, four-, five-, and six-membered heterocycles with one heteroatom.
- To learn the synthesis of important bicyclic heterocycles (indole, quinoline, and isoquinoline) and learn the mechanisms of reactions.

CHSE -04P: HETEROCYCLIC CHEMISTRY LAB. COURSE

ThisCoursewillenablethestudentsto:

- Proficient in basic laboratory techniques like distillation, extraction, crystallization, and chromatography.
- Skilled in the synthesis and purification of heterocyclic compounds.
- Adept at using various spectroscopic techniques (IR, NMR, MS) to characterize heterocyclic structures.
- Able to analyze reaction mechanisms and predict product formation in heterocyclic reactions.

CHSE -05T: PHOTOCHEMISTRY AND PERICYCLIC REACTION

ThisCoursewillenablethestudentsto:

- To study the photochemical reaction and pericyclic reaction.
- To gain knowledge about mechanism of light induced reaction.
- To learn the mechanism of thermal reaction.
- To understand the difference between light and thermal reaction.

CHSE -05P: PHOTOCHEMISTRY AND PERICYCLIC REACTION LAB. COURSE

ThisCoursewillenablethestudentsto:

- To learn the advanced organic chemistry concept that will applied in solving their future chemistry problems.
- To learn about arenium ion, classical versus non classical carbonium ion, different rearrangement reactions.
- To make student aware the level of basic organic chemistry to apply in different reaction mechanisms and organic transformations.

CHSE -06T: SPECTROSCOPY-I

ThisCoursewillenablethestudentsto:

- To equips students with advanced spectroscopic techniques for in-depth molecular analysis.
- To enable classification, isotope effect analysis, and vibrational energy calculations of techniques like microwave and infrared spectroscopy.
- To provide detailed information on structure, environment, and electronic configuration on advanced methods like NMR, NQR and PES.
- To allows students to probe chemical and surface properties of materials using photoacoustic spectroscopy.

CHSE -06P: SPECTROSCOPY-I LAB. COURSE

ThisCoursewillenablethestudentsto:

- Understand the fundamental principles of different spectroscopic techniques (Microwave, Infrared, Raman, NMR, UV-Vis) and interpret the obtained from various spectroscopic experiments.
- Relate the observed spectroscopic features to structure, bonding and dynamics of molecules.
- Develop practical skills in operating spectroscopic instrumentation and analyzing data.
- Enhance critical thinking and problem-solving skills in a laboratory setting.

CHSE -07T: CHEMICAL KINETICS AND NUCLEAR CHEMISTRY

ThisCoursewillenablethestudentsto:

- To understand types/kinetics of composite reactions and elucidate mechanism and derive rate laws, calculate various activation parameters and predict feasibility of reaction of its basis.
- To explain the concept of acidity functions and illustrate the various rate correlations, isotopic effect and solvent effect.
- To discuss various aspects of nuclear models, nuclear reactions and nuclear reactors.
- To understand the principles of radioactivity, its measurements, counters, apply in determining reaction mechanism, structures, physicochemical properties and in chemical analysis.

CHSE -07P: CHEMICAL KINETICS AND NUCLEAR CHEMISTRY LAB. COURSE

ThisCoursewillenablethestudentsto:

- To understand basic concepts in Physical Chemistry through experimental learning.
- To acquaint with the basic principles of equipment/instruments and its applications.
- To determine the order of reaction with respect to various reactants and overall order and activation parameters using experimental data.
- To acquire the knowledge of radioactive decay and GM counter.

CHSE -08T: ELECTROCHEMISTRY AND SURFACE CHEMISTRY

ThisCoursewillenablethestudentsto:

- Understand electrochemistry fundamentals, explain laws and industrial applications.
- To explain and derive equations related to the theory of strong electrolytes- Debye-Huckel law and its extensions, structure/models and thermodynamics of electrified interfaces, polarography and its applications.
- To describe and interpret various adsorption isotherms and its applications, concept and various aspects of micelles.
- To understand the fundamentals, types, and applications of surfactants and micelles.

CHSE -08P: ELECTROCHEMISTRY AND SURFACE CHEMISTRY LAB.COURSE

ThisCoursewillenablethestudentsto:

- To acquire the knowledge of surface tension.
- To apply the principle of conductance in studying different applications.
- To apply various concepts of physical chemistry and use instruments in various applications.
- To acquire the surface tension – concentration relationship for solution.

CHSE -09T: APPLICATION OF SPECTROSCOPY-II

ThisCoursewillenablethestudentsto:

- To interpret the vibrational spectra of molecules to identify functional groups and understand their bonding modes.
- To gain proficiency in analyzing NMR and ESR spectra to determine the structure and electronic environment of atoms within a molecule.
- To equip students with the ability to utilize Mossbauer spectroscopy for the characterization of iron-containing materials, analyzing their oxidation state and local environment.
- To develop the skills to interpret mass spectra, including fragmentation patterns, to determine the molecular weight and structure of unknown compounds.

CHSE -09P: APPLICATION OF SPECTROSCOPY-II LAB.COURSE

ThisCoursewillenablethestudentsto:

- Understand working principle of FTIR instrument and interpret FTIR spectrum.
- Interpretation of H-NMR spectra, Carbon-13 NMR and ESR spectra and identifying molecules based on chemical shifts and coupling constants.

- Interpretation of Mossbauer spectra and understanding its working principle.
- Understanding working principle of mass spectrometry and interpret mass spectrum.

CHSE -10T: SOLID STATE AND NANOMATERIALS CHEMISTRY

ThisCoursewillenablethestudentsto:

- Understand the origin and nature of defects and crystals, electrically conducting solids and superconductors.
- Apply the concept of band theory to explain the behavior of conductors,
- To compare bulk and nanomaterials, explain the role of size, shape, properties and uses of nanomaterials, describe various methods for synthesis of nanoparticles.
- To describe the instrumentation/principle of various characterization techniques like EDAX, FTIR, SEM, TEM, etc and its applications.

CHSE -10P: NANOTECHNOLOGY AND SOLID STATE LAB. COURSE

ThisCoursewillenablethestudentsto:

- The consolidation of knowledge about the structure-property relationship of solids through the self-directed synthesis, structure and property determination.
- To apply the knowledge gained on the synthesis, structure and function of solid-state compounds.
- To acquire the knowledge of basic sciences required to understand the fundamentals of nanomaterials.

CHSE -11T: NATURAL PRODUCTS & MEDICINAL CHEMISTRY

ThisCoursewillenablethestudentsto:

- To study the occurrence, types, structure and analysis methods of terpenes and alkaloids and their biosynthesis.
- To grasp key concepts in medical chemistry and drug terminology and learn importance of durg structure for activity.
- To explore specific drug classes and study the medical value of natural products.

CHSE -11P: NATURAL PRODUCTS & MEDICINAL CHEMISTRY LAB. COURSE

ThisCoursewillenablethestudentsto:

- Demonstrate competence in determining the physicochemical properties of drugs relevant to their biological activity.
- Gain practical experience in the synthesis and characterization of common drugs.
- Develop skills in isolating natural products from plant sources and analyzing their purity.

- Evaluate the antimicrobial potential of natural product extracts or synthetic drugs.
- Integrate theoretical concepts of medicinal chemistry with laboratory techniques.

CHSE -12T: INSTRUMENTAL METHOD OF ANALYSIS

ThisCoursewillenablethestudentsto:

- Understand the importance of sampling and sample treatment.
- Select appropriate sampling technique based on sample and target analyte.
- Explain principle and instrumentation involved in AAS.
- Deduce the necessity to remove interferences in AAS and methods involved.
- Select proper technique among the available techniques.
- Formulate experiments based on optical and electroanalytical techniques.

CHSE -12P: INSTRUMENTAL METHOD OF ANALYSIS LAB. COURSE

ThisCoursewillenablethestudentsto:

- Understand fundamental principles of polarography and amperometry.
- Understand the working principle of UV-Visible and Atomic absorption spectroscopy.
- Handling and working with Fluorometer, understanding fluorescence quenching.
- Handling of flame photometer instrument.
- To determine concentration of ions in different samples by Nephelo-Turbidometry.

CHGE -01T: FUNDAMENTAL CHEMISTRY-I

ThisCoursewillenablethestudentsto:

- To know the contributions of ancient Indian scientists, study atomic structure, and periodic properties.
- To explore the concept of chemical bonding, including ionic and covalent bonding, hybridization, molecular orbital theory and intermolecular interactions.
- To learn about reaction mechanisms of inorganic reaction and their stoichiometry.
- To learn basic principles of organic chemistry.

CHGE -01P: CHEMISTRY LAB COURSE-I

ThisCoursewillenablethestudentsto:

- Analyze mixtures for cations (NH_4^+, Pb^{2+}, etc.) & anions (CO_3^{2-}, S^{2-}, etc.) using H_2S or other methods.
- Perform titrimetric analysis (standardization, unknown conc. determination).
- Estimate the concentration of acetic acid in vinegar (using NaOH), alkali content in antacids (using

HCl), and free alkali in soaps/detergents.
- Utilize complexometric titrations for calcium (Ca^{2+}), water hardness, Fe^{2+}, Fe^{3+}, and Cu^{2+}.

CHGE -02T: FUNDAMENTAL CHEMISTRY-II

ThisCoursewillenablethestudentsto:

- To understand different acid-base theories and solvent system.
- To learn the preparation, bonding and reactions of C-C σ- & π- bonding compounds.
- To understand the concept and chemistry of aromatic compounds and their reactions.
- To learn the basic concepts of various states of matter & understand the basic concepts of surface chemistry and chemical kinetics.

CHGE -02P: CHEMISTRY LAB COURSE-II

ThisCoursewillenablethestudentsto:

- Demonstrating and using common glassware for accurate measurements.
- Studying the functional group analysis of organic compounds.
- Determining melting points to assess compound purity and employing distillation and sublimation techniques to establish boiling points.
- Equipping with essential skills in measuring liquid surface tension and solution viscosity.

CHVAC -01: CHEMISTRY IN DAILY LIFE

ThisCoursewillenablethestudentsto:

- To introduce the student about dairy product, beverages, food additives, artificial sweeteners, flavors, food colorants, paints, pigments, dyes etc.
- To make aware the students about air pollution, hydrological cycle, composition of soil, fertilizers etc.
- To introduce the students about carbohydrate, vitamins, drugs.
- To introduce students about concept of thermodynamics used in day to day life.

CHSEC -01: GREEN CHEMISTRY

ThisCoursewillenablethestudentsto:

- Understand needs, goals and obstacles in green chemistry.
- Understand and application of twelve principles of chemistry.
- Design green solvents and reactions.
- To interpret and execute case study, survey and projects on Green Chemistry.

NON-NEP

Program Outcome(PO)

Major Program outcome of B.Sc Chemistry:

- To gain knowledge aboutFundamentals and application of current chemical and scientific theories.
- To develop problem solving, critical thinking and analytical skills.
- Students will be able to record and analyze the results of experiments.
- To develop understanding about the central role of chemical sciences in human society.

Program Specific Outcome(PSO)

B. Sc. Part-I

POS-01 :- Inorganic and Physical Chemistry

At the end of this course, the students will be able to learn the following aspects of Chemistry

- To learn basic concept of atomic structure and the periodic properties of elements
- To understand chemical bonding in ionic and covalent compounds
- To study group trends for s and p-block elements in the periodic table
- learn properties and bonding of compounds of the noble gases
- Understand the metallurgical extraction of metals.
- Basic concepts of Mathematics and Computer for Chemists.
- Basics and mechanism of chemical kinetics and catalysis.

POS-02:- Organic and Physical Chemistry

At the end of this course, the students will be able to learn the following aspects of Chemistry

- Understand the fundamentals of physical organic chemistry
- Stereochemistry of carbon compounds
- Chemistry of Alkenes and Alkynes
- Chemistry of Alicyclic and aromatic Hydrocarbons
- Understanding kinetic model of gases and its properties, Behavior of real gases, its derivation from ideal behavior, equation of state, isotherms and Law of corresponding states and molecular velocities.
- Fundamental concepts of liquid state and colloids & surface chemistry.
- Solids, Lattice parameters its calculation, application of symmetry, solid characteristics of simple salts.

POS -03:- Laboratory

At the end of this course, the students will be able to learn the following

- aspects of Chemistry
- To analyse the given mixture for anions (acid radicals) and cations (basic radicals).
- Titrations
- Qualitative Analysis
- Surface tension measurements.

- Viscosity measurement
- Chemical Kinetics

B. Sc. Part-II

POS-04 :- Inorganic and Physical Chemistry

At the end of this course, the students will be able to learn the following aspects of Chemistry

- Understand the general characteristics of transition elements.
- Explain the chemistry of Coordination Compounds.
- Analyze water and coal.
- Basic concepts of thermodynamics.
- Basic concepts of Chemical and Ionic Equilibrium

POS-05:- Organic and Physical Chemistry

At the end of this course, the students will be able to learn the following aspects of Chemistry:

- Reactions of the alcohols and phenols.
- Reactivity of carbonyl compounds Carboxylic acid and its derivatives
- Organic compounds containing nitrogen
- Phase Equilibrium
- Electrochemistry

POS -06:- Laboratory
By the end of this course students will learn the following aspects of Laboratory Course Learning. Outcomes (CLO)

- To analyze the given mixture for anions (acid radicals) and cations (hasic radicals).
- Titrations
- Qualitative Analysis
- Transition Temperature.
- Thermochemistry.
- Water Analysis.

B. Sc. Part-III

PSO: 07- Paper-I: Inorganic Chemistry

- Students will learn about metal-ligand bonding in transition metal complexes and types of ligand.
- Student gains important information about ionic bond, crystal field theory and its applications.
- Students gains the knowledge of organometallic compounds and their chemical reactions.
- Students will learn about important elements.
- Students will learn about concept of acid and base and the forms in which compounds occur in nature.

PSO: 08- Paper-II: Organic Chemistry

- Students will learn about different organometallic compounds and organic synthesis
- via enolates.
- Students will learn about biomolecules and their important roles in chemistry and daily life.
- Students gains the knowledge of polymers, types of biopolymers, formation, their properties and uses.
- Students will learn about Mass Spectroscopy, infrared and UV/Visible spectroscopy.
- Students gains knowledge about NMR 13C Spectroscopy their principle and applications.

PSO: 09- Paper-III:Physical Chemistry

- Students will know about the structure of atom, orbitals and importance of quantum mechanics in chemistry.
- Students gain knowledge about applications of quantum mechanics.
- Students will know about Spectroscopy and its role in determination of molecular and atomic structure.
- Students gains the knowledge about orientation of magnetic properties in substances.
- Students will know about third law thermodynamics.

PSO: 10 - Laboratory course

- Students will understand preparation of complex, synthesis and analysis of organic compound, qualitative analysis and handling of instruments.
- Know about TLC method for determination of drugs.

Master of Science- Chemistry :-

The purpose of the M.Sc. (Chemistry) programme is

- To provide advanced theoretical and practical knowledge in the field of chemistry.
- This will help the student to further pursue advanced research in Chemistry and to work in Chemical industry or Academia.

Course and Examination Scheme

Our College follows the Syllabus of DurgUniverstiy for M.Sc Chemistry.

The Course is divided in to 4 Semesters.

M.Sc. examination scheme of each Semesters consists of 4 Theory papers and 2 Lab courses.

Semester I

Paper	Course	Internal Marks	Theory	Total	

I	Group Theory And Chemistry Of Metal Complexes	20	80	100	
II	Concepts of organic Chemistry	20	80	100	
III	Quantum Chemistry, Thermodynamics And Chemical Dynamics - I	20	80	100	
IV	Theory And Applications Of Spectroscopy-I	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

Semester II

Paper	Course	Internal Marks	Theory	Total	
I	Transition Metal Complexes	20	80	100	
II	Reaction Mechanisms	20	80	100	
III	Quantum Chemistry, Thermodynamics and Chemical Dynamics - II	20	80	100	
IV	Theoryand applications of spectroscopy-II	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

Semester III

Paper	Course	Internal Marks	Theory	Total	
I	Resonance Spectroscopy, Photochemistry And Organocatalysis	20	80	100	
II	Chemistry of Biomolecules	20	80	100	
III	Catalysis, Solid State And Surface Chemistry	20	80	100	
IV	Analytical Techniques And Data Analysis	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

Semester IV

Paper	Course	Internal Marks	Theory	Total	
I	Instrumental Methods Of Analysis	20	80	100	
II	Natural Product And Medicinal Chemistry	20	80	100	
III	Material And Nuclear Chemistry	20	80	100	
IV	Environmental & Applied Chemical Analysis##	20	80	100	
Practical	Lab Course I			100	
	Lab Course II			100	

##: Students of our College opt for this paper from the choice of Optionals given by the University.

Program Outcome(PO)

Major Program outcome of M.Sc Chemistry:

To gainadvancedtheoreticalknowledge and applications of

1. Group theory and Chemical Complexes, Quantum Chemistry, Chemical Dynamics and Thermodynamics.
2. Reaction Mechanisms and Spectroscopy.
3. Photochemistry, Catalysis and Surface chemistry, Biomolecules.
4. Instrumental methods of Chemical Analysis.
5. Medicinal Chemistry, Nuclear Chemistry, Environmental Chemistry, Nanochemistry.

M. Sc. Semester I

PSO: 01- Paper-I: Group Theory and Chemistry of Metal Complexes

Students gain knowledge about:

-
- Symmetry and Group Theory.
- Metal-Ligand Bonding.
- Metal-Complexes, Metal–Ligand Equilibra in Solution.
- Isopoly-Acid And Heteropoly-Acid.
- Silicates, Silicones Metal Clusters, Chains, Rings.

PSO: 02- Paper-II: Concepts oforganic Chemistry

Students gain knowledge about:

- Nature of bonding in organic molecules.
- Aromaticity.
- Conformational analysis.
- Stereochemistry.
- Reaction intermediates .
- Elimination reactions.
- Pericyclic reactions.

PSO: 03- Paper-III: Quantum Chemistry,Thermodynamics and Chemical Dynamics - I

Students gain knowledge about:

- Mathematical Concept in Quantum Chemistry
- Basics of Thermodynamics

- Electrochemistry–I
- Chemical Dynamics –I

PSO: 04- Paper-IV: Theory And Applications Of Spectroscopy-I

Students gain knowledge about:

- Unifying Principles
- Microwave Spectroscopy
- Scattering Spectroscopy
- Raman Spectroscopy

Lab Course I

1. Qualitative analysis of mixture containing Acid and Basic radicals.
2. Separation and determination of two metal ions in ores, alloys, or mixtures in solution, one by volumetric and the other by gravimetric methods.
3. Estimation of Constituents of Commercial Compounds.
4. Preparation of selected inorganic compound and their studies by I.R. electronic spectra, Mössbauer, E.S.R.
5. Magnetic susceptibility measurements.
6. Handling of air and moisture sensitive compounds.

Lab Course II

Exercise Based on :

1. Adsorption/Surface Chemistry
2. Phase Equilibria
3. Chemical Kinetics
4. Solutions/Molecular Weights

M. Sc. Semester II

PSO: 05- Paper-I: Transition Metal Complexes

The Student will gain knowledge of:

- Reaction Mechanism of Transition Metal Complexes
- Electronic Spectra And Magnetic Properties of Transition Metal Complexes
- Transition Metal Complexes
- Alkyls And Aryls of Transition Metals
- Compounds of Transition Metal - Carbon Multiple Bonds
- Fluxional Organometallic Compounds

PSO: 06- Paper-II: Reaction Mechanisms

The Sudent will gain knowledge about:

- Aliphatic Nucleophilic Substitution

- Aromatic Nucleophilic Substitution
- Aliphatic Electrophilic Substitution
- Aromatic Electrophilic Substitution
- Addition To Carbon-Carbon Multiple Bonds
- Addition To Carbon-Hetero Multiple Bonds

PSO: 07- Paper-III: Quantum Chemistry, Thermodynamics and Chemical Dynamics - II
The Sudent will gain knowledge about:

- Application Of Matrices In Quantum Chemistry.
- Angular Momentum In Quantum Chemistry.
- Approximate Methods.
- Statistical Thermodynamics.
- Electrochemistry –II
- Chemical Dynamics –II

PSO: 08- Paper-IV:Theory and applications of Spectroscopy-II

The Sudent will gain knowledge about:

- Ultraviolet and Visible Spectroscopy
- Infra Red Spectroscopy
- Mass Spectrometry
- Nuclear Resonance Spectrophotometry

Lab Course III

Excersice Based on:

- General Methods of Separation and Purification of Organic Compounds
- Distillation Techniquies
- Analysis of Organic Binary Mixture
- Preparation of Organic Compounds: Single Step preparations

Lab Course IV

Excersice Based on:

- Error Analysis And Statistical Data Analysis
- Use Of Computer Programmes
- Flame Photometric Determinations
- Nephelometric Determinations
- Electrophoresis

- Spectroscopy

M. Sc. Semester III

PSO: 09- Paper-I: Resonance Spectroscopy, Photochemistry AndOrganocatalysis

The Sudent will gain knowledge about:

- Electron Spin Resonance Spectroscopy
- Nuclear Quadrupole Resonance Spectroscopy
- Photoelectron Spectroscopy
- Photoacoustic Spectroscopy
- Photochemical Reactions
- Determination Of Reaction Mechanism
- Miscellaneous Photochemical Reactions
- Organocatalysis

PSO: 10- Paper-II: Chemistry of Biomolecules

The Sudent will gain knowledge about:

- Bioenergetics
- Electron Transfer in Biology
- Transport and Storage of Dioxygen
- Metalloenzymes
- Enzyme Models
- Enzymes
- Co-Enzyme Chemistry
- Biotechnological Applications of Enzymes
- Biopolymer Interactions
- Thermodynamics of Biopolymer Solutions
- Cell Membrane and Transport of Ions

PSO:11 - Paper-III: Catalysis, Solid State And Surface Chemistry

The Sudent will gain knowledge about:

- Acids, Bases, Electrophiles, Nucleophiles and Catalysis
- Micelles and Adsorption
- Solid State Chemistry – I
- Macromolecules

PSO: 12- Paper-IV:Analytical Techniques And Data Analysis

The Sudent will gain knowledge about:

- Sample Preparation, Digestion And Statistical Analysis
- Separation Techniques

- Thermal And Automated Methods
- Electrochemistry
- Polarography

Lab Course V

- Excersices Based on Physical Chemistry
- Advanced Equipment based experiments

Lab Course VI

Excersices Based On

- Spectrophotometric Determinations
- Polarography
- pH-Meter
- Flame Photometric Determinations
- Refractometry
- Separation And Quantitative Estimation Of Binary And Ternary Mixtures

M. Sc. Semester IV

PSO: 13- Paper-I: Instrumental Methods Of Analysis

The Sudent will gain knowledge about:

- Advanced Chromatography
- X-Ray And Proton Induced Spectroscopy
- Atomic Emission Spectroscopy
- Atomic Absorption Spectroscopy And Hyphenated Techniques

PSO: 14- Paper-II: NaturalProduct And Medicinal Chemistry

The Sudent will gain knowledge about:

- Terpenoids and Carotenoids
- Alkaloids
- Steroids
- Plant Pigments
- Drug Design Development
- Antineoplastic Agents
- Antibiotics, Anti Malarial drugs

PSO:15 - Paper-III: Material And Nuclear Chemistry

The Sudent will gain knowledge about:

- Non Equilibrium Thermodynamics
- Material Chemistry
- Supramolecular Chemistry

- Nuclear And Radiochemistry Nuclear Theory
- Nuclear Fission
- Nuclear Energy
- Applied Radiochemistry

PSO: 16- Paper-IV: Environmental & Applied Chemical Analysis

The Sudent will gain knowledge about:

- Air Pollution Monitoring And Analysis
- Soil And Water Pollution
- Food Analysis
- Cosmetics, Clinical And Drug Analysis

Lab Course VII

Excersices Based on:

- Multi - Step Synthesis of Organic Compounds
- Quantitative Organic Analysis
- Estimation of Functional Group
- Extraction of Organic Compounds From Natural Sources
- Some advanced level sophisticated instrument based (FTIR, NMR, GC-MS, AAS, FLUORESCENCE SPECTROPHOTOMETER, TENSIOMETER etc.)

Lab Course VIII

Excersices Based on:

- Spectrophotometric Determination
- Flow Injection Analysis
- Atomic Absorption Spectrophotometer
- Titrimetic/Gravimetric Determinations
- Chromatographic Separation
- Nutrient and micronutrient analysis
- Toxic Element estimation

Department of Physics

Bachelor of Science :-

NEP-2020

Program Outcomes (PO)

The learning outcomes of the undergraduate degree course in physics are as follows:

In-depth disciplinary knowledge: The student will acquire comprehensive knowledge and understanding of the fundamental concepts, theoretical principles and processes in the main and allied branches of physics.

Hands-on/ Laboratory Skills: Comprehensive hands-on/ laboratory exercises will impart analytical, computational and instrumentation skills. The students will be able to demonstrate mature skills for the collation, evaluation, analysis and presentation of information, ideas, concepts as well as quantitative and/or qualitative data.

Role of Physics: The students will develop awareness and appreciation for the significant role played by physics in current societal and global issues. They will be able to address and contribute to such issues through the skills and knowledge acquired during the programme.

Communication and Skills: Various DSCs, DSEs, SECs, and GEs have been designed to enhance student's ability to write methodical, logical and precise reports. The courses will, in addition, guide the student to communicate effectively through presentations, writing laboratory/ project reports and dissertations.

Critical and Lateral Thinking: The programme will develop the ability to apply the underlying concepts and principles of physics and allied fields beyond the classrooms to real life applications, innovation and creativity.

Research skills: The course provides an opportunity to students to hone their research and innovation skills through assignment/internship/dissertation. It will enable the students to demonstrate mature skills in literature survey, information management skills, data analysis and research ethics.

Course Learning Outcomes (CLO) for DSC

Course Title: PHSC-01T: Mechanics

After going through the course, the student should be able to:

- Analyze and apply the laws of motion to various dynamical situations.
- Explain and demonstrate the principle of conservation of momentum and energy including their application in real-world scenario such as collision and energy transformation.
- Evaluate and calculate moment of inertia for objects of different shapes and analyze how these properties affect the motion of rotating bodies.
- Analyze flow of fluids.
- Describe special relativistic effects and their effects on the mass and energy of a moving object.

Course Title: PHSC-01P: Mechanics (Practical)

After the completion of the course, Students are expected to understand working mechanism and laws of **classical mechanics**. The Students will be able to:

- Assemble required parts/devices and arrange them to perform experiments.
- Record/ observe data as required by the experimental objectives.
- Analyze recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to laws of mechanics and its applications.

Course Title: PHSC-02T: Electricity and Magnetism

After going through the course, the student should be able to:

- State various laws related with electrostatics, dielectric, electric current, magnetism and electromagnetic induction.
- Apply vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.
- Compare rise and decay of current in LR, CR, LCR circuits.
- Apply Biot-Savart law for calculation of magnetic field in simple geographic situations.
- Derive and analyze Maxwell's equations.

Course Title: PHSC-02P: Electricity & Magnetism (Practical)

After the completion of the course, Students are expected to understand working laws of **Electricity, Magnetism and EMWs**. The students will also be able to:

- **Verify various circuit laws, network theorems**, using simple electric circuits. Assemble required parts/devices and arrange them to perform experiments.
- **Verify various laws in electricity and magnetism** such as **Lenz's law, Faraday's law** and learn about

the construction, working of various measuring instruments.

- Record/ observe data as required by the experimental objectives. Analyze recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to laws of Electricity, Magnetism and its applications.

Course Title: PHSC-03T: Heat and Thermodynamics

After going through the course, the student should be able to:

- Demonstrate a deep comprehension of the fundamental principles of **thermodynamics**, including concepts such as **energy, entropy and laws of thermodynamics**.
- Apply the **laws of thermodynamics** to analyze and solve problems related with **energy transfer, heat engines, refrigeration system** and other thermodynamic processes.
- Analyze basic aspects of **kinetic theory** and transport phenomenon in gases.

Course Title: PHSC-03P: Heat and Thermodynamics (Practical)

- **Lab Proficiency:** Thermometers, pressure gauges, calorimeters, heat transfer apparatus, experimental setup, data acquisition.
- **Hands-on Learning:** Heat transfer, work done, entropy, phase transitions, experiments.
- **Data Analysis:** Experimental data, theoretical discrepancies, analysis.
- **Predictive Skills:** Thermodynamic behavior, varying conditions, experimentation.
- **Theory-Practice Integration:** Theoretical knowledge, practical lab work, synthesis, applications.

Course Title: PHSC-04T: Waves and Optics

After going through the course, the student should be able to:

- Analyze the behavior of **waves propagating** through different mediums and predict how factors such as density, elasticity, and temperature affect wave propagation.
- Demonstrate an understanding of **interference phenomena**, including constructive and destructive interference, and apply this knowledge to solve problems involving wave superposition.
- Explain the concept of **diffraction** and its implications for wave propagation, including how waves bend around obstacles and spread out after passing through narrow openings.
- Describe the **polarization of waves**, including linear, circular, and elliptical polarization, and apply polarization concepts to analyze and manipulate electromagnetic waves.

Course Title: PHSC-04P: Waves and Optics (Practical)

After the completion of the course, students are expected to understand laws and principles behind various **optical phenomena**, specially related to **wave nature of light**. The students will also be able to:

- Gain proficiency in operating laboratory equipment such as **light source i.e. mercury, sodium and Laser, spectrometers, polarimeter**, demonstrating competence in setting up experiments, calibrating instruments, and collecting accurate data.
- Develop a deep understanding of optical principles such as **refraction, diffraction, dispersion, and interference**, as well as their applications in various scientific disciplines.
- Analyze recorded data and formulate it to get desired results.

Course Title: PHSC-05T: Introduction to Quantum Mechanics

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

- Explain the basic **postulates of quantum mechanics**.
- Explain the concept of the **wave packet**.
- Describe the principle of **Heisenberg's uncertainty principle** and its applications.
- Gain knowledge about **physical quantities as operators**.
- Apply the **Schrodinger equation** to various quantum systems.

Course Title: PHSC-05 P: Introduction to Quantum Mechanics (Practical)

After the completion of the course, get opportunity to perform the following experiments on measurement and verification basic concepts of **Quantum mechanics**. The students are expected to:

- Assemble required parts/devices and arrange them to perform experiments. Record/ observe data as required by the experimental objectives.
- Analyze recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to **laws of Quantum Mechanics** and its applications.
- Apply the learnt concepts for different problems in **laser systems, nuclear physics and EMW related problems**.

Course Title: PHSC-06 T: Solid State Physics and Solid State Devices

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

- To give knowledge of some basic **electronic components and circuits**. Understand the basic principles and industrial applications of **semiconductor diode, zener diode and transistor**.
- Use **diodes and transistors** in electronic circuits.
- Understand the construction working and applications of **transistor**.
- Understand the construction and working principles of various **instruments** that are used in the physics

laboratory.

- Gain knowledge on importance of a **filter circuit**. Describe the working of **oscillators**.

Course Title: PHSC-06 P: Solid State Physics and Solid State Devices

After the completion of the course, the students are expected to:

- Assemble required parts/devices and arrange them to perform experiments. Record/ observe data as required by the experimental objectives.
- Analyze recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to **theory of semiconductors**.
- Apply theory and principle of **semiconductors** for various **device applications**.
- **Verify various I/P, O/P and other characteristics of various semiconductor (solid state) devices** and interpret the phenomena.

Course Title: PHSC-07: Classical Mechanics

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

- The ideas and concepts in **classical physics**.
- Explain **Newtonian Mechanics, Lagrangian, and Hamiltonian formulation**.
- Gain knowledge about **central force problems** and its application in **scattering phenomena**.
- Explain **small oscillations** and its applications. Apply mechanics to solve various physical problems.

Course Title: PHSC-08: Quantum Mechanics

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

- Explore **uncertainty relations** and states with minimum uncertainty. Learn and apply **commutation relationships**.
- Master **matrix representation of operators** and solve the **harmonic oscillator**. Comprehend **angular momentum** in quantum mechanics.
- Explore **spin angular momentum** and **Pauli's matrices**. Master the concept of **Clebsch-Gordan coefficients**.
- Analyze **central force problems** and **spherically symmetric potentials in 3D**. Explore parity, square-well potentials, and **hydrogen atom solutions**.

Course Learning Outcomes (CLO) for DSE

Course Title: PHSE-01: Introduction to Statistical Mechanics

- Differentiate between **macrostate and microstate** and calculate their numbers.
- Comprehend the concept of **ensembles** and its requirement in study of physical phenomenon.
- Correlate and compare the **classical and quantum statistical distribution laws**.
- Apply concepts of statistical distribution laws for different physical systems.

Course Title: PHSE-02: Mathematical Physics-I

- Revise and apply the knowledge of **calculus, vectors, vector calculus, probability and probability distributions** in various cases.
- Illustrate proficiency in writing and solving **Differential equation** and solving them for a given physical system.
- Apply and interpret the **curvilinear coordinates** in problems with spherical and cylindrical symmetries.
- Use **Dirac Delta function** for various physical situation, especially in quantum mechanical approaches.

Course Title: PHSE-03: Nuclear Physics

- Describe **nuclear constituents** and their intrinsic properties. Analyze **binding energy variations** with mass number and understand the **N/Z plot**.
- Explain and apply **nuclear models** for clear understanding of stability of nuclei and nuclear processes. Differentiate **alpha, beta, and gamma decay** and interpret energy spectra.
- Apply **conservation laws** to compute **Q-values**, and analyze **reaction mechanism**. Explain significance of **scattering and reaction cross section**.
- Calculate and compare **nuclear fission, and fusion energy**. Describe **nuclear detectors and particle accelerators**.
- Gain insights into cutting-edge research, **accelerator technology**, and interdisciplinary applications and apprehend the role of accelerators in advancing scientific knowledge and contributing to societal well-being.

Course Title: PHSE-04 T: Numerical Methods and C Programming

- Analyses the **convergence of solutions** to numerical methods. Understand the principles of **Gaussian elimination, pivoting, and iterative methods** to solve linear systems.
- Use **interpolation methods**. Perform **numerical differentiation and integration** using **Newton-Cotes formulae**.
- Explain the roles of **compilers, interpreters, and operating systems**. Learn the basics of **C programming**.

Course Title: PHSE-04 P: Numerical Methods and C Programming

- Get **experimental Knowledge of computational methods** in physics.

- Learn **C language**.
- Use **C programming to solve various equations**.
- Perform **Interpolation and curve fittings** through various tools.

Course Title: PHSE-05: Mathematical Physics-II

- Apply **Fourier analysis** of periodic functions in physical problems such as vibrating strings etc.
- Solve the **beta, gamma and the error functions** and their applications in doing integrations.
- Relate basic **theory of errors**, their analysis, and estimation with examples of simple experiments in Physics.
- Solve **partial differential equations** with the examples of important partial differential equations in Physics.

Course Title: PHSE-06: Classical Electrodynamics & Electromagnetic Theory

- Calculate the **reflection and transmission of waves** at the media interface.
- Understand the aspects related to **Polarized lights** and its generation as the superposition of different waves.
- Understanding the **plasma state**, the concept of **Debye screening**, and **collective behavior**.

Course Title: PHSE-07 T: DIGITAL ELECTRONICS

- Understand basics of **logic gates, Boolean algebra**, and simplifying complex **Boolean functions**.
- Learn about **combinational circuits, logic families, and digital ICs**.
- Understand the working of **flip-flops** and thus **memory**.
- Capable to know the various sequential circuits an **ADs & DAs** (presumably A/D and D/A converters).

Course Title: PHSE-07 P: DIGITAL ELECTRONICS (Practical)

After completion of this course a student will be able to-

- Understand the working of **logic gates** and realization of Functions.
- Clarify the concept of **combinational logic circuits**.
- Understand the differences between **MUX, DMUX, Encoder and Decoder** and their uses.
- Familiar with basic memory elements (**Flip-flop**).
- Understand the concept of **counters and shift registers**. Able to use **D/A and A/D convertors**.

Course Title: PHSE-08 T: Operational Amplifier & Its Applications

After completion of the course students will be able to-

- The Idea and concepts of **differential amplifier**.
- Basic concepts of **Ideal operational amplifier and Practical operational amplifier** with its electrical parameters.
- Gain the knowledge of **op-amp with feedback** and its effect on different parameters.
- Understand the concept of various **oscillators** and their applications.
- Know the uses of **Timer circuits** and their applications.

Course Title: PHSE-08 P: Operational Amplifier & Its Applications

After completion of this course a student will be able to-

- Understand the working of **differential amplifier** and its inverting and non-inverting configurations.
- Know the importance of **negative feedback**.
- Know the uses of **op-amp IC**. Understand the idea of **Oscillators**.
- Understand the working of **active filters**.
- Have the idea about **Multi-vibrators**.

Course Title: PHSE-09 T: Solid State Physics

By course end, students will master:

- **Energy band concept** in solids, including energy gap analysis.
- **Bloch function, Kronig-Penny model** application for electron description.
- **Hall Effect** in semiconductors, **Fermi-Dirac distribution** temperature impact, and **free electron gas** behavior in 3D.
- **Zone schemes** exploration, **Fermi surface** construction, and understanding of nearly free electrons, holes, and open orbits.

Course Title: PHSC-09 P: Solid State Physics (Practical)

After the completion of the course, the Students are expected to:

- Analyses recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to **theory of semiconductors**.
- Apply theory and principle of **semiconductors** for various **device applications**.

Various **electronics experiments** and some advanced experiments in Physics.

Course Title: PHSE-10: Atomic and Molecular Physics

- Explain **Vector atom model** and use it for analyzing **hydrogen spectra**.
- Analyze various spectra and check for possibility of a given transition.

- Explain and Apply **Raman's effect and spectroscopy** for various application.
- Appreciate the extraordinary characteristic of **lasers** and differentiate it from an ordinary light.
- Explore more about scientific contribution of **Sir C V Raman**.

Course Title: PHSE-11: Statistical Mechanics

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

- Explain the connection between **statistics and thermodynamics**. Define the **phase space** of the classical system.
- Define three different types of **Ensembles** and discuss corresponding theories. Define **partition functions** for different canonical systems.
- Explain **energy, energy-density fluctuations**, and correspondence of various ensembles. Explain statistics of different **quantum mechanical ensembles**.
- Discuss **Bose-Einstein (BE) Condensate** w.r.t. liquid Helium II. Define and discuss **electron gas** behavior w.r.t. **Fermi Dirac Statistics**.
- Discuss **Virial expansion** of the equation of state. Discuss **Brownian motion and Einstein and Smoluchowski theory**.

Course Title: PHSE-12 T: Microprocessor

After completion of this course a student will be able to:

- Understand the basics of **digital computer**. Clarify the concept of **memories** used in computer system.
- Familiar with **buses and registers** available in microprocessor.
- Understand the **addressing modes, data transfer group, arithmetic group, logical group** etc. Know about **Assembly Language, High-Level** and Area of applications of various languages.
- Able to use **Assembly Language for programming of microprocessor**.

Course Title: PHSE-12 P: Microprocessors (Practical)

After completion of this course a student will be able to-

- Understand the working of **logic gates** and realization of Functions.
- Clarify the concept of **combinational logic circuits**.
- Understand the differences between **MUX, DMUX, Encoder and Decoder** and their use.
- Familiar with basic memory elements (**Flip-flop**).

Course Learning Outcomes (CLO) for GE

Course Title: PHGE-01 T – Mechanics

- After going through the course, the student should be able to: Analyze and apply the laws of motion to various dynamical situations.
- Explain and demonstrate the principle of conservation of momentum and energy including their application in real-world scenario such as collision and energy transformation.
- Evaluate and calculate moment of inertia for objects of different shapes and analyze how these properties affect the motion of rotating bodies.
- Analyze flow of fluids.
- Describe special relativistic effects and their effects on the mass and energy of a moving object.

Course Title: PHGE-01 P - Mechanics

After the completion of the course, Students are expected to understand working mechanism and laws of classical mechanics. The Students will be able to:

- Assemble required parts/devices and arrange them to perform experiments.
- Record/ observe data as required by the experimental objectives.
- Analyze recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to laws of mechanics and its applications.

Course Title: PHGE-02 T - Electricity and Magnetism

After going through the course, the student should be able to:

- State various laws related with electrostatics, dielectric, electric current, magnetism and electromagnetic induction.
- Apply vector (electric fields, Coulomb's law) and scalar (electric potential, electric potential energy) formalisms of electrostatics.
- Compare rise and decay of current in LR, CR, LCR circuits.
- Apply Biot-Savart law for calculation of magnetic field in simple geographic situations.
- Derive and analyze Maxwell's equations.

Course Title: PHGE-02 P - Electricity & Magnetism

After the completion of the course, Students are expected to understand working laws of Electricity, Magnetism and EMW's (Electromagnetic Waves). The students will also be able to:

- Verify various circuit laws, network theorems, using simple electric circuits. Assemble required parts/devices and arrange them to perform experiments.

- Verify various laws in electricity and magnetism such as Lenz's law, Faraday's law and learn about the construction, working of various measuring instruments.
- Record/ observe data as required by the experimental objectives. Analyze recorded data and formulate it to get desired results.
- Interpret results and check for attainment of proposed objectives related to laws of Electricity, Magnetism and its applications.

Course Learning Outcomes (CLO) for VAC

Course Title: PHVAC-01 - Renewable Energy and Energy Harvesting

Objective of the course is to impart students; the knowledge of renewable energy and they are expected to learn about:

- Energy crisis at national and international scenario.
- Renewable sources of energy and their importance.
- Availability of renewable energy resources in India.
- Knowledge about energy harvesting technology.

Course Learning Outcomes (CLO) for SEC

Course Title: PHSEC-01 - Basic Electrical Skill

On successful completion of the course, student is expected to enhance his electrical skill through:

- Understanding importance of accuracy in measuring physical quantities.
- Using basic mechanical tools.
- Using various measuring instruments.
- Fault finding and repairing simple domestic appliances.

NON-NEP

Program Outcome(PO)

Major Program outcome of B.Sc Physics:

- To gain knowledge about Fundamentals and application of Physcial Phenomenon like Laws of Motion, Optics, Mechanics, and Electronics.
- To develop problem solving, critical thinking and analytical skills.
- To be able to record and analyze the results of experiments.
- To develop understanding about the role of physical sciences in human society.

B.Sc. I year

PSO: 01- Paper-I:Mechanics Oscillation and Properties of Matter

The paper aims at imparting knowledge about:

- The concepts of Frame of Reference of different coordinates
- The laws and apply them in calculations of the motion of simple and oscillation systems
- The Cathode Ray Oscilloscope theory
- The concepts of friction and the concepts of elasticity, fluid mechanics and be able to perform calculations using them

PSO: 02- Paper-II: Electricity, Magnetism and Electromagnetic Theory

The paper aims at imparting knowledge about:

- The concepts of Circuit theory.
- The knowledge regarding Electricity, Dielectric medium.
- Magnetisation and Electromagnetic behaviour.
- Demonstrating quantitative problem solving skills.

PSO : 03 Lab Course :-

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

- To get knowledge about the use of various measuring instruments.
- To get understanding about the simple harmonic motion, elasticity, surface tension and viscosity.
- Students will be able to understand applications of basic principle of Electricity and Magnetism theory in real world**.**

B.Sc. II year

PSO 04- Paper-I: Thermodynamics, Kinetic Theory and Statistical Physics

The paper covers the topic related to thermodynamics, kinetic theory and Statistical physics.
Student will be able to

- Comprehend the basic concepts of thermodynamics and its applications in physical situation.
- Learn about situations in low temperature.
- Understand the concepts of Thermal and Statistical mechanics.
- Understand the concepts of Statistical system and its impact on surrounding.
- Understand the Particle behaviour and its consequences according to the Statistical Physics.
- Demonstrate quantitative problem solving skills in all the topics covered

PSO 05- Paper-II: Waves Acoustics and Optics

- Students will appreciate the role of Physics in ‘interdisciplinary areas related to materials, Acoustics etc.
- Students will understand the concepts of lens system and interference.
- To apply the laws of light to formulate the relations necessary to analyse lens formulae

- To study about LASER and its applications
- To demonstrate quantitative problem solving skills in all the topics covered.

PSO 06 : Lab Course :-

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

- Students able to get working knowledge of laws and methods of thermodynamics and elementary statistical mechanics and to use this knowledge students can explore various application related to physics of condensed matter.
- Students experience experimental evidence of laws of wave optics and how light has wave nature is confirmed through experiment.

B.Sc. III year

PSO 07 : Paper I: Relativity, Quantum Mechanics Atomic Molecular and Nuclear Physics

Student will be able to

- Understand laws of Relativity, Quantum mechanics and apply them in atomic Physics
- Understand the concepts Molecular Physics
- Understand laws and application of Nuclear Physics
- Demonstrate quantitative problem solving skills in all the topics covered

PSO 08: Paper II: Solid State Physics, Solid State Devices and Electronics.

Student will be able to

- Understand the concepts of Solid State Systems
- Understand the concepts of Statistical system in Solid State System and its impact on surrounding
- Demonstrate quantitative problem solving skills in all the topics covered
- Understand the basics of transistor biasing and their applications

PSO 09 : Lab Course :-

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

- Understand the working of semiconductor diode, LED, transistor, and their characteristics
- Understand the working of rectifier, filter, regulator etc.
- Understand the function of Zener diode as voltage regulator
- Gain knowledge about amplifier and logic gates,

Department of Mathematics

Bachelor of Science

NEP 2020

Program Outcomes (PO)

PO 1- Ability to develop scientific temper and acquire in depth knowledge of algebra, calculus, real analysis , complex analysis, topology and several other branches of Mathematics. This Program helps learners in building a solid foundation for higher studies in mathematics .

PO2 – Utilize mathematics to solve theoretical and applied problems by critical thinking, understanding , analysis and synthesis.

PO3 – The skills and knowledge gained has intrinsic beauty, which also lead to proficiency in analytical reasoning. This can be utilized in modeling and solving real life problem .

PO 4- Ability to apply mathematical tools in physics , Economics , Optimization and other subjects it will also develop understanding the architecture of curves and surfaces in plane and spaces etc.

PO 5- This program will also enable the learners to join teaching profession in schools and this will help the students to enhance their employability for government jobs, jobs in banking insurance and investment sectors , data analyst jobs and jobs in various other public and private enterprises .

Course learning outcome (CLO) :-

MASC -01 Elementary Calculus :-

This Course will enable the students to:

- Know about ancient Indian Mathematicians and their contribution
- Calculate the limit and examine the continuity and understand the geometrical interpretation of differentiability. Apply various tests to determine convergence.
- Understand the consequences of various mean value theorems.
- Understand concepts of Curvature and Asymptotes.
- Draw curves in Cartesian and polar coordinate systems
- Understand the elementary integration of transcendental function and understand applications of reduction formulae.

MASC -02 ALGEBRA :-

This Course will enable the students to:

- Learn about the Matrix algebra.
- Understand Set theory, Function and Relation
- Learn about the theory of equations.
- Learn about the fundamental concepts of groups, Subgroups.
- Understand cosets and normal subgroups

MASC-03 :- DIFFERENTIAL EQUATIONS

This Course will enable the students to:

- Learn various techniques of getting exact solutions of certain solvable first order differential equations and linear differential equations of second order.

- Understand the genesis of ordinary as well as partial differential equations.
- Learn about solution of first order linear partial differential equations using Lagrange's method.
- Know how to solve second order linear partial differential equations with constant coefficients.

MASC-04 :- ABSTRACT ALGEBRA

This Course will enable the students to:

- Understand of Homomorphism, Isomorphism of Group
- Understand Cyclic and Permutation Groups.
- Understand vector spaces, subspaces, basis, dimension and their properties.
- Learn about properties of linear transformation and isomorphism theorems.
- Understand the concept of linear transformations.

MASC-05 :- REAL ANALYSIS

This Course will enable the students to:

- Understand basic properties of real number system such as least upper bound property and Order property.
- Realize importance of bounded, convergent, Cauchy and monotonic sequences of real numbers, find their limit superior and limit inferior.
- Learn about Riemann integrability of bounded functions and algebra of R-integrable functions.
- Determine various applications of the fundamental theorem of integral calculus.
- Relate concepts of uniform continuity, differentiation, integration and uniform convergence..

MASC-06 :- METRIC SPACES

This Course will enable the students to-

- Understand concepts of metric, distance, convergence, completeness, compactness, connectedness, Bolzano-Weierstrass property.
- Apply these concepts to key classes of spaces.
- Learn to analyze mapping between spaces.
- Identify the continuity of a function defined on metric spaces homeomorphism.
- Attain background for advanced courses in real analysis, functional analysis and topology.

MASC-07:- ADVANCED REAL ANALYSIS

At the end of the course, the students will be able to:

- Understand the concept of sequences and series of functions, power series apply the test for their convergence, divergence and apply Abel's and Tauber's theorems.
- Understand the concept of functions of several variables and properties of sets of vectors in R", maxima and minima of real valued functions from R to Rand from R to R, concept of Integration theory that is closely related to the theory of Euclidean spaces and derivatives of functions of several variables.
- Understand the concept of Riemann-Stieltjes integral and apply it to evaluate definite integrals arising in different fields of science and engineering.

MASC-08:- ADVANCED ABSTRACT ALGEBRA

At the end of the course, the students will be able to:

- Demonstrate capacity for mathematical reasoning through analyzing, Proving and explaining concepts from advanced algebra.
- Understand the concept of Normal and subnormal series, solvable group, state and prove Jordan-Holder theorem.

- Understand the concepts of fields, extension of fields and splitting fields of polynomials
- . Create, select and apply appropriate algebraic structures such as Galois extensions, Automorphisms of groups and fixed fields, Fundamental theorem of Galois theory to understand and use the Fundamental theorem of Algebra, solvability of polynomials.
- Understand the concepts of modules, Noetherian and artinian modules. Prove Wedderburns theorem on finite division rings.

MAGE -01 :- ELEMENTARY CALCULUS

This Course will enable the students to:

- Know about ancient Indian Mathematicians and their contribution
- Calculate the limit and examine the continuity and understand the geometrical interpretation of differentiability. Apply various tests to determine convergence.
- Understand the consequences of various mean value theorems.
- Understand concepts of Curvature and Asymptotes.
- Draw curves in Cartesian and polar coordinate systems
- Understand the elementary integration of transcendental function and understand applications of reduction formulae.

MAGE -02:- ALGEBRA

This Course will enable the students to:

- Learn about the Matrix algebra.
- Understand Set theory, Function and Relation
- Learn about the theory of equations.
- Learn about the fundamental concepts of groups, Subgroups.
- Understand cosets and normal subgroups

MASE -01 :- ADVANCED CALCULUS

This Course will enable the students to:

- Calculate the limit and examine the continuity and understand the concepts of limit, continuity and differentiability of functions of more than one variable with geometrical interpretation.
- To Understand the concepts of mean value theorems with their applications.
- To understand the concept of maxima and minima for functions of two and three variables with their uses and techniques
- Understand conceptual variations while advancing from one variable to several variables in calculus.
- Understand the concept of integration of functions of two and three variables and their evaluation technique with emphasis on beta and gamma functions

MASE – 02:- MECHANICS

This Course will enable the students to:

- The object of the paper is to give students knowledge of basic mechanics such as simple harmonic motion, motion under other laws and forces.
- Learn about a nul point, a nul line, and a nul plane with respect to a system of forces acting on a rigid body together with the idea of central axis.
- Understand necessary conditions for the equilibrium of particles acted upon by various forces and learn the principle of virtual work for a system of coplanar forces acting on a rigid body. Determine the centre

of gravity of some materialistic systems and discuss the equilibrium of a uniform cable hanging freely under its own weight.

- Deal with the kinematics and kinetics of the rectilinear and planar motions of a particle including the constrained oscillatory motions of particles. Learn that a particle moving under a central force describes a plane curve and know the Kepler's laws of the planetary motions, which were deduced by him long before the mathematical theory given by Newton.
- Understand the reduction of force system in three dimensions to a resultant force acting at a base point and a resultant couple, which is independent of the choice of base of reduction.

MASE – 03 :- NUMERICAL METHODS

This Course will enable the students to:

- The aim of this course is to teach the student the application of various numerical techniques for variety of problems occurring in the daily life.
- The main outcome will be that student will be able to handle problems and finding approximated solution.
- Obtain numerical solutions of algebraic and transcendental equations.
- Find numerical solutions of system of linear equations and to check the accuracy of the solutions.
- Learn about various interpolating and extrapolating methods to find numerical solutions.

MASE – 04 :- NUMBER THEORY

This Course will enable the students to:

- Know about distribution of prime and congruence.
- Solve Number theoretic functions
- Learn primitive, Quadratic Reciprocity Law and Public Key Encryption

MASE – 05 :- INTEGRAL TRANSFORMS

- This Course will enable the students to:
- Know about piece wise continuous functions, Dirac delta function, Laplace transforms and its properties.
- Solve ordinary differential equations using Laplace transforms.
- Explain Parseval's identity, Plancherel's theorem and applications of Fourier transforms to boundary value problems.

MASE – 06 :- TOPOLOGY

This Course will enable the students to:

- Understand the concept of countable and uncountable sets and its properties. Understand the concept of topological spaces and its examples, bases, sub-bases, subspaces and relative topology.
- Understand the concept of countable, separable spaces and separation axioms with their characterizations and basic properties.
- Understand the concept and properties of compactness, continuous functions.
- Understand the concept and properties of countable compactness in metric spaces.
- Understand the concept and properties of connectedness, continuous functions.

MASE – 07 :- COMPLEX ANALYSIS-I

This Course will enable the students to:

- Understand Complex number and their properties.
- Learn about properties of linear transformation and isomorphism theorems.

- Understand the concept of Limit, Continuity, Differentiability of Complex and Analytic function.
- Obtain various variants of Mobius transformations.
- Obtain various Conformal mapping and types of transformations.

MASE – 08 :- DISCRETE MATHEMATICS

This Course will enable the students to:

- The course aims at introducing the concepts of Lattices, sub Lattices and Homomorphisms between Lattices.
- Understand the uses of Boolean algebra in daily life.
- Understand the uses of grammer and languages in daily life.
- Learn about the Finite state machines in different fields.
- Solve real-life problems using finite-state and Tuning machines.

MASE – 09 :- MEASURE THEORY

This Course will enable the students to:

- Understand development of measure and integration theory and Borel, Lebesgue measurability, and compare integration theory of Lebesgue and Riemann with examples and counter examples.
- Understand the concept and properties of functions of bounded variation.

MASE – 10 :- GENERAL AND ALGEBRIC TOPOLOGY

At the end of the course, the students will be able to:

- Understand the concept of products in different topological spaces.
- Understand embedding, metrization and its related theorems.
- Understand the concept of net, filter and its various topological properties and their inter-relations.
- Understand fundamental group and covering spaces.

MASE – 11 :- COMPLEX ANALYSIS- II

This Course will enable the students to:

- Understand the fundamental Complex integration.
- Understand the concept of residues and apply Cauchy's residue theorem to evaluate integrals. Understand the concept of conformal mappings, bilinear transformations, their properties and classifications. Understand the concept about the spaces of analytic functions.
- Understand the concept of Weierstrass' factorization theorem, Riemann Zeta function, Gamma function and its properties. Understand the concept of Analytic Continuation and its properties. Gain knowledge of power series of analytic function. Understand the concept and properties of Harmonic functions on a disc.
- Understand the concept of Canonical products, entire function and exponent of Convergence.
- Understand the advanced concepts of Analytic functions and its properties

MASE – 12:- GRAPH THEORY

This Course will enable the students to:

- Appreciate the definition and basics of graphs along with types and their examples.
- Understand the definition of a tree and learn its applications to fundamental circuits.
- Know the applications of graph theory to network flows.
- Understand the notion of planarity of a graph.
- Relate the graph theory to the real-world problems.

MASEC – 01:- INTRODUCTION TO LATEX

This Course will enable the students to:

- Make different Alignments in a document and an Application for a job.
- Generate Bio-Data, and Table Structures.
- Create Mathematical Statements using LaTex.
- Prepare Articles and Inserting Pictures.
- Prepare Question paper and PowerPoint presentation in LaTeX format.

MASEC – 02:- PYTHON

This Course will enable the students to:

- To write python programs, develop a small application .and logic for problem solving.
- To be familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.
- To be familiar with string and its operation.
- To develop basic concepts of function and terminology.
- To determine the methods to create and develop Python programs by
- Utilizing the data structures like lists and tuples.

MAVAC – 01 :- BASIC MATHEMATICS AND LOGIC

This Course will enable the students -

- To orient them towards life-long learning, to develop power of concentration and to overcome the fear of mathematics from their mind.
- To cultivate scientific temper through systematic, critical and lateral thinking.
- To enhance their logical, analytical and reasoning skills useful for competitive exams.
- To make understand the relevance and need of quantitative methods for making business decisions.

NON- NEP

PROGRAMME OUTCOME

On completion of this programme, students will be able to:

- Create, interpret and analyse graphical representation of functions and equations.
- Develop the knowledge of create Mathematical models to solve real-world problems.
- Understand the basic concepts, fundamental principles and Mathematical theories related to various mathematical phenomena and their relevance in day-to-day life.
- Develop the knowledge and understanding of axiomatic approaches in pure and applied Mathematics.
- Develop mathematical skill to solve problems.

The course of B.Sc-I Mathematics is divided into 3 part :

PSO:01- Paper- I- Calculus

- Calculate the limit and examine the continuity and understand the geometrical interpretation of differentiability.
- Understand the consequences of various mean value theorems.
- Draw curves in Cartesian and polan coordinate systems.

- Understand conceptual variations while advancing from one variable to several variable in calculus.
- Inter-relationship amongst the lime integral, double and triple integral formulations.
- Realize importance of Greem, Gauss and Stokes' theorems in other branches of mathematics.

PSO: 02- Paper-II: Algebra

- Employ De Moivre's theorem in a number of applications to solve numerical problem.
- Learn about the fundamental concept of groups, subgroups, normal subgroups, isomorphism theorems, cyclic and permutation groups.
- Recognize consistent and inconsistent systems of linear equations by the row echelon form of the augmented matrix using rank.
- Find eigen values and corresponding eigen vectors for a square matrix.
- Understand real vector spaces, subspaces, basis, dimension and their properties.

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PSO: 03 Project : History of Mathematician.

- Develop a deeper understanding of the mathematics they hare already studied by seeing how it was developed over time and in various places.
- Know the rich intellectual heritage of the country.
- Develop an appreciation of mathematics and build positive attitude toward mathematics increasing student's motivation decreasing anxiety related the subject.

The course of B.Sc-II Mathematics is divided into 3 papers:
PSO: 04-Paper-I – Differential Equation

This Course will enable the students to:

- Understand the genesis of ordinary as well as partial differential equations.
- Learn various techniques of getting exact solutions of certain solvable first order differential equations and linear differential equations of second order.
- Know Picard's method of obtaining successive approximations of solutions of first order ordinary differential equations, passing through a given point in the plane.
- Learn about solution of first order linear partial differential equations using Lagrange's method.
- Know how to solve second order linear partial differential equations with constant coefficients.
- Formulate mathematical models in the form of ordinary and partial differential equations to problems arising in physical, chemical and biological disciplines.

PSO: 05-Paper-II- Real Analysis

This Course will enable the students to:

- Understand basic properties of real number system such as least upper bound propertyand order property.
- Realize importance of bounded, convergent, Cauchy and monotonic sequences of real I numbers, find their limit superior and limit inferior.

- Apply various tests to determine convergence and absolute convergence of a series of real numbers.
- Learn about Riemann integrability of bounded functions and algebra of R- integrable functions.
- Determine various applications of the fundamental theorem of integral calculus.
- Relate concepts of uniform continuity. differentiation, integration and uniformconvergence.

PSO: 06 Project : History of Mathematician.

- Develop a deeper understanding of the mathematics they hare already studied by seeing how it was developed over time and in various places.
- Know the rich intellectual heritage of the country.
- Develop an appreciation of mathematics and build positive attitude toward mathematics increasing student's motivation decreasing anxiety related the subject.
- To acquire knowledge about developmet of mathematics in ancient medieval and moderm period of history

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The course of B.Sc-III Mathematics is divided into 3 papers:

PSO: 07-Paper-I- Analysis

- Understand the Metric spaces, Neighbourhoods, Limit points, Interior points, Open and closed sets, Closure and interior.
- Learn the Dense subsets. Baire Category theorem. Separable, second countable and first countable spaces. Continuous functions. Extension theorem. Uniform continuity.
- Determine the Riemann integrability, Intergrability of continuous and monotonic functions with Different Tests.
- Solve the Series of arbitrary terms. Convergence, divergence and Oscillation. Abel's and Dirichlet's test. Multiplication of series.
- Understand Complex numbers as ordered pairs. Geometric representation of Complex numbers.

PSO: 08-Paper-II- Abstract Algebra

- Students develop knowledge of Group-automorphisms, inner automorphism. Automorphism groups and their computations, Conjugacy relation, Normaliser, Counting principle and Sylow's theorems, Sylow subgroup, Structure theorem for finite Abelian groups.
- Analyze and demonstrate examples of ideals and quotient rings and Use the concept of isomorphism and homomorphism for rings.
- Understand the vector spaces. Subspaces. Sum and direct sum of subspaces, linear span. Linear dependence, independence and their basic properties.
- Solve the Linear transformations and their representation as matrices.
- Solve the Inner Product Spaces-Cauchy-Schwarz inequality and Bessel's inequality for finite dimensional spaces. Gram-Schmidt Orthogonalization process.

POS : 09- Paper -III- Discrete mathematics

- Understand principle of mathematical induction. Inclusion and exclusion. Formal languages.
- Understand binary relation. Partial order relation and lattice. Pigen hole principle. Graph and shortest path.
- Finite state machines , equivalent machines. Analysis of algorithms . Generating functions.
- Linear recurrence relations . Homogeneous solution and particular solution Of linear differential equations.
- Lattices and algebraic structure. Boolean functions and expression. Design and implementation of digital network

Department of Commerce

(Bachelor of Commerce)

NEP-2020

Upon completion of B.Com. Degree Programme, the graduates will be able to:

- **PO-01** The students will be able to acquire in-depth and contemporary knowledge in the field of business studies, commerce and management.
- **PO-02** The program will develop an aptitude and attitude of working effectively and efficiently in modern business environment.
- **PO-03** Understand the conceptual knowledge of accounting and acquire skills of maintaining accounts.
- **PO-04** Acquire entrepreneurial, legal and managerial skills.
- **PO-05** Identify the avenues of marketing and banking both traditional and modern.
- **PO-06** Develop the skills and techniques of communication to be successful in business and personal life.
- **PO-07** Improve competency to make eligible and employable in the job market.
- **PO-08** Recognize different value systems and ethics, understand the moral dimensions and accept responsibility.
- **PO-09** Students will develop research skills to comprehend, analyse, reflect and critically evaluate information gathered from primary and secondary sources.
- **PO-10** The program will equip students with relevant technological and analytical skills to be career ready and globally competitive.
- **PO-11** The program will build a strong foundation for pursuing higher studies and professional courses.
- **PO-12** The program will sensitize students towards sustainable development and environmental

COURSE OUTCOMES

B COM 1st Semester

1) COSC-01Fundamental ofAccounting

- Explain the process and methods of financial decision making.
- Identify appropriate financial theory and techniques to solve various corporate financial problems.

- Identify fundamental concepts of generally accepted accounting principles and can also Identify challenges of accounting
- Classify capital and revenue concept, understand basic principles, concepts and conventions of financial accounting
- Construct final accounts of firm and apply various aspects of computerised accounting.

2) COSC-02 Business Law

- Demonstrate the basic concepts terms & provisions of business law.
- Classify various types of contract and illustrate the related case studies.
- Interpret the regulation governing the Contract of Sale of Goods.
- Discuss the laws governing partnership and legal consequences of the transactions and other actions in relation with the partnership, and examine contractual obligations and provisions governing limited liability partnership.
- Explain the significant provisions of the Negotiable Instrument Act and provisions of the Consumer Protection Act to protect the interest of the consumers.

3) COSC-03 Business Economics

- Demonstrate how different economic systems function and evaluate implications of various economic decisions.
- Understand how consumers try to maximize their satisfaction by spending on different goods.
- Analyze the relationship between inputs used in production and the resulting outputs and costs.
- Analyze and interpret market mechanism and behaviour of firms and response of firms to different market situations.
- Discover various facets of pricing under different market situations.

2NDSemester

COSC-04 BUSINESS ACCOUNTING

- Understand concept of partnership and can prepare financial statements of partnership firm.
- Explain the accounting technique related to disposal of assets and payment of liabilities.
- Utilize various methods of accounting for hire purchase transactions.
- Identify main sources of Income and learn the technique of preparing Income and Expenditure account from Receipts and Payments account and also able to prepare Balance Sheet.
- Understand concept of branch accounting and prepare the accounts on the basis of different methods.

COSC-05 BUSINESS MATHEMATICS

- Explore the application of business mathematical techniques to solve problems.
- Solve the ratio, proportion, variation and percentage and determine its application in different fields.
- Evaluate the profit or loss arising out of business transactions.
- Describe the practical application related to commission, app brokerage, profit and loss, simple interest and compound interest.

- Solve numerical computations quickly and faster with the help of Vedic mathematics

COSC-06 BUSINESS ENVIRONMENT

- Understand relationship between environment and business.
- Demonstrate and develop conceptual frame work of business environment and generate interest in international business.
- Indentify the nature of local business environment and its component.
- Demonstrate govt. policies and different roles for the emergence, upliftment and smooth functioning of business organization.
- Extend knowledge of Industrial Policy and NITI AYOG

3RD SEMESTER

COSC-07 CORPORATE ACCOUNTING

- Utilize conceptual knowledge of corporate accounting system and learn the techniques of preparing the financial statements of companies within the frame work of Indian AS
- Understand the process for issue & redemption of shares & debentures.
- Analyze the financial statement of Joint stock company ltd..
- Interpret the procedure involved in Amalgamation and absorption of companies.
- Apply the process ofValuation of Goodwill and Shares.

COSC-08 COMPANY LAW

- Understand and evaluate the legal framework of company environment in India and gain elementary knowledge of Indian Company Law.
- Outlines company's objective, boundaries of operation and other essential details.
- Understand the role of Company Secretary which helps students in building their career.
- Elaborate different clauses of Company Law which a businessmanager must know for better decision making and also understand the process of Winding up of the the companies.
- Develop ability of legal analysis by reasoning and problem-solving skills to arrive at solutions to legal problems.

COSC-09 PRINCIPLES OF MANAGEMENT

- Understand the concept of Principle of management along with the basic principles and norms.
- Understand the terminologies associated with the field of business management and control along with their relevance.
- Identity the appropriate method and technique of Principle of Management for solving different problems.
- Apply basic business Management principles to solve business and industry related problems.
- Understand the concept of Planning, Organizing, Direction, Motivation and Control

4TH SEMESTER

COSC-10 BUSINESS STATISTICS

- Understand the basic knowledge of data collection and various statistical elementary tools.
- Develop the ability to analyse and interpret data to provide meaningful information to assist in management decision.
- Apply appropriate graphical and numerical descriptive statistics for different types of data.
- Analyse statistical data graphically using frequency distributions and cumulative frequency distributions, measures of central tendency, dispersion and location.
- Find the inter-relation between two or more phenomena with the help of curve fitting and correlation-regression

COSC-11 COST ACCOUNTING

- Acquire conceptual knowledge of cost accounting and able to solve various decision-making problems that takes place in business.
- Evaluate the costs and benefits of different conventional and contemporary costing systems
- Understand different elements of cost and calculate material and labour cost.
- Able to prepare cost sheet to know the cost of a product.
- Determine contract cost, job-cost, batch cost, & process

COSC-12FUNDAMENTALS OF ENTREPRENUERSHIP

- Explore entrepreneurial culture and industrial growth so as preparing them to set up and manage their own small units.
- Choose entrepreneurship as career and can take part in startups.
- Explore government support available to entrepreneurship activities.
- Explain the entrepreneur concepts, gain knowledge in the financial institution, project report incentives and subsidies.
- Understand the stages of the entrepreneur process, personal creativity and entrepreneurial

COVAC-01 Concept of Business

- As per program Analyze business operations and scale, evaluating size and scope effectively.
- Demonstrate an understanding of business promotion strategies and growth mechanisms.
- Identify various business structures and comprehend their implications.
- Develop awareness of social responsibility, ethical principles, and their significance in business practices.

COSEC-01 ACCOUNTING FOR EVERYONE

- Understand accounting principles and transaction recording techniques.
- Prepare financial statements manually and using the software.
- Interpret the annual report and financial disclosure effectively.

- analyze textual and numerical financial information**.**

COSEC-02 MARKETING MANAGEMENT

- Develop the understanding of marketing, marketing philosophies and environmental conditions effecting marketing decisions.
- Analyze the process of marketing decisions involving product development and its role in value creation.
- Analyze the Process of marketing decisions involving product Promotion and its role in creating communication value for customers
- Understand the basics of marketing distribution channels and its role. Aspiring to be marketing professionals in better decision making and understanding their role in the marketing

COSEC-03 INTERNATIONAL MARKETING

- Understand the international market and customer needs across multiple foreign countries.
- Explain export import policy and develop an understanding of export business.
- Evaluate the international pricing and methods.
- Develop international marketing skills for advertising, personal selling.
- Analyze the impact of international marketing on economic growth of any society

Course Outcomes for GE

COGE-01Fundamental ofAccounting

- Explain the process and methods of financial decision making.
- Identify appropriate financial theory and techniques to solve various corporate financial problems.
- Identify fundamental concepts of generally accepted accounting principles and can also Identify challenges of accounting
- Classify capital and revenue concept, understand basic principles, concepts and conventions of financial accounting
- Construct final accounts of firm and apply various aspects of computerised accounting.

COGE-02 Business Law

- Demonstrate the basic concepts terms & provisions of business law.
- Classify various types of contract and illustrate the related case studies.
- Interpret the regulation governing the Contract of Sale of Goods.
- Discuss the laws governing partnership and legal consequences of the transactions and other actions in relation with the partnership, and examine contractual obligations and provisions governing limited liability partnership.
- Explain the significant provisions of the Negotiable Instrument Act and provisions of the Consumer Protection Act to protect the interest of the consumers.

COGE-03 Business Economics

- Demonstrate how different economic systems function and evaluate implications of various economic decisions.
- Understand how consumers try to maximize their satisfaction by spending on different goods.
- Analyze the relationship between inputs used in production and the resulting outputs and costs.
- Analyze and interpret market mechanism and behaviour of firms and response of firms to different market situations.
- Discover various facets of pricing under different market situations.

NON-NEP

Program Outcome(PO)

Major Program outcome of B.Com:

- To provide knowledge about Fundamentals and application of Finance, Auditing and taxation, Accounting, Management, Communication, Computer .
- To develop problem solving, critical thinking and analytical skills in the field of Business and Commerce.
- To develop understanding about the role of Commerce in human society.

Program Specific Outcome(PSO)

B.Com I Year

PSO 01 FINANCIAL ACCOUNTING

- Define bookkeeping and accounting.
- Explain the general purposes and functions of accounting.
- Explain the differences between management and financial accounting.
- Describe the main elements of financial accounting information – assets, liabilities, revenue and expenses.
- Preparation of final accounts and their purposes.

PSO 02 BUSINESS COMMUNICATION

- To give the knowledge of effective Communication in Business.
- Different processes and considerations involved in writing in business.
- Identify the appropriate use of different channels of written communication in business.
- Create various types of business reports
- Communicating through Technology

PSO 03 BUSINESS MATHS

- Understanding of basic marketing mathematics by solving relevant problems, including trade discount, cash discounting, and markup & markdown calculations.
- Apply the principles of simple interest to solve relevant problems in financial applications such as simple interest based loans.
- To analysis business math concepts that are encountered in the real world understand and able to communicate the under lined business concepts & mathematics involve to help another person.

PSO 04 BUSINESS REG. FRAMEWORK

- Knowledge of Contract Act.
- Explain the rights and duties of bailor, bailee, pawnee and surety
- Provisions of agency.
- Contract of Sale.
- To give the knowledge of consumers protection act and FEMA.

PSO 05 BUSINESS ENVIRONMENT

- Analyze the global business environment.
- Analyze the local business environment.
- Use critical thinking skills in business situations.
- Apply an ethical understanding and perspective to business situations.

PSO 06 BUSINESS ECONOMICS

- Apply the concept of opportunity cost.
- Law of Demand.
- Employ marginal analysis for decision making
- Analyze operations of markets under varying competitive conditions
- Analyze causes and consequences of unemployment, inflation and economic growth

B.Com II Year

PO 07 CORPORATE ACCOUNTING

- This course aims to enlighten the students on the accounting procedures followed by the Companies.
- Student's skills about accounting standards will be developed.
- To make aware the students about the valuation of shares.
- To impart knowledge about holding company accounts, amalgamation, absorption and reconstruction of company.

PO 08 COMPANY LAW

- To impart students with the knowledge of fundamentals of Company Law and provisions of the Companies Act of 2013.
- To apprise the students of new concepts involving in company law regime.
- To acquaint the students with the duties and responsibilities of Key Managerial Personnel.

PO 09 COST ACCOUNTING

- To understand Basic Cost concepts, Elements of cost and cost sheet.
- Providing knowledge about difference between financial accounting and cost accounting.
- Ascertainment of Material and Labor Cost.
- Student's Capability to apply theoretical knowledge in practical situation will be increased.

PO 10 PRINCIPAL OF BUSINESS MANAGEMENT

- To understand basic knowledge of principles & function of management.
- To understand the process of decision making.
- Modern trends in management process.
- To inculcate knowledge of personality perception motivation. job satisfaction morale , group dynamic and leadership.

PO 11 BUSINESS STATISTICS

- To develop the students ability to deal with numerical and quantitative issues in business
- To enable the use of statistical, graphical and algebraic techniques wherever relevant.
- **PO 12 FUNDAMENTAL OF ENTREPRENEURSHIP**
- To aiming to develop students about Entrepreneurship development
- To create an awareness on various Entrepreneurship Development Program.
- To enable them to understand project formulation.
- To familiarize the students with EDP schemes.
- To give an introduction about MSME, EDI and other training institutes in Entrepreneurship.

B.Com III Year

INCOME TAX

- Basic concepts of income tax
- Income from salaries head and house property
- Profit and gains from business and profession, capital gains and other sources
- Computation of tax liability and total income of individual
- Knowledge about tax management, advance payments of tax and tax planning for individual.

AUDITING

- Concept, objectives and advantages of auditing
- Internal check, internal check and verification of assets & liabilities
- Qualifications, duties, powers and resignation of company auditor
- Investigation and audit of non -profit organization
- Nature & significance of cost audit, tax audit and management audit

INDIRECT TAXES WITH GST

- Introduction of custom duty
- Detail study of central excise during calculation of tax
- Introduction of goods and service tax and benefits of implementing GST

- Registration procedure under GST and E-way billing
- Assessment and returns regarding input tax credit and furnishing detail of outward supplies and inward supplies

MANAGEMENT ACCOUNTING

- Meaning, nature, scope and functions of management accounting
- Fund flow statement and cash flow statement
- Marginal and differential costing as a tool for decision making, break even analysis
- Meaning of budget and budgetary control, its merits and demerits
- Meaning and definition of standard costing, to know about its application

PRINCIPLE OF MARKETING

- Introduction – Meaning, nature, scope and importance of marketing; Marketing concept and its evolution; Marketing mix; Strategic marketing planning – an overview
- Market Analysis and Selection – Marketing environment – macro and micro components and their impact of marketing decisions; Market segmentation and positioning; Buyer behavior; Consumer versus organizational buyers; Consumer decision – making process.
- Product Decisions – Concept of a product; Classification of products; Major product decisions; Product line and product mix; Branding; Packaging and labeling ; Product lifecycle – strategic implications ; New product development and consumer adoption process.
- Pricing Decisions – Factors affecting price determination; Pricing policies and strategies; Discounts and rebates.

INTERNATIONAL MARKETING

- International Marketing; Meaning; Scope, benefits and difficulties of International Marketing: International marketing and Domestic Marketing, reasons for entering International marketing. International marketing environment; Identifying and selecting foreign market
- Foreign market entry mode: Product designing, standardization Vs. Adaptation; Branding, Packaging and Labeling.
- Quality issues and after sales service; International pricing; International price quotation; payment terms and methods of payment
- Promotion of products and services abroad: International channels of distribution; Selection and appointment of foreign sales agents. Logistic decision
- Export policy and practices in India, Trends in India's foreign trade, steps in starting export business; Export finance, documentation and procedure.

MASTER OF COMMERCE (M.COM)

PO 1- Disciplinary knowledge: The program will help students to develop in-depth knowledge of the areas like taxation, cost accounting, management accounting, business laws, organizational behaviour and marketing management. This systematic and intensive knowledge will help them to ensure survival, growth & profitability of business firms.

PO 2- Communication Skills: It will help the learners to have sufficient knowledge of communication skills required in dealing with internal & external stakeholders of an business organization.

PO 3- Critical thinking: They will be exposed to the pedagogy that helps them understand real life situations through class room training and case-studies. They will be able to think from diverse perspectives and suggest solutions according to their own sensibilities.

PO 4- Problem solving: Basics of accounting & taxation will enable them to take decisions regarding production, budgeting & sales of products & services of their future organizations. Managerial skills developed through the program will enable them to forge partnerships on domestic & international level thereby expanding the scope of their business ventures.

PO 5- Analytical reasoning: It will help them to analyze the internal & external factors of business environment that are affecting the firms' performance & make necessary modifications in their plans, policies & strategies.

PO 6- Research-related skills: It will enable the budding entrepreneurs to go in for the market study, analyze consumer behavior & conduct marketing research so as to use the insights gained from market trends & projections for increasing the efficiency of production & distribution.

PO 7- Cooperation/Team work: It will help to incorporate the various techniques of group dynamics to enhance the coordination & cooperation among different departments of an organization. It will also ensure voluntary acceptance of introduction of new techniques & procedures.

PO 8- Scientific reasoning: It will inculcate the ability to analyze situations, formulate ideas and apply scientific approach in tackling business challenges. It will enable them to investigate, evaluate & experiment with the relevant data available using data mining techniques.

PO 9- Reflective thinking: It will enable to move sequentially in order to solve a problem effectively. It will also help to logically deduce a problem, develop alternative solutions, carefully weigh the effectiveness of each & select the best one.

PO 10- Information/digital literacy: It will strengthen the ability to utilize digital sources for data storage, retrieval & analysis. It will acquaint the learners with latest accounting software, IT Act, e-filing of Income tax return & Management Information Systems

PO 11- Self-directed learning: It will encourage them to take responsibility for their knowledge up gradation rather than being dependent on others for their personal & professional development. They will diagnose their learning needs, formulate learning goals, identify the resources needed for learning, choose & implement appropriate learning strategies and self evaluate the learning outcomes.

PO 12-Moral and ethical awareness/reasoning: It will make them aware of the ethical implications of their business actions. They will be able to know about the transparency & accountability regarding employee well-being, public safety, legal compliance, fair business practices, working conditions, wage policy & environmental impact of their activities.

COURSE OUTCOMES

M.COM 1st Semester

MANAGERIALECONOMICS

- **CO 1**-Nature and Scope of Managerial, Economics: Objective of a firm; Economics theory and managerial theory; Managerial economist's role and responsibilities.
- **CO 2-**Fundamental economic concepts-incremental principle, opportunity cost principle, discounting principle. Equi-marginal principle.
- **CO 3-**Demand Analysis: Individual and Market demand functions Law of demand; determinants of demand; Elasticity of demand-its meaning and importance, Price elasticity; income elasticity and cross elasticity; Using elasticity in managerial decisions.
- **CO 4**-Theory of consumer Choice: Cardinal utility approach, indifference approach, revealed preference and theory of consumer choice under risk; Demand estimation for major consumer durable and non-durable products; Demand forecasting tech. technique.
- **CO 5**-Production Theory: Production function-production with one and two variable inputs, Stages of production; Economics of scale; Estimation of production function.

ADVANCED ACCOUNTING

- **CO 1**-Accounting for issue, Forfeited and redemption of shares and debentures
- **CO 2**-Final accounts and financial statements of companies
- **CO 3**-Accounting issues relative to amalgamation and reconstruction of companies.
- **CO 4**-Accounting for holding and subsidiary companies
- **CO 5**-Accounts relating to Liquidation of companies

INCOME TAX LAW AND ACCOUNTS

- **CO 1**-Law relating to Income tax: Brief study of the main provisions of the Indian Income Tax Act. Income exempted from tax, Residence and Tax liability.
- **CO 2-**Calculation of taxable income under the head : Salary and House property.
- **CO 3**-Depreciation and Development allowance, Calculation of taxable Income under the head: Business and Profession, capital gains, income from other sources.
- **CO 4**-Set off and carry forward of losses, Deduction from gross total Income Calculation of taxable Income and tax of an individual, and Hindu undivided Families.
- **CO 5**-Appeals & Revisions Reference of High Court and Supreme court, offences & penalties, Income tax authorities

STATISTIC ALANALYSIS

- **CO 1**-Statistics - Definitions, Characteristics, Scope and Nature, Functions, limitations, Distrust and misuse importance & Statistical Investigations., Classification & Tabulation,
- **CO 2**-Data Sources: Primary and Secondary, Primary data collection techniques, Schedule, Questionnaire and interview &Sources' of Secondary data.
- **CO 3**-Dispersion, Co-efficient of variance and skewness, correlation Karl- Parsons and spearman's ranking method and Regression analysis, Two variables case.
- **CO 4**-Probability Theory: Probability classical, relative and subjective probability, Addition and multiplication probability models - Conditional probability and Baye's Theorem.
- **CO 5-**Probability Distributions-Binomial, Poisson and Distributions, Their characteristics and applications

CORPORATELEGALFRAMEWORK

- **CO 1**-The Companies Act, 1956 (Relevant Provisions): Definition, types of companies Memorandum of association; Articles of association; Prospectus; Share capital and membership.
- **CO 2**-Meeting under solutions-Company management; Managerial remuneration; Winding up and dissolution of companies
- **CO 3**-The Negotiable Instruments Act, 1881-Definition, types of negotiable instruments; Negotiation; Holder and holder in due course; payment in due course;
- **CO 4**-Endorsement and crossing of cheque; Presentation of negotiable instruments.
- **CO 5**-Legal Environment for Security Markets: SEBI Act. 1992- Organization and Objectives of SEBI

M.Com. IInd Semester

BUSINESSECONOMICS

- **CO 1**-Cost Theory and Estimation, economic value analysis, Short and long run cost Functionstheir nature, shape and interrelationship; Law of variable proportions;- Law of returns to scale.
- **CO 2**-Price Determination under Different Market Conditions: Characteristics of different market structures; Price determination and firm equilibrium in short-run and long run under perfect competition, monopolistic competition, oligopoly and monopoly,

- **CO 3-**Pricing Practices: Methods of price determination in practice, pricing of multiple products; price discrimination, International price discrimination and dumping; Transfer pricing.
- **CO 4**-Business Cycles: Nature and phases of la business. Cycle, Theories of business cyclespsychological, profit, monetary, innovation, cobweb, Samuelson and Hicks theories
- **CO 5**-Inflation: Definition, Characteristics and types; Inflation interms of dem and pull and cost – push factors; Effects of inflation.

SPECIALISEDACCOUNTING

- **CO 1**-Accounts of General Insurance Companies
- **CO 2**-Accounts of Banking Companies
- **CO 3**-Accounts of Public Utility concerns: Double Accounts System.
- **CO 4**-Royalty accounts.
- **CO 5**-Investment accounts

TAX PLANNING AND MANAGEMENT

- **CO 1**-Calculation of taxable Income and tax of Firm and Companies
- **CO 2**-Return of Income, Provisional Regular, Expert and emergency assessment, Re opening of assessment
- **CO 3**-Concept of tax Planning ; Tax avoidance and tax evasions ; Tax planning with reference of location, nature and form of organization of new
- **CO 4**-Tax planning to capital structure, decision dividend policy; Inter corporate dividends and bonus shares
- **CO 5**-Preparation of income tax returns, Computation of Income tax, Tax deduction at source; Advance payment of tax.

ADVANCE STATISTICS

- **CO 1**-Statistical Decision Theory: Decision environment, Expected profit under uncertainty and assigning probabilities and utility theory
- **CO 2-**Statistical Estimations And Testory: Point and intervals timation of population Mean, proportion and variance Statistical Testing-Hypothesis and Errors, Sample size-Large and Small Sampling test Z tests, T Tests & F Tests.
- **CO 3-**Association of Attributes: Two Attributes, consistency of data, measurement of Association of Attributes - Percentage method, Co-efficient of Association, Comparison of Actual and (you Iemethod) Expected frequency's &Issusery Association.
- **CO 4**-Statistical Quality Control: Causes of Variations in quality characteristics, Quality Control Charts-purpose and logic, Process under control and out of control, warning limits, control charts for attributes – fraction defectives and number of defects, Acceptance sampling
- **CO 5-** Interpolation and Extrapolation – PrabolicBionomial, Newton and long rages method

BUSINESS LAWS

- **CO 1**-SEBI Act-1992: Organization and objectives of SEBI, Functions and Role of SEBI Rights and Power of SEBI.
- **CO 2**-MRTP Act 1969: Monopolistic Trade Practice Meaning, essentials, Restrictive Trade Practices-Meaning, Unfair trade practice, MRTP commission of fences and Penalties.
- **CO 3**-Consumer Protection Act 1986: Needs of Act, Rights of consumers, Objectives of Act., Grievance redressal Machinery, District Forum, State Commission, National Commission.
- **CO 4**-FEMA Act 1999: Objectives; Regulation and Management of FEMA, Penalties Appeal.
- **CO 5**-W.T.O.: Brief History of WTO, Objectives and Functions, Organization, W.T.O. and India, Regional groupings, antidumping duties and other NTBs, Doha declaration Dispute settlement system, TRIP, TRIMS and GATS

M. Com. 3rd Semester

MANAGEMENT CONCEPT

- **CO 1**-Schools of Management Thought - Scientific, process, human behavior and social system school; Decision theory school; Quantitative and system school; Contingency theory of management; Functions of a manager.
- **CO 2**-Managerial Functions : Planning - concept, significance, types; Organizing - concept, principles of authority, theories, types of organizations, authority, responsibility, power, delegation, decentralization;
- **CO 3**-Staffing; Directing; Coordinating; Control - nature, process, and techniques
- **CO 4**-Motivation - Process of motivation; Theories of motivation - need hierarchy theory, theory X and theory Y, two factor theory, Alderfer's ERG theory, McClelland's learned need theory, Victor Vroom's expectancy theory, Stacy Adams equity theory.
- **CO 5-**Group Dynamics and Team Development : Group dynamics - Definition and importance, types of groups, group formation, group development, group composition, group performance factors; Principle-centered approach to team development.

ORGANIZATIONAL BEHAVIOUR

- **CO 1**-Organizational Behavior: concept and significance; Relationship between management and organizational behavior; Emergence and ethical perspective; Attitudes; Perception; Learning; Personality; Transactional analysis.
- **CO 2-**Leadership: Concept; Leadership styles; Theories - trait theory, behavioral theory, Fielder's contingency theory; Hersey and Blanchard's situational theory; Managerial grid; Likert's four systems of leadership.
- **CO 3**-Organizational Conflict: Dynamics and management; Sources, patterns, levels, and types of conflict; Traditional and modern approaches to conflict; Functional and dysfunctional organizational conflicts; Resolution of conflict.
- **CO 4-**Interpersonal and Organizational Communication: Concept of two-way communication; Communication process; Barriers to effective communication; Types of organizational communication; Improving communication; Transactional analysis in communication.

- **CO 5**-Organizational Development: Concept; Need for change, resistance to change; Theories of planned change; Organizational diagnosis; Organizational Development intervention.

ADVANCED COST ACCOUNTING

- **CO 1-**Introduction – Cost Analysis, concepts and classification, Materials control– Techniques of Materials control.
- **CO 2**-Labour cost – Computation and control, Overheads – Accounting and Control.
- **CO 3**-Job, Batch, Contract Costing and operating costing
- **CO 4**-Process Costing, Joint products &By – products costing. Uniform costing and Estimate costing
- **CO 5**-Budgetary control – Importance of budgets in accounting, Nature of budgetary control, Organization for budgetary control preparation zero base budgeting, performance budgeting. Cash Budget, Production and sales Budget.

MANAGEMENT ACCOUNTING

- **CO 1**-Introduction of Accounting: Management accounting as a area accounting; Objectives, nature and scope of management accounting, techniques of management accounting, difference between financial accounting, cost accounting and management accounting, Management accounting and managerial decisions; Management accountant's position, role and responsibilities.
- **CO 2**-Accounting Plan and Responsibility Centers: Meaning and significance of responsibility accounting; Responsibility centers-cost centre, profit centre and investment centre, Problems in transfer pricing, Objectives and determinates of responsibility centers.
- **CO 3**-Budgeting: Definition of Budget; Essentials of budgeting; Types of budgets functional, master etc, Fixed and flexible budget
- **CO 4**-Standard Costing and Variance Analysis:, Standard costing as a control technique; Setting of standards and their revision; Variance analysis – meaning and importance; Kinds of variances and their uses material, labour and over head variances; Disposal: of variances; Relevance of variance analysis to budgeting and standard costing.
- **CO 5**-Marginal Costing: Concept of marginal cost; Marginal costing and absorption, costing, Marginal costing versus direct, costing

ACCOUNTING FOR MANAGERIAL DECISIONS

- **CO 1**-Break-even-analysis; Assumptions and practical applications of break- even-analysis; cost volume profit analysis, Decisions regarding sales-mix, make or buy decisions and discontinuation of a product line etc.
- **CO 2**-Analyzing financial Statements: Method, objects and ratio analysis.
- **CO 3**-Cash flow analysis and Fund flow analysis.
- **CO 4**-Contemporary Issues in Management Accounting: Value chain analysis; Activity bases costing, Quality costing, Target and lifecycle costing
- **CO 5**-Reporting to Management: Objectives of reporting, reporting needs at different managerial levels; Types of, reports," modes of reporting; reporting at different levels of management

M. Com. 4th Semester

MARKETING GROUP-A

PRINCIPLE OF MARKETING

- **CO 1**-Introduction – Meaning, nature, scope and importance of marketing; Marketing concept and its evolution; Marketing mix; Strategic marketing planning – an overview
- **CO 2**-Market Analysis and Selection – Marketing environment – macro and micro components and their impact of marketing decisions; Market segmentation and positioning; Buyer behavior; Consumer versus organizational buyers; Consumer decision – making process.
- **CO 3**-Product Decisions – Concept of a product; Classification of products; Major product decisions; Product line and product mix; Branding; Packaging and labeling ; Product lifecycle – strategic implications ; New product development and consumer adoption process.
- **CO 4**-Pricing Decisions – Factors affecting price determination; Pricing policies and strategies; Discounts and rebates.
- **CO 5**-Distribution Channels and Physical Distribution Decisions – Nature, functions, and types of distribution channels; Distribution channel intermediaries, Channel management decisions; Retailing and wholesaling, Physical Distribution Management

ADVERTISING & SALES MANAGEMENT

- **CO 1**-Introduction: Concept, Scope, Objectives and Functions of Advertising. Role of Advertising in marketing mix and the advertising process Legal, ethical and social aspect of advertising
- **CO 2**-Pre-launch Advertising Decision: Determination of target audience, Advertising Media and their choice. Advertising messages, Layout of advertisement and Advertising Appeal, Advertising Copy
- **CO 3**-Promotional Management: Advertising Department, Role of Advertising Agencies and their Selection, Advertising Budget, Evaluation of Advertising Effectiveness.
- **CO 4**-Personal Selling: Meaning and Importance of Personal Selling, - Difference between Personal Selling, Advertising and Sales Promotion. Methods and Procedure of Personal Selling
- **CO 5**-Sales Management: Concept of Sales Management, Objectives and Functions of Sales Managements. Sales Organization, Management of Sales force and Sales force objectives, Sales force Recruitment: - Selection, Training, Compensation and Evaluation.

MARKETING RESEARCH

- **CO 1**-Marketing Research: An Introduction; Marketing Decisions; Marketing Research and Information System.
- **CO 2**-Marketing Research Methodology, Research Design
- **CO 3**-Organization of Marketing Research Specialized areas of application of marketing research
- **CO 4**-Specialized Techniques of Marketing Research, Motivation Research
- **CO 5**-Advertising Research: Planning and Procedure, New Product Research.

INTERNATIONAL MARKETING

- **CO 1**-International Marketing; Meaning; Scope, benefits and difficulties of International Marketing: International marketing and Domestic Marketing, reasons for entering International marketing. International marketing environment; Identifying and selecting foreign market
- **CO 2**-Foreign market entry mode: Product designing, standardization Vs. Adaptation; Branding, Packaging and Labeling.
- **CO 3**-Quality issues and after sales service; International pricing; International price quotation; payment terms and methods of payment
- **CO 4**-Promotion of products and services abroad: International channels of distribution; Selection and appointment of foreign sales agents. Logistic decision
- **CO 5**-Export policy and practices in India, Trends in India's foreign trade, steps in starting export business; Export finance, documentation and procedure.

Department of History

Bachelor of Arts ;-

Programme Outcome

FOUR YEAR UNDERGRADUATE PROGRAM (2024-28) DEPARTMENT OF HISTORY

- The main objective of the core course of the B. A history subject is to give students systematic knowledge of the history of India.

- The aim of this course is to generate interest in Indian civilization and Indianness among the students by giving them knowledge about the rise and fall of various dynasties in ancient India, analysis of their causes and implementation and impact of ideal administrative systems etc.

- Under Medieval India, students have to understand the circumstances of foreign invasions in the medieval period, regional fragmentation of India, internal differences, clash of Indian and foreign cultures as well as efforts for religious-cultural coordination by devotees and saints. Along with this, the main objective is to give knowledge about religious activities based on personal interest and contemporary art and architecture through the scriptures. Knowledge of the political challenges given to the then system by Marathas and Sikhs during this period is also an important aspect.

- Under modern India, we have to give knowledge about the aspects like commercial attraction of foreigners in India, taking over India through fraudulent means, changing India's civility culture and administrative systems to fulfill economic interests etc. so that... Can understand the mentality.

- Along with this, we also have to understand the efforts of Renaissance to uplift national self-respect along with socio-religious reforms and the criticism of British policies through the press.

- The second aspect of modern Indian history is the national movement in which students should understand the nature of opposition to British rule among Indians, the organized movement against British rule, the changes in administrative and constitutional policies and rules by the British rule and ultimately the partition and to understand the complex process of independence and the devious mentality behind it.

- Through two question papers of World History as an optional subject (DSE), an attempt has been made to give students information about the major events of the modern world and their impact on other areas of the world so that the students develop an understanding of the events. The ability to analyze and establish their interrelationships in the international context can be developed.

- Knowledge of regional history is also important for the students of Chhattisgarh, along with ancient and medieval Chhattisgarh, various aspects of the history of modern Chhattisgarh like the rise and fall of dynasties, administrative system of Chhattisgarh, freedom movement. Chhattisgarh's participation in IT, study of cultural heritage of Chhattisgarh etc. increases the competitive ability of the students.

- Efforts have been made to include tourism in the curriculum to enhance the knowledge of thestudents as well as to fulfill the professional perspective.

- Including women in this curriculum in India is a big effort to uplift women power. This course is likea catalyst for the burning problem like women's upliftment.

- It is also very important for the students to have knowledge of the Indian Constitution and Administration. It is very important to have knowledge of the Constitution and Administration notonly for knowledge but also to face the challenges of life.

- In the Optional Subject (DSE) question paper, with the aim of in-depth understanding of Indian culture, Indian culture from ancient to modern times has been included in the syllabus so that thestudent can understand the Indian culture and its continuity.

- The history of modern China and Japan has also been included in it so that students can have information about the contemporary activities going on in the countries around India as well as understand their impact on India.

- Knowledge of Indian history is incomplete without the history of Marathas, hence Maratha history has been included as an option. The struggles of the Marathas in both the Mughal and British periods are very important historical issues, without knowledge of which Indian history is not complete.

- Under VAC, an effort has been made to give simple knowledge of the Indian National Movement to the students, so that the students can understand the difficult struggles for independence and canevaluate the independence.

- The aim of Programme is to orient students to ward research and Historiography by making them understand the nuances of concept of history and Indian and Foreign Historiographical traditions.

Course Outcome

CODE HIGE-01 : Ancient Indian History (From the Beginning to Satavahana Dynasty)

- Student will acquire knowledge about ancient period, Life style
- They can gather knowledge about the society culture & religion.
- Political condition of ancient period and the role of different social class.
- Student will learn about the Historigraphical trends as well as sources of ancient Indian History
- Student will be familiar vedic period, Jainism, Buddhism and all ruling dynasties of Ancient India.

HIGE-02: Ancient Indian History (From Gupta Age to 1206 A.D.)

- Student will acquire knowledge about ancient period, Life style
- They can gather knowledge about the society culture & religion.
- Political condition of ancient period and the role of different social class.

- Student will learn about the Historigraphical trends as well as sources of ancient Indian History
- Student will be familiar vedic period, Jainism, Buddhism and all ruling dynasties of Ancient India.

HISC01 : Ancient Indian History (From the Beginning to Satavahana Dynasty)

• Students will gain knowledge of the geographical features of India and their impact on history.
• They will understand the importance of sources of ancient Indian history and their historiographical trends.
• Learners will study the Pre-Stone Age and New Stone Age, with emphasis on socio-economic life.
• Students will analyze Harappan Civilization – its origin, extension, town planning, political, social, economic, and religious conditions.
• They will understand the Rigvedic and Later Vedic societies, their political and cultural changes.
• Students will study the Mahajanapadas and analyze the causes of the rise of the Magadha empire.
• Learners will examine the rise of Jainism and Buddhism, their philosophy, and their role in social change.
• They will understand the invasion of Alexander and its impact on Indian polity and society.
• Students will analyze the Mauryan Empire, Chandragupta Maurya's conquests, and the Mauryan administrative system.
• They will study Ashoka's Dhamma and its historical relevance.
• Learners will gain knowledge about the Sunga, Kushana, and Satavahana dynasties and their political and cultural contributions.

HISC02: Ancient Indian History (From Gupta Age to 1206 A.D.)

• Students will study the Gupta dynasty, Samudragupta's conquests, Chandragupta II's achievements, and the Gupta administration.
• They will critically analyze the concept of the "Golden Age" of the Gupta period.
• Learners will gain knowledge of South Indian dynasties such as the Sangam (Chola, Chera, Pandya), Pallavas, Chalukyas, and Rashtrakutas.
• They will understand the reign of Harshavardhana, his conquests, administration, and cultural contributions.
• Students will study the origin and rise of the Rajputs and the culture of the Rajput age.
• They will examine the role of Gurjar-Pratihara, Pal, and Sen dynasties in Indian history.
• Learners will understand India's relation with South-East Asia during the early medieval period.
• They will evaluate the Arab invasion of India and its long-term effects.
• Students will study the Turkish invasions of Mahmud Ghaznavi and Muhammad Ghori and their impact on Indian polity and society.

HISC03 History of Medieval India – Sultanate Period (1206–1526 A.D.)

• Student will know about the political and administrative changes during medieval period.
• Student will be familiar with the dynasties and Architecture of south India.
• Get knowledge about the mutual harmony of Indian's through Bhakti and sufi movement.
• Political Atmoshphere of India during Medieval period.
• Out line the changes in the field of culture art and Architecture.

HISC04 - History of Medieval India – Mughal Period (1526–1707 A.D.)

• Student will be able to identify the major political development in the history during the period.
• There will be information about mughal art, culture and Architecture.
• Delineate the development of trade and Urban complexes.

• Different policies of Mughal Empire.
• Student will be familiar with the establishment, Expansion and Governance of the Maratha Empire.

HISC05 V: History of India (1757–1947)

• The student will be able to trace the British colonial Expansion in the Polotical contexts of Eighteenth century.
• They will learn about the changes in society, politics, religious and Economy during this period.
• Student knows about the land revenue system of Britishers.
• Reform's of the Britsh Governers like William Bentinck, curzeon.
• Student will acquire knowledge about Indian Renaissance in the nineteenth century.

HISC06 VI: History of Indian National Movement and Constitutional Development

• The contents of the syllabus are designed to cover core issues pertaining to vast canvass of Nationalist History.
• The student at the undergraduate level is equipped to focus upon the core ideas of national movement.
• India quest for Independence and nation building.
• Indians National movement has vast and divergent ideological base with inner contradictions.
• Students will also gain knowledge about the constitutional development of India under British rule.

HISC07 VII: Research Methodology

• The contents of the syllabus are designed to cover core issues pertaining to vast canvass of Nationalist History.
• The student at the undergraduate level is equipped to focus upon the core ideas of national movement.
• India quest for Independence and nation building.
• Indians National movement has vast and divergent ideological base with inner contradictions.
• Students will also gain knowledge about the constitutional development of India under British rule.

HISC08 VIII: Methodology of History

• Students will acquire knowledge about the Philosophy of History.
• What are the meaning, definition, nature and scope of History?
• Students will also gain knowledge about the types of History.
• They learn whether History is a Science or an Art.
• Students will know the correlation of History with other social sciences.

HISE -01 I: World History (1453–1871)

• The Student will be able to analyze the Historical development in Europe between 1453 to 1870.
• They will acquire knowledge regarding the downfall of Feudalism and the rise of modern age.
• How was the Industrial revolution start and after that the Economy of the whole world was changed.
• Students gain knowledge the new political challenges like Revolution, Reform moments.
• How the old Imperialism was goan for ever & new Imperialism was born (rise) and the world phase the new problem of new Imperialism.

HISE02- II: World History (1871–1950)

• Student will learn about the political scenario of the world and to understand the rule policies of the famous personalities.
• Student will prepare a research paper on important topic like eastern question.
• They will able to learn in detail about the Russian Revolution.
• They will be able to understand all the aspects of world war closely and assess its impact on the world.
• They will be able to give a detailed description of the formation of the united Nations and its role in various global differences.

HISE03 III: Historiography

• This course provides to students the opportunity to understand the Historiography during medieval and modern period.
• They learn the different trends of Historiography.
• Students also learn the different types of Interpretation of Indian History.
• They gain knowledge about the themes of History.
• They learn about the content of Indian History like Jati, Janjati, Science and Techonology for Historiography.

HISE04 - IV: Ancient and Medieval Chhattisgarh

• The contents of the syllabus are designed to cover the specific issues pertaining to vast canvass of regional History.
• The student of undergraduate level is equipped to focus upon the specific ideas of Regional History in its contextuality.
• Student will be ables to identify the major political development in the history of Chhattisgarh ancient and medival period.
• They learn the department especially in the field of Administration & cultural.
• Student will acquire knowledge about the Maratha invasion and there Administration in Chhattisgarh.

HISE05 - V: Modern Chhattisgarh (1818 to 2001)

• The student will be able to trace the British colonial Expansion in the political contexts of 19th century in Chhattisgarh.
• They will learn about the changes in society, politics religion, Economy, during the period.
• They will also acquir knowledge about farmer, Labour and Trible movement in Chhattisgarh.
• Student will gain knowledge the religious belives in Chhattisgarh.
• Learn about the Background of the State building.

HISE06 -VI: Tourism in Theory and Practice – I

• Student will know the meaning and definition of Turism and its importance.
• They acquire knowledge about Travel Agency and their function (work) and method.
• Learn about tourism transport industry and accommodation industry.
• They will familiar with the religious and Historical tourist place of India.
• They will acquire knowledge the major National parks of India.

HISE07 - VII: Tourism in Theory and Practice – II

• Student will know the meaning and definition of Turism and its importance.
• They acquire knowledge about Travel Agency and their function (work) and method.
• Learn about tourism transport industry and accommodation industry.
• They will familiar with the religious and Historical tourist place of India.
• They will acquire knowledge the major National parks of India.

HISE08 - VIII: Women's in Indian History

• Student will enhance their knowledge of the History of the Indian women in Ancient and Medivel period.
• Student will also learn about womens education during colonial period.
• They will know about the contribution of women in politics.
• Student will gather knowledge about the condition of women in Buddha, Jain, Islam and Sikh religion.
• They will understand the significance and utility of women study.

HISE09 - IX: Indian Constitution and Administration

• The Student will learn about the sources of constitution.
• Student will familiar with the merits of constitution.
• The course aims to provid the understanding about the Indian constitution and administrative system.
• They will know powers of president and vice president.
• Students will acquire knowledge of working culture of Supreme Court, Union Public Service Commission and Election Commission of India.

HISE10 - X: History of Indian Culture

• Students learn and understand the culture of Ancient time.
• They will be able to understand the contribution of Ashoka to Indian culture.
• They will also learn about the suck and Greko effect on Indian culture.
• Students will be able to understand the Indian culture of south Indian states.
• In addition student will be able to gain an in depth knowledge of Indo Islamic culture, Jainism, Buddhism and cultural characteristics of Bhakti period.

HISE011 - XI: History of Indian Culture (Modern Period)

• The student will be able to learn about the contribution of Akbar, Shivaji and Sants of Medieval period to Indian culture and understand the thoughts of above personalities.
• They will able to understand the political condition of India at the time of European Invasion and its effect on Indian culture.
• They will able to give a detailed description of the Indian Renaissance.
• Student will know the contribution of Arya Samaj, Brahma Samaj and the Satnam panth to Indian History.
• They will learn lesson from the history of Theosophical society, Muslim reform movement and the effects of the muslim reform movement on Indian culture.

HISE12 - XII: History of China and Japan (1800–1965)

• The student will be able to understand the causes and effects of European Invasion in China.
• Comprehend the historical Background of Chinese history.
• Learn about the registances against imperialism in China.
• Student will also gain knowledge about the Historical Background of Japan, Meiji restoration, Militarism in Japan, Russo-Japanese war and its effects.
• They will know how the Japan rise as a modern world power state.

HISEC01-Maratha History

• Student will learn about the Maratha power emerge in in maharastra in which condition.
• Students also gain knowledge the congyest of Shivaji, Shahji.
• They will learn the consolidation of Maratha power in the leader administration.
• Maratha power under Peshawa's.
• The 3rd war of panipat & its impact on the History of India.

HIVAC- Indian National Movement (1857 to 1947)

• The student will be understood the causes and effects of notable events in Indian History.
• Comprechend political background of Indian History.
• Explain the political and socio-economic condition of India during the British rule.
• They will also gain knowledge about the national movement during world war.
• Know about the circumstances leading to the beginning of the Gandhian movement and also about the repressive methods adopted by the British to crush the movement.

NON-NEP

Programme Outcome (PO)

Programme outcomes describe the knowledge, skills, and competencies that students are expected to achieve by the completion of the program.

1. To develop in students a foundational understanding of ancient Indian civilization and its evolution over time.
2. To strengthen the ability to interpret historical events through archaeological and literary sources.
3. To help students relate ancient political, social, and cultural developments with the shaping of medieval and modern India.
4. To build a basic historical sense that supports further study in higher semesters.

Course Outcome

Bachelor of Arts – First Year (HISTORY)

PAPER – I: Indian History (From Earliest Times to 1206 AD)

- Students will understand the **geographical structure of India** and how physical features influenced ancient civilizations.

- They will study the **sources of Indian history**—archaeological, literary, numismatic, epigraphic—and learn how historians reconstruct the past.
- Students will develop knowledge of the **Vedic and post-Vedic periods**, including political, social, and economic life.
- They will understand the rise and expansion of the **Mahajanapadas** and the emergence of cities, trade, and new economic patterns.
- Students will study the life, teachings, and impact of **Jainism and Buddhism**, and their contribution to Indian culture.
- Learners will understand the **rise of new empires**, including the Mauryan Empire—administration, art, Ashoka's Dhamma, and socio-economic developments.
- Students will understand the **Sangam Age**, Tamil literature, society, and cultural developments.
- They will study the **Gupta Empire**, Chandragupta and Samudragupta's achievements, administrative system, art, literature, and science.
- Students will develop knowledge about the **post-Gupta period**, including Pushyabhuti, Vardhana, Chalukya, Pallava, and Rashtrakuta rule, and India's contact with Sri Lanka and Southeast Asia.
- They will understand the rise of **early medieval India**, Rajput polity, society, administration, and cultural contributions.
- Students will learn the causes and consequences of **Turkish invasions**, including Mahmud Ghazni and Muhammad Ghori.

PAPER – II: World History (1453 AD to 1890 AD)

- Students will understand the **features of the Modern Age in Europe**, including the Renaissance and scientific awakening.
- They will study **religious reform movements** like Protestant Reformation and their impact on European society.
- Students will develop knowledge of the **rise of nation-states** such as England, France, and Russia.
- They will learn about **economic changes**—Mercantilism, Commercial Revolution, and early Colonialism.
- Students will examine the **Industrial Revolution**, its causes, inventions, and worldwide impact.
- Learners will study major political events such as:
    - The **Glorious Revolution (1688)**
    - The **American War of Independence**
    - The **French Revolution** and its influence
    - The rise of **Napoleon Bonaparte**
- Students will understand **European diplomacy**, Metternich's system, internal and external policies, and major treaties.
- They will learn about important social and political developments:
    - Revolutions of **1830 and 1848** in Europe
    - British Reform Acts of **1832 and 1867**
    - Eastern Question, Crimean War, and Berlin Congress
- They will understand the **Unification of Italy and Germany**, and the rise of nation-states.
- Students will study the **foreign policy of Bismarck** and his role in balancing European powers.

Bachelor of Arts – Second Year (HISTORY)

Paper – I : Indian History (1206 AD – 1761 AD)

• Students will understand the nature, types, and importance of primary sources for studying the Delhi Sultanate and the Mughal Empire.
• They will gain detailed knowledge of the Delhi Sultanate—Slave, Khilji, Tughlaq dynasties—and their military organization, administrative structure, revenue system, and market regulations.
• Students will study the establishment of the Mughal Empire under Babur and Humayun, and the administrative reforms of Sher Shah Suri.
• They will analyze Akbar's administrative system, Rajput policy, religious policy (Sulh-i-kul), and the evolution of Mughal religious policy up to Aurangzeb.
• Learners will understand medieval social and economic conditions, Bhakti and Sufi movements, and important cultural developments.
• Students will study the Deccan kingdoms—Bahmani, Bijapur, Golconda—and Vijayanagara and Chola contributions in art, architecture, and literature.
• They will examine the rise of the Marathas—Balaji Vishwanath, Bajirao I, the Third Battle of Panipat—and Maratha administration in Chhattisgarh under Bimbaji Bhonsle.
• Students will be able to connect the regional history of Chhattisgarh with broader political transformations of medieval India.

Paper – II : World History (1890 AD – 1964 AD)

• Students will understand major political developments of the modern world, including imperialism, colonialism, and the foreign policy of Kaiser William II.
• They will gain knowledge about the partition of Africa, Meiji Restoration, Japanese modernization, and Japan's emergence as a world power.
• Learners will study major international conflicts such as the Sino-Japanese War, Russo-Japanese War, and Balkan Wars, along with their global consequences.
• Students will analyze the causes and outcomes of the First World War, the Treaty of Versailles, and the Russian Revolution of 1917.
• They will understand the rise of Fascism (Mussolini), Nazism (Hitler), and Japanese militarism, and their contributions to the Second World War.
• Students will examine the formation of the League of Nations, the creation of the United Nations, the Cold War, and major geopolitical issues including Korea and Palestine.
• They will study principles of Non-Alignment, Panchsheel, and the evolution of modern international relations.
• Overall, students will develop a deep understanding of twentieth-century global political, economic, and ideological transformations.

Bachelor of Arts – Final Year (HISTORY)

Paper – I: Indian History (1761 AD to 1947 AD)

- Students will gain a broad understanding of the establishment and expansion of British colonial rule in India, including the political strategies such as subsidiary alliances and the Doctrine of Lapse.
- They will be able to critically evaluate the impact of British economic policies on Indian agriculture, trade, handicrafts, and the rise of land revenue systems like Permanent, Ryotwari, and Mahalwari settlements.

- Students will develop an analytical perspective on social structures and reform movements, particularly related to peasants, laborers, women, and the middle class.
- They will understand the development of socio-religious reform movements like Brahmo Samaj, Arya Samaj, Prarthana Samaj, as well as institutions such as the Aligarh Movement and Theosophical Society.
- Learners will gain insight into the evolution of constitutional developments during British rule and the transformation of education, press, and communication systems (railways, postal services).
- Students will be introduced to regional history through the study of British control and administration in Chhattisgarh, as well as social reform movements like the Kabirpanth and Satnampanth, and tribal cultural traditions.
- Overall, students will acquire the ability to analyze historical sources, interpret political and social changes, and contextualize India's national movement from both national and regional perspectives.

Paper – II: History of Indian National Movement (1857 AD to 1947 AD)

- Students will understand the emergence of Indian nationalism and analyze the 1857 Revolt in terms of its causes, nature, and consequences.
- They will gain knowledge about the formation and evolution of the Indian National Congress, including the moderate and extremist phases.
- Students will evaluate the impact of the Partition of Bengal, the Swadeshi Movement, and the growth of revolutionary nationalism.
- They will study the rise of communal politics, the establishment of the Muslim League, and the significance of Home Rule Movement and the Lucknow Pact.
- Students will examine Gandhian movements such as Non-Cooperation, Civil Disobedience, and Quit India Movement, and assess the contribution of Subhas Chandra Bose and the Indian National Army.
- Learners will gain insight into the process of Indian independence, partition, and princely state integration.

Students will explore regional contributions to the freedom movement, especially the role of Chhattisgarh in the 1857 revolt, tribal uprisings such as the Muria Rebellion and Bhumkal movement, Gandhian activities, and princely state mergers

Master of Arts - History

Course outcome

- Students will be able to demonstrate broad knowledge of historical events and periods and their significance.
- Students will be able to deploy skills of critical analysis.
- Formulating persuasive arguments.
- Evaluating evidence and critiquing claims in the literature.
- Interpreetinga a varirty of primary sources.
- Identifying and accessing a sufficient base of primary sources.

Programme outcome

Programmeoutcome are statements conveying the intent of a program of study. Specifically,program outcome refer to what a student should know or be able to do at the knowledge and skills student will have abtained by the time they have received their intended degree.

Semester -1

PSO -1: Paper - 1. Methodology of history

1.Enhabce knowledge in history writing and also understand nature, scope and importance of history.

2.To develop conceptual knowledge in research methodology and formulate hypotheses, quantitative and qualitative analysis.

3.involve in awareness program of heritage and monuments as a primary sources of history.

PSO 02 :Paper -2. Modern world

1.They will learn about the French revolution and its impact of European countries.
2. unity and power makes people to strength which has showed in the French revolution in 1789.
3.how the industrialization had occurred and its affected on socio economic transformation of Europe.

PSO-03: Paper-3. Ancient and medieval chhattisgarh

1. How was Chhattisgarh at the time of kalchuri dynasty informs the students of the glorious history of Chhattisgarh.
2. How did Chhattisgarh come under the monopoly of Maratha rule in formulation related to the relationship between Maratha in Chhattisgarh.
3. Students understood about national movement and publicity participation in Chhattisgarh.

PSO-04:Paper-4.Woman in Indian history in ancient & medieval period

1. Students will gather knowledge about the history of education in india and the status of women education from earliest times to modern age.
2. They will be aware about the womens education in medieval times as well as regional trends of womens education in pre-colonial india.
3. They will be aware about the role of Christian missionaries in spreading female education,recent debates and indigenous initiatives at womens education in india.

Semester - 2

PSO-05: Paper-1.Historiography

1.Distinguidsh between the major arguments of different types of historiogrphical interventions.
2.Learn that this simple recounting of facts is always imbedded in particular historigraphical narratives, subject to which they will be introduced in this course and further reinforced in the MA history.
3.know about the method of writing history.

PSO-06: Paper-2. Contemporary world

1.students of history will learn about how the world became dividing after first world War among the super of the world.
2.they also learn how the aggressive forign policy of ltaly and germany influenced to the European countries and compelled to form allied powers of the world.
3. gradually, the 2 world war had occurred and the league of nations was established aftermath of the war which affected to the world politics .

PSO-07: Paper-3. Modern Chhattisgarh

1. Study of the political developments of Chhattisgarh.
2. Study of the tribal culture and folk arts of Chhattisgarh.
3. The students will be able to understand the whole regional history.
4. Will be able to elaborate the regional cultural developments.

PSO-08: Paper-4. Women in modern india

1.They will acquire knowledge about the emergence of women studies in india from 1980 to till that.
2.they will gather knowledge about the contributaion of women towards the socirty through political, social and religious fields.
3.They government became active to the developments of women empowerment by introducing new rules and regulations which also are learn as history student.

Semester - 3

PSO-09:Paper-1. Indian polity and economy in sultanate period(1200 – 1526)

1. They can achieve knowledge how to develop Indian feudalism and evolution of the political structures of early-medieval north and south Indian.
2. They can learn how the conquering of lslam had intiated in india and had transformed of Indian culture,society,religion and agrarian structures changing scenatios after the advent of the lslam in Indian.

PSO-10: Paper-2. Society and culture in sultanate period (1200 – 1526)

1.They will acquire knowledge how the economic,social and religious development had made during the medieval European society.

2.They can be learning about the socio-economic and political conditionand of feudal organization of production,towns formation, trade and commerce,technological developments and crisis of feudalism in Europe.

PSO-11: Paper-3. History of national movement (1857-1922)

1.they will learn from this chapter about the local rebellion and movements like the indigo rebellion,the deccan riots,the growth of the new middle class.
2. the age of associations, the Aligarh movement, the arya and the prarthana samaj aftermath of 1857.
3.they will learn the real historiography of Indian nationalism, birth of Indian national congress.
4. the moderates and the extremists, partition of Bengal, the swadeshi movement in Bengal in 1905.

PSO-12: Paper-4. Cultural history of india (beginning to 1526)

1. They can understand about the colonial nature of state during 200 years rule of the british power in this land.
2. Hey can gather knowledge about how the Indian society, politics, religion and economy had changed during the companys rule in india.
3. They will aware about in which situation the Indian nationalism had raised among the Indian people for freedom.

Semester -4

PSO-13: Paper-1. Indian politiy and economy in mughalperiod(1526-1750)

1.they acquire knowledge towards the turkeys invasion & struggle for empire in north-western india and foundation of the mughal rule in india.
2.students will learn about the mugham Indian society,economy and culture after consolidation of the mughal rule india.
3. they will learn about how the regional powers had been raised in different parts of india after downfall of the mughal empire of delhi.

PSO-14: Paper-2.Society and culture in mughal period (1526-1750)

1. Know about the social order in vogue during Indus and vedic civilization.
2. Know about the influence of Buddhism,Jainism and other sects on the people.
3. Students will know about the political,social,cultural changes during the (1526-1750)
4. Student will understand the nature of social and cultural changes.

PSO-15: Paper-3. History of Indian national movement (1922-1947)

1.The main objective the of this course is to familiarize the students with the main commercial,political,military and ideological aspects of the east india company rule in india.
2.Throughout the course the students study the impact of british rule on india and the Indian reactions to this rule ranging across a wide range of subject.

PSO-16: Paper-4. Cultural history of india (1526-1950)

1.Establish the chronology, the location and the features of the many sultanate and mughalcities and settlements in delhi.
2.Thry will access architechural and epigraphical materials and learn how to correlate these with narrative, textual materials.
3.know about development and growth of modern education under britishindia.
4.analyze the impact of orientalist-anglicist debate on education system in britishindia.

Department of Economics

FOUR YEAR UNDERGRADUATE PROGRAM (NEP-2020)

Program: Bachelor of Arts

Program Outcome(PO):

PO1- Develops Critical thinking: To draw relationship between various assumptions and their actual estimates, helps to develop analytical and critical thinking.

PO2- Communicational skill enhancement: By connecting to people, various ideas help the communication skill.

PO3- Ethical Awareness: More awareness about the values of life, moral duties and obligations.

PO4- Environment and Sustainability: To know about the environmental issues and the solutions.

Program Specific outcomes (PSO):

PSO 1- Economic System: Ability to know the basics of economics at macro and micro level.

PSO2- Statistical Analysis: Acquaint with the statistical data and analysis.

PSO3- Perspective on Indian Economy: Awareness about the nation's economic policies and compare it with the global scenario.

PSO 4- Development Perspective: Draw a relation between developed and developing economies.

Course learning outcomes (CLO)

ECSC-01: BASICS OF ECONOMICS

- This course gives a general idea about the basics of economics.
- It tries to bridge the gap between higher secondary syllabus and higher education.
- This paper creates eagerness and enthusiasm among students to know more about economics.
- It also envisages the basic knowledge of micro and macroeconomics and tries to create an interest.

ECSC-02: BASICS OF INDIAN ECONOMY

- The students learn about the state of Indian economy pre and post independence.
- The students learn about the planning process and its achievements in Indian economy.
- The students come across with the new economic reforms introduced in Indian economy in the year 1991 and its role in India's development.

- The students will come to know about some social problems like overpopulation, education, health & malnutrition, poverty, unemployment etc.
- The students learn the problem and prospects of agriculture sector in India.
- The students learn various aspects of industrial development and reforms process in the industrial economy.
- The students learn the role of foreign trade on Indian economy. They will also learn various aspects of foreign trade in India.
- The student learns the state income of Chhattisgarh in the form of GSDP, Per capita income, sectorial contribution etc.
- The students also learn about the importance of agriculture in Chhattisgarh's economy.
- The students learn about various crops their production and productivity.
- The students learn about various industries and infrastructure facilities in Chhattisgarh.

ECSC-03: MICRO ECOMONICS

- This course deals with the basics of Micro Economics.
- Student after passing this course will understand rational behavior of microeconomics.
- Students will know about the production process.
- Along with it, they will also be able to explain the markets and their compositions.
- The students will have knowledge of welfare, which is a pivot to equality and justice.

ECSC-04: MACRO ECONOMICS

- Students after studying this paper are aware of the National income component.
- They have good knowledge of the consumption and investment pattern, which helps them in balancing their income in a proper manner.
- They get information regarding markets and its fluctuations.
- Students get knowledge of various tariffs and quotas being imposed on goods.
- Students get an idea about money and also about the bank deposits and loans.

ECSC-05: DEVELOPMENTAL ECONOMICS

- It will help the students to know more about growth and development.
- Students will be benefited by experiencing the population pattern and its impact on the economy.
- Various topics on environment will enhance the knowledge of nature and environmental disruption.
- The students will have a deep knowledge of their home state on various aspects of economy.

ECSC-06: STATISTICAL METHODS

- Student after studying statistical methods will develop a realistic approach towards economics. He becomes more analytical in his life.
- Statistics also teaches him to check and verify theoretical approach.
- He can analyze data and more clarity is attained in his findings, be it economic or real life.

ECSC-07: ADVANCE ECONOMIC THEORY

- With the help of this course the students will understand the important concepts related to consumer behavior.

- Students get information about the important topic of production function which will help him in the competitive exams.
- The students will learn various concepts of markets as well as their equilibrium.
- The students learn various hypotheses related to consumption function within macroeconomics.
- The students will come across with various aspects of monetary theory and related various theories.

ECSC-08: QUANTITATIVE METHODS

- Student after studying quantitative methods will develop a realistic approach towards economics. He becomes more analytical in his life.
- Students will enhance advance knowledge of statistics and quantitative techniques.
- They will be able to analyze statistical data rigorously and also forecast about the future values.
- This paper will built a foundation among the students of economics for a comprehensive research.

ECSE-01: INTERNATIONAL ECONOMICS

- This course introduces students to the various international trade theories and students will learn how international trade has helped countries to acquire goods at cheaper cost. Also, understand the concept of balance of payments and exchange rate determination in foreign exchange market.

ECSE-02: HISTORY OF ECONOMIC THOUGHT

- The course enhances the knowledge of economic thoughts and values in the minds of students.
- Various schools of thoughts including Indian have had a great impact on the economic scenario globally.

ECSE-03: INDUSTRIAL ECONOMICS

- This paper introduces to students with concept of firms and its structure.
- The students will learn how location of industry is determined by different location theories and different types of project appraisal techniques.

ECSE -04: MONEY AND BANKING

- The students will learn the evolution of money. They will also learn the value of money and inflation and other related issues of monetary economics.
- The students will get knowledge about banking and its functions, various deposit accounts which will be helpful for them in real life also.
- The students will get complete information about RBI, its main functions and the measures to control credit creation.
- The students will get knowledge about various aspects of macroeconomics by the whole syllabus resulting in increased knowledge of theoretical as well as practical aspects of macroeconomics.
- This course introduces students to the conceptual and practical operations of the Money, banking, financial markets and institutions. The course is intended to provide an in-depth understanding of the operational issues of capital and money market network along with its regulatory framework.

ECSE -05: PUBLIC FINANCE

- The students will learn the evolution of money. They will also learn the value of money and inflation and other related issues of monetary economics.
- The students learn the whole process of preparation and passing of govt. budget. They also get information about various aspects of budget which will make them aware about the whole government mechanism.
- The students get knowledge about various taxes and their role & importance in the economy which will make them responsible citizen of India.
- The students will get knowledge about various aspects of macroeconomics by the whole syllabus resulting in increased knowledge of theoretical as well as practical aspects of macroeconomics.
- This course aims to introduce the students to the basic concepts of Public Finance. On completion of this course students will be able to understand the revenue and expenditure system of the federal country, India.

ECSE-06: ECONOMICS OF CHHATTISGARH

- This papers aims to introduce students with the basic economic features of Chhattisgarh economy, growth pattern.
- It helps them understand the pattern of agriculture and rural development, and sectoral growth in Chhattisgarh.

ECSE -07: BASIC ECONOMETRICS

- On completion of this course, students will be able to understand the concept of econometrics in the economic research.
- They will learn hypotheses testing and regression model and their estimation.

ECSE-08: ENVIRONMENTAL ECONOMICS

- On completion of this course, students will be able to understand the concept of environment and its linkage to economy.
- Students will be aware of the available natural resources, its optimum use, implication and consequences.
- It will teach about the pollution hazard and measures to control it.
- It will define relationship between environment and sustainable development.
- Awareness regarding environmental values shall increase.

ECSE-09: DEMOGRAPHY

- The student will be aware of the demographic dividend of India.
- After completion of the course, the student will have a clear cut idea of population growth.
- He shall be aware of the concept of birth, death and mortality rate.
- He will also be aware of the demographic transition prevailing in India

ECSE-10: INDIAN AGRICULTURE

- The student will know about the agriculture sector and its impact on the Indian economy.

- He will also be aware of the various allied sectors associated with agriculture.
- HE will be well versed with various policies enacted for the farmers.
- He will also learn various means to finance the agriculture sector.

ECSE-11: GENDER ECONOMICS

- This course will enable student to know the importance of gender equality.
- It will make the students more responsive towards women issues.
- The students will enhance their knowledge about legal rights of women.
- It will create awareness about govt. Initiative towards gender development.
- Compare budgetary allocations on the basis of gender.

ECSE-12: ECONOMICS OF SOCIAL SECTOR

- This course enhances the knowledge about the social sector and various developmental indicators.
- It studies about the minimum needs of a person.
- It also makes aware the student regarding education, health and food security.

ECGE-01: BASICS OF ECONOMICS

- This course gives a general idea about the basics of economics.
- It tries to bridge the gap between higher secondary syllabus and higher education.
- This paper creates eagerness and enthusiasm among students to know more about economics.
- It also envisages the basic knowledge of micro and macroeconomics and tries to create an interest.

ECGE-02: BASICS OF INDIAN ECONOMY

- The students learn about the state of Indian economy pre and post independence.
- The students learn about the planning process and its achievements in Indian economy.
- The students come across with the new economic reforms introduced in Indian economy in the year 1991 and its role in India's development.
- The students will come to know about some social problems like overpopulation, education, health & malnutrition, poverty, unemployment etc.
- The students learn the problem and prospects of agriculture sector in India.
- The students learn various aspects of industrial development and reforms process in the industrial economy.
- The students learn the role of foreign trade on Indian economy. They will also learn various aspects of foreign trade in India.
- The student learns the state income of Chhattisgarh in the form of GSDP, Per capita income, sectorial contribution etc.
- The students also learn about the importance of agriculture in Chhattisgarh's economy.
- The students learn about various crops their production and productivity.
- The students learn about various industries and infrastructure facilities in Chhattisgarh.

ECSEC-01: Statistical Product and Service Solutions (SPSS)

- Use the advanced features of SPSS will assist the students in their research endeavors.
- Comprehending new trends and techniques in using appropriate statistical and computational tools for inter -disciplinary research.
- Effectively analyze and present their data and research outcomes
- Understand basic functions of statistical software package for managing variables and generate descriptive statistics to describe the data and analyse data through graphs and charts.
- Test differences in sample means.
- Identify relationships between variables and develop models for predicting dependent variables on the basis of independent variables.

NON- NEP-2020

Program: Bachelor of Arts Part- I/II/III

PROGRAM OUTCOMES (POs)

PO 1- Demonstrate critical thinking by analyzing economic, social and political issues using theoretical and empirical tools.

PO 2- Acquire foundational knowledge of microeconomics and macroeconomics and apply these concepts to real-world economic problems.

PO 3- Use quantitative techniques, including basic mathematics and statistics, for data interpretation and economic analysis.

PO 4- Communicate economic ideas effectively through written reports, presentations, charts, and analytical discussions.

PO 5- Develop research aptitude by collecting data, reviewing literature, interpreting findings and preparing research-based reports.

PO 6- Identify socio-economic problems and propose feasible, sustainable and ethical solutions.

PO 7- Understand social responsibility and ethics in economic decision-making, with emphasis on equity, welfare, and sustainable development.

PO 8- Work efficiently in teams, demonstrate leadership qualities, and collaborate professionally during academic and community activities.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO 1- Explain and apply core economic theories such as demand-supply, market structures, national income, inflation, and fiscal & monetary policies.

PSO 2- Analyze the structure and performance of the Indian economy, including agriculture, industry, service sector, poverty, unemployment, and developmental issues.

PSO 3- Interpret economic data using graphs, tables, charts, and apply basic statistical and econometric techniques.

PSO 4- Evaluate public policies related to taxation, subsidies, social welfare, trade, and environment, labor and public expenditure.

PSO 5- Understand major development issues and propose data-driven and policy-oriented solutions for inclusive growth.

PSO 6- Analyze global economic issues such as international trade, globalization, exchange rates, and global financial systems.

PSO 7- Prepare for higher education and employment opportunities in banking, research institutions, public administration, data analysis, and corporate sectors.

PSO 8- Develop skills in economic research, including survey design, data collection, report writing, and policy brief preparation.

Course learning outcomes (CLO)

B. A. Part- I Micro Economics, Paper-I (Code: 0111)

- This course serves as an introductory study of microeconomics, focusing on how individuals make economic choices as consumers and producers. Students are introduced to the core ideas that guide economic behaviour and learn how markets operate through the forces of demand and supply. The course also explains how different types of market structures—such as perfect competition and various forms of imperfect competition—shape pricing, output decisions, and resource allocation. By the end of the course, students gain a clear understanding of how individual decisions influence market outcomes in an economy.

B. A. Part- I Indian Economy, Paper-II (Code: 0112)

- By the end of this course, students will be able to comprehend the developmental strategies pursued in India since independence and critically assess how these approaches have influenced the country's economic growth, social progress, and overall well-being.

B. A. Part- II Macro Economics, Paper-I (Code: 0181)

- This course is designed to build a strong conceptual foundation that helps students understand and analyse real-world economic issues such as inflation, money supply, GDP, and the relationships among them. It also equips learners with the analytical tools needed to critically assess different macroeconomic policies within a clear and logically consistent framework.

B. A. Part- II Money, Banking and Public Finance, Paper-II (Code: 0182)

- Develop a clear understanding of the core concepts of monetary economics, banking systems, and public finance.
- Apply major economic theories and analytical models to interpret current events and real-life financial situations.
- Recognize the significance of monetary factors and government intervention in shaping both national and global economic outcomes.
- Critically examine monetary and fiscal policies and assess their implications for economic stability and public welfare.
- Strengthen analytical and problem-solving abilities to support sound financial and managerial decision-making.

B. A. Part- III A3-ECO-DEG-DSE-1/1: Development and Environmental Economics (Core Course)

- It will help the students to know more about growth and development.
- Students will be benefited by experiencing the population pattern and its impact on the economy.
- Various topics on environment will enhance the knowledge of nature and environmental disruption.
- The students will have a deep knowledge of their home state on various aspects of economy.

B. A. Part- III A3-ECO-DEG-DSE-1/2: Agricultural Economics (Elective Course)

- Student after studying Agricultural Economics will develop an understanding of Indian and Chhattisgarh's agricultural Economy. They will be able to understand the rural economy and its problem. This will lead to encourage them choosing agriculture as their professional option.

B. A. Part- III A3-ECO-DEG-DSE-2/1: Statistical Methods (Elective Course)

- Student after studying statistical methods will develop a realistic approach towards economics. He becomes more analytical in his life.
- Statistics also teaches him to check and verify theoretical approach. He can analyze data and more clarity is attained in his findings, be it economic or real life.

B. A. Part- III A3-ECO-DEG-DSE-2/2: Demography (Elective course)

- Student after studying Demography will be able to understand and analyze the demographic features of India as well as of Chhattisgarh. They will also be able to understand the relation between economic development and population growth. They will also be able to come to know about the optimum level of population. They will be able to understand the importance of population control too. It will encourage the students to take various demographic problems as their research problems.

Master of Arts in Economics

Program: M. A. Economics

PROGRAM OUTCOMES (POs)

PO1 – Knowledge Enhancement: Develop an advanced and systematic understanding of microeconomic and macroeconomic theories, quantitative techniques, and applied economic analysis.
PO2 – Analytical & Critical Thinking: Acquire the ability to logically analyse economic problems, interpret data, evaluate policies, and make evidence-based decisions.
PO3 – Research Competence: Build the capacity to design research studies, use statistical and econometric tools, analyse datasets, and prepare academic reports.
PO4 – Policy Understanding: Gain comprehensive knowledge of the Indian economy, public finance, industrial structure, labour market issues, and international economic relations.
PO5 – Social & Ethical Awareness: Develop awareness of social, environmental and ethical dimensions of economic policies and contribute to sustainable development.
PO6 – Employability & Professional Skills: Develop skills required for careers in academics, government, financial institutions, development organisations, and corporate sectors.
PO7 – Communication & Presentation Skills: Enhance written, verbal, and digital communication skills for presenting economic ideas effectively to diverse audiences.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1 – Economic Theory Application: Ability to apply microeconomic and macroeconomic principles to analyse real-world economic situations.
PSO2 – Quantitative Competence: Capacity to use statistical, mathematical and computer-based tools for economic modelling and policy evaluation.
PSO3 – Indian Economy & Policy Expertise: Develop a specialised understanding of issues, trends, and policies in Indian economic development.
PSO4 – Sectoral Analysis: Gain the ability to critically evaluate industrial, labour, environmental, demographic, and social sector issues.
PSO5 – Research & Data Handling Skills: Acquire skills for conducting independent research, handling large datasets, preparing reports, and using software tools.
PSO6 – Global Economic Understanding: Develop strong foundations in international trade, finance, and global economic dynamics.

COURSE LEARNING OUTCOMES (CLOs)

Master of Arts in Economics

Program: M. A. Economics I Semester

Paper-1 Micro Economics – I

- Understand the concepts of demand, supply, elasticity and consumer behaviour.
- Analyse production functions, cost concepts, and revenue relationships.

- Explain price and output determination under various market structures.
- Apply basic microeconomic tools to real-world decision-making.

Paper-2 Macro Economics – I

- Understand national income accounting and macroeconomic aggregates.
- Explain the classical and Keynesian models of income determination.
- Analyse consumption, investment, and money market theories.
- Examine unemployment, inflation, and business cycles.

Paper-3 Statistical and Quantitative Methods

- Use statistical tools for data collection, presentation, and interpretation.
- Apply probability distributions, hypothesis testing, and correlation-analysis.
- Understand and use index numbers, time series, and linear programming.
- Employ quantitative techniques in economic decision-making.

Paper-4 Indian Economy

- Analyse structural changes in the Indian economy post-Independence.
- Evaluate trends in agriculture, industry, service sector and foreign trade.
- Understand poverty, unemployment, and regional disparities.
- Assess policy reforms and development strategies.

Paper-5 Industrial Economics

- Understand industrial organisation, market conduct, and performance.
- Analyse industrial productivity, efficiency, and financial performance.
- Examine industrial policy, reforms, and competitiveness.
- Evaluate the role of public, private and MSME sectors.

Master of Arts in Economics

Program: M. A. Economics II Semester

Paper-1 Micro Economics – II

- Analyse advanced theories of consumer behaviour and market equilibrium.
- Understand modern production and cost theories.
- Examine factor pricing, welfare economics and general equilibrium.
- Apply game theory and information economics to practical situations.

Paper-2 Macro Economics – II

- Explain growth models like Harrod-Domar and Solow.
- Study monetary and fiscal policy in depth.
- Evaluate IS-LM, AD-AS and expectation models.
- Analyse open economy macroeconomics and macroeconomic stabilisation.

Paper-3 Research Methods & Computer Application

- Understand research design, data sources, sampling, and hypothesis testing.
- Use statistical software/spreadsheets for data analysis.
- Prepare research proposals, surveys, questionnaires, and reports.
- Apply computer applications in economic research.

Paper-4 Indian Economic Policy

- Study the objectives, strategies and outcomes of Five-Year Plans.
- Analyse economic reforms, liberalisation, and globalisation.
- Evaluate policies relating to agriculture, industry, infrastructure and trade.
- Assess contemporary policy challenges and inclusive growth.

Paper-5 Labour Economics

- Understand labour supply, demand, wage theories, and labour market institutions.
- Study employment trends, migration, and labour welfare issues.
- Analyse labour policies, industrial relations and social security.
- Evaluate the impact of globalisation on labour markets.

Master of Arts in Economics

Program: M. A. Economics III Semester

Paper-1 Economics of Growth

- Understand theories of economic growth and structural change.
- Analyse endogenous growth models and technological progress.
- Evaluate constraints to growth in developing nations.
- Assess long-term growth strategies and sustainable development.

Paper-2 International Trade

- Explain classical, neo-classical and modern trade theories.
- Analyse tariffs, quotas and commercial policies.

- Understand balance of payments, exchange rate mechanisms.
- Study international trade institutions and agreements.

Paper-3 Public Finance

- Understand the nature and principles of public revenue and expenditure.
- Analyse taxation theories, budgetary systems and deficit financing.
- Study fiscal federalism and intergovernmental transfers.
- Evaluate public debt, fiscal policy and economic stabilisation.

Paper-4 Environmental Economics

- Understand environment–economy interaction and externalities.
- Analyse cost-benefit analysis, environmental valuation and policies.
- Study pollution control mechanisms and sustainable development.
- Evaluate international environmental agreements and climate policy.

Paper-5 Demography

- Study population theories, structure, and demographic transition.
- Analyse fertility, mortality, migration and population projections.
- Understand population policies and demographic issues in India.
- Evaluate population–development linkages.

Master of Arts in Economics

Program: M. A. Economics IV Semester

Paper-1 Economics of Development & Planning

- Understand development theories, indicators and inequality measures.
- Analyse planning models and strategies for developing economies.
- Evaluate rural development, poverty alleviation, and employment schemes.
- Study constraints to development and policy solutions.

Paper-2 International Economics

- Understand international monetary systems, exchange rates and capital flows.
- Analyse balance of payments, international reserves, and debt problems.
- Study global financial institutions and international macroeconomic issues.
- Evaluate the impact of globalisation on emerging economies.

Paper-3 Public Economics

- Understand public goods, market failure and government intervention.
- Analyse fiscal instruments, redistributive policies and welfare economics.
- Study budgeting, fiscal rules, and public sector efficiency.
- Evaluate taxation reforms and public expenditure management.

Paper-4 Economics of Social Sector

- Understand the role of education, health and nutrition in development.
- Analyse social infrastructure financing and human development indicators.
- Evaluate public policy interventions in the social sector.
- Study inequality, social justice and welfare programmes.

Paper-5 Viva-Voce (Comprehensive Assessment)

- Demonstrate integrated understanding of economic theories and applications.
- Present research findings, data analysis and policy interpretations effectively.
- Exhibit analytical thinking, communication, and problem-solving abilities.
- Apply knowledge to real-world economic issues.

Department of Political Science

NEP-2020
Bachelor of Arts :-

PROGRAMME OUTCOMES.

After completion of the programme A graduate in Political science students shall be able to...

PO 1 :- Create critical thinking and have the Capacity to examine the arguments, claims, and beliefs with independence and originality, and to assess practices, policies and theories unhindered by the influence of schools of thought.

PO 2 :- Evaluate and communicate thoughts and ideas effectively in writing and orally. The ability to listen carefully, and present complex information in a clear and concise manner.

PO 3 :- Analyze the values and beliefs of multiple cultures; a global and cosmopolitan perspective, and a capacity to effectively engage in a multicultural society and interact respectfully with diverse communities and groups.

PO 4 :- Apply the holistic knowledge with the ability to make logical and critical analysis and develop their devotion and research vision towards society and nation and help them to become a competent, aware and dedicated citizen.

PO 5 :- aquants the foundational knowledge of Political Science and a thorough grasp of the theoretical and applied aspects of the discipline which leads towards self directed and lifelong learning process.

PROGRAM SPECIFIC OUTCOMES

- The programme imparts basic knowledge of important concepts such as power, authority, legitimacy, sovereignty, freedom, justice, democracy, party system and political theory to the students.
- The programme introduces the Indian Constitution, constitutional provisions, values and constitutional development.
- The programme provides comprehensive knowledge of the values, personalities and achievements of the Indian National Movement and freedom struggle.
- The programme introduces the ancient, mediaeval, modern and contemporary knowledge of political ideologies, western and Indian political philosophy.

- The programme provides comprehensive knowledge of modern political science through comparative politics, comparative analysis, comparative constitutional studies.

- The programme introduces the students to the theoretical and practical aspects of international politics, comprehensive knowledge of international organisations and their functioning.

- The programme provides theoretical and practical knowledge of public administration, public policy, development administration.

- The programme introduces comprehensive knowledge of Gandhian studies.

- The programme introduces students to various concepts and processes of political sociology.

- The programme provides in-depth knowledge of various concepts, processes, organisations and global dynamics of political economy.

- The programme provides comprehensive knowledge of various theoretical and practical dimensions of politics of states including Chhattisgarh and human rights.

- The programme enhances employability of students through proper knowledge of survey, research and e-governance.

Course Learning Outcomes

PSSC 01/ PSGE 01:- Introduction to Political Theory

After completion of the course, the student shall be able to..

- Create the understanding of the concept of political science, and methodology.

- Evaluate the concept of state, Its theories of origin, functions and relation with individuals.

- Analyse the basic concepts of Political Science like liberty, right, sovereignty.

- Apply the knowledge of democracy and democratic norms, the functional machinery of electoral democracy like political party system and pressure groups.

- Role of State as welfare agency, and as an agency of social change.

PSGE 01Introduction to Political Theory

PSSC 02 / PSGE 02 :- Constitutional Government in India

After completion of the course, the student shall be able to..

- Construct the political ideals mentioned in the preamble of the constitution.
- Assess the provisions of citizenship, fundamental rights and duties and their correlation.
- Examine the role of president and the functioning of union executive.
- Interpret the provisions and functioning of the union legislature and constitutional bodies of functional democracy, like election commission, finance commission and C&AG.

PSSC 03 :- Western Political Thought

After completion of the course, the student will be able to ..

- Develop the knowledge of ancient political philosophy given by founding fathers of political thought the great Plato and Aristotle.
- Evaluate mediaeval political philosophy and contribution.
- Examine the emergence of the modern age through the political philosophy of Machiavelli and Jean Bodin.
- Interpret the political ideas of individualism and liberalism in Hobbes and John Lock's philosophy. General will and Social contract theory of Rousseau and others

PSSC 04 :- Comparative Constitutions and Comparative Governments.

After completion of the course, the student will be able to

- Develop the basic knowledge about salient features of the constitutions of Britain, USA, Switzerland, and China.
- Calculate the comparative study of Legislature of USA Britain Switzerland and China
- Solve the comparative study of Executive of the USA Britain Switzerland and China
- Classify the comparative study of the judiciary, party system and bureaucratic system of USA, Britain, Switzerland and China.

PSSC 05 :- International Politics: Theory and Practice.

After completion of the course, the student will be able to

- Create the knowledge of concepts and approaches of international politics.
- Evaluate the theories of international politics.
- Analyse theoretical aspects of foreign policy. Interpret the execution of international politics like concepts of power, balance of power, diplomacy, disarmament etc.
- Explain the political aspects of environmentalism, globalisation, and human rights Define the global importance of India as emerging superpower.

PSSC 06 :- Introduction to Public Administration.

After completion of the course, the student will be able to

- Create knowledge about basic concepts, approaches and evolution of public administration.
- Evaluate the knowledge of theoretical aspects of public administration.
- Analyse the theories of organisation and management
- Interpret the knowledge of practical parts of public administration like bureaucracy.
- understands the Finance administration. Budget administration and control over administration.

PSSC 07 :- INDIAN POLITICAL THOUGHT

After completion of the course, the student will be able to

- Create the knowledge of Indian Political Philosophy from ancient to modern period.
- Evaluate the ideas of individual sages and philosophers on politics and functioning of government. Differentiate the ideas of ancient and modern ways of social and political thoughts.

- Interpret how Political Theory draws from and is shaped by Indian traditions. Explain the critical understanding about modern Indian thought

- Define the Indian Knowledge System through Indian Social and Political Thought.

PSSC 07 :- INDIAN POLITICAL THOUGHT

After completion of the course, the student will be able to

- Create the knowledge of Indian Political Philosophy from ancient to modern period.

- Evaluate the ideas of individual sages and philosophers on politics and functioning of government. Differentiate the ideas of ancient and modern ways of social and political thoughts.

- Interpret how Political Theory draws from and is shaped by Indian traditions. Explain the critical understanding about modern Indian thought

- Define the Indian Knowledge System through Indian Social and Political Thought.

PSSC 08 :- MODERN POLITICAL THOUGHT AND THEORY

After completion of the course, the student will be able..

- To Create the knowledge of modern Political theory, thoughts of Rawls and Popper, and libertarianism.

- To Evaluate the ideas of existentialists, and revolutionary Marxists.

- To Explain the ideas of neoliberalists, feminists and postmodernism.

- To Interpret the Political thought of contemporary or Euro Marxists.

PSSE 01 :- Gandhian Studies

After completion of the course, students will be able to

- create a corpus of knowledge by studying the contribution of Gandhiji in the Indian national movement.

- Evaluate Gandhi's principles of satyagraha, truth, non violence and purity of means and adopt them in their future life.

- Analyse Gandhi's ideas with socialism, Marxism and nationalism.

- Apply the knowledge like of social harmony, social conflict resolution from a Gandhian perspective

PSSE 02 :- Political Ideologies

After completion of the course, the student will be able to

- Develop the ideas, concepts and values inherent in the political life of a citizen.
- Judge the Systematic reflection and critical analysis of the political phenomenon.
- Differentiate the concepts of 'political' relation to 'social', 'economic' and 'moral' Values.Interpret a good state in a good society, and create processes, procedures, institutions, and structures which could be rationally achievable.
- Explain the idea of truth and non-violence which become the bedrock of Gandhian Philosophy. Define the nature and relevance of Indian Ideology.and Impact on Society.

PSSE 03 :- Indian Foreign Policy

After completing this course, students will be able

- To understand and analyse the world system and the formulation of Indian Foreign Policy and analyse the effect of internal and external elements in determining Foreign Policy.
- To apply the major to the knowledge of Indian foreign policy.
- To Explain the Foreign Policy in the context of different scenarios of world politics.
- To remember the disputes arising with neighbouring countries and the process of their resolution, students will be able to decide the right direction in the future.

PSSE 04 :- National Movement and Constitutional Development of India

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

- Create the understanding of the nature of Indian nationalism and the Constitution with historical perspectives and insights. Evaluate the intentions and visions of Constitution makers in the design and inclusion of distinct aspects in the Indian Constitution.

- Analyse the role of different culture and political organisations and ideologies which contributed to the freedom movement of India significantly. Predict the value and importance of freedom struggle and constitutional development in the making of Indian constitution and evolution of our democratic system and substantive democracy.

- Discuss the stages and setting in which Constitutional measures and reforms were initiated, contested and modified culminating in the making of the Indian Constitution.

- Recognize and appreciate the values and design of the Indian Constitution resulting from the diverse intellectual traditions, ideas, and concerns of freedom fighters

PSSE 05 :- State Politics in India with special reference to Chhattisgarh.

On completion of the course, this course enables the students to..

- Build a comprehensive knowledge about the basic assumptions of state politics, its development etc.

- Enables the students to evaluate the impact and patterns of globalisation on state politics.

- Enables the students to analyse the characteristics and politics of Chhattisgarh.

- Enables the students to gain practical knowledge about the administrative structure of Chhattisgarh.

PSSE 06 :- Comparative Politics

On completion of the course, this course enables the students to..

- Build comprehensive knowledge about the basic assumptions of comparative politics, its development etc.

- Enables students to evaluate the impact of scientific methods on comparative politics.

- Enables students to understand various theories of comparative politics and its basic dimensions.

- Enables students to gain practical knowledge about modern theories of comparative politics.

PSSE 07 :- Comparative Political Analysis Political Sociology

After completion of the course, the student will be able to

- Have an understanding of the concepts of comparative politics.

- Evaluate the concept of contemporary issues such as feminism, globalization and postmodernism with comparative studies.

- Develop the ability to compare theoretical and conceptual issues in political sociology and use them to understand political phenomena in a comparative perspective of a composite culture.

- Explain the relationship between state and society in shaping politics in India historically and analytically,

PSSE 08 :- International Organization

After completion of the courses the students will be able to

- Design the nature and development of the international organisation. Evaluate the role of the League of Nations and United Nations in establishing world peace.

- Analyse the roles of contemporary economic and political organisations.

- Solve the economic, social and human problems, which arose in the post-Cold War eraUnderstand the functioning of NATO, SEATO, CENTO and Baghdad Pact, a military organisation related to the security of nations.

- Define the nature of the International Monetary Fund, World Health Organization and new economic system.

PSSE 09 :- PUBLIC POLICY & DEVELOPMENT ADMINISTRATION

After completion of the course, the student will be able

- After completion of the course, the student will have a fair idea about:

- To develop basic concepts like public policy and public policy process.

- Assessing the importance of public policy

- To analyze the various stages of the public policy process in terms of theoretical constructs and process.

- To explain the conceptual and theoretical understanding of development administration.

PSSE 10 :- Human Rights: Theory and Practices

After completion of the course, the student will be able to

- Aquqnt through comparative study, students wili develop theoretical and practical understanding of human rights.
- Evaluate the efforts made by the United Nations and India for human rights.
- Explain human rights issues like terrorism, gender based violence, custodial torture etc.
- Identify challenges to human rights implementation

PSSE 11 :- POLITICAL ECONOMY

After completion of the course, the student will be able..

- To develop a basic understanding of the structural functional relationships linking the fields of politics and economics.
- To evaluate different approaches that will enhance students' knowledge on international political economy.
- Examining diverse global challenges to international political economy.
- To identify the prospects and challenges facing the Indian political economy.

PSSE 12 :- Contemporary Issues in Global Politics

After completion of the course, the student will be able...

- To gain knowledge of the causes and effects of the end of the Cold War.
- Be able to assess the arms trade and their effects on regional conflicts.
- To find out the regulatory elements of the causes and effects of terrorism on security.
- Can analyze various Kshatriya conflicts and identity politics, migration, etc.

PSVAC 01 :- constitutional Values

After completion of the course, the student shall be able to

- Develop students as good citizens that will act based on constitutional values.

- Evaluate the separation of power system in our constitution.
- Interpret the fundamental rights and duties that are described in the Indian Constitution.
- Explain democratic and constitutional values of Self governance.

PSSEC 01 :- Public Opinion and Survey Research

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

- Develop the importance of public opinion in a democracy and the role of survey research in comprehending the working of a democratic political system
- Assess the methods used for conducting surveys and interpreting survey data
- Analyse techniques of data collection and analysis.
- Interpret basic skill sets related to understanding public opinion formation and conducting research through the use of sample data, framing a questionnaire, etc.

PSSEC 02 :- Citizenship, duties and e-governance

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

- Create an understanding about the concept of citizenship.
- Have the ability to evaluate the basic features of modern state and citizenship.
- Analyse the various aspects of duties of citizens. Have understanding and applicable knowledge of laws
- Understand the concepts of duties, citizenship, Democracy and civil society.
- Have remembrance of the democratic, and constitutional values and active political life.

NON-NEP

Bachelor of Arts :-

PROGRAMME OUTECOMES

1. Understanding Political Ideologies: Develop a comprehensive understanding of diverse political ideologies and philosophies.
2. International Theory: Acquire a deep knowledge of International Political Theories and principles.
3. Knowledge of Public Administration: Demonstrate an understanding of the pivotal role of administration within the domain of Public Governance (Public Administration).
4. Promoting Research for Social Good: Cultivate a strong inclination toward research methodology and scholarly inquiry, focusing on projects that contribute to societal enrichment and development.
5. Mastery of Indian Governance: Attain and maintain current knowledge regarding the multi-faceted elements of the Indian governance system, including the Constitution, Parliament, organs of the government, and the procedure for constitutional amendments.
6. Success in Public Service and Social Duty: Achieve success in various competitive examinations and utilize this achievement to effectively discharge society-oriented duties and responsibilities.
7. Developing Political Participation Skills: Enhance the capacity for active participation and engagement in political affairs and activities.
8. Problem-Solving and Innovation: Be able to diagnose and resolve complex political, economic, and social issues, ensuring the initiation of relevant innovations and creative solutions.
9. Fostering Responsible Citizenship: Emerge as civilized and responsible citizens, possessing a strong sense of duty and commitment toward the welfare of society
10. Instilling National Awareness and Respect: Demonstrate respect for and actively disseminate knowledge about the National Anthem, National Song, Fundamental Duties, National Emblems, National Festivals, and the cultural heritage of the nation to all citizens.

COURSE OUTECOMES

Political Science as a Social Science discipline that not only studies government and state, but at the same time, applies empirical and scientific methods to analyse political issues. The subject matter is concerned with the day today life of individuals living in a society and state. Political Science is the subject deals with the study of political behaviour, governance and power and how these are shape by institutional settings and by the ideas, interests and resources of political actors. Therefore , a degree in Political Science not only enables students to enhance their grasp of the basic structure and processes of government system, public policies and political forces that directly impact their lives , but also help them analyse political problems, arguments, information and theories and to apply methods appropriate data applicable to this discipline . Above all, it aids students in becoming informed citizens by amplifying knowledge on their entitlement to the rights and duties within a state

The goals and Objectives of BA Political Science are as follows:

1. To impart Quality education to those seeking to BA Political science course.

2. To equip the students to prepare themselves for courses in teaching and research, the Unionand State Civil Services and the non-governmental sector.
3. To increase awareness among students on local, national and international issues andstrengthen their analytical skills and capabilities.
4. To train students to be good citizens.A graduate in Political Science should possess the capability to:
5. Demonstrate an understanding of fundamental political process, institutions, actors,behaviour, ideas and familiarity with major theories, methods and concepts of political science.
6. Demonstrate a proficiency in thinking systematically about political interactions in national,global and international contexts.
7. Demonstrate proficiency in thinking systematically about the ethical dimensions of politics.
8. Write effectively, engage in intellectual grounded oral debate, and form and express coherentarguments.
9. Synthesize, analyze, and critically evaluate major arguments with the discipline.
10. Comprehend the basic structure and process of government system / theoreticalunderpinnings.
11. Analyze political problems, arguments, information theories.
12. Apply methods appropriate for accumulating and interpreting data applicable to thediscipline of Political Science.
13. Educate the elected representatives about the parliamentary procedures and constitutionalpositions of the country.
14. Service to people by opting for Civil Services.

B.A. FIRST YEAR

PAPER.1 :- POLITICAL THEORY

1. Know about state, it's essential elements and different theories of the origin of state and basic knowledge about political science.
2. Know about citizenship , equality, Liberty and many other important things.
3. Students will be able to learn key concepts needed to understand the politicalphenomenon.
4. They will come to know about the role and functions of political theory.
5. They will come to know how Liberal and Marxist traditions look at and understandpolitics.
6. They will learn what is power and how does it operate in society and politics.
7. They will be able to explain the debates on the theories of justice.
8. They will be able to understand and explain different theories and contemporary debate indemocracy.

PAPER 2 :- INDIAN GOVERNMENT AND POLITICS

1. Get knowledge about constitution, its characteristics and Fundamental Rights.
2. Get knowledge about parliament, Supreme court, Judicial review and Judicial activism.
3. Students will be able to understand the terms of partition and how princely states wereintegrated.
4. They will come to know the importance of the Preamble in the constitutional design ofIndia

B.A.SECOND YEAR

PAPER.1 :- WESTREN POLITICAL THOUGHT

1. Know about main western political Thinker just like Plato, Aristotle, Hobbes, Locke, Rousseau, and Their Thoughts about political Institutions.
2. They will be able to explain what the ideal state was according to Plato and how was itlinked to his scheme of education and theory of justice.
3. They will be able to answer how Aristotle differed from his master Plato on theconception of justice.
4. They will be able to make a distinction among Hobbes, Locke, and Rousseau on the stateof nature, the law of nature, nature and form of contract and the emergence of state fromthe contract.
5. They will be able to answer how and why Machiavelli gave an overriding priority topragmatism above ethics and values in operation of statecraft.
6. They will be able to discern the meaning of utilitarianism and how Bentham and Milldiffered from each other.

PAPER.2 :- Comparative Govt.And Politics

1. Know the main political system which is adopted by different countries.
2. Know about the main characteristics of political system of different countries like Britain, China, America and Switzerland.
3. Students will come to understand and explain different forms of executive and theirfunctioning.
4. Students can have a debate on working of the organs of government and can concludeby evaluating the merits and demerits of these systems.

B.A. FINAL YEAR

PAPER.1 :- International Politics

1. Know about the significance of International Politics its Impact on different countries.
2. Know about the Disarmament, Globalization and Diplomacy etc.
3. Understand the major concepts of International politics including national power,national interest, foreign policy, diplomacy, balance of power etc.
4. Understanding and critically evaluating the theories and approaches of internationalpolitics viz. Idealist, Realist, World systems and game theory.
5. Identify the key actors in international politics including non – governmentalorganizations in the promotion of human rights and also concentrates on the nature,sources and sanctions of international law.

PAPER 2 :- public Administration

1. Knowledge of public Administration it's Importance and scope
2. Knowledge about government's part like legislature ,executiveandJudiciary and its control on administration.
3. The students will be able to make a difference between the public administration andprivate administration.
4. They will be able to explain what the decision-making approach is of Herbert Simon.
5. They will be able to explain the concepts and theories on motivation, leadership andconflict management in the organization.

Master of Art - Political Science

PROGRAMME OUTECOMES

11. Understanding Political Ideologies: Develop a comprehensive understanding of diverse political ideologies and philosophies.
12. International Theory: Acquire a deep knowledge of International Political Theories and principles.
13. Knowledge of Public Administration: Demonstrate an understanding of the pivotal role of administration within the domain of Public Governance (Public Administration).
14. Promoting Research for Social Good: Cultivate a strong inclination toward research methodology and scholarly inquiry, focusing on projects that contribute to societal enrichment and development.
15. Mastery of Indian Governance: Attain and maintain current knowledge regarding the multi-faceted elements of the Indian governance system, including the Constitution, Parliament, organs of the government, and the procedure for constitutional amendments.
16. Success in Public Service and Social Duty: Achieve success in various competitive examinations and utilize this achievement to effectively discharge society-oriented duties and responsibilities.
17. Developing Political Participation Skills: Enhance the capacity for active participation and engagement in political affairs and activities.
18. Problem-Solving and Innovation: Be able to diagnose and resolve complex political, economic, and social issues, ensuring the initiation of relevant innovations and creative solutions.
19. Fostering Responsible Citizenship: Emerge as civilized and responsible citizens, possessing a strong sense of duty and commitment toward the welfare of societ
20. Instilling National Awareness and Respect: Demonstrate respect for and actively disseminate knowledge about the National Anthem, National Song, Fundamental Duties, National Emblems, National Festivals, and the cultural heritage of the nation to all citizens.

Course Outcomes

Semester I

Paper I – Indian Political Thought

- Understand the evolution of Indian political ideas from ancient to modern times.
- Analyze contributions of major thinkers such as Kautilya, Gandhi, Ambedkar, and others.
- Evaluate the relevance of Indian political thought in contemporary politics.
- Compare Indian traditions with Western political ideas.
- Develop critical insights into democratic, socialist, and nationalist ideologies in India.
- Apply traditional ideas to understand present-day challenges.

Paper II – Indian Government and Politics

- Understand the constitutional framework of India.
- Analyze the structure and functioning of the legislature, executive, and judiciary.
- Evaluate federalism, decentralization, and governance mechanisms.
- Examine the dynamics of the party system and electoral politics.

- Assess issues of social justice, secularism, and rights in Indian politics.
- Apply theoretical concepts to contemporary Indian political issues.

Paper III – Comparative Politics

- Define approaches and methods of comparative politics.
- Understand similarities and differences among political systems.
- Evaluate structures like legislatures, executives, and judiciaries across nations.
- Examine political culture, participation, and development in comparative perspective.
- Critically analyze developed versus developing political systems.
- Apply comparative frameworks to global and regional issues.

Paper IV – International Organization

- Understand the evolution and role of international organizations (UN, WTO, etc.).
- Evaluate the effectiveness of peacekeeping and conflict resolution mechanisms.
- Analyze the role of regional organizations in global governance.
- Examine India's role in international organizations.
- Critically assess the successes and failures of multilateral institutions.
- Apply knowledge of organizations to current international issues.

Semester II

Paper I – Western Political Thought

- Understand major political thinkers from Plato to Marx.
- Compare classical, medieval, and modern Western political ideas.
- Evaluate theories of liberty, justice, rights, and democracy.
- Analyze the relevance of Western thought in modern governance.
- Critically reflect on ideological traditions such as liberalism, socialism, and conservatism.
- Apply Western political thought to global challenges.

Paper II – State Politics in India

- Understand the dynamics of state-level politics in India.
- Analyze regional parties, movements, and leadership patterns.
- Evaluate center–state relations and their impact on governance.
- Study caste, religion, and ethnicity in state politics.
- Critically assess issues of development and regional disparities.
- Apply knowledge to analyze specific state case studies.

Paper III – Comparative Politics and Developing Countries

- Understand the challenges of political development in developing nations.
- Analyze the role of colonial legacy, modernization, and dependency.
- Examine political institutions and their effectiveness in developing countries.
- Evaluate democratization, military rule, and authoritarian systems.
- Study development strategies and governance reforms.
- Apply theories to cases from Asia, Africa, and Latin America.

Paper IV – Indian Foreign Policy

- Understand the principles and objectives of India's foreign policy.
- Analyze India's relations with major powers and neighbors.

- Evaluate the role of non-alignment, strategic autonomy, and multilateralism.
- Study India's position in global organizations (UN, WTO, BRICS).
- Examine security, defense, and economic dimensions of foreign policy.
- Apply knowledge to contemporary foreign policy challenges.

Semester III

Paper I – Principles of International Politics

- Understand the evolution, nature, and scope of international politics.
- Compare major theories: realism, idealism, systems theory, etc.
- Evaluate the concepts of power, balance of power, and collective security.
- Analyze neo-colonialism, national interest, and ideology in world politics.
- Examine disarmament, nuclear treaties, and regional organizations.
- Apply theoretical knowledge to current global conflicts.

Paper II – Public Administration (Part I)

- Understand the definition, scope, and approaches to public administration.
- Differentiate public and private administration.
- Analyze theories of organization and principles of management.
- Evaluate centralization, decentralization, and role of executives.
- Study recruitment, training, bureaucracy, and the role of UPSC.
- Apply administrative concepts to governance challenges.

Paper III – Research Methodology (Part I)

- Understand the basics of research in political science.
- Learn various research designs and methods.
- Analyze quantitative and qualitative approaches.
- Apply techniques of data collection and hypothesis testing.
- Evaluate ethical issues in research.
- Develop research proposals and dissertations.

Paper IV – Government and Politics of Chhattisgarh

- Understand the historical and political evolution of Chhattisgarh.
- Analyze the state's administrative and constitutional framework.
- Study political parties, elections, and leadership patterns.
- Evaluate regional movements and tribal politics.
- Assess governance and development challenges in the state.
- Apply comparative insights to regional case studies.

Semester IV

Paper I – Contemporary Issues of International Politics

- Understand emerging trends in global politics.
- Analyze globalization, terrorism, and environmental politics.
- Evaluate the role of human rights and humanitarian intervention.
- Study global governance and regional integration.
- Examine South–South cooperation and multipolarity.
- Apply theory to practical case studies of global issues.

Paper II – Public Administration (Part II)

- Understand advanced concepts in public administration.
- Evaluate policy formulation, implementation, and evaluation.
- Study financial administration, budgeting, and auditing.
- Analyze administrative reforms and e-governance.
- Critically assess development administration and people's participation.
- Apply administrative knowledge to modern governance challenges.

Paper III – Research Methodology (Part II)

- Apply advanced research tools and statistical methods.
- Develop skills in content analysis and field research.
- Use software applications for research (SPSS, etc.).
- Evaluate reliability, validity, and data interpretation.
- Prepare dissertations with academic rigor.
- Apply research for policy formulation and decision-making.

Paper IV – International Law

- Understand the nature and sources of international law.
- Analyze principles of the law of the sea, air, and outer space.
- Evaluate international humanitarian and environmental law.
- Study treaties, conventions, and judicial bodies such as the ICJ.
- Assess the role of international law in conflict resolution.
- Apply legal principles to contemporary global disputes.

Department of Hindi

कक्षा– बी.ए./बी.एस–सी./बी. कॉम. (सेमेस्टर प्रणाली)

NEP 2020

Program Outcomes (PO) -

1. भाषा और साहित्य के व्यापक स्वरूप तथा उसके महत्व को समझने में सक्षम हो सकेंगे।

2. भारतीय ज्ञान परम्परा की निरंतरता, उसके महत्व एवं उरा ज्ञान परम्परा से स्वंय एवं समाज को समृद्ध करने की दिशा में अग्रसर हो सकेंगे।

3. प्राचीन, मध्यकालीन एवं आधुनिक भारतीय साहित्य की अवधारणा को समझ सकेंगे।

4. अपने विचार एवं भावों को मौखिक और लिखित रूप में अभिव्यक्त करने हेतु सक्षम हो सकेंगे।

5. साहित्य और लोकतत्व एवं लोकजीवन से जुडकर अपने व्यक्तित्व का विकास कर सकेंगे।

6. विद्यार्थियों में तर्कों एवं प्रमाणों द्वारा प्रत्येक क्षेत्र में निर्णय लेने की क्षमता का विकास हो सकेगा।

7. नवीन संदर्भों में शोधदृष्टि विकसित होगी।

8. आधुनिक तकनीक के साथ हिंदी के रिश्ते को समझने की क्षमता का विकास होगा।

9. साहित्य के साथ मानव जीवन, विज्ञान तथा पर्यावरण को परिभाषित कर सकेंगे।

10. रोजगार के अवसरों की तलाश, सौंपी गई जिम्मेदारियों के निर्वहन एवं स्वयं का व्यवसाय शुरू करने संबंधी क्षमताओं की समझ का विकास हो सकेगा।

CLO - बी.ए. प्रथम/बी.एस–सी. द्वितीय/बी.कॉम. तृतीय सेम.

हिंदी भाषा (AEC-03)

1. विद्यार्थी हिन्दी भाषा एवं व्याकरण संबंधी ज्ञान से समृद्ध होंगे।

2. भाषा ज्ञान के माध्यम से भारतीय संस्कृति एवं भावनात्मक एकता के महत्व को समझने की क्षमता विकसित हो सकेगी।

3. मुहावरे एवं लोकोक्तियों का महत्व समझ सकेंगे।

4. व्यंग्य, निबंध एवं कविता विधा से परिचित होंगे।

5. निबंध लेखन एवं अपठित गंद्याश के माध्यम से विद्यार्थियो का बौद्धिक विकास हो सकेगा।

CLO - बी.ए. द्वितीय सेमेस्टर

संप्रेषण कला एवं सुजनात्मक हिंदी (SEC-01)

1. विद्यार्थयों में संप्रेषण कौशल का विकास होगा।

2. विद्यार्थियों में सर्जनात्मक क्षमता विकसित हो सकेगी।

3. विद्यार्थी मौलिक लेखन हेतु प्रेरित होंगे।

4. संचार माध्यमों के महत्व को समझ सकेंगे।

5. प्रिंट मीडिया और इलेक्ट्रानिक मीडिया के विविध पक्षों का ज्ञान प्राप्त कर सकेंगे।

CLO - बी.ए. प्रथम सेमेस्टर HNSC-01

हिंदी साहित्य का इतिहास (आदिकाल से रीतिकाल तक)

1. विद्यार्थी साहित्येतिहास, काल विभाजन एवं नामकरण संबंधी ज्ञान से अवगत हो सकेंगे।

2. युगीन परिस्थितियों और साहित्यिक प्रवृत्तियों के आधार पर साहित्य और समाज के अन्तर्संबंधो को समझ पाने में सक्षम हो सकेंगे।

3. युगीन सामाजिक सांस्कृतिक परिस्थितियों के परिप्रेक्ष्य में व्यापक दृष्टिकोण की समझ का विकास हो सकेगा।

4. आदिकाल से रीतिकाल तक के सम्पूर्ण रचनाकारों की रचनाओं और उसके विविध विषयों पर विश्लेषणात्मक विचारशीलता का विकास हो सकेगा।

5. हिन्दी गद्य के आविर्भाव के प्रधान कारणों एवं परिस्थितियों को समझ सकेंगे।

CLO - बी.ए. द्वितीय सेमेस्टर HNSC-02

हिंदी साहित्य का इतिहास (आधुनिक काल)

1. युगीन परिस्थितियों और साहित्यिक प्रवृत्तियों के आधार पर विद्यार्थी पुनर्जागरण काल एवं जागरण सुधार काल के प्रमुख रचानाकारों की उपादेयता को गहनता से समझ सकेंगे।

2. हिन्दी पद्य के साथ गद्य के क्रमबद्ध विकास को समझ सकेंगे।

3. छायावाद एवं छायावादोत्तर काव्य के माध्यम से तत्कालीन स्वतंत्रता आंदोलन की पृष्ठ भूमि से विद्यार्थी अवगत होंगे।
4.स्वातंर्त्योत्तर पद्य और गद्य की विभिन्न विधाओं के माध्यम से विद्यार्थी बदलते हुए सामाजिक–सांस्कृतिक मूल्यों को समझने में सक्षम हो सकेंगे।
5. भूमण्डलीकरण के दौर में युगीन हिन्दी साहित्य को विश्व साहित्य के समानान्तर रख कर मूल्यांकनपरक दृष्टि एवं समझ का विकास हो सकेगा।

CLO- बी.ए. तृतीय सेमेस्टर HNSC-03

मध्यकालीन हिंदी काव्य

1. विद्यार्थी तात्कालीन सामाजिक– सांस्कृतिक पृष्ठभूमि से अवगत होंगे।

2. युगीन मूर्धन्य कवि कबीरदास, तुलसीदास, सूरदास, घनानंद के काव्य के माध्यम से साहित्य और समाज के अन्तर्संबंधों को समझने की क्षमता का विकास हो सकेगा।

3. विद्यार्थी गौरवशाली मध्यकाल की काव्य प्रवृत्तियों से परिचित होंगे।

4. विद्यार्थियों में मध्यकालीन काव्य के प्रति आलोचनात्मक एवं व्यावहारिक दृष्टि की समझ विकसित हो सकेगी।

5. छात्रों में मानवतावादी मानवीय मूल्यों का विकास होगा।

CLO- बी.ए. चतुर्थ सेमेस्टर HNSC-04

अर्वाचीन हिंदी काव्य

1. विद्यार्थी द्विवेदी युगीन सामाजिक– सांस्कृतिक पृष्ठभूमि से अवगत होंगे।

2. छायावाद के काव्य के माध्यम से प्रकृति के विविध पक्षों से गहन लगाय और परिचय प्राप्त हो सकेगा।

3. विद्यार्थी काव्य के क्षेत्र में नवीन प्रयोगों को समझ सकेंगे।

4. नवीन सालों में मूल्यांकन एवं शोध की दृष्टि विकसित होगी।

5. पाठ्य कृतियों के संदर्भ में समीक्षा की क्षमता का विकास हो सकेगा।

CLO- बी.ए. पंचम् सेमेस्टर HNSC-05

अर्वाचीन हिंदी काव्य (भाग–2)

1. विद्यार्थी छायावादोत्तर काव्य एवं प्रवृत्तियों से परिचित हो सकेंगे।

2. छायावादोत्तार काव्य के विकासक्रम को समझ सकेगे।

3. कृतियों के माध्यम से युगीन परिस्थितियों से परिचित होगे।

4. पाठ्य कृतियों के सदर्भ में समीक्षा की क्षमता का विकास हो सकेगा।

5. रचनाओं के आस्वादन, अध्ययन् और मूल्यांकन की दृष्टि का विकास हो सकेगा।

CLO- बी.ए. षष्ठम् सेमेस्टर HNSC-06

कथा साहित्य

1. विद्यार्थी कहानी और उपन्यास के तात्विक स्वरूप से परिचित होंगे।

2. कहानी और उपन्यास के विकासक्रम से परिचित होगे।

3. विद्यार्थियों में भाषा और कथा साहित्य के रचनात्मक पहलुओं की समझ का विकास हो सकेगा।

4. कथा साहित्य के आस्वादन एवं विश्लेषण की क्षमता विकसित हो सकेगी।

5. विद्यार्थियों में सृजनात्मक क्षमता का विकास हो सकेगा।

CLO- बी.ए. सप्तम् सेमेस्टर HNSC-07

कथेतर गद्य (नाटक, एकांकी, निबंध)

1. विद्यार्थी हिन्दी निबंध, नाटक एवं एकांकी विधाओं से परिचित होंगे।

2. निबंधकार, नाटककार, एकांकीकर एवं उनकी रचनाओं से परिचित होंगे।

3. विद्यार्थी निबंध, नाटक एवं एकांकी के माध्यम से सामाजिक समस्याओं से परिचित हो उनके समाधान हेतु प्रेरित होंगे।

4. विद्यार्थियों में लेखकों की लेखन शैली का परिचय एवं आलोचनात्मक दृष्टि का विकास हो सकेगा ।

5. विद्यार्थियों में रचनात्मक क्षमता का विकास हो सकेगा।

CLO- बी.ए. अष्टम् सेमेस्टर HNSC-08

जनपदीय भाषा एवं साहित्य (छत्तीसगढ़ी)

1. विद्यार्थियों में छत्तीसगढ़ी भाषा एवं साहित्य के प्रति अभिरूचि का विकास हो सकेगा।

2. छत्तीसगढ़ी भाषा के रचनाकारों से परिचित होंगे।

3 छत्तीसगढ़ी कविता एवं अन्य गद्य विधाओं से परिचित होंगे।

4. छत्तीसगढ़ी साहित्य के प्रति आलोचनात्मक दृष्टि का विकास हो सकेगा।

5. विद्यार्थी छत्तीसगढ़ी भाषा एवं व्याकरण का ज्ञान प्राप्त कर छत्तीसगढी में साहित्य सृजन के लिए प्रेरित हो सकेंगे।

CLO- बी.ए. तृतीय सेमेस्टर (HNSE-01)

(DSE) तुलसीदास

1. विद्यार्थी महाकवि तुलसीदास के व्यक्तित्व एवं कृतित्व से परिचित होंगे।
2. हिंदी की भक्तिकालीन काव्य प्रवृत्तियों से परिचित होंगे।
3. विद्यार्थी तुलसी साहित्य की व्यापक प्रासंगिकता से अवगत होंगे।
4. पाठ्य कृतियों के संदर्भ में समीक्षा की क्षमता का विकास हो सकेगा।
5. विद्यार्थी युगीन सामाजिक–सांस्कृतिक परिस्थितियों से अवगत होंगे।

CLO- बी.ए. चतुर्थ सेमेस्टर (HNSE-02)

(DSE) छायावाद– प्रतिनिधि रचनाकार

1. विद्यार्थी छायावादी काव्य आंदोलन से परिचित होंगे।
2. विद्यार्थी छायावाद की काव्य प्रवृत्तियों से अवगत हो सकेंगे।
3. छायावादी प्रमुख कवियों एवं काव्यकृतियों से परिचित होंगे।
4. तत्कालीन सामाजिक–सांस्कृतिक परिस्थितियों से अवगत हो सकेंगे।
5. पाठ्यकृतियों के संदर्भ में आलोचनात्मक दृष्टि का विकास हो सकेगा।

CLO- बी.ए. पंचम् सेमेस्टर (HNSE-03)

(DSE) राष्ट्रीय काव्यधारा

1. विद्यार्थी तत्कालीन राष्ट्रीय आंदोलन से परिचित होंगे।
2. विद्यार्थी राष्ट्रीय काव्यधारा की प्रवृत्तियों से अवगत हो सकेंगे।
3. राष्ट्रीय काव्यधारा के प्रमुख कवियों एवं काव्यकृतियों से परिचित होंगे।
4. पाठ्यकृतियों के संदर्भ में आलोचनात्मक दृष्टि का विकास हो सकेगा
5. राष्ट्र के प्रति प्रेम और कर्तव्य का भाव जागृत हो सकेगा।

CLO- बी.ए. षष्ठम् सेमेस्टर (HNSE-04)

(DSE) भाषा विज्ञान एवं हिंदी भाषा

1. विद्यार्थी हिंदी के विविध रूपों से अवगत होंगे।
2. विद्यार्थी भाषा विज्ञान के सैद्धान्तिक पक्षों से परिचित हो सकेंगे।
3. हिन्दी की उपभाषाओं एवं बोलियों से परिचित हो सकेंगे।
4. हिन्दी की ऐतिहासिक पृष्ठभूमि से परिचित हो सकेंगे।
5. भारतीय आर्य भाषाओं के क्रमिक विकास से परिचत हो सकेंगे।

CLO- बी.ए. सप्तम् सेमेस्टर (HNSE-05)

(DSE) भारतीय काव्यषास्त्र एवं साहित्यालोचन

1. विद्यार्थी भारतीय काव्यशास्त्र के स्वरूप को समझने में सक्षम हो सकेंगे।
2. विद्यार्थी भारतीय काव्यशास्त्र के विकासक्रम से परिचित हो सकेंगे।
3. हिन्दी आचार्यों के काव्यशास्त्रीय चिंतन से परिचित होंगे।
4. आधुनिक हिन्दी आलोचना की प्रमुख प्रवृत्तियों से अवगत हो सकेंगे।
5. भारतीय काव्यशास्त्र के प्रमुख सिद्धान्तों को समझने की क्षमता का विकास हो सकेगा।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-06)

(DSE) कार्यालयीन व व्यवहारिक हिंदी

1. विद्यार्थी कार्यालयीन हिन्दी के स्वरूप को समझने में सक्षम हो सकेंगे।
2. कार्यालयों में प्रयुक्त होने वाली हिन्दी के विविध पक्षों से परिचित हो सकेंगे।
3. जनसंचार माध्यमों में हिन्दी के प्रयोग से अवगत होंगे।
4. कम्पयूटर में हिन्दी के अनुप्रयोग में समक्ष होंगे।
5. विद्यार्थियों में कार्यालयीन एवं व्यावहारिक हिन्दी के प्रति अभिरूचि का विकास हो सकेगा।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-07)

(DSE) छत्तीसगढ का लोकसाहित्य

1. विद्यार्थी लोक जीवन एवं लोक संस्कृति से परिचित हो सकेंगे।
2. विद्यार्थी लोक साहित्य के स्वरूप से अवगत होंगे।
3. विद्यार्थियों में लोक संस्कृति की समझ विकसित हो सकेगी।
4. छत्तीसगढ़ के लोक साहित्य से जुड़ाव हो सकेगा।
5. विद्यार्थियों में लोक साहित्य के सृजन की रूचि जागृत हो सकेगी।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-08)

(DSE) अस्मितामूलक विमर्ष और हिंदी साहित्य

1. विद्यार्थी अस्मिता मूलक साहित्य की अवधारणा एवं स्वरूप से परिचित हो सकेंगे।
2. स्त्री विमर्श के प्रमुख साहित्यकार एवं कृतियों से अवगत होंगे।
3. विद्यार्थी हिंदी साहित्य और अस्मितामूलक साहित्य से अंतर्संबंध को समझ सकेंगे।
4. पाठ्य कृतियो के संदर्भ में समीक्षात्मक क्षमता का विकास हो सकेगा
5. विद्यार्थियों में सृजनात्मक क्षमता विकसित हो सकेगी।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-09)

(DSE) पाष्चात्य काव्यषास्त्र एवं साहित्यालोचन

1. विद्यार्थी पाश्चात्य काव्यशास्त्र की मूल अवधारणा से परिचित हो सकेंगे।
2. विद्यार्थी पाश्चात्य काव्यशास्त्र के विकासक्रम को समझ सकेंगें।
3. विद्यार्थी पाश्चात्य काव्यशास्त्र के प्रमुख सिद्धान्तों से परिचित हो सकेंगे।
4. आधुनिक समीक्षा के सिद्धान्तों से परिचित होंगे।
5. साहित्यशास्त्रीय अध्ययन के माध्यम से विद्यार्थियों में समीक्षात्मक दृष्टि का विकास हो सकेगा।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-10)

(DSE) अनुवाद / सिद्धांत एवं प्रविधि

1. विद्यार्थी अनुवाद के व्यापक स्वरूप से अवगत होंगे।
2. अनुवाद प्रक्रिया को समझ सकेंगे।
3. विद्यार्थी अनुवाद के सामाजिक सांस्कृतिक पक्षों से अवगत हो सकेंगे।
4. विद्यार्थियों में अनुवाद करने की क्षमता का विकास हो सकेगा।
5. विद्यार्थी अनुवाद के सैद्धान्तिक एवं व्यावहारिक महत्व को समझ सकेंगे।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-11)

(DSE) हिंदी कहानी

1. विद्यार्थी हिंदी कहानी के क्रमिक विकास से परिचित होंगे।
2. मूल्यांकन एवं विश्लेषण की क्षमता का विकास हो सकेगा।
3. कहानी के तात्विक स्वरूप से अवगत होंगे।
4. कृतियों के माध्यम से जीवन और समाज को समझने की क्षमता का विकास हो सकेगा।
5. विद्यार्थियों में रचनात्मकता की क्षमता विकसित हो सकेगी।

CLO- बी.ए. अष्टम् सेमेस्टर (HNSE-12)

(DSE) भारतीय साहित्य

1. विद्यार्थी भारतीय साहित्य के माध्यम से अखिल भारतीय परिप्रेक्ष्य से परिचित हो सकेंगे।
2. विद्यार्थी हिन्दीतर भाषा साहित्य से परिचित हो सकेंगे।
3. विद्यार्थियों में भारतीय साहित्य में अभिव्यक्त भारतीयता की पहचान करने की क्षमता का विकास होगा।
4. अनूदित साहित्य के आस्वादन एवं मूल्यांकन की क्षमता विकसित हो सकेगी।
5. पाठ्य कृतियों के माध्यम से भारतीय संस्कृति को समझने की क्षमता का विकास हो सकेगा।

CLO- बी.एस–सी./बी.कॉम. प्रथम/तृतीय सेमेस्टर (HNGE-01)

(GE) हिंदी साहित्य का इतिहास (आदिकाल से रीतिकाल तक)

1. विद्यार्थी साहित्येतिहास, काल विभाजन एवं नामकरण संबंधी ज्ञान से अवगत हो सकेंगे।

2. युगीन परिस्थितियों और साहित्यिक प्रवृत्तियों के आधार पर साहित्य और समाज के अन्तर्संबंधो को समझ पाने में सक्षम हो सकेंगे।

3. युगीन सामाजिक सांस्कृतिक परिस्थितियों के परिपेक्ष्य में व्यापक दृष्टिकोण की समझ का विकास हो सकेगा।

4. आदिकाल से रीतिकाल तक के सम्पूर्ण रचनाकारों की रचनाओं और उसके विविध विषयों पर विश्लेषणात्मक विचारशीलता का विकास हो सकेगा।

5. हिन्दी गद्य के आविर्भाव के प्रधान कारणों एवं परिस्थितियों को समझ सकेंगे।

CLO- बी.एस–सी./बी.कॉम. द्वितीय/चतुर्थ सेमेस्टर (HNGE-02)

(GE) हिंदी साहित्य का इतिहास (आधुनिक काल)

1. युगीन परिस्थितियों और साहित्यिक प्रवृत्तियों के आधार पर विद्यार्थी पुनर्जागरण काल एवं जागरण सुधार काल के प्रमुख रचानाकारों की उपादेयता को गहनता से समझ सकेंगे।

2. हिन्दी पद्य के साथ गद्य के क्रमबद्ध विकास को समझ सकेंगे।

3. छायावाद एवं छायावादोत्तर काव्य के माध्यम से तात्कालीन स्वतंत्रता आंदोलन की पृष्ठ भूमि से विद्यार्थी अवगत होगे।

4. स्वातंर्त्योत्तर पद्य और गद्य की विभिन्न विधाओं के माध्यम से विद्यार्थी बदलते हुए सामाजिक–सांस्कृतिक मूल्यों को समझने में सक्षम हो सकेंगे।

5. भूमण्डलीकरण के दौर में युगीन हिन्दी साहित्य को विश्व साहित्य के सामानान्तर रख कर मूल्यांकनपरक दृष्टि एवं समझ का विकास हो सकेगा।

NON-NEP

स्नातक 3 वर्षीय पाठ्यक्रम (**Old course**)

बी. ए./बी.एस–सी./बी. कॉम. भाग–1

हिंदी भाषा :–आधार पाठ्यक्रम

Program outcomes (PO) –

1. हिंदी भाषाके प्रयोजनात्मक स्वरूप का सामान्य ज्ञान प्रदान करना।

2. कंप्यूटर में हिंदी भाषा के प्रयोग की आवश्यकता के अनुरूप कंप्यूटर की कार्य प्रणाली की आरंभिक जानकारी से अवगत होने के लिए प्रेरित करना।

3. हिंदी व्याकरण की बुनियादी ज्ञान संप्रेषण कौशल तथा आषाची दक्षता से अवगत कराना।

4. साहित्य और समाज को समझने की दिशा में रुझान उत्पन्न करना।

Course outcomes (CLO) -

इस पाठ्यक्रम को पूर्ण करने के पश्चात विद्यार्थी–

1. हिंदी प्रयोजनात्मक तथा कार्यशील भाषा के प्रति सजग होंगे।

2. भाषा संबंधी संभावित अशुद्धियों एवं उनके परिष्कारसे परिचित होंगे तथा मानक भाषा का

व्यवहार करने में सक्षम होंगे।

3. विद्यार्थियों के शब्द भंडार में वृद्धि होगी।

4. हिंदी साहित्य के पठन–पाठन के प्रति रुचि जागृत होगी एवं सामाजिक महत्व के विविध आयामों को समझने की दृष्टि विकसित होगी।

बी.ए. भाग–1 हिंदी साहित्य

प्रश्न पत्र– प्रथम :–<u>प्राचीन हिंदी काव्य</u>

Program Outcomes (PO) –

1. आधुनिक काल से पूर्व का काल ज्ञान प्रदान करना।
2. हिंदी भाषा और साहित्य के विकास संबंधी ज्ञान प्रदान करना।
3. धार्मिक तथा ऐतिहासिक साहित्य ज्ञान कराना।
4. भक्तिकाल एव रीतिकाल एवं प्रमुख कवियों से परिचय कराना।

Course outcomes (CLO) -

1. विद्यार्थियों को हिंदी साहित्य की प्रारंभिक काव्य परंपरा एवं रचना शिल्प से परिचित कराना।
2. प्राचीन हिंदी काव्य के अंतर्गत आदिकाल, भक्तिकाल एवं रीतिकाल के प्रतिनिधि कवियों के साहित्य के प्रति मूलभूत समझ विकसित करना।
3. साहित्य के माध्यम से विद्यार्थियों में प्रेम, सद्भाव एवं जीयन मूल्यों का विकास करना।
4. छत्तीसगढ़ प्रदेश के कवियों एवं उनके साहित्यिक अवदान के प्रति विद्यार्थियों में अभिरुचि जागृत करना।

बी.ए. भाग–1 हिंदी साहित्य

प्रश्न पत्र– द्वितीय :–<u>हिंदी कथा साहित्य</u>

Program Outcomes (PO) –

1. हिंदी गद्य की प्रमुख विधाओं का ज्ञान विकसित करना।
2. प्रसिद्ध एवं लोकप्रिय साहित्यकारों से परिचय कराना।
3. आधुनिक जीवन के समस्या यथार्थ का चित्रण करना।

Course outcomes (CLO) -

1. विद्यार्थियों को हिंदी उपन्यास एवं हिन्दी कहानी की विकास यात्रा से परिचित कराना।

2. उपन्यास एवं कहानी विधा की शिल्पगत विशेषताओं से अवगत कराना।

3. मुंशी प्रेमचंद एवं सुप्रसिद्ध कहानीकारों के व्यक्तित्व, कृतित्व एवं साहित्यिक अवदान से विद्यार्थियों को परिचित कराना।

4. छत्तीसगढ़ प्रदेश के साहित्यकारों के रचनात्मक कौशल एवं हिंदी कथा साहित्य की अंतर्वस्तु की समझ विकसित करना

बी. ए./बी.एस–सी./बी. कॉम. –2 हिंदी भाषा

आधार पाठ्यक्रम

Program Outcomes (PO) –

(1) गद्य विधाओंसे अवगत कराना एवं निबंध कौशल सिखाना।

(2) कार्यालयीन हिंदी का ज्ञान प्रदान करना ।

(3) हिंदी व्याकरण का समग्र ज्ञान प्रदान करना ।

(4) हिंदी भाषा में प्रचलित विभिन्न शब्द रूपों से परिचित कराना।

Course outcomes (CLO) -

1. गद्य की विभिन्न विधाओं से परिचित हो सकेंगे एवंउनमेंसाहित्यिक रुझान पैदा होगा।

2. हिंदी के आधारभूत व्याकरणिक अवधारणाओं से विद्यार्थी परिचित हो सकेंगे। उनमें रचनात्मकताएवं भाषाकौशल का विकास होगा।

3. विभिन्नप्रतियोगी परीक्षाओं की तैयारी में यह पाठ्यक्रम सहायक होगा।

बी.ए. भाग–2 –हिंदी साहित्य

प्रश्न पत्र– प्रथम :–अर्वाचीन हिंदी काव्य

Program Outcomes (PO) –

1. स्वतंत्रता प्राप्ति के पूर्व की भाषा, शिल्प, अंतर्वस्तु संबंधी ज्ञान विकसित करना।

2. आधुनिक काव्य के साथ अर्वाचीन हिंदी काव्य का ज्ञान कराना।

3. हिंदी की आधुनिक कविता की स्वरूप तथा उसकी मूल संवेदना के विषय में जानकारी प्रदान करना।

4. छायावाद के काव्यात्मक सौंदर्य को समझने की दिशा में प्रेरित करना।

5. छायावादोत्तर काव्य और प्रयोगवादी कविता को समझने की दृष्टि विकसित करना ।

Course outcomes (CLO) –

1. आधुनिक काव्य की युगीन प्रवृत्तियों एवं विशेषताओं से विद्यार्थियों का परिचय कराना।

2. आधुनिक साहित्य के माध्यम से विद्यार्थियों में राष्ट्रीयता, सहिष्णुता, सद्भावना एवं मानवीय मूल्यों को जागृत करना।

3. विविध आधुनिक विचार धाराओं में प्रवहमान हिंदी काव्य और कविता के समीक्षात्मक विवेचन से विद्यार्थियों को परिचित कराना।

4. युगीन भाषा, संस्कृति और समय की समझ विकसित करना।

5. आधुनिक काव्य स्वतंत्रता के पूर्व और पश्चात की भाषा शैली एवं वैचारिक यात्रा का बोध कराता है इस वैचारिक यात्रा से विद्यार्थियों को अवगत कराना।

बी.ए. भाग–2 हिंदी साहित्य

प्रश्न पत्र– द्वितीय :–<u>हिंदी नाटक,निबंध तथा अन्य गद्य विधाएँ</u>

Program Outcomes (PO) –

1. हिंदी गद्य के विकास में वैचारिकता और आधुनिकता का मार्ग प्रशस्त करना।

2. नवजागरण की रश्मि और स्वाधीनता की चेतना नाटकों निबंधों एवं अन्य गद्य विधाओं से ही ज्ञान कराना।

3. हिंदी गद्य के वैचारिक और सौंदर्यात्मक पक्ष से परिचित हो सकेंगे।

4. हिंदी नाटक के आरंभिक दौर में उसके स्वरूप संवेदनात्मक बुनावट तथा प्रगतिवादी स्वभाव से अवगत कराना।

5. हिन्दी एकांकी के विषय में आरंभिक ज्ञान प्रदान करना।

Course outcomes (CLO) –

1. गद्य साहित्य आधुनिक काल की प्रवृत्तियों एवं विचारधाराओं का जीवंत दस्तावेज है। हिंदी नाटक, एकांकी एवं निबध हिन्दी गद्य साहित्य की महत्वपूर्ण सतत् प्रवाहमान विधाएँ हैं। इन विधाओं के विकासक्रम से विद्यार्थियों को परिचित कराना।

2. हिंदी महा साहित्य आधुनिक जीवनानुभूतियों, संवेदनाओं और परिस्थितियों का परिचायक है। विद्यार्थियों को इन विधाओं के विकास कम, भाषायी एवं शिल्पगत सूक्ष्मताओं एवं विविधताओं से परिचित कराना।

3. गद्य साहित्य के अध्ययन से विद्यार्थियों में देशभक्ति और राष्ट्रीयता की भावना जागृत कराना।

बी.ए./बी.एस–सी./बी. कॉम. (भाग–3)

हिंदी भाषा (आधार पाठ्यक्रम)

Program outcomes (PO) -

1. हिंदी भाषा एवं साहित्य से सामान्य परिचय हो सकेंगे ।

2. हिंदी में अभिव्यक्ति की पद्धतियों से परिचय होगा एवं उनके संप्रेषण कौशल में वृद्धि हो सकेगी।

3. कामकाजी भाषा लेखन का कौशल विकसित हो सकेगा ।

4. भारतीय संस्कृति के समन्वयात्मक स्वभाव के प्रति विश्वास जागृत हो सकेगा।

Course outcomes (CLO) -

1. हिंदी साहित्य की मूल संवेदना से सामान्य रूप से परिचित कराना ।

2. भारत की सामाजिक, आर्थिक एवं पर्यावरण संबंधी समग्र राष्ट्रीय विकास की रणनीति के विषय में सामान्य जानकारी प्रदान करना।

3. हिंदी में अभिव्यक्ति की पद्धतियों से अवगत कराना एवं उनके संप्रेषण कौशल में वृद्धि करना।

4. कामकाजी भाषा का सम्यक ज्ञान प्रदान करना।

बी.ए. भाग–3 हिंदी साहित्य

प्रश्न पत्र– प्रथम :–छत्तीसगढ़ी भाषा एवं साहित्य

Program outcomes (PO) -

1. छत्तीसगढ़ी भाषा और सस्कृति के प्रति रूचि और सजगता का विकास।

2. छत्तीसगढ़ी भाषा के स्वरूप से परिचय।

3. लोक–साहित्य तथा उसकी विभिन्न विधाओं से परिचय तथा छत्तीसड़ी लोक–संस्कृति के प्रति जागरूकता का विकास।

4. समकालीन छत्तीसगढ़ी साहित्य से परिचय।

5. छत्तीसगढ़ी भाषा के संरचनात्मक एवं प्रयोजनात्मक पक्ष से परिचय।

6. छत्तीसगढ़ी के सामाजिक जीवन एवं सस्कृति तथा व्यवहार से सामान्य परिचय।

Course outcomes (CLO) -

इस पाठ्यक्रम का अध्ययन करने के पश्चात् विद्यार्थी –

1. छत्तीसगढ़ी भाषा और संस्कृति के प्रति अभिमुख होगे।

2. छत्तीसगढ़ी भाषा के स्वरूप का सामान्य परियय प्राप्त होगा।

3. लोक साहित्य एवं उसकी विभिन्न विधाओं से परिचय होगा।

4. छत्तीसगढ़ी लोक संस्कृति के प्रति जागरूकता का विकास होगा।

5. छत्तीसगढ़ी समकालीन साहित्य से परिचय होगा।

6. छत्तीसगढ़ी भाषा के संरचनात्मक एवं प्रयोजनात्मक पक्ष से परिचत होगें

7. छत्तीसगढ़ी के सामाजिक जीवन एवं संस्कृति तथा भाषा व्यवहार से परिचय होगा।

8. छत्तीसगढ़ी भाषा के क्षेत्र में करियर बनाने के इच्छुक विद्यार्थियों को तैयार करना।

9. राज्य स्तरीय प्रतियोगी परीक्षाओं के लिए विद्यार्थियों को तैयार करना।

बी.ए. भाग–3 हिंदी साहित्य

प्रश्न पत्र– द्वितीय :– हिंदी भाषा–साहित्य का इतिहास एवं काव्यांग विवेचन

Course outcomes (CLO) -

1. हिंदी भाषा के आधारभूत ज्ञान प्राप्ति के साथ, हिंदी के विविध रूपों से अवगत कराना।

2. हिंदी के शब्द भंडार से परिचित कराना जिससे विद्यार्थियों की भाषा समृद्ध और परिमार्जित हो सके।

3. भाषा साहित्य तथा संस्कृति के प्रति विद्यार्थियों की समझ और विवेक को विकसित करना।

4. हिंदी साहित्य के इतिहास की संक्षिप्त जानकारी देकर विद्यार्थियों को साहित्य की प्रमुख युगीन प्रवृत्तियों

के साथ विकास क्रम से अवगत कराना तथा उस काल की ऐतिहासिक, सामाजिक, सांस्कृतिक पृष्ठभूमि से भी परिचित कराना।

5. कांव्यांग विवेचन में अलंकारों और छंदों का अध्ययन कर भाषा के सौंदर्य के साथ–साथ, काव्य परंपरा को भी समृद्ध करना।

स्नातकोत्तर पाठ्यक्रम 'हिंदी'

प्रथम सेमेस्टर

प्रश्न पत्र – प्रथम

हिंदी साहित्य का इतिहास (आदिकाल एवं पूर्वमध्यकाल)

Program outcomes (PO) -

1. हिंदी साहित्य के इतिहास और इतिहास दर्शन के बीच के संबंधों से परिचित कराना।

2. हिंदी साहित्य और हिन्दी भाषी समाज के मध्य ऐतिहासिक संबंध और पारस्परिक निर्भरता से अवगत कराना।

3. भक्ति आंदोलन के सामाजिक परिप्रेक्ष्य और राष्ट्रीय सामाजिक संस्कृति के विकास में उसके प्रभाव को समझने की दृष्टि विकसित होगी।

4. भारतीय संस्कृति के बहुलतावादी और समन्वयवादी स्वरूप पर विश्वास पैदा होगा।

Course outcomes (CLO) -

1 इतिहास लेखन और साहित्य के इतिहास की समझ विकसित होगी।

2 हिंदी साहित्य के इतिहास दर्शन इतिहास लेखन की परंपरा और लेखन की समस्या से अवगत कराना ।

3 हिंदी साहित्य के इतिहास का काल विभाजन और नामकरण का समुचित ज्ञान होगा ।

4 आदिकालीन साहित्यिक प्रवृत्तियों, सांस्कृतिक पृष्ठभूमि व दार्शनिक विचारधारा से परिचय होगा।

5 पूर्व मध्यकालीन काव्य में लोक जागरण का नवीन स्वर समाहित है इसमें भारत की भावनात्मक एकता और सांस्कृतिक परंपरा को सुरक्षित रखा है।

प्रथम सेमेस्टर

प्रश्न पत्र – द्वितीय

प्रचीन एवं मध्यकालीन काव्य

Program outcomes (PO) -

1. हिंदी के पहले महाकाव्य पृथ्वीराजरासो सहित रासो काव्य परंपरा का परिचय और अध्ययन से साहित्यिक परंपरा का ज्ञान होता हैं।

2. प्राचीन भारतीय समाज और संस्कृति के संवेदनात्मक पक्ष की सामान्य समझ विकसित करना।

3. मध्यकालीन संस्कृति का अध्ययन और मध्यकालीन सामंती समाज के भीतर विकसित काव्यबोध की सामान्य जानकारी और समझ विकसित करना।

4 भक्ति आंदोलन के दौरान विशिष्ट प्रतिरोध की संस्कृति के प्रति जागरूकता उत्पन्न करना।

Course outcomes (CLO) -

1. विद्यार्थियों को हिंदी साहित्य के प्राचीन एवं मध्यकालीन काव्य का विशिष्ट ज्ञान प्राप्त होगा।

2. मध्यकालीन काव्य अपनी कलात्मक अभिव्यंजना में बेजोड़ है इसके अध्ययन से समाज व संस्कृति को समग्रता से समझा जा सकेगा।

3. प्रश्न पत्र में चंदबरदाई विद्यापति कविव मलिक मोहम्मद जायसी की कविताएं सम्मिलित है जिसके माध्यम से उनके कालजयी रचनाओं का ज्ञान होगा।

4. विद्यार्थी प्राचीन व मध्य युग की भाषा से अवगत हुए

5. रासो काव्य, लौकिक काव्य एवं निर्गुण काव्य परंपरा से परिचित हुए।

प्रथम सेमेस्टर

प्रश्न पत्र – तृतीय

<u>आधुनिक काव्य–1</u>

(द्विवेदी युगीन एवं छायावादी काव्य)

Program outcomes (PO) -

1. आधुनिक काव्यधारा और उसके संवेदनात्मक वैचारिक स्वरूप से अवगत करना।

2. द्विवेदीयुगीन एवं छायावाद के काव्य–वैशिष्ट्य और उसके महत्त्व से परिचित कराना।

3. हिन्दी साहित्य के पुनर्जागरण की परिस्थितियों तथा उनकी सर्जनात्मक प्रतिफलन के विषय में सम्यक दृष्टिकोण से अवगत करना

4. मैथिलीशरण गुप्त, जयशंकर प्रसाद, निराला और महादेवी वर्मा के काव्य और उनके रचनात्मक अवदान की जानकारी देना तथा उनके साहित्य का समीक्षात्मक विश्लेषण की समझ उत्पन्न करना।

Course outcomes (CLO) -

1. द्विवेदी युगीन व छायावादी काव्य के सशक्त हस्ताक्षर कवियों की युगीन प्रासंगिकता से परिचय।

2. द्विवेदी युगीन व छायावादी काव्य के माध्यम से समकालीन साहित्य का मूल्यांकन करने की क्षमता का विकास

3. साकेत महाकाव्य के माध्यम से राम कथा में उपेक्षित पात्रों से परिचय।

4. कामायनी महाकाव्य के माध्यम से जीवन के मनोवैज्ञानिक और सांस्कृतिक विकास के इतिहास का बोध।

प्रथम सेमेस्टर

प्रश्न पत्र – चतुर्थ

आधुनिक गद्य साहित्य

(नाटक, एकांकी एवं चरितात्मक तथा आत्मकथात्मक कृति)

Program outcomes (PO) -

1. आधुनिक गद्य की प्रमुख विधाओं के तात्विक स्वरूप व विकासक्रम की जानकारी देना।

2. आधुनिक गद्य साहित्य की आधुनिक संवेदना और समकालीन जीवन–बोध के सम्बंधों के प्रति सजगता प्रदान करना।

3. हिंदी नाट्य–परंपरा तथा एकांकी विधा के अध्ययन के प्रति उन्मुख करना।

4. चरितात्मक तथा आत्मकथात्मक लेखन के प्रति रचनात्मक रूप से उन्मुख और अभिप्रेरित करना।

Course outcomes (CLO) -

1. विद्यार्थियों में ऐतिहासिक विकास क्रम के परिप्रेक्ष्य में रचना विशेष के महत्व को समझने और मूल्यांकन की क्षमता विकसित हुई

2. नाटक, एकांकी के माध्यम से विद्यार्थी विविध समस्याओं से अवगत हुए और उन समस्याओं के समाधान के लिए प्रेरित किया।

3. आवारा मसीहा के माध्यम से प्रसिद्ध बांग्ला लेखक शरतचंद्र चट्टोपाध्याय की जीवनी से परिचित हुए।

4. आत्मकथात्मक कृति जूठन द्वारा दलित जीवन की पीड़ा को जानने का अवसर प्राप्त हुआ।

द्वितीय सेमेस्टर

प्रश्न पत्र – पंचम्

<u>हिंदी साहित्य का इतिहास</u>

(उत्तर मध्यकाल से आधुनिक काल तक)

Program outcomes (PO) -

1. उत्तर मध्य काल से आधुनिक काल की साहित्यिक परंपरा का सम्यक ज्ञान तथा उस काल में रचित साहित्य को समझने की दृष्टि प्रदान करना।

2. आधुनिकता और नवजागरण की ज्ञान–परंपरा और उसकी सामान्य पृष्ठभूमि की जानकारी प्रदान करना।

3. आधुनिक रचना के आस्वादन एवं समीक्षा की क्षमता विकसित करना।

4. हिंदी के आधुनिक साहित्य की सामाजिक पृष्ठभूमि से अवगत कराना तथा समाजशास्त्रीय पद्धति से उसे समझने की प्रणालियों की जानकारी देना।

Course outcomes (CLO) -

1. साहित्य की विभिन्न विधाओं का मूल्यांकन।

2. आधुनिक काल की सामाजिक, आर्थिक एवं सांस्कृतिक पृष्ठभूमि, राज्यक्रांति एवं पुनर्जागरण का समुचित ज्ञान होगा

3. हिंदी गद्य की प्रमुख विधाओं उपन्यास, कहानी, नाटक, निबंध का विकासात्मक अध्ययन किया जाएगा।

4. छायावादोत्तर काल, प्रगतिवाद, नई कविता, नवगीत व समकालीन कविता को समझने की दृष्टि और समझ विकसित होगी।

द्वितीय सेमेस्टर

प्रश्न पत्र – षष्ठम्

<u>मध्यकालीन काव्य</u>

Program outcomes (PO) –

1. मध्यकालीन काव्य के स्वरूप तथा उसकी भावभूमि से परिचित करना।

2. भक्तिकाल के महान कवियों सूरदास और तुलसीदास के काव्य–वैशिष्ट्य और उनकी कविता की लोकहितकारी भूमिका के प्रति जागरूकता उत्पन्न करना।

3 मध्यकालीन काव्य की प्रमुख प्रवृत्तियों एवं रचनाकारों का अध्ययन करना।

4 भक्तिकालीन साहित्य के ऐतिहासिक परिप्रेक्ष्य की जानकारी प्रदान करना।

Course outcomes (CLO) -

1 मध्यकालीन काव्य की मूल संवेदना तथा उसके भाषिक स्वरूप का बोध

2 राम एवं कृष्ण भक्ति का तुलनात्मक अध्ययन ।

3 भारतीय संस्कृति विशेषता भक्तियुगीन संस्कृति के समन्वयात्मक स्वभाव के प्रति संवेदनशील होंगे।

4 हिंदी की भक्तियुगीन साहित्यिक विरासत के प्रति गौरव का अनुभव कर सकेंगे।

द्वितीय सेमेस्टर

प्रश्न पत्र – सप्तम्

आधुनिक काव्य–2

(प्रगतिवाद, प्रयोगवाद, नई कविता एवं समकालीन कविता)

Program outcomes (PO) –

1. आधुनिक काव्य के मूल स्वभाव की समझ प्रदान कराना ।

2. आधुनिक काव्य के संवेदनात्मक और वैचारिक स्वरूप से परिचित करना।

3. नई कविता एवं समकालीन कविता के स्वरूप और प्रणाली से अवगत कराना।

4. प्रगतिवाद और प्रयोगवाद के सौंदर्यशास्त्रीय, वैचारिक और संवेदनात्मक दृष्टिकोण से अवगत कराना।

Course outcomes (CLO) -

1 आधुनिक कालीन हिंदी काव्य का विस्तृत बोध कराना।

2 भारत के सामाजिक परिदृश्य के प्रति सजगता।

3 अज्ञेय, मुक्तिबोध की कविताओं के अध्ययन से उनकी कालजयी रचनाओं का ज्ञान।

4 रघुवीर सहाय व केदारनाथ सिंह के काव्य में अनुस्यूत मानवीय मूल्यों से साक्षात भेंट कर सकेंगे।

द्वितीय सेमेस्टर

प्रश्न पत्र – अष्टम्

आधुनिक गद्य साहित्य

(उपन्यास, निबंध एवं कहानी)

Program outcomes (PO) –

1 युगीन संदर्भों के आलोक में उपन्यास, निबंध एवं कहानी गद्य विधाओं को जान सकेंगे।

2 हिन्दी गद्य साहित्य के प्रमुख स्तम्भ आचार्य रामचंद्र शुक्ल, मुंशी प्रेमचंद्र, जयशंकर प्रसाद आदि की प्रसिद्ध रचनाओं पर समीक्षात्मक दृष्टि विकसित कराना ।

3 आधुनिक गद्य साहित्य के अनुभव संसार के साक्ष्य से सामाजिक वास्तविकता के साक्षात्कार का प्रयत्न करना।

4 आधुनिक गद्य साहित्य की संवेदनात्मक बुनावट को समझने की दृष्टि प्रदान करना ।

Course outcomes (CLO) -

1. आधुनिक गद्य साहित्य के सशक्त लेखकों का आलोचनात्मक अध्ययन।

2. आधुनिक समाज की जीवंत समस्याओं का विस्तृत ज्ञान।

3. भारत के सामाजिक परिदृश्य के प्रति सजगता।

4. उपन्यास, कहानी व निबंध लेखन का अभिज्ञान।

तृतीय सेमेस्टर

प्रश्न पत्र – प्रथम

साहित्य के सिद्धांत एवं आलोचना षास्त्र

Program outcomes (PO) –

(1) विद्यार्थियों में आलोचनात्मक विवेक पैदा करना।

(2) भारतीय एवं पाश्चात्य साहित्य के सिद्धान्तों और आलोचना शास्त्र से अवगत कराना।

(3) साहित्य के पारंपरिक और आधुनिक मूल्यांकन के मानदण्डों और प्रतिमानों से परिचय कराना।

(4) साहित्य के सिद्धान्तों और आलोचना शास्त्र के माध्यम से समकालीन साहित्य की समझ और मूल्यांकन के लिए प्रेरित करना।

Course outcomes (CLO) -

(1) विद्यार्थियों में साहित्य का आलोचनात्मक विवेक पैदा होगा।

(2) साहित्य के सिद्धांत और आलोचनाशास्त्र की भारतीय एवं पाश्चात्य परम्परा से परिचित हो सकेंगे।

(3) उन्हें श्रेष्ठ साहित्य के मानदण्डों का ज्ञान होगा।

(4) समकालीन साहित्य की आलोचना और मूल्यांकन की दिशा में वे उन्मुख हो सकेंगे।

तृतीय सेमेस्टर

प्रश्न पत्र – द्वितीय

<u>भाषा विज्ञान</u>

Program outcomes (PO) –

(1) विद्यार्थियों को भाषा में परिवर्तन और विकास के नियमों से अवगत कराना।

(2) भाषा की ध्वनियों के वर्गीकरण और उच्चारण का वास्तविक ज्ञान कराना।

(3) भाषा की शुद्धता को बनाये रखने के लिए व्याकरण का ज्ञान देना।

(4) शब्द और अर्थ के संबंध, अनेकार्थता और अर्थ परिवर्तन का बोध कराना।

Course outcomes (CLO) -

(1) विद्यार्थी भाषा में परिवर्तन और विकास के नियमों से परिचित हो सकेंगे।

(2) उन्हें ध्वनियों के वर्गीकरण और सही उच्चारण का ज्ञान होगा।

(3) व्याकरण के ज्ञान के कारण वे शुद्ध भाषा का प्रयोग कर पायेंगे।

(4) विद्यार्थी शब्द और अर्थ के संबंध, अनेकार्थता और शब्दों के अर्थ परिवर्तन से परिचित हो सकेंगे।

तृतीय सेमेस्टर

प्रश्न पत्र – तृतीय

<u>कामकाजी हिंदी एवं पत्रकारिता</u>

Program outcomes (PO) –

(1) हिन्दी भाषा के विविध रूपों–सर्जनात्मक भाषा, राजभाषा, माध्यम भाषा के विविध प्रकार्यों से विद्यार्थियों को परिचित कराना।

(2) बदलते समय की माँग के अनुरूप हिन्दी में कम्प्यूटर और इन्टरनेट के उपयोग के बारे में जानकारी प्रदान करना।

(3) हिन्दी में पारिभाषिक शब्दावली के निर्माण के सिद्धान्तों एवं ज्ञान के विविध क्षेत्र की पारिभाषिक शब्दावलियों से विद्यार्थियों को परिचित करना।

(4) हिन्दी पत्रकारिता के इतिहास के साथ पत्रकारिता से जुड़े व्यावहारिक ज्ञान प्रदान करना।

Course outcomes (CLO) -

(1) विविध क्षेत्रों में हिन्दी भाषा के प्रयोग से विद्यार्थी परिचित हो सकेंगे।

(2) कम्प्यूटर और इन्टरनेट पर हिन्दी के उपयोग की जानकारी उन्हें हो सकेगी।

(3) विविध क्षेत्र के पारिभाषिक शब्दावलियों एवं पारिभाषिक शब्दावली के निर्माण के सिद्धान्तों से वे अवगत हो सकेंगे।

(4) पत्रकारिता के इतिहास के साथ–साथ पत्रकारिता से जुड़े विविध कार्यों की व्यावहारिक जानकारी प्राप्त कर सकेंगे।

तृतीय सेमेस्टर

प्रश्न पत्र – चतुर्थ

<u>भारतीय साहित्य</u>

Program outcomes (PO) –

(1) विद्यार्थियों में अपनी भाषा के साहित्य के अलावे अन्य भारतीय भाषाओं के साहित्य के प्रति रुचि पैदा करना।

(2) विविध भारतीय भाषाओं के साहित्य का तुलनात्मक अध्ययन कर उनके बीच समता और विषमता के तत्वों की पहचान करना।

(3) अनुवाद के माध्यम से भारतीय साहित्य की कुछ श्रेष्ठ रचनाओं का आलोचनात्मक अध्ययन करना।

(4) भारतीय साहित्य की अवधारणा का विकास करना।

Course outcomes (CLO) -

(1) विद्यार्थियों में अन्य भाषाओं के साहित्य के अध्ययन के प्रति रूचि विकसित होगी।

(2) भारतीय भाषाओं के साहित्य के प्रति परिचय का दायरा बढ़ेगा और भाषिक संकीर्णता दूर होगी।

(3) विद्यार्थी भारतीय भाषाओं के साहित्य के तुलनात्मक अध्ययन करने की दिशा में अग्रसर होंगे।

(4) भारतीय साहित्य की अवधारणा मजबूत होगी और राष्ट्रीय एकता को बढ़ावा मिलेगा।

चतुर्थ सेमेस्टर

प्रश्न पत्र – पंचम्

<u>हिंदी आलोचना तथा समीक्षाशास्त्र</u>

Program outcomes (PO) –

(1) विद्यार्थियों को साहित्य एवं साहित्येतर क्षेत्र के विभिन्न वादों एवं सिद्धान्तों से परिचय करना जिससे उनकी आलोचनात्मक क्षमता का विकास हो।

(2) हिन्दी के कवि आचार्यों एवं काव्य शास्त्रीय चिन्तन की परम्परा तथा हिन्दी के प्रसिद्ध आलोचकों की आलोचना से विद्यार्थियों को परिचित कराना।

(3) हिन्दी आलोचना की विविध प्रवृत्तियों की जानकारी प्रदान करना।

(4) विद्यार्थियों में स्वतंत्र आलोचनात्मक विवेक पैदा करने हेतु व्यावहारिक समीक्षा का अभ्यास कराना।

Course outcomes (CLO) -

(1) विद्यार्थियों को साहित्य एवं साहित्येतर क्षेत्र के विभिन्न वादों एवं सिद्धांतों का ज्ञान होगा।

(2) वे हिन्दी की काव्यशास्त्रीय चिंतन की परम्परा के साथ–साथ हिन्दी के प्रसिद्ध आलोचकों की आलोचना से परिचय प्राप्त कर सकेंगे।

(3) उन्हें हिन्दी आलोचना की विविध प्रवृत्तियों का ज्ञान होगा।

(4) उनमें नवीन कृतियों की व्यावहारिक आलोचना हेतु आलोचनात्मक विवेक पैदा होगा।

चतुर्थ सेमेस्टर

प्रश्न पत्र – षष्ठम्

हिंदी भाषा

Program outcomes (PO) –

(1) हिन्दी भाषा के विकास की ऐतिहासिक पृष्ठभूमि से विद्यार्थियों को परिचित कराना।

(2) हिन्दी भाषा के भौगोलिक विस्तार की जानकारी प्रदान करना।

(3) सम्पर्क भाषा, राष्ट्र भाषा, राजभाषा, संचार भाषा के रूप में हिन्दी के विविध रूपों तथा उसकी संवैधानिक स्थिति के बारे में विद्यार्थियों को जानकारी देना।

(4) हिन्दी में कम्प्यूटर की सुविधाओं तथा देवनागरी लिपि की विशिष्टताओं से विद्यार्थियों को अवगत कराना।

Course outcomes (CLO) -

(1) विद्यार्थी हिन्दी भाषा के विकास की ऐतिहासिक पृष्ठभूमि से परिचित हो सकेंगे।

(2) उन्हें हिन्दी भाषा के भौगोलिक विस्तार का ज्ञान होगा।

(3) वे हिन्दी भाषा के विविध रूपों तथा उसकी संवैधानिक स्थिति से परिचित होंगे।

(4) हिन्दी में कम्प्यूटर की सुविधाओं के साथ–साथ देवनागरी लिपि की विशेषताओं से परिचित हो सकेंगे।

चतुर्थ सेमेस्टर

प्रश्न पत्र – सप्तम्

मीडिया लेखन एवं अनुवाद

Program outcomes (PO) –

(1) विद्यार्थियों को जनसंचार के विविध माध्यमों एवं मीडिया लेखन की जानकारी प्रदान करना।

(2) दृश्य एवं श्रव्य माध्यम (फिल्म, टेलीविजन एवं रेडियो) की विविध विधाओं की भाषिक प्रकृति से अवगत कराना।

(3) अनुवाद का सैद्धांतिक और व्यावहारिक ज्ञान प्रदान करना।

(4) व्यावहारिक अनुवाद के विविध क्षेत्रों–कार्यालयीन, प्रशासनिक, साहित्यिक अनुवाद की विशिष्टता और प्रविधि से अवगत कराना।

Course outcomes (CLO) -

(1) विद्यार्थियों को आधुनिक संचार के विविध माध्यमों का ज्ञान प्राप्त होगा।

(2) वे दृश्य एवं श्रव्य माध्यमों की भाषा की प्रकृति से अवगत होंगे।

(3) उन्हें अनुवाद का सैद्धांतिक और व्यावहारिक ज्ञान प्राप्त होगा।

(4) वे कार्यालयीन, प्रशासनिक, व्यावसायिक और साहित्यिक अनुवाद की दिशा में कार्य करने में सक्षम होंगे।

चतुर्थ सेमेस्टर

प्रश्न पत्र – अष्टम्

<u>जनपदीय भाषा एवं साहित्य (छत्तीसगढ़ी)</u>

Program outcomes (PO) –

(1) विद्यार्थियों को छत्तीसगढ़ी भाषा के स्वरूप एवं व्यावहारिक विशेषताओं से परिचय करना।

(2) छत्तीसगढ़ी साहित्य के इतिहास एवं युगीन प्रवृत्तियों की जानकारी प्रदान करना।

(3) छत्तीसगढ़ी कविता की महान विभूतियों एवं उनकी कविताओं से परिचय कराना।

(4) छत्तीसगढ़ी नाटक, उपन्यास एवं अन्य विधाओं की जानकारी प्रदान करना।

Course outcomes (CLO) -

(1) विद्यार्थी अपनी मातृभाषा एवं जनपदीय भाषा छत्तीसगढ़ी के स्वरूप एवं व्यावहारिक विशेषताओं से परिचित होंगे।

(2) उन्हें अपनी भाषा के साहित्य के इतिहास और विविध युगीन प्रवृत्तियों का ज्ञान प्राप्त होगा।

(3) छत्तीसगढ़ी कविता की महान विभूतियों और उनकी कविताओं से परिचित होंगे।

(4) छत्तीसगढ़ी भाषा में रचित नाटक, उपन्यास एवं अन्य विधाओं से परिचय प्राप्त कर सकेंगे।

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Department of English

NEP-2020

Program Outcomes (PO):

PO-1 Utilize efficiently the acquired knowledge of humanities to face the challenges of life.

PO-2 Implement the contributions of great thinkers and transform the society in accordance with local, national and global needs.

PO-3 Prioritize cultural, ethical and moral values through learning experiences for a sustainable development.

PO-4 Understand the cultural values of different countries through their literature. Develop global leadership competencies

PO-5 Enhance leadership qualities, team spirit and communication skills for a better developmental career.

PO-6 Apply the comprehensive learning to attain self-confidence and self-reliance in their chosen career and higher education.

PO-7 Emerge with competency to view challenges and experiences with multiple perspectives through critical thinking.

PO-8 Develop LSRW skills to communicate effectively and appropriately in person and online to facilitate inter-personal relationship with every section of the society.

PO-9 Nurture social concerns and social justice for effective civic life participation and to enhance value systems for assessing moral dimensions at every walk of life.

PO-10 Acquire the ability to simultaneously engage in independent multidisciplinary learning which facilitates lifelong learning.

Programme Specific Outcomes (PSOs)

PSO-1 Master communication skills for employability and higher education.

PSO2 Ascertain specialized knowledge of literature and its backgrounds.

PSO3 Interact confidently at the interface between life and self.

PSO-4 Understand the basic tenets of Literature.

PSO-5 Analyse cross-cultural nuances and to assess the underlying human values that connect peoples of all races

PSO-6 Determine the criss-crossing influencing factors in the fields of History, Literatures of the East and the West, Writings of Men and Women, Psychology and Socio Economics

PSO-7 Understand the applications of Literary Theories to creatively analyse literature with prismatic interpretation

PSO-8 Extend the envisioned emotional, social and psychological mellowness in the affairs of the society

PSO-9 Apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.

PSO -10 Identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.

PSO-11 Write analytically in a variety of formats, including essays, research papers, reflective writing, and critical reviews of secondary sources.

PSO 12 Ethically gather, understand, evaluate and synthesize information from a variety of written and electronic sources.

PSO-13 Understand the process of communicating and interpreting human experiences through literary representation using historical contexts and disciplinary methodologies.

Course Code-ENGE-01/ENSC-01

Course Title- Introduction to the Study of English Literature

1. Have a deep insight into various genres of English Literature and write clearly, coherently and effectively about them.
2. Recognize the culture and context of the work of literature.
3. Develop sensitivity to nature and fellow human beings.
4. Understand the growth of Indian Literature in English.
5. Apply the knowledge of literary genres in interdisciplinary fields.
6. Read and analyze the representative texts as categorized under the various genres.

Course Code-ENGE-02/ENSC-02

Course Title- History of English Literature

7. Be aware of the characteristics of the various ages of English Literature.
8. Understand different factors responsible for the literary developments that have taken place over the centuries in English Literature.
9. Understand the development of English Literature through a historical timeline.
10. Comprehend the defining ethos and characteristics of different periods in English Literature.
11. Develop a comprehensive understanding of the history of English Literature.
12. Take cognizance of the historical, social, and cultural context of each literary age and thereby make connections between literature and society, and appreciate literature's ability to stimulate feeling.

Course Code ENSC-03

Course Title- Indian Writing in English

1. Analyze the complexities of culture.
2. Understand the role of English as a medium for political awakening and the use of English In India for creative writing.
3. Analyze the strength and constraints of Indian English as a literary medium.
4. Develop a literary sensibility

Course Code ENSC-04
Course Title- American Literature

1. Understand the depth and diversity of American Literature and relate different themes and ideas in all the four genres of American Literature.
2. Identify the contributions of major authors in the growth of American literature and trace out the causes and impact of World Wars I and II.
3. Develop their knowledge on major literary trends, stages of growth and development of Poetry, Drama, Prose, Fiction and other writings.
4. The students will be able to critically examine, compare and comment on the political, socio-cultural and economic influences on the writers and their works socially the influence of Indian Spirituality and transcendentalism.

Course Code ENSC-05
Course Title- DRAMA

1. Analyse and appreciate the representative works of British and American Drama.
2. Comprehend the general features of Shakespearean plays.
3. Develop an interest in Shakespearean language, his use of images, supernatural elements, music and the word play.
4. Demonstrate the ability to contextualize the works of American dramatists, interpret the thematic and stylistics elements of the plays and appreciate their literary worth, social relevance and timeless appeal.

Course Code ENSC-06

Course Title- Colonial & Postcolonial Studies

1. Understand the socio-historical, political-economic contexts of Colonialism and Post-Colonialism in India and other countries affected by the colonial rule.
2. Understand the scope of Post-Colonial Literature in India and abroad; and realize the effects of colonial rule on language, culture, economy and habitat of specific groups of people affected by it.
3. Critically evaluate and interpret the issues of Imperialism and Racism.

4. Appreciate and critically analyse the changing role of English in Postcolonial literatures and relate colonialism to modernity.

Course Code ENSC-07

Course Title- Literary Criticism

1. Understand the historical and philosophical contexts that led to the development of literary criticism and its practice in different traditions and periods.
2. Understand fundamental literary and critical concepts and underlying distinctions amongst them.
3. Grasp a wide range of literary philosophers and critics whose works had informed and shaped the discourse of literary theory.
4. Have knowledge about major, critical movements and critics in various Indian and western critical traditions.
5. Identify theoretical and critical concepts with critics/texts/movements with which they are associated and understand them in their contexts.
6. Be able to apply various theoretical frameworks and concepts to literary and cultural texts.
7. Be able to strengthen and deepen their interpretative skills.

Course Code ENSC-08

Course Title- Language and Linguistics

1. Understand and interpret the complexities of English language; Make use of concepts and theories used in Linguistics.
2. Understand and analyze Language variation and Language acquisition theories.
3. Identify the role of the Organs of Speech and their functions insound production.
4. Differentiate and classify the English Vowels and Consonant sounds.
5. Estimate the phonetic, semantic and syntactic characteristics of language.
6. Identify and explain Morphology, Word formation and Phrase structure and IC analysis.

Course Code ENSE-01

Course Title- New Literature in English

1. Understand New Literatures that were written under colonial influences.
2. Identify the regionalization of the language.
3. Critical analyse the themes of the texts.
4. Engage with major forms and works of literature of the 20th Century.

Course Code ENSE-02

Course Title- Indian Literature in Translation

1. To enjoy and appreciate the rich tapestry of Indian Vernacular literature.

2. To understand the underlying aesthetics of writing in various Indian languages.
3. To familiarize the students with the Indian writers and their translated works.
4. Develop an understanding of different literary genres in translated Modern Indian Writings.
5. Develop and acumen to read appreciate and critically engage with translated Indian text from various regions

Course Code ENSE-03

Course Title- Partition Literature

1. Develop an understanding of the term 'Partition Literature.
2. Understand historical and socio-cultural factors responsible for the partition of the Indian sub-continent.
3. Demonstrate critical understanding of manifestations of the experience of partition in various art forms.
4. Link and analyse the eco-socio-historical-cultural contexts and dimensions related to partition of India.
5. Interpret texts and experiences and relate it to their contexts and experiences.

Course Code ENSE-04

Course Title- Women's Writings.

1. Recognise the importance of gender specificity in literature.
2. Understand the representation of female experience in literature.
3. Identify genres and narrative strategies employed by different women writers.
4. Express the concepts through writing.
5. Analyse literary texts through the perspective of gender.

Course Code ENSE-05

Course Title- Indian Diasporic Literature

1. Understand and analyse the historical, cultural and social contexts of the Indian Diasporic literature.
2. Analyse the major themes in the Indian diasporic literature.
3. Identify, interpret, compare and contrast the major works of Indian diasporic literature from different regions and time periods.
4. Distinguish between the different phases of Indian diasporic settlements.
5. Analyze and discuss key themes, motifs and narrative techniques in Indian diasporic literature.
6. Evaluate the changes in the perception of Indian diasporic literature from within and outside.
7. Comprehend the interrelations between home and homeland, diaspora and migration.

Course Code ENSE-06

Course Title- World Literature

1. Understand Literatures that were written outside Europe.
2. To understand the colonial and Postcolonial literatures.
3. Develop independent Critical responses to texts.
4. Engage with major forms and works of literature of the 20th century.
5. Analyze notarization of themes.

Course Code ENSE-07

Course Title- British Literature Post World War II

1. Be equipped with comprehensive understanding of literary genres, trends and movements in British Literature, thereby, enabling them to understand the valuable co-relation between the socio-cultural, economical and historical contexts, behind the literary production.
2. Become reflective and imaginative thinkers through a close, critical and analytical reading of the prescribed texts.
3. Be aware of the consequences of the World War II and encroachment of science and technology on humanity.
4. Be able to identify the theory of existentialism.

Course Code ENSE-08

Course Title- Literary Theories – I

1. Identify various literary theories.
2. Understand theoretical concepts with theorists and movements.
3. Apply various theoretical frameworks and concepts to literary texts.
4. Analyze strengths and limitations of theoretical frameworks.

Course Code ENSE-09

Course Title- Literary Theory- II

1. Understand various literary theories.
2. Identify theoretical concepts with theorists and movements.
3. Apply various theoretical frameworks and concepts to literary texts.
4. Analyze strengths and limitations of theoretical frameworks.

Course Code ENSE-10

Course Title- Popular Literary

1. understanding of the term 'Popular Literature'. Read and identify certain kinds of literature as 'popular' and 'formulaic'.
2. Distinguish literature of popular, mass consumption from academic, elitist literature.
3. Interpret popular genres using theoretical perspectives.
4. Connecting popular texts to their cultural context. Discover the art of enhancing travel experiences through travel literature
5. .Assess the manoeuvrings of child's psyche.
6. Develop inquisitive thinking and become more observant as detective fiction readers

Course Code ENSE-11

Course Title- Dalit Literature

1. Define Dalit literature.
2. Classify various genres of Dalit literature.
3. Understand the articulations of Dalit voices.
4. Illustrate the significance of Dalit literature in post-colonial literature.
5. Develop social awareness about marginalized people and their literature

Course Code ENSE-12

Course Title- Literature and Cinema

1. Understand various aspects of cinema.
2. Classify the evolution film as an art form.
3. Determine the National and International World of cinema.
4. Analyze the technical and flexibility of the digital technology.
5. Assess film as one of the oldest art forms yet it has a very close link with Literature.

Ability Enhancement Course (AEC)

Course Title- English Language

1. Understand and apply the use of Articles and Tenses in day to day life.
2. Analyze the power of imagination and creativity and critically appreciate the poems.
3. Identify and develop different types of writing skills.
4. Appreciate and value the use of idioms and phrases as enriching elements of language expression.
5. Learn deviant use of English both in written and spoken forms.
6. Understand the importance of communication in English.
7. Apply the ability to improve competence in using English language.
8. Analyze the importance of reading skills.
9. Develop language for speaking with confidence.

Value Added Course (VAC)

Course Title- Emotional Intelligence

1. Identify the concept and characteristics of emotional intelligence.
2. Evaluate the concept of different models of emotional intelligence.
3. Discover personal competence and techniques of building emotional intelligence.
4. Managing emotions effectively.

Skill Enhancement Course (SEC 01)

Course Title- Creative Writing

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1. Identify the basic concepts of creative writing.
2. Understand the craft of writing and writing process.
3. Employ various styles and techniques of writing and editing.
4. Assess and develop imagination.

NON-NEP

BA, BSc &BCom (PART – I, II & III)
FOUNDATION COURSE

Objectives of the Programme:
The objectives of the prescribed course are:

- To develop an aesthetic sense and love for literature, culture, tradition and language in learners.
- To help them appreciate ancient classic texts.
- To encourage them towards further learning.
- To provide learners with a basic understanding of the language.

PROGRAMME SPECIFIC OUTCOME:

The course of Foundation Course English Language :
PSO: BA/BSc/B Com Part-I – English Language and Indian Culture
The paper highlights ancient and old cultural traditions in Ancient India. The paper enables students to:

- To read and understand about Ancient and Old Indian culture and traditions
- Ancient Indian texts, myths and the impact of Ancient Indian culture on other cultures
- The age of Ramayana and Mahabharata and the impact of these epics in the development of the culture and traditions of the South-Asian countries
- Impact of Buddha and Buddhism in India and the neighbouring countries. Also, the development of Buddhism as a religion worldwide
- Ancient Indian Science and knowledge; India being the centre of literature and cultural exchange

- The old India and her boundaries, the rich heritage, the flourishing culture, Ancient Indian civilization, Harappa, Mohenjo-Daro and Indus-River Valley.
- The Ancient Indian Literature and the impact of the literature worldwide.

PSO: BA/BSc/B Com/BCA Part-II – Foundation English

The paper focuses on the Ancient Indian Science and the cultural ethics of India. The paper acquaints students with:

- The fine knowledge of Ancient India
- Ancient Indian Scientists, Mathematics and Mathematicians, medicines, medical practices and the ancient texts based on the same
- The colonial Indian culture and the impact of the colonization on the Indian sub-continent
- The introduction of Western Science and Western Culture
- Modern Indian scientists and the contribution of the Indians in the development of the Modern Science
- The basic knowledge of the language with the fine grammar, phonetics and the vocabulary
- Students will collect much information on the Science in Ancient India with the knowledge of the English language

PSO: BA/BSc/B Com/BCA Part-III – Aspects of English Language and Development

The paper is a collection of essays on the general information and awareness; also it helps students to advance in the language. Students also get glimpse of the English Literature with the collections of short-stories in the prescribed book. The textbook also helps students in:

- Collecting the information on the development and the advancement of the modern technique
- The geography of the state, soil, crops and water
- General information on the types of pollution and the increasing water crisis
- The ethics and conducts of the day-to-day life
- English language and the basic genres of the literature
- Famous essayists and short-story writers
- Famous Indo-Anglian and Anglo-Indian writers
- Texts describing the achievements of the modern Indians
- The development of modern science and technique in India
- Sci-fi and other such forms of the literature
- Also, the learners will develop a positive attitude towards the future and love for learning
- Advance grammar, sentence formation and vocabulary.

B.A. ENGLISH LITERATURE

PROGRAMME OUTCOME (POs)

- To help students to have a strong foundation in English Literature and develop comprehension knowledge of various forms of literature poetry, drama, prose, fiction and literary history.
- To make students proficiently oral & written communication.
- Perspective of literary movements that existed in different ages.
- Develop the knowledge of grammatical system of English Language.
- Apprehend different cultures and cultural sensibilities around the world.
- Define literary theory and terms in criticism.
- Expose the students to a wide range of writing from British/American and Anlophone origin.
- To recognize and appreciate the real world context of knowledge.
- To identify language variants (formal/informal, American/ British) and use the appropriate variety in a given context.
- Practice creative thinking and expression.
- Write analytically in different formats like essays, reviews etc.
- To articulate the relations among culture history & texts.

COURSE OUTCOME (COs)

B.A. – I (Paper – I)

Unit – I :**Annotations.**

Unit – II &III : POETRY

Discuss and describe the particular works of Shakespeare , John Donne, John Milton, John Dryden and Alexander Pope.

Unit- IV: PROSE

Determine the prose style of Fir Francis Bacon, Addision and Rechard Steele with the selected texts.

Unit- V: DRAMA

Discuss and describe the writing style of Shakespeare with his particular works.

Unit- VI: FICTION

Discuss on the contribution of Jonathan Swift to the English literature.

Unit- VII: LITERARY TERMS

Discuss and define the kinds of literary terms and Movements, theories.

B.A- I (PAPER 2)

Unit-I: **ANNOTATIONS.**

Unit-II & III: POETRY.

Poetry of William Blake, William Wordsworth, S.T Coleridge, P.B Shelley and John Keats, Lord Tennyson,Robert Browning.

Unit-IV: PROSE

The major works of Charles Lamb and William Hazlitt.

Unit-V & VI: FICTION

Works of the female writer Jane Austen and Charles Dickens.

Unit-VII: LITERARY TERMAS AND TOPICS

Colonialism and Imperialism, Reform Acts , Faith and Doubts etc.

PROGRAM SPECIFIC OUTCOME (PSOs)

B.A- I (PAPER 1)

Unit-I:ANNOTATIONS.

Unit-II &III:POETRY.

- Determine the writing style of Shakespeare
- Analyze the literary term Metaphysical poetry with specific works of John Donne.
- Various elements of poetry such as tone, form, stanza etc.
- Identify the poetic literary way in specific texts of Renaissance period.

Unit- IV: PROSE

- Assess Bacon's educational essays with the selected works.
- Determine the contribution of Addision and Steele as a prose writer.

Unit- V: DRAMA

- Describe and discuss the themes brought up in Shakespeare's play.
- Identify the major literary characters in Shakespeare's play The Merchant of Venice.

Unit-VI: FICTION

- Categorize the genre of Novel,novella and short story.
- Discuss on the contribution of Swift to the development of English novel.

Unit-VII: LITERARY TOPICS

- Renaissance, Humanism, Reformation , The Earlier Drama , Periodical Essays etc.

B.A I (PAPER 2)

Unit-I: ANNOTATIONS.

Unit-II &III:POETRY.

- Discuss and describe the Romantic age of the English literature with the work of Romantic poet William Wordsworth, Coleridege and Shelley, Keats, Browning etc.
- Define the major events and movements of the Romantic age.
- Identify the influence of Romantic poets to the English literature.

Unit- IV: PROSE

- Discuss and identify deferent prose style and prose writers.
- Assess the contribution of CharlesLamb to the English literature.

Unit-VI: FICTION

- Study of Female writings with the work of Jane Austen's Pride and Prejudice.
- Identify the Dramatic style of Charles Lamb.

Unit-VII: LITERARY TOPICS

- Realism and the novel, the Victorian novel, Varieties of Romantic and Victorian poetry etc.

COURSE OUTCOME (Cos)

B.A II (PAPER I)

Unit- I ANNOTATION.

Unit- II & III POETRY

- Discuss the forms of poetry with the particular poems of W.B Yeats, T.S Eliot, Dylan Thomas and John Larkin.

Unit- IV PROSE

- Identify the writing styles of Bertrand Russell and Oscar Wilde.

Unit- V DRAMA

- Contribution of G.B Shaw to English literature.

Unit- VI FICTION AND SHORT-STORIES

- Rudyard Kipling and short story writer Katherine Mansfield.

Unit- VII LITERARY TERMS AND THEORIES.

B.A II (PAPER II)

Unit- I ANNOTATION

Unit- II & III POETRY

- Famous poetries of sasson,Owen ,W.H.,Auden, Ted Hughes.

Unit- IV PROSE

- Writing styles of Robert Lynd & H Belloc.

Unit-V DRAMA

- John Galsworthy &J.M.Synge.

Unit-VI FICTION

- William Golding

Unit-VII LITRARY TERMS.

B.A. – III (PAPER – I)

Unit – I ANNPTATIONS & SHORT ANSWERS.

Unit – II & III POETRY

- Describe and identify the poetry of major writers like Toru Dutt, Tagore, Sarojini Naidu, Kamla Das, Gauri Deshpande, Jayant Mahapatra,K.N.Daruwala, Shiv K. Kumar.
- Discuss Rabindranath Tagore as a national poet of India with the special reference to his Gitanjali.
- Describe Kamla Das as a confessional poet.
- Discuss the contribution of Jayant Mahapatra to Indian English Literature.

Unit – IV PROSE

- Discuss the litrary career of Nirad C. Choudhary with reference his works "My Birth Place"
- Identify the contribution of Dr.S.Radhakrishnan as an Indian writer.

Unit- V DRAMA

- Identify the litrary career of Girish Karnad with his works hyavadana.

Unit – VI FICTION

- Describe the fictional writing of Malgudi of the famous Indian writer R.K. Narayan.

Unit – VII LITRARY TERMS

- Define the term autobiography with major autobiographical works.
- Discuss what is poetry and its selected types like lyric, subjective poetry, hymn,couplet.

B.A. – III (PAPER- II)

Unit- I ANNOTATIONS AND SHORT ANSWERS.

Unit – II & III POETRY

- Describe the litrary journey of Walt Whitman, Emily Dickenson.E.E. Cummings, & Carl Sandberg.

Unit – IV PROSE

- Identify the writing styles of famous American writers Walt Whitman, William Faulkner, Carlos William.

Unit- V DRAMA

- Describe the various dramatic themes of Eugene O' Neill,& Arthur Miller.

Unit- VI FICTION

- Discuss the contribution of Hemingway and Faulkner to American Literature.

Unit – VII LITERARY FORMS AND THEORIES.

- Define some American literary movements ,Naturalism and realism, existentilism, symbolism.
- Discuss some modern literary terms Art for Art's sake and poetic drama.

Department of Home Science
Bachelor of Arts :-

NEP-2020

Program outcomes (PO)

PO-1 - Explains the science and technologies that enhance the quality of life in day to-day living.

PO-2 - Take science from the laboratory to the people.

PO-3 - Define the importance of food and health to enhance the quality of life of people.

PO-4 -Develop skills in food, nutrition, textiles, product making, communication technologies and human development.

PO-5 - Competence in Public Speaking, writing and interpersonal skills.

PO-6 - Development of critical sensitivity towards community issues and process.

PO-7 - Acquire basic management skills for organizing events, resource mobilization, leading community-based projects etc.

PO-8 - Reflect universal and domain-specific values in Home science.

Course Learning Outcomes (CLO) :-

HOSC-01 (T) INTRODUCTION TO TEXTILES

At the end of this course, the students will enable to:-

- Develop an understanding of concepts and basics of textiles.
- Understands and define the key textiles terms.
- Develop critical understanding of the techniques of yarn and fabric manufacture.
- Identify the fibres, yarn and fabrics for its appropriate use.
- Analyze and asses dyed and printed textiles.
- Recommendthe dyes, printing and finishing of textiles for specific use.

HOSC-01 (P) INTRODUCTION TO TEXTILES (PRACTICAL)

At the end of this course, the students will enable to:-

- Develop an understanding of concepts and basics of textiles.
- Understands and define the key textiles terms.
- Develop critical understanding of the techniques of yarn and fabric manufacture.
- Identify the fibres, yarn and fabrics for its appropriate use.
- Analyze and asses dyed and printed textiles.
- Recommend the dyes, printing and finishing of textiles for specific use.

HOSC-02 (T) EXTENTION EDUCATION

At the end of this course, the students will enable to:-

- Explains the Concepts of developing communication skills.
- Describes the process of communication.
- Analyze soft skill development for proper communication.
- They understand E-Learning for communication.
- Explained the various method to reach individual and mass.

HOSC-02 (P) EXTENTION EDUCATION (PRACTICAL)

At the end of this course, the students will enable to:-

- Explains the Concepts of developing communication skills.
- Describes the process of communication.
- Analyze soft skill development for proper communication.
- They understand E-Learning for communication.
- Explained the various method to reach individual and mass.

HOSC-03 (T) FOOD SCIENCE AND NUTRITION

At the end of this course, the students will enable to:-

- Basic Knowledge of health & Nutrition.
- Knowledge of Food Groups.
- Knowledge of excess & deficiencies of nutritients.

- Knowledge of Vitamins.
- Knowledge of Normal & Therapeutic nutrition.

HOSC-03 (P) FOOD SCIENCE AND NUTRITION (PRACTICAL)

At the end of this course, the students will enable to:-

- Basic Knowledge of health & Nutrition.
- Knowledge of Food Groups.
- Knowledge of excess & deficiencies of nutritients.
- Knowledge of Vitamins.
- Knowledge of Normal & Therapeutic nutrition.

HOSC-04 (T) FAMILY RESOURCE MANAGEMENT

At the end of this course, the students will enable to:-

- Basic knowledge of Home management.
- Basic knowledge of work simplification.
- Basic knowledge of time management, energy management.
- Basic knowledge of Finance management.

HOSC-04 (P) FAMILY RESOURCE MANAGEMENT (PRACTICAL)

At the end of this course, the students will enable to:-

- Basic knowledge of Home management.
- Basic knowledge of work simplification.
- Basic knowledge of time management, energy management.
- Basic knowledge of Finance management.

HOSC-05 (T) CLINICAL NUTRITION

At the end of this course, the students will enable to:-

- Importance of Meal Planning.
- Factors affecting nutritional requirements.
- Normal nutrition.
- Medical nutritional therapy in various diseases.
- Conversion of Normal Diet to Disease Specific Diet.

HOSC-05 (P) CLINICAL NUTRITION (PRACTICAL)

At the end of this course, the students will enable to:-

- Importance of Meal Planning.
- Factors affecting nutritional requirements.
- Normal nutrition.
- Medical nutritional therapy in various diseases.
- Conversion of Normal Diet to Disease Specific Diet.

HOSC-06 (T) HUMAN DEVELOPMENT

At the end of this course, the students will enable to:-

- To know about the basic knowledge of Development.
- Development in various stages of age.
- Factors affecting growth and Development.
- Prenatal and Postnatal growth.
- Physical, Emotional and social development.

HOSC-06 (P) HUMAN DEVELOPMENT (PRACTICAL)

At the end of this course, the students will enable to:-

- Pysical growth and develoment of human child.
- To compare normal children with delinquent child.
- Importance of heredity and environment on development.
- To develop skills of counseling to parents.

- To study cognitive develpoment cross the life span.

HOSC-07 (T) ANATOMY PHYSIOLOGY AND HYGIENE

At the end of this course, the students will enable to:-

- Explains the Basics of Human Body Structure.
- Explains the Basics of Human Body Functioning.
- Explains the Basics of Primary Health care.
- Gives the Basic knowledge of First Aid.
- Gives the Basic knowledge of Home Nursing.

HOSC-07 (P) ANATOMY PHYSIOLOGY AND HYGIENE (PRACTICAL)

At the end of this course, the students will enable to:-

- Explains the Basic knowledge of First aid.
- To make First aid box.
- How to prepare Therapuetic Diet.
- Home Nursing technology.

HOSC-08 (T) FUNDAMENTAL OF CLOTHING CONSTRUCTION

At the end of this course, the students will enable to:-

- Understand basic principles of clothing construction.
- Comprehend the importance and function of clothes.
- Identify the common fabrics used for clothing construction.
- Utilized sign components in garment construction.
- Gain an insight of various sewing machine and other sewing equipment's available in the market, their functioning & common problems faced while usage.
- Understand various garment construction process.
- Co-ordinates fabrics, patterns and supportive materials construct the garment.

HOSC-08 (P) FUNDAMENTAL OF CLOTHING CONSTRUCTION (PRACTICAL)

At the end of this course, the students will enable to:-

- Understand basic principles of clothing construction.
- Comprehend the importance and function of clothes.
- Identify the common fabrics used for clothing construction.
- Utilized sign components in garment construction.
- Gain an insight of various sewing machine and other sewing equipment's available in the market, their functioning & common problems faced while usage.
- Understand various garment construction process.
- Co-ordinates fabrics, patterns and supportive materials construct the garment.

HOGE-01 (T) INTRODUCTION TO TEXTILES (GENERIC ELECTIVE)

At the end of this course, the students will enable to:-

- Develop an understanding of concepts and basics of textiles.
- Understands and define the key textiles terms.
- Develop critical understanding of the techniques of yarn and fabric manufacture.
- Identify the fibres, yarn and fabrics for its appropriate use.
- Analyze and asses dyed and printed textiles.
- Recommendthe dyes, printing and finishing of textiles for specific use.

HOGE-01 (P) INTRODUCTION TO TEXTILES (PRACTICAL) (GENERIC ELECTIVE)

At the end of this course, the students will enable to:-

- Develop an understanding of concepts and basics of textiles.
- Understands and define the key textiles terms.
- Develop critical understanding of the techniques of yarn and fabric manufacture.
- Identify the fibres, yarn and fabrics for its appropriate use.
- Analyze and asses dyed and printed textiles.
- Recommend the dyes, printing and finishing of textiles for specific use.

HOGE-02 (T) EXTENTION EDUCATION (GENERIC ELECTIVE)

At the end of this course, the students will enable to:-

- Explains the Concepts of developing communication skills.
- Describes the process of communication.
- Analyze soft skill development for proper communication.
- They understand E-Learning for communication.
- Explained the various method to reach individual and mass.

HOGE-02 (P) EXTENTION EDUCATION (PRACTICAL) (GENERIC ELECTIVE)

At the end of this course, the students will enable to:-

- Explains the Concepts of developing communication skills.
- Describes the process of communication.
- Analyze soft skill development for proper communication.
- They understand E-Learning for communication.
- Explained the various method to reach individual and mass.

HOSEC-01 (SKILL ENHANCEMENT COURSE) SURFACE ORNAMENTS

At the end of this course, the students will enable to:-

- Identify and use embroidery tools followinf safety precautions.
- Meticulous use stiches and trimming.
- Translated sign ideas on to fabric.
- Use the Indian Embroidery, painting and printing for developing products.
- Access, analyze, evaluate and use information from a variety of sources, work collaboratively with others to achieve individual and collective goals.
- Confidence in developing their own designs.

HOVAC-01 (VALUE ADDED COURSE) TECHNIQUES OF FOOD PRESERVATION

At the end of this course, the students will enable to:-

- Know the principles of preservation behind the methods of preservation.

- Understand the stages of sugar cookery, quality of pectin and acidity in the development of preserved food products.
- Acquire skills to formulate food-based products.
- Explore the principles of preservation in fruits and vegetables-based products.
- Skills to prepare cereals and pulse based preserved products and develop new products with retention of quality.

NON-NEP

Program Outcome(PO)

Major Program outcome of B.A(Home Science):

- To provide knowledge about Fundamentals of Human Anatomy and Physiology, Hygiene and Extension activities.
- To provide knowledge about Textiles Science, Home resource Management
- To provide Knowledge about Human Development, Food and Nutrition.

Program Specific Outcome(PSO)

B. A. Part-I

PSO: 01-ANATOMY PHYSIOLOGY & HYGIENE

Student will develop understanding and gain knowledge about

- Structure & functions of Cell and Tissue systems.
- Circulatory system and Respiratory system .
- Digestive system.
- Nervous system and Sense organs.
- Concepts of Hygiene, First aid, home nursing.

PSO: 02- EXTENSION EDUCATION

Student will develop understanding and gain knowledge about

- Introduction of Home Science Extension Education.
- Community Development problems and Role of Home Scientists.
- Teaching methods & aids.
- Attitude, Motivation and Applications of Home Science.

Practical

- Practical exercise based on Hygiene, First aid and home management of Patients.

B. A. Part-II

PSO: 03-Fibers and Textile

Student will and gain knowledge about

- Types of Fibers and Weaving techniques.
- Basic design and Colours.
- Printing techniques.
- Washing and Cleaning of Textiles.
- Apparel and Clothing.

PSO: 04- Family Resource Management

Student will gain knowledge about

- Introduction to Home Management.
- Home decoration, Furniture, Flower arrangment.
- Family Resources, classification and optimum utilization of energy, family budget.
- Kitchen resources and management.
- Streamlining of household work, Optimum use of house hold equipments for saving time, energy and labour.

Practical

- Practical exercise based on Tailoring, Cleaning and Decoration.

B. A. Part-III

PSO: 05-Human Development

Student will and gain knowledge about

- Indtroduction to Human Development.
- Types of Delivery.
- Childhood and Adolescence.
- Behaviour.
- Theories of Play, Habits, and delinquency.

PSO: 06- Food and Nutrition

Student will gain knowledge about

- Introduction to Nutrition and types of Nutrients.
- Food, types of Food.

- Food Processing purpose and techniques.
- Food resources and its management.
- Food and Diseases

Practical

- Practical exercise based on Food Preparation, Food management, Food Processing, Supplimentary Diet, Personality and Intellect estimation.

Department of Scociology

Bachelor of Arts

NEP-2020

Programme Outcome:

- **POI**:- BA Degree with other two disciplines in social sciences (3 major)
- **PO2**:- Research skills in social science research
- **PO3** :- Understand human society in general and Indian society in particular
- **PO4**:- Analytical skills in sociological perspectives
- **PO5**:- Social placement with adaptive interpersonal skills

Programme Specific Outcome

The Courses in Sociology are to prepare the candidates to equip the employability skills and to acquire comprehensive knowledge on human life and social analysis. The curricula are prepared to teach the candidate the

- PSO 1- Employability skills for efficient service
- PSO 2 -Research skills to take up research or projects works
- PSO 3 -Serve in Development agencies
- PSO 4 -Work with Legal firms and correction centers
- PSO 5 -Take up independent choice as entrepreneurs.
- PSO 6 -Skills to face the social reality confidently.
- PSO 7- Exposure to students on special and new streams in Sociology.
- PSO 8- Field work research through Project Work

COURSE LEARNING OUTCOME (CLO):

SOSC-01 :- INTRODUCTION TO SOCIOLOGY

After completion of the course, the student will be able to achieve the following objectives-

- The course is designed to incorporate all the key concept of sociology which would enable the learner to develop keen insight to distinguish between the common sense knowledge and sociological knowledge

- The conceptual learning of society, association, institution, community will help the student with their day to day understanding of society

- The concept of Indian social institution such as family, marriage, kinship will enable students to consider their roles in solving many problems.

- Concept of globalization and media imperialism will make the students to understand global geopolitical scenario conceptually.

- Concept of social stratification and social change will make the students better understand the concept of different generational gap and minimize it in due course.

SOSC-02 :- CHANGING SOCIAL INSTITUTIONS IN INDIA

After completion of the course, the student will be able to achieve the following objectives-

- The students will learn and understand the classical background ofIndian society.

- Students will learn about the Indian social structure.

- The course will enhance understanding about pre dominant issues of Indian society.

- This course will enhance the understanding about rural structure, development and issues.

- The students will learn about social problems of India.

SOSC-03 :- TRIBAL CULTURE OF CHHATTISGARH

After completion of the course, the student will be able to achieve the following objectives-

- The student will learn about the tribal and folk culture of India.

- This course will provide students a deeper understanding about tribal and rural society and their problems.

- This will help the students to understand the background of various tribal movements and what are the impact of different schemes on overall tribal development and inclusion.

- This will make students to learn the local culture of Chhattisgarh.

SOSC-04 :- SOCIAL PROBLEMS AND SOCIAL CHANGE

After completion of the course, the student will be able to achieve the following objectives-

- Students will be able to understand the causes and background of social problems in India.

- This course will enable students to search for solutions of current social problems in India.
- This course will make students to learn about different theoretical perspectives of social change.
- Students will develop a tendency to understand and accept the process of social change.

SOSC-05 :- INDIAN AND WESTERN SOCIOLOGICAL THINKERS

After completion of the course, the student will be able to achieve the following objectives-

- The students will be able to critically analyze the theoretical arguments of different scholars.
- Students will be able to apply sociological theories to understand social phenomenon of practical world
- The students will be able to understand the Indian society from indological, functional and subaltern perspective.
- This course will be helpful in developing deep scientific and logical understanding about society, culture, traditions among students

SOSC-06 :-FUNDAMENTALS OF SOCIAL RESEARCH

After completion of the course, the student will be able to achieve the following objectives-

- It will teach students about importance of reality and the ways to obtain objective and reliable information.
- It will develop comprehensive reasoning skills among students.
- This paper is designed to acquaint students with scientific ways of studying social phenomenon.
- The students well versed with this course will have many job opportunities in academic, fundamental, and policy research projects undertaken by both by government and non government organizations.

SOSC-07 :- SOCIOLOGY OF RURAL LIFE IN INDIA

After completion of the course, the student will be able to achieve the following objectives-

- Students will Understand the myths and realities of village India constructed by Western
- This course will make them to know about the changes in land tenure systems and consequences

- The course will enable students to appreciate the role of traditional social institutions and how they have responded to forces of changes.

- This will make an informed analysis of various development programmes and challenges encountered

SOSC-08 :- SOCIAL POLICY AND PLANNING

After completion of the course, the student will be able to achieve the following objectives-

- This course will make students understand the background of social policy that how government planning is gateway towards achieving an egalitarian society.

- Students will be able to understand the cultural parameters for implementation of any scheme.

- Students will know about various schemes of government.

SOSE-01 :- CRIME AND SOCIETY

After completion of the course, the student will be able to achieve the following objectives-

- The course is designed to incorporate all the key concept of crime which would enable the learner to develop keen insight to distinguish between the common sense knowledge and sociological knowledge.

- The conceptual learning of crime will enable students to have a deeper understanding of reason and causes of crime.

- The concept of punishment will make students to understand the role of law and different theories of crime and punishment.

- Students will learn the importance of correctional process in minimizing the further future crime.

SOSE-02 :- ENVOIRENMENT AND SOCIETY

After completion of the course, the student will be able to achieve the following objectives-

- This course will provide students with a sound conceptual and theoretical and empirical background to the issues of environment, sustainable development and resource management.

- This course will prepare them for further research in overall area of environment.

- The students will be able to understand the main concepts, theories, debates and imperial practices on the interaction between environment and society.

- This course will develop a deeper understanding of different paradigms and discourses on nature used by society.

- This course will help students in understanding current theoretical and empirical issues on environment movement and sustainable resource management practices

SOSE-03 :- SOCIOLOGY OF EVERYDAY LIFE

After completion of the course, the student will be able to achieve the following objectives-

- Students will be able to learn to look at familiar world from a new perspective.

- Students will be able to understand how social world are constructed.

- Students will be able to communicate effectively in written andoral formats.

SOSE-04 :- SOCIAL MOVEMENTS IN INDIA

After completion of the course, the student will be able to achieve the following objectives-

- This course will help to sensitize students to the variety and dynamics of social movement and their role to social transformation.

- This will help students to look at social movements in historically in sociological and comparative perspective.

SOSE-05 :- POLITICAL SOCIOLOGY

After completion of the course, the student will be able to achieve the following objectives-

- The students will be able to understand the most dominant components of the total social structure.

- This course will make students well acquaisnted with the nature and functioning of political system and the political process.

- This course aims to generate awareness in the minds of students about their status, roles and rights as citizen of state.

- It will make students aware of the prerequisites of sound democratic political system and its vulnerability

SOSE-06 :- SOCIOLOGY OF RELIGION

After completion of the course, the student will be able to achieve the following objectives-

- It will teach students about importance of religion in maintaining social order and stability in society.
- Students will be able to understand the important contents of religion and its function for society at large.
- This paper will make students to understand the relationship between state and politics and the changing dynamics of this overtime.
- This course will focus the different Indian and tribal religion in details so the students will learn about the pluralistic religious culture of India.

SOSE-07 :- GLOBALISATION AND ITS SOCIETY

After completion of the course, the student will be able to achieve the following objectives-

- This course will enable students to learn multicultural social theories across societies.
- This course will create a common thread in all societies of world.
- This will equip students to understand and appreciate the empirical global overall and specific context.
- Students will know about the overall global impact on society.

SOSE-08 :- TRANSGENDER AND SOCIETY

After completion of the course, the student will be able to achieve the following objectives-

- This course will sensitize students about the Third Gender and expand the base of their social acceptability.
- This course will educate students about the changes taking place in Socioeconomic and Cultural status of transgender community.
- This course will make students to understand the causes and types of violence faced by the transgender community in the society.

- This course will make the students aware about the legal and constitutional rights and provisions of transgender in india.

SOSE-09 :- POPULATION AND SOCIETY

After completion of the course, the student will be able to achieve the following objectives-

- Students will be able to understand the influence of population on social phenomena.
- This course will acquaint students to demographic features and trends of Indian society in world population.
- This course will make students to understand population controlling terms and its social needs.
- This will make students to appreciate population control measures and their implementation.

SOSE-10 :- SOCIOLOGY OF POPULAR CULTURE AND MASS COMMUNICATION

After completion of the course, the student will be able to achieve the following objectives-

- This course will enable the understanding of culture in students.
- The students will understand the role of information and communication technology on society and popular culture.
- This course will enhance the understanding of social issue of the media among students.
- Students will understand different theoretical perspective and the implication of them in forming the mass culture.

SOSE-11 :- SOCIAL DEVELOPMENT IN INDIA

After completion of the course, the student will be able to achieve the following objectives-

- This course will enable the students to rethink about development.
- Students will learn about the component of social development.
- This course will create deeper understanding of different challenges to development and the responses to it.

- This course will make students to know about Indian perspective about social development.

SOSE-12 :- SOCIOLOGY OF HEALTH AND ILLNESS

After completion of the course, the student will be able to achieve the following objectives-

- The course will enable students about concept of health illness and sickness.
- The students will understand conceptual perspectives of sociology to health.
- This course will make students to understand the Concept of family healthcare and its importance to state.
- Students will learn about indigenous knowledge system of medicine in India and its importance.

SOGE-01 :- INTRODUCTION TO SOCIOLOGY

After completion of the course, the student will be able to achieve the following objectives-

- The course is designed to incorporate all the key concept of sociology which would enable the learner to develop keen insight to distinguish between the common sense knowledge and sociological knowledge
- The conceptual learning of society association institution community will help the student with their day to day understanding of society
- The concept of Indian social institution such as family marriage kinship will enable students to consider their roles in solving many problems.
- Concept of globalization and media imperialism will make students to understand global geopolitical scenario conceptually.
- Concept of social stratification and social change will make the students better understand the concept of different generational gap and minimize it in due course.

SOGE-02 :- CHANGING SOCIAL INSTITUTIONS IN INDIA

After completion of the course, the student will be able to achieve the following objectives-

- The students will learn and understand the classical background ofIndian society.
- Students will learn about the Indian social structure.

- The course will enhance understanding about pre dominant issues of Indian society.
- This course will enhance the understanding about rural structure, development and issues.
- The students will learn about social problems of India.

SOVAC-01 :- INDIAN TRADITION AND VALUES

After completion of the course, the student will be able to achieve the following objectives-

- The student will learn about the Indian value system and its significance in the betterment of our society.

SOSEC-01 :- ETHICS, POLITICS AND SKILL IN SOCIAL RESEARCH

After completion of the course, the student will be able to achieve the following objectives-

- The student will be able to understand the fair practice of writing, ethics and politics in doing research.
- Student will also get exposure to basic skill in handling computer for collection analysis and presentation of data.

NON-NEP

PROGRAMME OUTCOME

Upon successful completion of the program the graduate students would be able to :
- Understand basic concepts and theoretical perspectives in Sociology and how they are used in sociological explanation of social behavior.
- Understand how to collect, analyze and interpret empirical evidence in sociological research.
- Gain familiarity with and develop an understanding of core substantive areas of sociological inquiry.
- Express sociological ideas clearly and coherently both in writing and in oral presentations.

COURSE OUTCOME

Major areas that will be covered under UG (Sociology) Program:-
- Sociology: An Introduction
- Indian Society
- Foundations of Sociological Thoughts
- Crime and Society
- Sociology of Tribal Society
- Methods of Social Research

PROGRAM SPECIFIC OUTCOME

B.A. I

PSO-1 Sociology: An Introduction

Students will gain insight into the emergence of Sociology as an independent subject of enquiry as well as the basic concepts of sociology, social institutions and social processes. They also get to know the utility of sociology and about Applied Sociology and Social Ecology.

PSO-2 Indian Society

In this paper students will dive deep into the core of Indian society. They will understand about the Ancient concepts like Varna, Ashram system, Theory of Karma etc. They will also learn about the cultural diversity prevalent in India, social institutions related with different religions and tribes, changes occurring in the Indian society through the process of Globalization, Liberalization etc. and some social issues and problems of the state of Chhattisgarh.

B. A.II

PSO-3: Sociology of Tribal Society Outcome –

One of the important components of Indian society is the Tribal Society. Students get to know about the concept, classification, culture, beliefs, religion, customs, institutions as well as social problems, changes and mobility prevalent among the aboriginals and the schemes of tribal development. They would also learn about some important tribal communities of Chhattisgarh.

PSO-4:Crime and Society Outcome –

This paper will develop an understanding of the concepts of crime, law and criminal justice system. Students will be able to understand crime rates, patterns and types of crime and punishment. They will know about social disorganization and the correctional process too.

B. A. - III

PSO-5:Foundations of Sociological Thoughts Outcome –

Students would be able to gain knowledge about the emergence and development of Sociology and the pioneers of the subject like AugusteCompte, Karl Marx, Emile Durkheim, Max Weber, Vilfredo Pareto etc. and some of their important classical theories along with the development of sociological thoughts in India.

PSO-6:Methods of Social Research Outcome –

Students will understand the meaning, scope and importance of social research, scientific method and its logic. They will gain knowledg about the types of research, techniques of data collection, meaning and significance of statistics and measures of central tendency

Department of Geogreaphy

Bachelor of Arts

NEP-2020

PROGRAMME OUTCOME

Upon successful completion of the program the graduate students would be able to:

- Understand basic concepts and theoretical perspectives in Geography
- Understand how to collect, analyze and interpret data .
- Gain familiarity with and develop an understanding of core substantive areas of Geography
- Express knowledge of Geography clearly and coherently .

UG 1st semester

GOSC-01T - Fundamental of physical geography

At the end of the this course the student will be able to

- Understand the functioning of Earth systems and analyze geo morphological,
- climatic and oceanic factors.
- Course Learning. Understand the Physical aspect of Geographical concepts which are relevant in day to day life To record the temperature, pressure, humidity, rainfail and other climatic conditions and evaluate the local climate
- Understand the Oceanic Features and Conditions.

GOSC-01P -Cartography-Tools and Techniques

At the end of the this course the student will be able to

- History of Cartography, Indian cartography, Modern
- Training/ cartography, Drawing Equipment's.
- Characteristics Features of Map, classification of maps, Contents
- Mapping methods.
- Tools of Map Making, Type of printed Shades.
- Enlargement, Reduction and Combination of Maps-Graphical and Mechanical methods.

UG-2nd semester

GOSC-02T -Fundamental of Human Geography

At the end of the this course the student will be able to

- Gain knowledge about major themes of human Geography.
- Acquire knowledge on the history and evolution of humans.
- Understand the approaches and processes of Human Geography as well as the diverse patterns of habitat and adaptations.
- Ability to develop an idea about space and society .
- Understand the evolution of varied types of economic activities.
- Assess the varied aspects of development and regional disparity, in order to formulate measures of balanced development and sustainable development.

GOSC-02P -Scale and Representation of Relief

At the end of the this course the student will be able to

- Understand and prepare different kinds of Scales and comprehend the concept of scales.
- Identify the features of the land form through counters .
- Developed the Relief Map Making skills.
- Gain in-depth knowledge on Drawing of Contour Features.

UG-3rd semester

GOSC-03T -ECONOMIC GEOGRAPHY

At the end of the this course the student will be able to

- Understand about the nature and scope of Economic Geography.
- Understand the concept and classification of resources natural and minerals.
- Identify the major Crops their production and distribution.
- Understand the fundamentals of major economic theories.
- Understand the economic activifies-primary secondary and tertiary.
- Understand the basic theories of Agriculture and Industrial location.

GOSC-03P -MAP PROJECTION

After the completion of course, the students will have ability to:

- Read and prepare maps.
- Comprehend locational and spatial as pects of the earth surface.
- Use and importance of maps for regional development and decision making.

UG-4th semester

GOSC-04T -GEOGRAPHY OF INDIA

After the completion of course, the students will have ability to:

- Understand about the physiographic division of India and drainage system.
- Understand the seasonal variations of climate and monsoon of India.
- Understand the biotic and abiotic resources of India.
- Understand the growth density and distribution of population of India. 5.Understand the economic activity primary, secondary and tertiary.

GOSC-04P -Representation of Statistical Data

After the completion of course, the students will have ability to:

- Read and prepare diagram.
- Acquire knowledge to prepare Graphs and diagram from geographic data and also the ability to interpret them.
- To understand basic statistical methods and skills for cartogranhic transformation of information. Skills in graphical representation of data pertaining to geography will be given.

UG- 5th semester

GOSC-05T - Geography of Chhattisgarh

After the completion of course, the students will have ability to:

- The students will be Understand location, extent and physical features ofthe chhattisgarh.
- Resource distribution utilization and To explain and analyze the development in the state .
- Describe and understand thedemographic characteristics of Chhattisgarh.
- Able to explain the Industrial development and Planning process of all sectors of the Chhattisgarh.
- Acquaint themselves with geographical knowledge of Chhattisgarh that will assist them in the preparation of competitive examinations.

GOSC-05P -Distribution Maps and three dimensional diagrams

At the end of this course, the students will be ability to

- Recognize the different types of thematic Map and making of such maps to understand the representation of climate data, socio-economic data.

UG-6th semester

GOSC-06T -HISTORY OF GEOGRAPHICAL THOUGHT

After the completion of course, the students will have ability to:

1. Understand the basic concept and nature of geography.
2. Students of geography may be encouraged to interact with their counterparts from other disciplines and discuss the nature of their subject.
3.The students may be encouraged to collect information on any theme amenable to geographical interpretation
4.To study and understand the founding concepts of human geography in the nineteenth century academy, and over the last century from feminist and Marxist .
5.scholarship, through to post-colonial and non-representational theories.

GOSC-06P -Study & Interpretation of Topographical Map

After the completion of course, the students will have ability to:

- Identify the physical features of an area. Understand the relationship between physical pattern & cultural landscape .
- .Explain Morphometric analysis of river basin & slope.

UG- 7th semester

GOSC-07T - GEOMORPHOLOGY

After the completion of course, the students will have ability to:

- Understand the theories and fundamental concepts of Geomorphology .
- Understand earth's tectonic and structural evolution.
- Gain knowledge about earth's interior.
- Develop an idea about concept of plate tectonics, and resultant landforms.
- Acquire knowledge about types of folds and faults and earthquakes, volcanoes and associated landforms.
- Understanding crustal mobility and tectonics; with special emphasis on
- their role in landform development.
- Overview and critical appraisal of landform development models.

GOSC-07P- Instrumental Field Survey-Chain and Tape,Prismatic Compass and Plane Table Survey

After the completion of course, the students will have ability to:

- Design and acquire field survey measurements using modern surveying instruments .
- Gain knowledge about Chain & Tape, Plane Table, & Prismatic Compass and apply this knowledge in ground surface.
- Instrumental surveying provides proficiency in geographical knowledge related to various sizes, shapes, lengths and directions found on the earth's surface .
- Survey methods identify the actual location of objects and areas located on the ground.

UG- 8th semester

GOSC-08T -REGIONAL PLANNING & DEVELOPMENT

After the completion öf course, the students will have ability to:

- Identify notable lagging regions and solutions for their overall development.
- Have comprehensive understanding regarding the different regions and application of different models and theories for integrated regional development.
- Select appropriate indicators for the measurement of socio-economic regional. Development.

GOSC-08P -MORPHOMETRIC ANALYSIS

After the completion of course, the students will have ability to:

- understand the hydrological and morphological characteristics of any region.
- understand the hydrological and morphological characteristics in two different morpho-climatic setting from drainage basin morphometric parameters.

GOSE-01 THEORY **CLIMATOLOGY AND OCEANOGRAPHY**

After the completion of course, the students will have ability to:

- Understand the elements of weather & climate and its impact in different scales.
- Understand the Monsoon system and comprehend the climatic aspects and its
- bearing on planet earth.
- Understand the Oceanic process and its impact on land water.
- Understand the future availability of resources through Oceans.
- Understand the Climatic change and Global warming.

GOSE-01 **PRACTICAL -STUDY OF INDIAN WEATHER MAP**

After the completion of course, the students will have ability to:

- Understand the difference between weather and climate.
- Understand the elements of climate and Meteorological instruments.
- Understand the importance of Weather maps, the method of description through various seasons-summer, winter and rainy.

GOSE-02 THEORY SOIL & BIOGEOGRAPHY

- At the end of the semester student has ability to
- Acquaint with the nature and basics of Biogeography.
- Describe the major factors and processes governing the soil formation.
- To analyze the different issues regarding soil degradation and soil conservation.
- Explain the major principles and processes that govern the local and global distribution of plants & anima.
- Critically assess theoretical and conceptual issues relating to biodiversity an forest conservation efforts in India.

GOSE-02 PRACTICAL -GEOLOGICAL MAPS

At the end of the semester student has ability to

- To provide the knowledge of geological structure of the earth.
- To Understand the Geological periods.
- To acquainted knowledge of rocks and their pattern.

GOSE-03 THEORY DISASTER MANAGEMENT

At the end of the semester student has ability to

- Understand the need and significance of studying disaster management.
- Understand the different types of disasters and causes for disasters.

- Gain knowledge on the impacts Disasters on environment and society.
- Study and assess vulnerability of a geographical area.
- Students will be equipped with various methods of risk reduction measures and risk mitigation.
- Understand the role of Information Technology in Disaster Management.

GOSE-03 PRACTICAL -STATISTICAL METHODS

After the completion of course, the students will have ability to:

- Learn the significance of statistics in geography.
- Understand the importance of use of data in geography.
- Recognize the importance and application of Statistics in Geography.
- Interpret statistical data for a holistic.
- understanding of geographical phenomena. Know about different types of sampling.
- Develop an idea about theoretical distribution.
- Learn to use tabulation of data. Gain knowledge about association and correlation.

GOSE-04 THEORY INDUSTRIAL GEOGRAPHY

After the completion of course, the students will have ability to:

- Know and learn different types of industry.
- Know and learn about sources of raw materials for industry.
- Know and learn about production problem.
- Know and learn information related to trade of manufactural good.
- Know and learn about spatial distribution of industry.
- Know and learn different types of industry.

GOSE-04 PRACTICAL

After the completion of the course the students should be able to -

- Appreciate the strength and application of aerial photograph.
- Map the resources, their location and availability.
- Apply this knowledge for sustainable developme**n**t.

GOSE-05 RURAL SETTLEMENT GEOGRAPHY

After the completion of the course the students should be able to -

- The students gain knowledge and acquire clear concept of rural settlem
- understanding of origin and distribution of settlements.
- Increase a greater understanding of man land relationship that is cruci sustainable development
- Students will be able to collaborate in conceptual knowledge of rural development policies and strategies in the research work undertaken.
- Acquire the skill of identifying rural settlement types from tropical Street.
- Students will gain knowledge about area based approach to rural do draught area programs.

GOSE-05 PRACTICAL -PRINCIPLES OF GEOGRAPHIC INFORMATION SYSTEM

After the completion of course, the students will have ability to:

- Interpret satellite imagery and understand the preparation of false color composites from them.
- Training in the use of Geographic Information System (GIS) software for contemporary mapping skills.
- Have knowledge of using GPS & DGPS for the accurate location.
- Apply the GIS science platform for the monitoring and forecast.

GOSE-06 URBAN GEOGRAPHY

After the completion of course, the students will have ability to:

- Understand the nature of Urban Geography.
- Understand the fundamentals and patterns of the urbanization process.
- Understand & learn the functional classification of cities.
- Understand the Rural Urban relationship.
- Understand contemporary problems of Delhi, Mumbai, Kolkata and Chennai.

GOSE-06 PRACTICAL -Fundamentals of Remote Sensing

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

- The student will be able to gain in-depth knowledge and use of remote sensing software.
- Create, analyze and critically evaluate different technical/research solutions.
- Develop the skill so as to use digital satellite data using software.
- Prepare the maps based on satellite data to compare with the ground realities.
- Classify digital data for the land use/land cover and urban studies.

GOSE-07 POLITICAL GEOGRAPHY

After the completion of course, the students will have ability to:

- Understand the meaning & scope of Political Geography.
- Understand the historical development of Political Geography.
- Understand the concept of nation and state.
- Understand the Frontiers & Boundaries, Capital & Core Area.
- Understand the different dimensions of electoral geography and resources.

GOSE-07 PRACTICAL -Computer Cartography

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

- Learn the computer hardware, software & its uses.
- Understand the use of computer in mapping.
- Represent the geographical data using MS-EXEL -graphs.

GOSE-08 SUSTAINABLE DEVELOPMENT

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

- Students will be able to define sustainability and identify major sustainability challenges.
- Understand the basic concept of Sustainable Development (SD), the environmental, social and economic dimensions.
- Understand the embedment of sustainability issues in environmental, societal, and economic systems, and the relevance of the conditions, interrelations, and dynamics of these systems.
- Students will be able to apply concepts of sustainable development to address.
- Sustainability challenges in a global context Students will have an understanding of their social responsibility as future professionals and citizens.

GOSE-08 PRACTICAL-DUMPY LEVEL SURVEYING

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

- Understand the surveying and leveling.
- Understand the methods of levelling.
- Understand how to construct a longitudinal profile.

GOSE-09 RURAL DEVELOPMENT IN INDIA

At the end of the semester student has ability to

- Student may have ability to understand the meaning & approaches of rural development.

- Learn the various issues of rural development student can evaluate the
- possibilities of employment in rural sectors of the country.
- Assess the various policies of rural development and its consequences in Indian perspective.
- Understand the perspective of rural development in Chhattisgarh.

GOSE-09 PRACTICAL -CARTOGRAPHICAL ANALYSIS OF GEOGRAPHICAL PATTERNS AND SYSTEM

After the completion of course, the students will have ability to:

- Understand the types of data measurement.
- Comprehend the representation and interpretation of the results.
- Put into practice results obtained in representation as well as day-to-day life.

GOSE-10 GEOGRAPHY OF TOURISM

After the completion of course, the students will have ability to:

- Understand of the definition, nature, and scope of tourism.
- Recognize and articulate the economic, social and cultural importance of tourism.
- Analyze the impact of physical determinants such as relief, climate, forest and water bodies on tourism development and experience .
- Identify and evaluate the influence of religious, historical, and cultural factors on tourist attractions and destination choices.
- Evaluate the importance of infrastructure in development of tourism .Have sound knowledge on geographical, environment socio cultural aspect of tourism India.

GOSE-10 PRACTICAL-Field Work - Tour & Tour Report

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

- To understand the geography in real world.
- To describe the analytical view on places visited
- To understand the various geographical features of the earth surface.
- Recognize and articulate the economic, social, and cultural importance of tourism.

GOSE-11 TRIBAL DEVELOPMENT IN INDIA

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

- Students will learn about the situation of the tribal people in India and Chhattisgarh.
- The students will leárn about the concept of tribal society and the tribal situation in India.
- Understand how and why both human culture and the natural environment are dynamic creations of their mutual interaction.
- Students will able to analyze the problem of tribal people in India.
- The student will also learn about the different dimensions of health and nutrition with special reference to tribe.

GOSE-11 PRACTICAL -Project Report on Socio- Economic Survey

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

- Conduct field work in physical and human geography besides investigationinto socio economic and environmental issues.
- Develop tool to collect primary data from the field and interpret them meaningfully.
- Make use of proper tools and serving method from measurement in context of collection and processing of data.
- Prepare field report with suitable table map and diagrams based on the data.collected from the field and secondary sources. After Competing this course the students will be completely familiar with research.

GOSE-12 AGRICULTURE AND FOOD SECURITY

After the completion of course, the students will have ability to: of the students will have

- The students will able to analyze the agriculture development andproductivity and its impact on various sectors.
- Have sound knowledge of agriculture Revolution and food security.
- .Explain the role of agriculture determinants towards the changing pattern.
- A good understanding of inter-relationship between climate change environment, food food secur security and sustainability at global and regional (India)level.
- To understand the concept of food security and issues in achieving it.

GOSE-12 PRACTICAL -Field Study and Research Report.

After the completion of course, the students will have ability to:

- The student will be able to gain in-depth knowledge and use adequate methods in the field of study of micro area.
- Create, analyze and critically evaluate different technical/research solutions.
- Identify the issues the addressed within the framework of the specific dissertation in order to take into consideration.
- Presentation of dissertation will develop research attitude.
- Research dissertation identifies the socio-economic problems of an area.
- Research dissertation increases the identification of regional problems.

GOVAC-GEOGRAPHICAL KNOWLEDGE IN ANCIENT INDIA

After the completion of course, the students will have ability to:

- After this study, it will help students to understand the historical development of geographical knowledge and science.
- It will help in understanding the nature of development of knowledge and science in ancient India.
- The understanding of the richness of geographical knowledge in ancient Indian literature will increase.
- This study will make students feel cultural pride.

GOSEC- PRINCIPLE OF MAP MAKING

After the completion of course, the students will have ability to:

- Understand to have sound knowledge regarding the classification and elements of maps.
- Have proper utilization of maps for the development.
- Appreciate the preparation of various thematic maps with the application of various techniques.

NON-NEP

B. A. – Part- I

PAPER 1-PHYSICAL

After the completion of course, the students will have ability to:

- Understand the international structure of the earth rock that compose it and forces within the earth that act to deform it.

- Analyze how the natural and anthropogenic operating factors affecting the development .
- Understand about the denudation processes that unceasingly act at the earth's surface to shape land forms and reduce relief.
- Assess the role of structure, stage and time in shaping the land forms.
- Identify the Atmospheric pressure, winds humidity. concept of precipitation. its types and understand the Air Masses and Fronts and the Weather Forecasting.
- Identify the relief of the ocean bottom, temperature, salinity of ocean water, tide,
- currents coral reef and oceanic resources.

PAPER 2- HUMAN GEOGRAPHY (UGeo-0102)

After the completion of course, the students will have ability to:

- Discuss and describe the major concepts and key principles of Human Geography including placc, spacc, scale and landscapc.
- Appreciate the diversity of Ihe cultural backgrounds and places.
- Problem solving from a geographic perspective by understanding the role location .

PAPER 3-PRACTICAL GEOGRAPHY (UGeo-0103)

After the completion of course, the students will have ability to:

- Devclop hands on skills in diagrammatic representation of data.
- Comprehend thematic mapping techniques, its cartographic representation and interpretation.
- Take up cartography as a profession .

B. A. – Part- II

PAPER 1 - ECONOMIC AND RESOURCE GEOGRAPHY (UGeo-0201)

After the completion of coursc. the students will havc ability to:

- Understand about the Nature and Scope of Economic Geography.
- Understand the concept and classification of resources as well as major mineral resources.
- Identify the major crops and their production and distribution.
- Understand the fundamental theories in economic geography.
- Understand the tvnes, characteristies different modes of transportation at national and international Ievel.
- Understand various intemational and role of international trade in economic development.
- Understand the conservation and management of resources as well as sustainable development.

PAPER -2 REGIONAL GEOGRAPHY OF INDIA

After the completion of course, the students will have ability to:

- Understand about the physiographic division of India and drainage system of India.
- Understand the seasonal variation of climate and monsoon of India.
- Understand the various biotic, conventional and non conventional resources and their distribution in India.
- Understand the growth, density and distribution of the Indian population.
- Identify the major crops, production and distribution. agriculture region of India .
- Understand the impact of the green revolution on Indian agriculture.
- Understand the industrial production and development in India.

PAPER 3- PRACTICAL GEOGRAPHY (UGeo-0203)

After the completion of course, the students will have ability to

- Understand the map design and map layout through various Cartographic symbols and techniques.
- Understand the Meaning, concept, classification and importance of map projections .
- To get a knowledge of Weather Maps and the use of Meteorological instruments.
- To get knowledge about Prismatic Compass Survey and Whole Circle Bearing and Reduced Bearing.
- Students are understood about how to represent of geographical data with different types of cartographic technique and Statical method through practical workbook.

B. A. – Part- III

PAPER 1 -Remote Sensing and Geographical Information System

After the completion of course, the students will have ability to:

- Understand andget the knowledge about fundamental concept ofRemote Outcome sensing.
- To understand the types of remote sensing,and types of plateform in remote sensing.
- To get a knowledge about satellite sensor and types of sensors, and their function and characteristics.
- Understand the data product, types of data product and its applications and uses in remote sensing

PAPER 2 -Geography Of Chhattisgarh

After the complction of coursc, the students will have ability

- Understand the about the physiographic division of Chhattisgarh State.
- Understand the India Drainase system of Chhattisgarh Rivers.
- Understand the climatic variation in Chhattisgarh State.
- Examine and understand the types of vegetation of Chhattisgarh.
- Understand the variation in industrial development in Chhattisgarh State.
- Examine and understand the developed and underdeveloped States in Chhattisgarh.

PAPER-3 Practical :- Plane Table Survey

After the completion of course, the students will have ability to:

- Design and acquire field survey measurements using modern surveying instruments .
- Gain knowledge about Chain & Tape, Plane Table, & Prismatic and apply this knowledge in ground surface.
- Instrumental surveying provides proficiency in geographical knowledge related to various sizes, shapes, lengths and directions found on the earth's surface.
- Survey methods identify the actual location of objects and areas located on the ground.