SACRED HEART COLLEGE AUTONOMOUS

THEVARA

COURSE OUTCOMES OF ALL PROGRAMMES

Contents

Programme Outcomes of all Under-graduate programmes

PO 1	**Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
PO 2	**Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the word by connecting people, ideas, books, media and technology.
PO 3	**Effective Citizenship:** Demonstrate empathetic social concern and equity centered national development, and the ability to act an informed awareness of issues and participate in civic life through volunteering.
PO 4	**Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.
PO 5	**Ethics**: Recognise different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
PO 6	**Global Perspective:** Understand the economic, social and ecological connections that link the world's nations and people.

Programme Outcomes of all Post-graduate programmes

PO 1	Exercise their critical thinking in creating new knowledge leading to innovation, entrepreneurship and employability
PO 2	Effectively communicate the knowledge of their study and research in their respective disciplines to their stakeholder sand to the society at large.
PO 3	Make choices based on the values upheld by the college, and have the readiness and know-how to preserve environment and work towards sustainable growth and development
PO 4	Develop an ethical view of life, and have a broader (global) perspective transcending the provincial outlook.
PO 5	Explore new knowledge independently for the development of the nation and the world and are able to engage in a lifelong learning process

DEPARTMENT OF AQUACULTURE

MASTER OF AQUACULTURE AND FISH PROCESSING

Programme Specific Outcomes:

PSO 1 : Understand the taxonomy and biology of cultivable fin fishes and other organisms.

PSO 2 : Understand the ecology and cultural practices of cultivable fin fishes, shell fishes, sea cucumber, seaweeds and various engineering principles applied to aquaculture structures.

PSO 3 : Understand the harvest and post-harvest technology of aquaculture organisms.

PSO 4 : Demonstrate their awareness of the Nutrition, physiology and pathology of aquaculture organisms.

PSO 5 : Apply of statistical and computer tools in relevant research field pertaining to aquaculture.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1AQCT01
COURSE TITLE : TAXONOMY & BIOLOGY OF COMMERCIAL AND CULTIVABLE FIN FISH AND SHELL FISH

COURSE OUTCOMES

CO 1. Identify the commercially important fin fish and shell fish through taxonomic studies and their distribution in Indian waters

CO 2. Understand the structural , functional and physiological features of digestive system and associated glands in fin fishes and shell fishes

CO 3. Determine food and feeding habits of fin fish and shell fish

CO 4. Understand the structural and functional features of circulatory system in fin fishes and shell fishes

CO 5. Understand the structural , functional and physiological features of respiratory system and accessory organs in fin fishes and shell fishes

CO 6. Understand the structure , function and role of excretory organs in osmoregulation of fin fishes and shell fishes

CO 7. Understand the structure and function of nervous system and endocrine system in fin fishes and shell fishes

CO 8. Understand the structure and function of reproductive system in fin fishes and shell fishes

COURSE CODE : 16P1AQCT02
COURSE TITLE : BIOPHYSICS, INSTRUMENTATION, MICROTECHNIQUES AND RESEARCH METHODOLOGY

COURSE OUTCOMES

CO 1. Understand the principles and operation of octoelectric equipment's in biological research
CO 2. Create information on biophysics and instrumentation as applied to aquaculture
CO 3. Evaluate detailed anatomic studies with the help of micro techniques
CO 4. Understand the basic principles of physiology as applied to aquaculture systems
CO 5. Understand introduction to research methods as a prelude to research work at higher level.

COURSE CODE : 16P1AQCT03
COURSE TITLE : BIOSTATISTICS AND COMPUTER APPLICATIONS

COURSE OUTCOMES

CO 1. Application of statistical tools for experimental practices
CO 2. Basic awareness on statistical tools in research and analysis of biological phenomenon
CO 3. Computer knowledge are imparted as applicable to aquaculture practices
CO 4. Computer knowledge at preliminary level for further studies
CO 5. Appropriate use of internet and communication system
CO 6. Sampling methods useful in estimation of marine fish landings

COURSE CODE : 16P1AQCT04
COURSE TITLE : AQUACULTURE ENGINEERING

COURSE OUTCOMES

CO 1. Describe the criteria for selection of site for freshwater, brackish water and mariculture systems.
CO 2. Understand the engineering principles which is helpful in design and construction of aqua farms
CO 3. Evaluate the basic features of soil by sampling method for classification ,distribution and strength
CO 4. Understanding the working of different aquaculture equipment including hand tools

CO 5. Understand engineering principles which is helpful in design and construction of hatcheries
CO 6. Understand preparation of aquacultural projects
CO 7. Understanding the management pond and hatcheries
CO 8. Understand the application of feeding systems in aquaculture

SEMESTER 2

COURSE CODE : 16P2AQCT05
COURSE TITLE : ECOLOGY OF CULTURE SYSTEM AND AQUATIC BIOLOGY

COURSE OUTCOMES

CO 1. Understand the basic ecology and aquatic biology as applicable to aquaculture organisms in captivity and controlled conditions
CO 2. Evaluate the ways and means of circumventing, ecological imbalances for production of better aquaculture yield
CO 3. Understanding the basic features of fisheries oceanography
CO 4. Understanding the physico-chemical characteristics of marine environment

COURSE CODE : 16P2AQCT06
COURSE TITLE : BIOCHEMISTRY AND NUTRITION OF FIN FISH AND SHELL FISH

COURSE OUTCOMES

CO 1. Understand the basic principles of biochemistry as applied to aquaculture organisms in relation with environmental factors
CO 2. Understand the application of different additives in aquaculture feeds
CO 3. Describe the nutritional bioenergetics in fin fish and shell fish
CO 4. Understand the classification of feed stuff and anti-nutritional factors present in its
CO 5. Evaluation of quality of feed ingredients and finished feed
CO 6. Analyse the feed formulation strategies and methods
CO 7. Understand the management of feeding in aquaculture arms and hatcheries
CO 8. Understand the nutritional requirements of finfishes and shell fishes under culture condition

COURSE CODE : 16P2AQCT07
COURSE TITLE : PHYSIOLOGY AND PATHOLOGY OF FIN FISH AND SHELL FISH

COURSE OUTCOMES

CO 1. Understand the basic physiology of fin fish and shell fish and its relation to cultural conditions
CO 2. Identification of pathogens in aquacultural organisms
CO 3. Understand the classification of disease in aquaculture systems
CO 4. Describe the disease control of fin and shellfish, remedial and prophylactic measures
CO 5. Comparative study of physiological characters of fin fish and shell fish
CO 6. Understanding the biological rhythm in aquatic organisms
CO 7. Understand the ecophysiology and environmental requirements for the metabolism of aquatic organisms
CO 8. Understand the principles and application of eye stalk ablation and hypophysation in fin fish and shell fish hatcheries

COURSE CODE : 16P2AQCT08
COURSE TITLE : GENETICS AND BIOTECHNOLOGY OF FIN FISHES AND SHELL FISHES.

COURSE OUTCOMES

CO 1. Understand Induced breeding ,genetic improvement of the stock for better strains of cultural organisms
CO 2. Genetic engineering and biotechnological principles for crop improvement
CO 3. Understand the principles of genetic technique in cytogenetics
CO 4. Describing different hybridization techniques
CO 5. Describing different types of probiotics and its application in aquaculture

SEMESTER 3

COURSE CODE : 16P3AQCT09
COURSE TITLE : CULTURE OF FIN FISH, MOLLUSCS AND SEA CUCUMBERS.

COURSE OUTCOMES

CO 1. Understand the commercial practices on culture of fin fishes and mollusc
CO 2. Analyze the food and feeding of fin fishes ,mollusc and sea cucumbers
CO 3. Understanding the characteristics and criteria for selection of species for mariculture
CO 4. Understanding the seed collection and transportation techniques
CO 5. Describe the culture and conservation of sea cucumbers n India
CO 6. Understanding the processing of sea cucumbers
CO 7. Describing different types of grow out culture systems
CO 8. Study of ecolabelling and organizations related to it.

COURSE CODE : 16P3AQCT10
COURSE TITLE : AQUARICULTURE, AQUACULTURE ECONOMICS, MANAGEMENT AND ADMINISTRATION

COURSE OUTCOMES

CO 1. Identification and breeding of ornamental fin fishes.
CO 2. Understand the basic principles of economic theories applied to farm management, entrepreneurships and small scale industries.
CO 3. Identification of aquarium plants and invertebrates.
CO 4. Study of construction and maintenance of aquarium
CO 5. Setting up of aquarium tanks.
CO 6. Identification of common diseases in aquarium fishes and management
CO 7. Application of production economics in aquaculture
CO 8. Analyze market demand for aquaculture products by conducting consumer surveys.

COURSE CODE : 16P3AQCT11
COURSE TITLE : CULTURE OF CRUSTACEANS, SEAWEEDS AND FISHERIES TECHNOLOGY

COURSE OUTCOMES

CO 1. Understand the culture of the economically important crustaceans and seaweeds
CO 2. Identification of economically important sea weeds
CO 3. Describe the methods of processing and extraction of different seaweed products
CO 4. Understanding the fundamental principle of bacteriology
CO 5. Describe spoilage causing microorganisms of fish and fishery products
CO 6. Sensory evaluation of fresh fish and fish products
CO 7. Analysing post mortem changes in fish
CO 8. Describing handling of fish onboard , landing centres ,retail outlets and pre-processing centres

SEMESTER 4

COURSE CODE : 16P4AQCT12
COURSE TITLE : FISHING TECHNOLOGY

COURSE OUTCOMES

CO 1. Understand the basic principles of capture of fin fishes and crustaceans from inland ,marine as well as from closed water system
CO 2. Describe different types of fishing crafts
CO 3. Describe different types of fishing gears
CO 4. Understand the different materials used for the construction of fishing crafts
CO 5. Understand different materials used for the construction of fishing gears
CO 6. Understand the marine fouling and corrosion in fishing boats and their maintenance
CO 7. Understand the basic principles of navigation
CO 8. Understand the different fish finding devices

COURSE CODE : 16P2AQCT13
COURSE TITLE : FISH PROCESSING TECHNOLOGY

COURSE OUTCOMES

CO 1. Understand the handling of fishes both culture and capture
CO 2. Understand the changes in the fish composition in relation to spoilage
CO 3. Understand the freezing technology of fish
CO 4. Understand the canning of fish
CO 5. Understand the curing and drying of fish
CO 6. Understand the value added fish products
CO 7. Understand the Fishery By-products
CO 8. Understand the Packaging of fish products

COURSE CODE : 16P4AQCT14
COURSE TITLE : FISH MICROBIOLOGY AND QUALITY ASSURANCE

COURSE OUTCOMES

CO 1. Understand the trace metals in fins fish and shell fish
CO 2. Understand the general aspects of seafood quality and quality problems
CO 3. Understand the biological hazards in seafoods
CO 4. Analyse the fish spoilage and quality assessments
CO 5. Understand the Good manufacturing practices in seafood processing
CO 6. Understand the Hazard analysis and critical control points in seafood industry
CO 7. Understand the National and international standards for fish and fish products
CO 8. Understand the Waste management in seafood plants

DEPARTMENT OF BOTANY

BSC BOTANY

Programme Specific Outcomes:

PSO 1 : Understand functional and theoretical concepts of the biological world and their relative role in the sustainability of natural habitats and biodiversity

PSO 2 : Understand knowledge on the evolutionary relationships among the plant

PSO 3 : Understand the applications of plant biology in various disciplines

PSO 4 : Perform laboratory procedures as per ethics and following standard Protocols

PSO5 : Synthesize the scientific character of observation, reasoning and apply the knowledge in designing of experiments

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CRBOT1
COURSE TITLE : MICROBIOLOGY AND PHYCOLOGY

COURSE OUTCOMES

CO 1. Define process and principles in the field of microbial diversity
CO 2. Explain the reproductive behaviour in Algae and microbes
CO 3. Apply the acquired knowledge on the ecological significance of the lower groups of plants and protists
CO 4. Analyze economic significance of the lower groups of plants and protists
CO 5. Evaluate various algal forms and classify them in the laboratory
CO 6. Develop new strategies based on various algal forms and on the basis of their applications

CHEMISTRY COMPLEMENTARY FOR BOTANY
COURSE CODE : 19U1CPCHE1
COURSE TITLE : GENERAL CHEMISTRY

COURSE OUTCOMES

CO 1. Describe different models of atomic structure.
CO 2. Define acids and bases and explain the concept of equilibrium.
CO 3. Understand the concept of solubility and its applications in various fields.
CO 4. Explain the fundamentals of nuclear chemistry.

CO 5. Generate a basic idea on applications of nuclear energy in various fields and the possible hazards.
CO 6. Explain the fundamentals of analytical chemistry.
CO 7. Understand the basics of thermodynamics.

ZOOLOGY COMPLEMENTARY FOR BOTANY

COURSE CODE : 19U1CPZOO1
COURSE TITLE : ANIMAL DIVERSITY – NON-CHORDATA

COURSE OUTCOMES

CO 1. Understand the basic concepts and principles of invertebrate taxonomy
CO 2. Analyse the salient features and taxonomy up to phylum of Kingdom Protista
CO 3. Understand the salient features and taxonomy of mesozoa and Parazoa.
CO 4. Differentiate the coral reefs and the rich biodiversity of coelenterates
CO 5. Understand the pathogenicity of round worms and flat worms.
CO 6. Understand the salient features and taxonomy of segmented, jointed and shelled invertebrates.
CO 7. Understand the morphological aspects, structural and functional facets of *Penaeus*.
CO 8. Impart the knowledge of the pests of paddy, coconut and stored grains.
CO 9. Analyze the salient features of Hemichordata with reference to evolutionary sequence

SEMESTER 2

COURSE CODE : 15U2CRBOT02
COURSE TITLE : MYCOLOGY, LICHENOLOGY AND PLANT PATHOLOGY

COURSE OUTCOMES

CO 1. Define the diversity of fungi and Lichens
CO 2. Explain the reproductive behavior in fungi and lichen
CO 3. Apply the biotechnological application of fungi
CO 4. Analyze the economic significance of the fungal world
CO 5. Grade the requirement of mushroom cultivation at a small scale industry level
CO 6. Develop strategies to identify plant diseases and it’s control measures

CHEMISTRY COMPLEMENTARY FOR BOTANY
COURSE CODE : 19U2CPCHE2
COURSE TITLE : BASIC ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Understand the basics of organic chemistry.
CO 2. Understand various purification techniques like solvent extraction, distillation and crystallization.
CO 3. Develop an idea on stereochemistry of organic compounds
CO 4. Explain the basics of organic reaction mechanism.
CO 5. Discuss the classification and synthesis of polymers.

ZOOLOGY COMPLEMENTARY FOR BOTANY
COURSE CODE : 19U2CPZOO2
COURSE TITLE : ANIMAL DIVERSITY –CHORDATA

COURSE OUTCOMES

CO 1. Understand taxonomy of Phylum Chordata, sub phyla Urochordata and Cephalochordate their classes and specific examples.
CO 2. Understand the taxonomy and salient features of Sub phylum Vertebrata, divisions Agnatha and Gnathostomata, super class Pisces and its various classes with typical examples
CO 3. Understand the accessory respiratory organs in fish.
CO 4. Analyze the morphological aspects, structural and functional characteristics of frog.
CO 5. Understand salient features of class Reptilia, its various subclasses with examples, identifying poisonous and nonpoisonous snakes.
CO 6. Understand Avian characteristics, its taxonomy and flight adaptations.
CO 7. Understand the general characteristics of Class Mammalia and its classification.
CO 8. Understand adaptations in aquatic mammals.

SEMESTER 3

COURSE CODE : 15U3CRBOT3
COURSE TITLE : BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS & PALAEOBOTANY

COURSE OUTCOMES

CO 1. Appreciate the morphological diversity of bryophytes, pteridophyte, and gymnosperms
CO 2. Classify and co-relate the reproductive behaviour in bryophytes, pteridophyte, and gymnosperms
CO 3. Evaluate the evolutionary trends in bryophytes, pteridophyte, and gymnosperms
CO 4. Distinguish the ecological significance of bryophytes, pteridophyte, and gymnosperms
CO 5. Utilize the economic significance of bryophytes, pteridophyte, and gymnosperms
CO 6. Compare the habitat variation in bryophytes, pteridophyte, and gymnosperms

CO 7. Compile the diversity and distributions of prehistoric flora

CHEMISTRY COMPLEMENTARY FOR BOTANY
COURSE CODE : 15U3CPCHE3.2
COURSE TITLE : INORGANIC AND BIOINORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. IIlustrate the role of chemistry in agriculture
CO 2. Know about oxygen carriers in biological systems
CO 3. Demonstrate the role of chemistry in enzymes and nucleic acids
CO 4. Analyse about the role of elements in medicine

ZOOLOGY COMPLEMENTARY FOR BOTANY
COURSE CODE : 15U3CPZOO3
COURSE TITLE : HUMAN PHYSIOLOGY AND IMMUNOLOGY

COURSE OUTCOMES

CO 1. Understand nutrition and deficiency disorders
CO 2. Understand the functional aspects of respiration and respiratory disorders
CO 3. Understand functional aspects of cardiovascular circulation, disorders and clinical aspects.
CO 4. Understand structure and function of human nitrogenous excretory organ and renal disorders.
CO 5. Understand structural and functional features of neuromuscular system and its disorders.
CO 6. Understand functional characteristics of hormonal glands and its disorders.
CO 7. Understand the basics of immunology, antigens and antibodies, antigen antibody reactions and its clinical applications.
CO 8. Understand the applications, new developments and recent trends in immune research.

SEMESTER 4

COURSE CODE : 15U4CRBOT4
COURSE TITLE : PLANT ANATOMY AND ANGIOSPERM MORPHOLOGY

COURSE OUTCOMES

CO 1. Understand the plant cell structure in a detailed manner
CO 2. Understand the tissue level organization in plant system
CO 3. Compare the morphological features of angiosperms
CO 4. Know and carry out the plant anatomical specimen preparations
CO 5. Compare different inflorescence and fruit types in plant kingdom

ZOOLOGY COMPLEMENTARY FOR BOTANY
COURSE CODE : 15U4CPZOO4
COURSE TITLE : APPLIED ZOOLOGY

COURSE OUTCOMES

CO 1. Application of aquaculture management practices for developing entrepreneurial skills.
CO 2. Application of aquarium fish management practices for developing entrepreneurial skills.
CO 3. Application of sericulture management practices for developing entrepreneurial skills.
CO 4. Application of apiculture management practices for developing entrepreneurial skills.
CO 5. Application of vermiculture management practices for developing entrepreneurial skills.
CO 6. Application of pearl culture management practices for developing entrepreneurial skills.

CHEMISTRY COMPLEMENTARY FOR BOTANY
COURSE CODE : 15U4CPCHE4.2
COURSE TITLE : ADVANCED BIO-ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Examine the classification and properties of amino acids
CO 2. Demonstrate the classification, properties and structure of carbohydrates
CO 3. Evaluate the fundamentals of vitamins, hormones, steroids and lipids
CO 4. Analyse the basics of natural products
CO 5. Know about heterocyclic compounds
CO 6. Examine the fundamentals of chromatographic techniques

SEMESTER 5

COURSE CODE : 15U5CRBOT05
COURSE TITLE : ANGIOSPERM SYSTEMATICS, FLORAL MORPHOLOGY AND ECONOMIC BOTANY

COURSE OUTCOMES

CO 1. Define the different systems of angiosperm classification and understand the merits and demerits of the classification systems
CO 2. Explain the floral morphology of angiosperms
CO 3. Apply the interdisciplinary knowledge in solving taxonomic problems
CO 4. Analyze the floral characters and classify the angiosperms into different families
CO 5. Explain the economically and ethnobotanically important plants.

COURSE CODE : 15U5CRBOT6
COURSE TITLE : ENVIRONMENTAL SCIENCE AND ECOTOURISM

COURSE OUTCOMES

CO 1. Know about the significance of environmental science
CO 2. Create responsible citizens on conservation of nature and natural resources
CO 3. Design novel mechanism for the sustainable utilization of natural resources
CO 4. Understand the ecological interactions in various ecosystems
CO 5. Understand various environmental laws in India
CO 6. Understand the current environmental issues and its global impacts
CO 7. Analyze various ecosystems for its impact in human life

COURSE CODE: 15U5CRBOT07
COURSE TITLE : GENETICS AND PLANT BREEDING

COURSE OUTCOMES

CO 1. Understand the science of inheritance and variation of genetic characters
CO 2. Compare various intra allelic and inter allelic interactions in plants
CO 3. Assess various techniques for the production of new superior crop varieties
CO 4. Appreciate the modern strategies applied in genetics and plant breeding for human welfare
CO 5. Identify various human genetic disorders and predict occurrence of such traits in future generations

COURSE CODE : 15U5CRBOT08
COURSE TITLE : CELL AND MOLECULAR BIOLOGY AND EVOLUTION

COURSE OUTCOMES

CO 1. Understand the ultrastructure in submicroscopic and molecular level.
CO 2. Understanding about the origin, concept of continuity and complexity of life activities.
CO 3. Understand different cytological aspects of growth and development.
CO 4. Know that the DNA as the basis of heredity and variation.
CO 5. Develop their understanding around the concept of evolution as the basis of biodiversity.

SEMESTER 6

COURSE CODE : 15U6CRBOT9
COURSE TITLE : PLANT PHYSIOLOGY AND BIOCHEMISTRY

COURSE OUTCOMES

CO 1. Understand the relationship of plant with its habitat
CO 2. Differentiate mineral nutrition and mechanism of absorption
CO 3. Understand the mechanism of photosynthesis
CO 4. Know the transport mechanism happening in plant system
CO 5. Understand the respiration mechanism in plants
CO 6. Know the plant responses to environment
CO 7. Understand the physiology of growth and development in plants
CO 8. Understand the biochemical nature of plant cell
CO 9. Know the chemical nature of biomolecules
CO 10. Understand the general features of enzymes
CO 11. Identify the osmotic pressure, stomatal index, and pigment vations in plant system

COURSE CODE : 15U6CRBOT10
COURSE TITLE ; PERSPECTIVES OF SCIENCE, METHODOLOGY AND GENERAL INFORMATICS

CO 1. Introduce the perspective of science
CO 2. Understands the steps in scientific methods
CO 3. Understand the steps in research methodology in plant science
CO 4. Understand the uses and applications of general informatics
CO 5. Understand the basis of computer in education
CO 6. Understand and perform chromatography and other techniques in botany
CO 7. Understand the statistical terms and its relevance in plant science

COURSE CODE : 15U6CRBOT11
COURSE TITLE : BIOTECHNOLOGY AND BIOINFORMATICS

COURSE OUTCOMES

CO 1. Understand on the fundamentals of Biotechnology and Bioinformatics
CO 2. Understand various developments in biotechnology and potential applications.
CO 3. Understand the basics in bioinformatics
CO 4. Equipped with use of computer in handling experimental data.

COURSE CODE : 15U6CRBOT12
COURSE TITLE : HORTICULTURE, NURSERY MANAGEMENT, EMBRYOLOGY AND REPRODUCTIVE BIOLOGY

COURSE OUTCOMES

CO 1. Understand Horticulture
CO 2. Understand the importance of horticulture in human welfare.
CO 3. Understand the basics in embryology.
CO 4. Analyse the development of fruit and seed.
CO 5. Apply Nursery Management Techniques

COURSE CODE : 15U6CRBOT13
COURSE TITLE : PHYTOCHEMISTRY AND PHARMACOGNOSY

COURSE OUTCOMES

CO 1. Understand the morphological, organoleptic, microscopic approach to study drug and aromatic plants
CO 2. Understand the extraction and characterization techniques in studying the secondary metabolites in plants
CO 3. Identify the occurrence, structure, classification, functions and pharmacological uses of plant derived drugs
CO 4. Identify the Phytochemical properties of common plant of Kerala
CO 5. Understand the volatile oil extraction methods for aromatic plants
CO 6. Know the methods in pharmacognosy
CO 7. Understand the traditional plant medicines and its scope in modern drug discovery

MSC BOTANY

Programme Specific Outcomes:

PSO1 : Understand functional and theoretical concepts of the biological world and their relative role in the sustainability of natural habitats and biodiversity

PSO2 : Possess knowledge on the evolutionary relationships among the plant

PSO3 : Understand the applications of plant biology in various desciplines and communicate effectively with the society.

PSO4 : Perform laboratory procedures as per ethics and following standard Protocols

PSO5 : Synthesize the scientific character of observation, reasoning and apply the knowledge in designing of experiments

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1BOTT01
COURSE TITLE : MICROBIOLOGY AND PHYCOLOGY

COURSE OUTCOMES

CO 1. Define the world of microbial diversity and their evolutionary relationships
CO 2. Apply the ecological significance of the lower groups of plants and protists
CO 3. Apply the economic significance of the lower groups of plants and protists
CO 4. Examine various algal forms
CO 5. Evaluate life cycles exhibited by different classes of algae

COURSE CODE : 16P1BOTT02
COURSE TITLE : MYCOLOGY AND CROP PATHOLOGY

COURSE OUTCOMES

CO 1. Define various phenomena, principles, etc. of micro and macro fungi.
CO 2. Explain different classification systems
CO 3. Apply the significance of mycotic diseases
CO 4. Analyze fungal associations, their usefulness and harmfulness
CO 5. Evaluate advanced theoretical and practical knowledge about phytopathogens and their control.
CO 6. Develop various aspects of applications of Mycology and crop pathology

COURSE CODE : 16P1BOTT03
COURSE TITLE : ECOLOGY, ENVIRONMENTAL BIOLOGY, PHYTOGEOGRAPHY & RESEARCH METHODOLOGY

COURSE OUTCOMES

CO 1. Define the basics of ecology and environmental science
CO 2. Explain the theoretical and practical knowledge on ecology and environmental science
CO 3. Demonstrate with different mathematical and statistical models and indices to explain natural phenomena and theoretical principles with which several ecological processes are explained.
CO 4. Analyse global environment problems.
CO 5. Explain origin of the Western Ghats and diversity and conservation in the Western Ghats
CO 6. Define biodiversity, phytogeography, ecosystem functioning etc.
CO 7. Evaluate methods of conservation managements of natural ecosystems and rare, endemic and threatened species in the Western Ghats.
CO 8. Develop scientific aptitude and apply methodologies to pursue scientific researches.

COURSE CODE : 16P1BOTT04
COURSE TITLE : CELL BIOLOGY

COURSE OUTCOMES

CO 1. Define the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles
CO 2. Explain how the cells interact among themselves and with the environment through signal molecules
CO 3. Explain about cytoskeleton, endomembrane system, protein trafficking and cell cycle
CO 4. Analyze recent advancements in Chloroplast and Mitochondrial research
CO 5. Evaluate the molecular mechanisms of cancer
CO 6. Develop basic knowledge to prepare for competitive examinations in life science

SEMESTER 2

COURSE CODE : 16P1BOTT05
COURSE TITLE : BRYOLOGY AND PTERIDOLOGY

COURSE OUTCOMES

CO 1. Define the diversity of primitive land plants.
CO 2. Explain the morphological and anatomical features of Bryophytes and Pteridophytes.
CO 3. Evaluate the main characteristics of Bryophytes and Pteridophytes.
CO 4. Examine the development of land adaptations in the Bryophytes and Pteridophytes.

CO 5. Analyze various lifecycle events in Bbryophyte and Pteridophytes.
CO 6. Define the evolutionary trends primitive plant groups.
CO 7. Develop capacity to identify various Bryophytes and Pteridophytes in their habitats.

COURSE CODE : 16P2BOTT06
COURSE TITLE : MOLECULAR BIOLOGY AND IMMUNOLOGY

COURSE OUTCOMES

CO 1. Define the basic properties, structure and functions of genetic materials.
CO 2. Explain the central dogma of molecular biology.
CO 3. Examine gene expression mechanisms.
CO 4. Explain the mechanism of DNA repair systems
CO 5. Evaluate the alternate forms of DNA and its significance
CO 6. Develop strategies to distinguish diverse RNA molecules and its functions in biological systems.

COURSE CODE : 16P2BOTT07
COURSE TITLE : PLANT ANATOMY, PRINCIPLES OF ANGIOSPERMS SYSTEMATICS & MORPHOLOGY

COURSE OUTCOMES

CO 1. Understand the plant cell structure in a detailed manner
CO 2. Understand the tissue level organization in plant system
CO 3. Define the morphological features of angiosperms
CO 4. Develop capacity in plant anatomical specimen preparations
CO 5. Explain the details of wood anatomy, plant fibres and secretory tissues
CO 6. Explain different inflorescence and fruit types in plant kingdom
CO 7. Evaluate different wood types looking into anatomical peculiarities
CO 8. Define floral, nodal and reproductive anatomy of plants
CO 9. Explain various underlying principles of angiosperm systematics
CO 10. Develop confidence in using correct systematic terms in publishing validly

COURSE CODE : 16P2BOTT08
COURSE TITLE : GENETICS AND BIOCHEMISTRY

COURSE OUTCOMES

CO 1. Explain the Mendelian and Non-Mendelian modes of inheritance that governs passage of genetic traits across generation.
CO 2. Define the Hardy-Weinberg equilibrium.
CO 3. Explain linkage and crossing over mechanisms
CO 4. Evaluate structure and functions of biomolecules.

CO 5. Explain enzymology, nucleotide metabolism and secondary metabolites.
CO 6. Evaluate map distance, gene order, coefficient of coincidence and interference.
CO 7. Develop capacity the structure and function of various biomolecules in living systems

SEMESTER 3

COURSE CODE : 16P3BOTT09
COURSE TITLE : TAXONOMY OF ANGIOSPERMS

COURSE OUTCOMES

CO 1. Define the scope and significance of angiosperm taxonomy and ethnobotany
CO 2. Explain the various systems of angiosperm classification and its merits and demerits
CO 3. Apply the different taxonomic keys and approaches for the exact identification of angiosperms up to the species level
CO 4. Examine the vegetative and reproductive characters of various angiosperm families
CO 5. Evaluate the evolutionary trends in angiosperms
CO 6. Develop methodology for the ethnobotanical study and bioprospecting of the products.

COURSE CODE : 16P3BOTT10

COURSE TITLE : GYMNOSPERMS, EVOLUTION & PALEOBOTANY
COURSE OUTCOMES

CO 1. Analyze the morphological diversity of gymnosperms
CO 2. Examine the reproductive behaviour in gymnosperms
CO 3. Predict evolutionary trends in biological systems
CO 4. Evaluate ecological and economic significance of gymnosperms
CO 5. Explain and interpret the origin and phylogeny organisms
CO 6. Justify the diversity and distributions of prehistoric flora

COURSE CODE : 16P3BOTT11
COURSE TITLE : PLANT PHYSIOLOGY AND METABOLISM

COURSE OUTCOMES

CO 1. Explain the relationship of plant with its habitat
CO 2. Relate mineral nutrition with the mechanism of absorption
CO 3. Examine the mechanism of photosynthesis, nitrogen metabolism, plant growth regulators and sensory photobiology
CO 4. Evaluate the transport mechanism in plant system

CO 5. Examine the respiration mechanism in plants
CO 6. Classify the plant responses to various environmental stresses

COURSE CODE : 16P3BOTT12
COURSE TITLE : PLANT REPRODUCTIVE BIOLOGY, PALYNOLOGY AND PLANT BREEDING

COURSE OUTCOMES

CO 1. Understand basic concepts of developmental biology, Palynology and plant breeding
CO 2. Define plant breeding systems and self-incompatibility and their role in plant breeding in plants
CO 3. Explain different pollination syndromes and pollination and post pollination changes in flowering plants
CO 4. Compare structure of pollen grains and analyse pollen ultra-structural characters
CO 5. Apply pollination-, palynology- and plant breeding- techniques

SEMESTER 4

COURSE CODE : 16P4E1BOTT13
COURSE TITLE : BIOTECHNOLOGY & GENETIC ENGINEERING

COURSE OUTCOMES

CO 1. Explain the fundamental and advanced aspects of recombinant DNA technology, gene cloning strategies
CO 2. Describe the various aspects of advanced transgenic technology
CO 3. Explain the social and ethical issues in the field of biotechnology
CO 4. Describe the scope and relevance of genome editing
CO 5. Explain the applications of rDNA technology

COURSE CODE : 16P4E1BOTT14
COURSE TITLE : GENOMICS, PROTEOMICS & BIOINFORMATICS

COURSE OUTCOMES

CO 1. Compile and explain the history of genomics and the revolution happened in the field
CO 2. Distinguish the ancient and modern techniques to understand the structural features of genome
CO 3. Elaborate the modern principles of functional genomics
CO 4. Simplify the evolutionary studies using the genomics tools and appraise the social and ethical issues with a scientific temper
CO 5. Formulate the genomic studies using the fundamentals of bioinformatics

COURSE CODE : 16P4E1BOTT15
COURSE TITLE : TISSUE CULTURE AND MICROBIAL BIOTECHNOLOGY

COURSE OUTCOMES

CO 1. Examine the basic aspects of plant tissue culture in vitro germplasm conservation strategies
CO 2. Describe the fundamentals of microbial biotechnology
CO 3. Evaluate the different methods and processes involved in plant tissue culture
CO 4. Describe the scope and relevance of Bioreactors and fermentation technology
CO 5. Analyze the somaclonal and ploidy variants

COURSE CODE : 16P4E1BOTT1
COURSE TITLE : BIOSTATISTICS, MICROTECHNIQUES & BIOPHYSICS

COURSE OUTCOMES

CO 1. Explain the tools and techniques available for studying biochemical and biophysical nature of life.
CO 2. Describe the basics of bio-statistics and experimental design in research
CO 3. Describe micro-preparation of plant materials for microscopic examination and histo-chemical studies.
CO 4. Identify various statistical tools and their applications in data analysis processing
CO 5. Explain principles and working of various types of microscopes and other instruments in biological research
CO 6. Understand and Apply different bio statistical analytical methods in research, real life and professional fields.

DEPARTMENT OF CHEMISTRY

BSC CHEMISTRY

Programme Specific Outcomes:

PSO 1 : Explain the basic scientific concepts effectively and solve the problems systematically and analytically related to inorganic, organic, theoretical and physical chemistry

PSO 2 : Apply the principles of chemistry in industry, agriculture, medicine and Environment

PSO 3 : Experiment, analyse and draw conclusions from qualitative, quantitative and synthetic laboratory exercises.

PSO 4 : Design projects in different fields of chemistry and develop research aptitude.

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CRCHE01
COURSE TITLE : THEORETICAL AND INORGANIC CHEMISTRY I

COURSE OUTCOMES

CO 1. Remember the evolution of chemistry as a discipline of science
CO 2. Understand the basics concepts of chemistry and fundamental principles of analytical chemistry.
CO 3. Analyse the features and limitations of various models of atomic structure.
CO 4. Apply the principles of quantum mechanics to describe atomic structure.

COMPLEMENTARY PHYSICS FOR CHEMISTRY
COURSE CODE : 19U1CPPHY2
COURSE TITLE : PROPERTIES OF MATTER, MECHANICS AND PARTICLE PHYSICS

COURSE OUTCOMES

CO 1. Understanding the concepts of Elastic moduli- Poisson's ratio- twisting couple-determination of rigidity modulus
CO 2. Understanding the basic concepts of Rotational dynamics of rigid bodies
CO 3. Understanding the role of oscillations in Physics life
CO 4. Understanding Particle Physics – Basic Introduction

COMPLEMENTARY MATHEMATICS FOR CHEMISTRY
COURSE CODE : 19U2CPMAT01
COURSE TITLE : DIFFERENTIAL CALCULUS AND TRIGONOMETRY

COURSE OUTCOMES

CO 1. Understand limits, derivatives of a functions and its applications.
CO 2. Determine whether a given function is increasing or decreasing.
CO 3. Apply the concepts of maxima and minima of a function to real world problems
CO 4. Understand the concepts of derivative of functions of more than one variable
CO 5. Understand the concepts of Trigonometric functions, their properties and summation of trigonometric series

SEMESTER 2

COURSE CODE : 19U2CRCHE02
COURSE TITLE : THEORETICAL AND INORGANIC CHEMISTRY II

COURSE OUTCOMES

CO 1. Ability to understand the basics of periodicity in the properties of the elements, chemical bonding, nuclear chemistry and different analytical techniques
CO 2. Ability to apply valence bond and molecular orbital theories to explain the bonding characteristics of different chemical systems**.**
CO 3. Ability to interpret the properties such as dipole moment, bond length, magnetic behaviour and bond energy of molecular systems in the light of VB or MO theory.
CO 4. Ability to explore and reflect about the wide range of possibilities and applications of nuclear reactions and radio activity.
CO 5. Ability to apply gravimetric analysis and different separation/purification techniques effectively in laboratory scale.

COMPLEMENTARY PHYSICS FOR CHEMISTRY
COURSE CODE : 19U2CPPHY2
COURSE TITLE : ELECTRIC AND MAGNETIC PHENOMENA, THERMODYNAMICS AND SOLID STATE PHYSICS

COURSE OUTCOMES

CO 1. Understanding the concepts of electric phenomena
CO 2. Understanding the concepts of magnetic phenomena
CO 3. Understanding the concepts of thermodynamics
CO 4. Understanding the concepts of solid state physics

COMPLEMENTARY MATHEMATICS FOR CHEMISTRY
COURSE CODE : 19U2CPMAT02
COURSE TITLE : INTEGRAL CALCULUS AND MATRICES

COURSE OUTCOMES

CO 1. Understand definite integrals and The fundamental theorem of Calculus
CO 2. Determine the area and volume of surfaces in space.
CO 3. Understand the concepts of Double Integrals
CO 4. Apply the concepts of multiple integrals to find the area and volume of regions in space
CO 5. Understand the concepts of matrices
CO 6. Apply the concepts of matrices to solve system of linear equations and characteristic roots

SEMESTER 3

COURSE CODE AND TITLE
15U3CRCHE03: ORGANIC CHEMISTRY – I

COURSE OUTCOMES

CO 1. Discuss the classification and nomenclature of organic compounds
CO 2. Categorize different organic reactions and discuss the mechanisms involved
CO 3. Apply the principles of aromaticity and stereochemistry in organic compounds
CO 4. Describe various emerging areas of organic chemistry and its applications

COMPLEMENTARY PHYSICS FOR CHEMISTRY
COURSE CODE : 15U3CPPHY06
COURSE TITLE : QUANTUM MECHANICS, SPECTROSCOPY, NUCLEAR PHYSICS AND ELECTRONICS

COURSE OUTCOMES

CO 1. Understanding the quantum world of atoms and appreciate the latest developments in Physics and Chemistry.
CO 2. Applying the basic understanding of nuclear physics to extended applications like nuclear reactors, atom bomb, carbon dating etc.
CO 3. Applying basic semiconductor physics and extend it to electronic components and devices.

COMPLEMENTARY MATHEMATICS FOR CHEMISTRY
COURSE CODE : 15U3CPMAT03
COURSE TITLE : DIFFERENTIAL EQUATIONS, MATRICES AND TRIGONOMETRY

COURSE OUTCOMES

CO 1. Understand the methods of solving important types of first order ordinary differential equations.
CO 2. Understand the origin of first order p.d.e's and their solution.
CO 3. Understand different types of matrices and rank of a matrix
CO 4. Apply the concept of matrices in solving system of linear equations

CO 5. Find the Eigen values and Eigen vectors of a given matrix
CO 6. Understand the applications of Cayley Hamilton theorem
CO 7. Understand trigonometric functions, their expansions and summation of infinite series using the C+iS method

SEMESTER 4

COURSE CODE : 15U4CRCHE04
COURSE TITLE : ORGANIC CHEMISTRY – II

COURSE OUTCOMES

CO 1. Review the chemistry of some selected functional groups to develop proper aptitude towards the study of organic compounds and their reactions
CO 2. Illustrate the chemistry of alcohols, phenols, carboxylic acids, derivatives of Carboxylic acids, Sulphonic acids, carbonyl compounds, poly nuclear hydrocarbons, active methylene compounds and Grignard reagents
CO 3. Categorize different organic reactions and analyze the mechanisms.

COMPLEMENTARY PHYSICS FOR CHEMISTRY
COURSE CODE : 15U4CPPHY08
COURSE TITLE : PHYSICAL OPTICS, LASER PHYSICS AND SUPERCONDUCTIVITY

COURSE OUTCOMES

CO 1. Applying the concept of wavenature of light in daily life to appreciate the science of various devices which make our life easier
CO 2. Understand the concept of polarization and applying concept to explain the use of polarization in various applications
CO 3. Understand the concept laser action and superconductivity and explore the possibility for higher level research.

COMPLEMENTARY MATHEMATICS FOR CHEMISTRY
COURSE CODE : 15U4CPMAT04
COURSE TITLE : FOURIER SERIES, PARTIAL DIFFERENTIAL EQUATIONS, NUMERICAL ANALYSIS AND ABSTRACT ALGEBRA

COURSE OUTCOMES

CO 1. Find the Fourier series expansion of a given periodic function in a specified interval.
CO 2. Solve different types of differential equations
CO 3. Discuss the solution using numerical method
CO 4. Understand the concepts of groups, cyclic groups, permutation groups

SEMESTER 5

COURSE CODE : 15U5CRCHE05
COURSE TITLE : INORGANIC CHEMISTRY I

COURSE OUTCOMES

CO 1. Understand the general characteristics, physical and chemical properties of the d and f block elements
CO 2. Know various theories of coordination compounds
CO 3. and isomerism exhibited by metal complexes
CO 4. Understand the classification, properties and applications of organometallic compounds
CO 5. Apply the concepts of acids and bases.
CO 6. Analyse the importance and various functions of metals in biological systems

COURSE CODE : 15U5CRCHE6
COURSE TITLE : ORGANIC CHEMISTRY – III

COURSE OUTCOMES

CO 1. Explain the chemistry of organic compounds containing nitrogen.
CO 2. Interpret the basics of organic photochemical reactions.
CO 3. Explain the chemistry and applications of dyes, organic polymers, important aliphatic hydrocarbons, soaps, detergents and organic reagents of analytical and synthetic importance.
CO 4. Explain the applications of chemotherapy.
CO 5. Identify organic compound using UV, IR and PMR spectroscopic techniques.

COURSE CODE : 15U5CRCHE07
COURSE TITLE : PHYSICAL CHEMISTRY I

COURSE OUTCOMES

CO 1. Describe the properties of solid, liquid and gaseous states and solutions
CO 2. Apply the theories of symmetry and point groups to simple molecules.
CO 3. Explain the theories and applications of adsorption.
CO 4. Analyse and determine the molecular weights of solids using colligative properties

COURSE CODE : 15U5CRCHE08
COURSE TITLE : PHYSICAL CHEMISTRY – II

COURSE OUTCOMES

CO 1. Explain the basics of spectroscopy.
CO 2. Explain the fundamental principles of rotational, vibrational, Raman, electronic, NMR and mass spectroscopic techniques.

CO 3. Compare the aspects of rotational and vibrational spectroscopy.
CO 4. Discuss the first order spectra of simple organic molecules.
CO 5. Describe the fundamentals of photochemistry and optical properties.
CO 6. Understand the mechanism of photochemical reactions and its application in everyday life.

COURSE CODE : 15U5OCCHE1
COURSE TITLE : CHEMISTRY IN EVERYDAY LIFE

COURSE OUTCOMES

CO 1. Know the importance of chemistry in everyday life.
CO 2. Understand the chemistry of food additives and flavours and its effect on human health.
CO 3. Understand the chemistry of soaps, synthetic detergents and their environmental effects.
CO 4. Understand the chemistry of cosmetics and the effect on health.
CO 5. Understand the chemistry of plastics, paper and dyes.
CO 6. Understand the hazards of plastics and other synthetic materials on human health and environment and acquaint the methods for its reduction.
CO 7. Understand the chemistry of and drugs; their action and possible side effects
CO 8. Explain the application of chemistry in agriculture and need of green methods

SEMESTER 6

COURSE CODE : 15U6CRCHE09
COURSE TITLE : INORGANIC CHEMISTRY – II

COURSE OUTCOMES

CO 1. Describe the process of metallurgy.
CO 2. Explain the structure and properties of organometallic compounds, metal carbonyls metal clusters and inorganic polymers.
CO 3. Illustrate the fundamentals of water quality parameters.
CO 4. Explain the chemistry of s and p block elements.
CO 5. Discuss the structure and related properties of inorganic solids.

COURSE CODE : 15U6CRCHE10
COURSE TITLE : ORGANIC CHEMISTRY – IV

COURSE OUTCOMES

CO 1. Understand the source, structure and functions of natural products terpenoids, alkaloids, vitamins and lipids.

CO 2. Know the structure and chemical properties of carbohydrates, amino acids, proteins, enzymes and steroids.
CO 3. Understand the chemical properties and syntheses of heterocyclic compounds.

COURSE CODE : 15U5CRCHE11
COURSE TITLE : PHYSICAL CHEMISTRY-III

COURSE OUTCOMES

CO 1. Explain the basics of thermodynamics.
CO 2. Explain the laws of thermodynamics and properties of thermodynamic functions.
CO 3. Apply the laws of thermodynamics to various physical and chemical processes.
CO 4. Describe the phase equilibria of one- and two-component systems.
CO 5. Discuss the fundamentals of chemical kinetics.
CO 6. Demonstrate the kinetics of various chemical reactions.

COURSE CODE : 15U6CRCHE12
COURSE TITLE : PHYSICAL CHEMISTRY IV

COURSE OUTCOMES

CO 1. Understand concept of acids, bases and ph of solutions.
CO 2. Explain the magnetic and spectroscopic properties of systems.
CO 3. Understand the theory of electrical conductance and its applications.
CO 4. Explain electromotive force, different electrochemical cells and its applications.

COURSE CODE : 15U6ELCHE1
COURSE TITLE : ADVANCES IN CHEMISTRY

COURSE OUTCOMES

CO 1. Understand the advanced topics in inorganic chemistry.
CO 2. Understand the advanced topics in organic chemistry like retrosynthesis, supramolecular chemistry, green chemistry and polymers.
CO 3. Understand the advanced topics in physical and computational chemistry

MSC CHEMISTRY

Programme Specific Outcomes:

PSO1 : Demonstrate an in-depth knowledge and understanding of the principles of Inorganic, Organic, Physical and Theoretical Chemistry.

PSO2 : Demonstrate an awareness of the relevance of chemistry in a wider multi-disciplinary context.

PSO3 : Apply their understanding in Chemistry to design solutions to unfamiliar problems in Chemistry and those involving other related disciplines.

PSO4 : Use their knowledge and understanding to conceptualize appropriate models and representations.

PSO5 : Design and conduct analytical, modelling and experimental investigations in Inorganic, Organic, Physical and Theoretical Chemistry.

PSO6 : Ability to identify, design and conduct appropriate experiments, interpret data obtained, draw pertinent conclusions and communicate all these effectively.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1CHET01
COURSE TITLE : INORGANIC CHEMISTRY I

COURSE OUTCOME

CO 1. Explain stability of organometallic compounds and clusters, and their application as industrial catalysts.

CO 2. Describe the key concepts of inorganic and organometallic chemistry including those related to synthesis, reaction chemistry, and structure and bonding.

CO 3. Demonstrate a systematic understanding of the key aspects of nuclear chemistry and their analytical applications.

CO 4. Recognize and explain the interaction of different metal ions with biological ligands.

COURSE CODE : 16P1CHET02
COURSE TITLE : BASIC ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Explain the basic concepts of organic chemistry.

CO 2. Illustrate the principles of physical organic chemistry.

CO 3. Demonstrate the reactivity and stability of organic molecules based on structure, including conformation and stereochemistry.

CO 4. Recognize the importance of organic photochemical reactions.

COURSE CODE : 16P1CHET03
COURSE TITLE : PHYSICAL CHEMISTRY – I

COURSE OUTCOMES

CO 1. Application of mathematical tools to calculate thermodynamic and kinetic properties.
CO 2. Explain the relationship between microscopic properties of molecules with macroscopic thermodynamic observables.
CO 3. Explain the kinetic behaviour of gases and their transport properties.

COURSE CODE : 16P1CHET04
COURSE TITLE : QUANTUM CHEMISTRY AND GROUP THEORY

COURSE OUTCOMES

CO 1. Understand the foundation and postulates of quantum mechanics.
CO 2. Describe the use of simple models for predictive understanding of different molecular systems and phenomena.
CO 3. Illustrate the concept of atomic orbitals by quantum mechanics.
CO 4. Explain the fundamentals of group theory.
CO 5. Apply the principles of group theory in chemical bonding.

SEMESTER 2

COURSE CODE : 16P2CHET05
COURSE TITLE : INORGANIC CHEMISTRY II

COURSE OUTCOMES

CO 1. Understand the structural and bonding aspects of co-ordination compounds.
CO 2. Explain the spectral and magnetic properties of metal complexes.
CO 3. Explain the thermodynamic and kinetic aspects of reactions of metal complexes.
CO 4. Understand the stereochemistry of co-ordination compounds.
CO 5. Describe the co-ordination chemistry of lanthanoids and actinoids

COURSE CODE : 16P2CHET06
COURSE TITLE : ORGANIC REACTION MECHANISM

COURSE OUTCOMES

CO 1. Describe the mechanisms of different types organic reactions.
CO 2. Explain the chemistry of carbanions, carbocations, carbenes, carbenoids, nitrenes and arynes.
CO 3. Understand the chemistry of radical reactions and its applications.

CO 4. Explain the basics and applications of concerted reactions

COURSE CODE : 16P2CHET07
COURSE TITLE : PHYSICAL CHEMISTRY – II

COURSE OUTCOMES

CO 1. Understand theory and application to Microwave, Infrared and Raman Spectroscopy
CO 2. Analyze the various aspects of Electron & Electronic Spectroscopy & Lasers
CO 3. Understand the fundamental concepts of atomic, molecular and spin resonance spectroscopy.

COURSE CODE : 16P2CHET08
COURSE TITLE : THEORETICAL AND COMPUTATIONAL CHEMISTRY

COURSE OUTCOMES

CO 1. Explain the approximation methods in quantum mechanics.
CO 2. Describe the quantum mechanical explanation of chemical bonding.
CO 3. Explain the methods of computational quantum chemistry.
CO 4. Explain Model Chemistry and Molecular Simulations

SEMESTER 3

COURSE CODE : 16P3CHET09
COURSE TITLE : INORGANIC CHEMISTRY-III

COURSE OUTCOMES

CO 1. Describe the structure, reactions and phase transitions of solid state
CO 2. Interpret the electrical, magnetic and optical properties of solids.
CO 3. Illustrate the structure and applications of inorganic chains, rings, cages and clusters, and organometallic polymers.
CO 4. Categorize different metal clusters
CO 5. Describe the synthesis, classification and applications of ceramics and refractories

COURSE CODE : 16P3CHET10
COURSE TITLE : ORGANIC SYNTHESES

COURSE OUTCOMES

CO 1. Describe the applications of oxidation and reduction techniques in organic syntheses.
CO 2. Illustrate modern synthetic methods and applications of reagents.
CO 3. Explain different methods for the construction of carbocyclic and heterocyclic ring systems.

CO 4. Understand the principles and applications of protecting groups in chemistry.
CO 5. Apply retrosynthetic analysis to design the synthesis of a target molecule.
CO 6. Apply the concept of molecular recognition in nucleic acids and proteins and understand molecular receptors and their applications in medicine

COURSE CODE : 16P3CHET11
COURSE TITLE : PHYSICAL CHEMISTRY III

COURSE OUTCOMES

CO 1. Apply the principles of chemical kinetics in different types of reactions.
CO 2. Apply the principles of chemical kinetics in different types of solutions and enzyme catalysis.
CO 3. Analyze the theories of electrochemistry with its applications in measurements.
CO 4. Describe the chemistry of surfaces and its applications in colloids and macromolecules.
CO 5. Explain the chemistry of light

COURSE CODE : 16P3CHET12
COURSE TITLE : SPECTROSCOPIC METHODS IN CHEMISTRY

COURSE OUTCOMES

CO 1. Describe the principles of UV-visible, Chiro-optical, IR, NMR and Mass spectroscopic techniques.
CO 2. Illustrate various spectroscopic techniques using simple problems.
CO 3. Elucidate the structure of an unknown organic compound using data from various spectroscopic techniques.

SEMESTER 4

COURSE CODE : 16P4CHET13EL
COURSE TITLE : ADVANCED INORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Apply the principles of group theory in co-ordination complexes.
CO 2. Analyze the structures of inorganic complexes using IR, Raman, Mossbauer and EPR spectroscopic techniques.
CO 3. Compare the chemistry of different photochemical reactions.
CO 4. Interpret the structure and properties of nanomaterials.
CO 5. Examine the structure and properties of different supramolecular architectures.
CO 6. Describe the principle and applications of different analytical techniques.
CO 7. Discuss the theories of acids and bases.

COURSE CODE : 16P4CHET14EL
COURSE TITLE : ADVANCED ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Illustrate the principles of biosynthesis, biomimetic synthesis, green synthesis and stereoselective transformations.
CO 2. Explain the chemistry of advanced polymeric materials.
CO 3. Describe the structure and applications of natural products and biomolecules
CO 4. Explain the mechanism of drug action and drug designing
CO 5. Explain different scientific methods, scientific writing and scientific journal

COURSE CODE : 16P4CHET15EL
COURSE TITLE : ADVANCED PHYSICAL CHEMISTRY

COURSE OUTCOMES

CO 1. Describe the physical principles of crystallography and apply it in explaining the properties of solids and liquid crystals.
CO 2. Apply the principles of electrochemistry in electrochemical cells, fuel cells, storage cells and corrosion.
CO 3. Explain the principles of dynamic electrochemistry
CO 4. Describe the principles of diffraction methods and various atomic spectroscopic techniques
CO 5. Apply various electro-analytical techniques in qualitative and quantitative analysis.

MSC PHARMACEUTICAL CHEMISTRY

Programme Specific Outcomes:

PSO1 : Demonstrate an in-depth knowledge and understanding of the principles of Inorganic, Organic, Physical and Theoretical Chemistry.

PSO2 : Demonstrate an awareness of the relevance of chemistry in a wider multi-disciplinary context.

PSO3 : Apply their understanding in Chemistry to design solutions to unfamiliar problems in Chemistry and those involving other related disciplines.

PSO4 : Use their knowledge and understanding to conceptualize appropriate models and representations.

PSO5 : Design and conduct analytical, modelling and experimental investigations in Inorganic, Organic, Physical and Theoretical Chemistry.

PSO6 : Ability to identify, design and conduct appropriate experiments, interpret data obtained, draw pertinent conclusions and communicate all these effectively.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1CPHT01
COURSE TITLE : INORGANIC CHEMISTRY I

COURSE OUTCOMES

CO 1. Explain stability of organometallic compounds and clusters, and their application as industrial catalysts.

CO 2. Describe the key concepts of inorganic and organometallic chemistry including those related to synthesis, reaction chemistry, and structure and bonding.

CO 3. Demonstrate a systematic understanding of the key aspects of nuclear chemistry and their analytical applications.

CO 4. Recognize and explain the interaction of different metal ions with biological ligands.

COURSE CODE : 16P1CPHT02
COURSE TITLE : BASIC ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Explain the basic concepts of organic chemistry.

CO 2. Illustrate the principles of physical organic chemistry.

CO 3. Demonstrate the reactivity and stability of organic molecules based on structure, including conformation and stereochemistry.
CO 4. Recognize the importance of organic photochemical reactions.

COURSE CODE : 16P1CPHT03
COURSE TITLE : PHYSICAL CHEMISTRY – I

COURSE OUTCOMES

CO 1. Application of mathematical tools to calculate thermodynamic and kinetic properties.
CO 2. Explain the relationship between microscopic properties of molecules with macroscopic thermodynamic observables.
CO 3. Explain the kinetic behaviour of gases and their transport properties.

COURSE CODE : 16P1CPHT04
COURSE TITLE : QUANTUM CHEMISTRY AND GROUP THEORY

COURSE OUTCOMES

CO 1. Understand the foundation and postulates of quantum mechanics.
CO 2. Describe the use of simple models for predictive understanding of different molecular systems and phenomena.
CO 3. Illustrate the concept of atomic orbitals by quantum mechanics.
CO 4. Explain the fundamentals of group theory.
CO 5. Apply the principles of group theory in chemical bonding.

SEMESTER 2

COURSE CODE : 16P2CPHT05
COURSE TITLE : INORGANIC CHEMISTRY II

COURSE OUTCOMES

CO 1. Understand the structural and bonding aspects of co-ordination compounds.
CO 2. Explain the spectral and magnetic properties of metal complexes.
CO 3. Explain the thermodynamic and kinetic aspects of reactions of metal complexes.
CO 4. Understand the stereochemistry of co-ordination compounds.
CO 5. Describe the co-ordination chemistry of lanthanoids and actinoids

COURSE CODE : 16P2CPHT06
COURSE TITLE : ORGANIC REACTION MECHANISM

COURSE OUTCOMES

CO 1. Describe the mechanisms of different types organic reactions.
CO 2. Explain the chemistry of carbanions, carbocations, carbenes, carbenoids, nitrenes and arynes.
CO 3. Understand the chemistry of radical reactions and its applications.

CO 4. Explain the basics and applications of concerted reactions

COURSE CODE : 16P2CPHT07
COURSE TITLE : PHYSICAL CHEMISTRY – II

COURSE OUTCOMES

CO 1. Ability to understand theory and application to Microwave, Infrared and Raman Spectroscopy
CO 2. Analyze the various aspects of Electron & Electronic Spectroscopy & Lasers
CO 3. Understand the fundamental concepts of atomic, molecular and spin resonance spectroscopy.

COURSE CODE : 16P2CPHT08
COURSE TITLE : THEORETICAL AND COMPUTATIONAL CHEMISTRY

COURSE OUTCOMES

CO 1. Explain the approximation methods in quantum mechanics.
CO 2. Describe the quantum mechanical explanation of chemical bonding.
CO 3. Explain the methods of computational quantum chemistry.
CO 4. Explain Model Chemistry and Molecular Simulations

SEMESTER 3

COURSE CODE : 16P3CPHT09
COURSE TITLE : PHARMACEUTICAL CHEMISTRY – I

COURSE OUTCOMES

CO 1. Describe the Drug design, Pharmacology, mechanism of action of drugs
CO 2. Interpret the receptor theories and bio-transformation of drugs.
CO 3. Structure, synthesis, pharmacological and mechanism of action and SAR of Antiinfective agents.
CO 4. Structure, synthesis, pharmacological and mechanism of action and SAR of Drugs acting on CVS
CO 5. Structure, synthesis, pharmacological and mechanism of action and SAR of Chemotherapeutic agents
CO 6. Structure, synthesis, pharmacological and mechanism of action and SAR of Antipyretics and NSAIDs

COURSE CODE : 16P3CPHT10
COURSE TITLE : ORGANIC SYNTHESES

COURSE OUTCOMES

CO 1. Describe the applications of oxidation and reduction techniques in organic syntheses.
CO 2. Illustrate modern synthetic methods and applications of reagents.
CO 3. Explain different methods for the construction of carbocyclic and heterocyclic ring systems.
CO 4. Understand the principles and applications of protecting groups in chemistry.
CO 5. Apply retrosynthetic analysis to design the synthesis of a target molecule.
CO 6. Apply the concept of molecular recognition in nucleic acids and proteins and understand molecular receptors and their applications in medicine

COURSE CODE : 16P3CPHT11
COURSE TITLE : PHYSICAL CHEMISTRY III

COURSE OUTCOMES

CO 1. Apply the principles of chemical kinetics in different types of reactions.
CO 2. Apply the principles of chemical kinetics in different types of solutions and enzyme catalysis.
CO 3. Analyze the theories of electrochemistry with its applications in measurements.
CO 4. Describe the chemistry of surfaces and its applications in colloids and macromolecules.
CO 5. Explain the chemistry of light

COURSE CODE : 16P3CPHT12
COURSE TITLE : SPECTROSCOPIC METHODS IN CHEMISTRY

COURSE OUTCOMES

CO 1. Describe the principles of UV-visible, Chiro-optical, IR, NMR and Mass spectroscopic techniques.
CO 2. Illustrate various spectroscopic techniques using simple problems.
CO 3. Elucidate the structure of an unknown organic compound using data from various spectroscopic techniques.

SEMESTER 4

COURSE CODE : 16P4CPHT13EL
COURSE TITLE : PHARMACEUTICAL CHEMISTRY II (BIOCHEMISTRY AND BACTERIOLOGY)

COURSE OUTCOMES

CO 1. Describe the structure and functions of biomolecules, amino acids, proteins, enzymes, nucleic acids and hormones.

CO 2. Explain the chemical processes involved in the biological oxidation and metabolism.
CO 3. Illustrate the application of buffer systems in pharmaceutical chemistry.
CO 4. Describe the principles of microbiology and immunology

COURSE CODE : 16P4CPHT14EL
COURSE TITLE : PHARMACEUTICAL CHEMISTRY III (ADVANCES IN PHARMACEUTICALOPERATIONS)

COURSE OUTCOMES

CO 1. An over view of different dosage forms drug delivery systems
CO 2. Describe the formulation and development of solid dosage forms
CO 3. Illustrate Preformulation studies and Stability Testing of Drugs
CO 4. Discuss about application of colloids
CO 5. Illustrate IPR and copyright
CO 6. Explain different types of chromatography
CO 7. Describe the Radio pharmaceuticals, principle and methods of extraction

COURSE CODE : 16P4CPHT15EL
COURSE TITLE : PHARMACEUTICAL CHEMISTRY IV – DRUG DESIGN

COURSE OUTCOMES

CO 1. Explain the principles of drug design and development, QSAR, CADD and combinatorial chemistry
CO 2. Illustrate the structure and mechanism of actions of antineoplastic drugs, drugs acting on ANS and drug acting on CNS.
CO 3. Deduce the synthetic strategies for different classes of drugs.

DEPARTMENT OF COMMERCE

B.COM. (TAXATION AND FINANCE)

Programme Specific Outcomes:

PSO 1 : Equipping the students with the manpower requirements in various commerce subjects in order to cater to the needs of trade, industry and commerce.

PSO 2: Imbibing ethical values, sustainable team work, professional communication and leadership skill sets in students.

PSO 3 : Instilling entrepreneurship among students in order to sustain their ventures through environmental friendly practices.

PSO 4 : Facilitating assimilation of knowledge, skill and attitude among the students for the creation of responsible citizenry.

PSO 5 : Ensuring higher education, employability, apart from providing global educational perspectives.

Course Outcomes

SEMESTER-1

19U1CRCOM01 COURSE TITLE: BUSINESS STATISTICS

CO-1.
Explain the features, characteristics, functions and limitations of statistics.
CO-2
Apply the measures of central tendency in business situations
CO-3
Differentiate measures of dispersion and compute it
CO-4
Evaluate the relevance and application of co-efficient of variation in business situations
CO-5
Focus and distinguish the types of index numbers
CO-6
Evaluate the methods of trend determination and its scope in business

19U1CRCOM02 COURSE TITLE: FINANCIAL ACCOUNTING

CO-1
Critical Thinking and differentiation of accounting of non- profit organization and profit making organisations
CO-2
Accounting of non-profit organisation leads to effective citizenship
CO-3
Royalty of different natural resources and its treatment in the books of Lessee and lessor leads to discussions and understanding in environment related issues

CO-4
Branch and Consignment Accounting helps in developing global perspective in the era of MNC's

19U1CRCOM03 COURSE TITLE: BUSINESS REGULATORY FRAMEWORK
CO-1
Apply knowledge of Indian Contract Act, Sale of Goods Act, Partnership Act and LLP.
CO-2
Ability to identify, and solve legal issues in connection with business.
CO-3
Ability to understand the method and style of legal proceedings for legal practice.
CO-4
Appreciate the relevance of business law to individuals and businesses and the role of law in an economic, political and social context.
CO-5
Identify the fundamental legal principles behind contractual agreements.
CO-6
Acquire problem solving techniques and to be able to present coherent, concise legal argument.

19U1COCOM1 COURSE TITLE: BUSINESS ENVIRONMENT
CO-1
Provide an exposure to students about the various business environmental factors
CO-2
Gain substantial knowledge in the spheres of business, industry and commerce
CO-3
Familiarize students on the various elements of business environment along with the concepts of business ethics, CSR and corporate governance
CO-4
Provide a thorough understanding on economic environment vis-à-vis various of business environmental policies
CO-5
Understand about foreign investments, BRICS and WTO
CO-6
Equip students on legal environment such as insolvency, bankruptcy code, IPR and consumer protection Act
CO-7
Create awareness about impact of business on natural environment and to take corrective measures in the modern world

SEMESTER:-2

19U2CRCOM04 COURSE TITLE: QUANTITATIVE TECHNIQUES FOR BUSINESS RESEARCH
CO-1
Understand research, research methodology, types and its importance in business.
CO-2
Analyse the steps in research process.
CO-3

Apply the Diagrammatic and Graphic Presentation of data and its significance.
CO-4
Check the significance of Correlation analysis and its methods (types Correlation-methods-Karl Pearson's Co-efficient of correlation-Spearman's Rank correlation co-efficient)
CO-5
Evaluate the significance of Regression analysis in business
CO-6
Understand the basic concepts of Probability theory
CO-7
Compute Permutation and combination of probability, the Theorems of Probability (Addition theorem & Multiplication theorem.)
CO-8
Explain research Report writing, types of report, characteristics of a good report and contents of a report.

19U2CRCOM05 COURSE TITLE:INTERNATIONAL FINANCIAL REPORTING STANDARDS
CO-1
After the successful completion of the course the students are expected to understand various accounting Standards
CO-2
Understanding the procedure for First time adoption of IFRS by Companies
CO-3
Familarise the students with the difference between IFRS and other standards
CO-4
Create an idea about IASB, Conceptual Framework and need for international accounting standards in the Globalised era
CO-5
Understanding Convergence and conversion to IFRS and recognition, Measurement, presentation, disclosure of events
CO-6
The position of IFRS in India and also the presentation and reporting of Financial Statements as per IFRS

19U2CRCOM06 COURSE TITLE:CORPORATE REGULATIONS
CO-1
Know about the concept of company and shares.
CO-2
Know about the application of company law in India.
CO-3
Understand the use of the memorandum of association and article of association in a company, they also learn from this course.
CO-4
Use of various documents and forms in a company.
CO-5
Understand the relationship between company and its stakeholders.
CO-6
Identify the legal compliances of the Company.

19U2COCOM2 COURSE TITLE:BUSINESS COMMUNICATION & MANAGEMENT INFORMATION SYSTEM

CO-1
Understand and appreciate the need, importance and urgency of good business communication
CO-2
To enable students gain effective communication skills
CO-3
Learn preparation of business communication documents apart from formal letters., CV, bio data, quotations and enquiry letters
CO-4
To hone presentation skills and related soft skills of students
CO-5
To familiarize MIS and data base systems apart from enumerating its present day relevance and importance
CO-6
Help to overcome barriers in effective communication

SEMESTER-3

15U3CRCOM07 COURSE TITLE: MARKETING MANAGEMENT

CO-1
Understand the Meaning and need of marketing in business/trade.
CO-2
To comprehend the elements of marketing mix and its strategies
CO-3
To understand the pricing policies in the industry and the pricing strategies
CO-4
To understand the changes in the marketing environment.

15U3CRCOM08 COURSE TITLE: CORPORATE ACCOUNTING

CO-1
Process of issue ,reissue and forfeiture of shares and apply in business situation
CO-2
Understand the format of final accounts of Company's and prepare final accounts as per Company's act 2013
CO-3
Determination of purchase consideration in the event of amalgamation and to prepare consolidated financial statements and apply in practical situation of merger and acquisition
CO-4
Understand the process of alteration and reduction of share capital
CO-5
Understand the process of liquidation and prepare liquidators final statement of accounts
CO-6
Study of Farm Accounting and Accounting of Hospital will contribute towards sustainable development

15U3CRCOM09 COURSE TITLE: E-COMMERCE AND GENERAL INFORMATICS

CO-1

Familiarize the fundamental concepts, terms and the main activities of E-Commerce.

CO-2

Understand about the various components of E-Commerce, its models, strategies, Ecommerce security

CO-3

Logically observe and experience online shopping and dealings in the Electronic market.

CO-4

Learn about how to develop an E-commerce website

CO-5

Identify the usage of different electronic payment systems.

CO-6

Equip the students with modern technologies especially internet & related medium

15U3CRCOM10 COURSE TITLE: BUSINESS MANAGEMENT

CO-1

To ensure students' knowledge enhancement on business management and relevant management concepts

CO-2

Understand and comprehend Fayol and Taylor's contributions

CO-3

To understand various management functions, concepts of MBO, MBE and CSR.

CO-4

Make students familiar with the topics of motivation , leadership and relevant related theories

CO-5

Appreciate Human Resource Management and related concepts apart from learning performance appraisal and its techniques

CO-6

Evoke interest in pursuing higher studies in management field

SEMESTER-4

15U4CRCOM11 COURSE TITLE: CAPITAL MARKET

CO-1

To familarise students with the capital market and money market

CO-2

To enable students with the fundamentals of trading, IPO and dematerialisation

CO-3

To help students to understand more about SEBI and its contribution to Indian Capital Market

CO-4

To appreciate the emergence of various methods of share floatation and about various Indian Stock Market indices

CO-5
To learn briefly about various international stock markets
CO-6
To understand various capital market concepts like futures, forwards, swaps apart from appraising about the latest trends in Stock Markets

15U4CRCOM12 COURSE TITLE: SPECIAL ACCOUNTING
CO-1
Understand the final accounts of Banking Companies and apply in business situations
CO-2
Understand final accounts of Insurance Companies. and apply in practical situations
CO-3
Understand investment accounts and take suitable investment decisions
CO-4
Calculate the amount of Claims by understanding the loss of stock and loss of profit policy
CO-5
Prepare farm accounts and identify expenses and incomes of hospitals

15U4COCOM4 COURSE TITLE: ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT
CO-1
Encourage students to take up entrepreneurship
CO-2
Create awareness on the setting up of an enterprise
CO-3
Familiarise students on the various schemes provided for entrepreneurs
CO-4
Familiarise the students on the organisations that provide financial and non financial assistance for entrepreneurs.
CO-5
Equip students with the basic ideas of preparation of project report.
CO-6
Evaluate the problems in entrepreneurship based on case study and take adequate precautions.
COURSE TITLE: FINANCIAL SERVICES
CO-1
Understand the different types of financial services offered by a service provider
CO-2
2. Familiarize with the advantages and disadvantages of each financial service
CO-3
3. Understand the legal and tax implications of each of these financial services.
CO-4
4. Examine and evaluate the case studies related to these issues
CO-5
5. Examine the effect of financial services on the market value of a firm.
CO-6
6. Examine the effect of financial services on the stake holders of a firm

SEMESTER- 5

COURSE TITLE: COST ACCOUNTING

CO-1
Understand the various cost concepts, methods and techniques of cost accounting
CO-2
Understand the accounting and control of material cost
CO-3
Understand the accounting and control of labour cost
CO-4
Understand accounting for overheads, primary and secondary distribution and absorption of overheads and control overhead cost
CO-5
Understand format of cost sheet and prepare cost sheet
CO-6
Understand the reason for difference between cost accounts and financial accounts
CO-7
Apply cost accounting practices
CO-8
To know the application of cost control techniques
CO-9
Apply costing for decision making in business areas

COURSE TITLE:BANKING AND INSURANCE

CO-1
Demonstrate a comprehension of the principles of banking law and its relationship to banks and customers.
CO-2
Demonstrate an awareness of law and practice in a banking context.
CO-3
Engage in critical analysis of the practice of banking law from a range of perspectives.
CO-4
Organize information as it relates to the regulation of banking products and services

COURSE TITLE: ENVIRONMENT MANAGEMENT

CO-1
Create environment consciousness among the educated youth.
CO-2
Evaluate all decisions and policies taking into consideration its effect on the environment
CO-3
Inculcate a habit of preserving and protecting the natural resources.
CO-4
Implement and propagate the environmental consciousness in the surroundings
CO-5
Participate in organisations that promote environmental consciousness.
CO-6
Group of responsible citizens contributing towards sustainable growth and development.

COURSE TITLE: FUNDAMENTALS OF ACCOUNTING(OPEN COURSE)

CO 1

Familiarize the student from various disciplines with the meaning of basic accounting terms and principles

CO 2

Maintain accounts and get an idea about practical application of accounting

CO 3

Understanding the basic accounting terms, Journal, Ledger, and Trial Balance preparation, and how to prepare final accounts of a sole trading business

CO 4

After the successful completion of the course the students are expected to understand and manage accounts in a real-life situation

SEMESTER-6

COURSE TITLE: APPLIED COST ACCOUNTING

CO-1

Understand the process costing concepts so that logical decision can be taken and apply process costing concepts in business situations

CO-2

Understand the accounting procedures of job ,batch and contract costing and apply in practical situations

CO-3

Identify the role of CVP Analysis and apply the marginal costing principles in decision making situations of businesses

CO-4

Understand the concept of various budget and apply budgetary control in business situation

CO-5

To know the application of cost control techniques

CO-6

Apply costing for decision making in business areas

COURSE TITLE: PRINCIPLES OF BUSINESS DECISIONS

CO-1

Understand the economic concepts and theories applied in decision making

CO-2

Familiarise the standards with the law of demand and its effects in the market

CO-3

Explain the methods of forecasting the demand for a new product in the market

CO-4

Explain the loss of the production and its influencing factors

CO-5

Understand the concept of cost and its determinants

CO-6

Analyse the relationship between cost and output and optimum firm

CO-7
Understand the concept of pricing and price mechanism under various market situations
CO-8
Apply the economic theories in different business situations

COURSE TITLE: PRACTICAL AUDITING
CO-1
Understand the practical application of auditing.
CO-2
Familiarize with the different types of audit in-depth.
CO-3
Examine and to tackle the frauds and manipulations happening in accounts through auditing
CO-4
Equip the students with the theory and methodology of auditing, audit reporting, generally accepted auditing standards & other basic concepts.
CO-5
Explain the legal framework under which a company audits are conducted and apply the professions code of conduct.
CO-6
Demonstrate the ability to undertake research on significant auditing issues and to keep up - to-date with developments in auditing theory and practice.

COURSE TITLE: ACCOUNTING FOR MANAGERIAL DECISIONS
CO-1
Use business finance terms and concepts when discussing.
CO-2
Explain the financial concepts used in making accounting management decision.
CO-3
Use effective communication skills to promote respect and relationship for financial deals.
CO-4
Apply a variety of business and industry software and hardware to major financial function.
CO-5
Demonstrate a basic understanding of management accounting.
CO-6
Enable the students to have a thorough knowledge on the management accounting techniques in business decision making.

OPTIONAL COURSES
I FINANCE AND TAXATION
1) FINANCIAL MANAGEMENT(SEM-3)
CO-1
Familiarize the fundamental concepts and goals of financial management
CO-2
Understand the importance of, financing, investment and dividend decisions
CO-3
Evaluate the various alternatives available before arriving at a particular decision

CO-4
Analyze the profitability of various alternatives for financing
CO-5
Familiarize the theories and approaches related to the topics in financial management
CO-6
Equip the students to solve the financial problems related to an enterprise

2) GOODS AND SERVICES TAX(SEM-4)
CO-1
Understand the concepts of indirect tax
CO-2
Evaluate the structure of GST from pre GST period to post GST period.
CO-3
Familiarise with the practical applications of GST
CO-4
Identify the different types of e-filing of returns
CO-5
Comprehend the principles of taxation, objectives of taxes and its impact in the market oriented economy.
CO-6
Enable the student as a tax consultant in preparing the tax planning, tax management, payment of tax, and filing of tax returns.

3) INCOME TAX LAW AND PRACTICE (SEM-5)
CO-1
Understanding the laws of Indian Income Tax and Finance Act.
CO-2
To determine the residential Status of Tax payers.
CO-3
To compute the Income from Salary, House Property, Profits and Gains from Business or Profession and Capital Gains
CO-4
Understand the link between the different heads of Income

4) INCOME TAX-ASSESSMENT AND PROCEDURE(SEM-6)
CO-1
To Understand and compute from the head Income from other sources
CO-2
To learn how to club income and the provisions of Set off and Carry forward of losses for different class of assesse.
CO-3
To learn the provisions of deductions in Income tax and calculate the income of an assesse.
CO-4
To understand the powers of Income tax authorities and learn the assessment procedures.

M.COM. FINANCE

Programme Specific Outcomes:

PSO-1 : Fostering students with the requisite advanced knowledge and skills in the field of accounting, management, finance, taxation and securities market.

PSO-2 : Enabling acquisition of aptitude in students in their respective area of interest and equipping them to explore a career of their choice in commerce.

PSO-3 : Instilling interest in research and academic fields, help students to pursue NET, SET and such other exams.

PSO-4 : Developing overall personality of students and inculcating in them problem-solving skills in their respective fields.

PSO-5 : Creating a community that contributes towards sustainable development, inclusive growth, involve in nation building through a global perspective and gives priority for ethics.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1COMT01
COURSE TITLE : ADVANCED FINANCIAL ACCOUNTING – I

COURSE OUTCOMES

CO 1. Critical analysis and valuation of goodwill and value of shares and compare the real value of shares and with the market prices

CO 2. Determination of purchase consideration in the event of amalgamation and Students are able to prepare consolidated financial statements of group companies

CO 3. Study of reorganization schemes and Students are able to prepare statement of affairs and deficiency account of individuals

CO 4. Study of Human Resource Accounting various methods of Valuing Human Resource enabling students in calculating the value of Human Resource which is the most important resource of the business

CO 5. Strong understanding about the International Financial Reporting Standards which is necessary in the modern Global Market

COURSE CODE : 16P1COMT02
COURSE TITLE : MANAGEMENT AND ORGANISATONAL BEHAVIOUR

COURSE OUTCOMES

CO 1. Ensure students' knowledge enhancement on various management concepts

CO 2. Equip students with various management functions and OB techniques

CO 3. Make students appreciate change management and its techniques

CO 4. Understand the relevance of goal, goal setting and its congruency
CO 5. Help them explore more about recent trends in Management.

COURSE CODE : 16P1COMT03
COURSE TITLE : FINANCIAL MANAGEMENT PRINCIPLES

COURSE OUTCOMES

CO 1. Familiarise the various concepts and approaches in financial management
CO 2. Understand various issues involved in financial management of a firm
CO 3. Equip them with advanced analytical tools and techniques that are used for making sound financial decisions
CO 4. Enable students to compare and contrast the implications of financial decisions
CO 5. Familiarise the types of financial decisions namely financing, dividend and investment decisions
CO 6. Enables comparison of the risk- return analysis and liquidity-profitability analysis of different alternatives in financial management

COURSE CODE : 16P1COMT04
COURSE TITLE : RESEARCH METHODOLOGY

COURSE OUTCOMES

CO 1. Enumerate basic research methodology concepts and steps in research
CO 2. Understand research problem, research design, related terminologies apart from familiarizing research hypothesis and research proposal
CO 3. Comprehend various methods of sampling and sampling techniques
CO 4. Enhancement of knowledge in data collection, analysis and interpretations
CO 5. Acquire knowledge for the successful application of computers in research and related areas
CO 6. Formulate and generate research reports in a logical and scientific manner

COURSE CODE : 16P1COMT05
COURSE TITLE : QUANTITATIVE TECHNIQUES

COURSE OUTCOMES

CO 1. Understand various quantitative & statistical methods
CO 2. Understand data and draw inference from data
CO 3. Calculate and interpret statistical values by using statistical tools
CO 4. Demonstrate an ability to apply various statistical tools to solve business problem
CO 5. Understand and master the handling of data and employ proper analyses
CO 6. Demonstrate their competence and confidence in using descriptive statistics
CO 7. Carry simple sample survey, analyse the results and present the findings to the class.
CO 8. Extrapolate from data the important trends in order to forecast as accurately as possible

SEMESTER 2

COURSE CODE : 16P1COMT06
COURSE TITLE : ADVANCED FINANCIAL ACCOUNTING – II

COURSE OUTCOMES

CO 1. After the successful completion of the course the students are expected to understand and manage accounts in a real-life situation which will enabling them to explore a career in the field of Accounting
CO 2. Critical thinking and selection of different methods of valuation based on situation will help in the development of overall personality and problem solving capacity
CO 3. Students are able to prepare consolidated financial statements of group companies. Study of double accounting followed by Public Utility Undertakings, leads to better citizenship.
CO 4. Study of Farm Accounting and Accounting of shipping will contribute towards sustainable development and inclusive growth
CO 5. Green accounting, which considering impact of business activities in the natural resources enabling students to contribute towards sustainable development and environment friendliness

COURSE CODE : 16P2COMT07
COURSE TITLE : HUMAN RESOURCE MANAGEMENT

COURSE OUTCOMES

CO 1. Enhance student's knowledge on human resource management
CO 2. Equip students with various HR concepts
CO 3. Make students familiar with the latest trends in HRM
CO 4. Help students understand the importance of recruitment and selections
CO 5. Help them appreciate the concepts of motivation and leadership apart from familiarizing them with the relevant theories.

COURSE CODE : 16P1COMT08
COURSE TITLE : FINANCIAL MANAGEMENT STRATEGIES

COURSE OUTCOMES

CO 1. Familiarise the various principles and practices in financial management strategies
CO 2. Understand various issues involved in working capital management of a firm
CO 3. Equip students with advanced analytical tools and techniques that are used for making sound short term financial decisions
CO 4. Enable students to evaluate the implications of various short-term decisions
CO 5. Evaluate and justify the reasons for taking a particular decision
CO 6. Estimate the working capital requirements of a company

COURSE CODE : 16P2COMT09
COURSE TITLE : STRATEGIC MANAGEMENT

COURSE OUTCOMES

CO 1. Familiarize students with strategic decision making in organisations
CO 2. Analyze operations of an organisation in a strategic perspective
CO 3. Formulization of strategies in various organizational business situations
CO 4. Enhance students' knowledge in the areas of organizational strategies viz take overs, consortium, networking and acquisitions
CO 5. Learn the implementation criterion as well as to identify the performance gap through analysis and to negate the same.

COURSE CODE : 16P2COMT10
COURSE TITLE : OPERATIONS RESEARCH

COURSE OUTCOMES

CO 1. Understand the meaning and evolution of Operations Research
CO 2. Understand the concept of Linear Programming and its application for business solution.
CO 3. Learn the transportation and assignment techniques for business application.
CO 4. Understand the decision theory and quantitative approach to managerial decision making
CO 5. Learn the techniques of Networking and different types of Networking.

SEMESTER 3

COURSE CODE : 16P3COMT11
COURSE TITLE : MANAGEMENT ACCOUNTING

COURSE OUTCOMES

CO 1. Understand the concept of cash flow and prepare cash flow statement
CO 2. Understand the concept of flow of fund and prepare fund flow statement
CO 3. Understand various ratios as a tool of financial analysis and take suitable financial decisions
CO 4. Understand the concept of price level accounting and apply in real life situation
CO 5. Proper reporting of information to various level of management
CO 6. Analysis of financial performance of companies and identify the strength and weakness
CO 7. Demonstrate their competence and analytical skill
CO 8. Managerial decision making through analysis of financial statements

COURSE CODE : 16P3COMT12
COURSE TITLE : DIRECT TAXES- LAW AND PRACTICE

COURSE OUTCOMES

CO 1. Understand the laws of Direct Taxes and objectives of taxation

CO 2. Learn the different classes of assesses and various slabs of tax rates.
CO 3. Learn the provisions under the various heads of Income.
CO 4. Understand the provisions of Clubbing of Income, set off and Carry forward of Losses.
CO 5. Understand the provisions of deductions and compute the income of an individual, HUF

COURSE CODE : 16P3COMT13
COURSE TITLE : CORPORATE GOVERNANCE AND BUSINESS ETHICS

COURSE OUTCOMES

CO 1. Knowledge enhancement on corporate governance
CO 2. Equip with various business ethics topics and concepts
CO 3. Familiar with clause 49 and the various provisions relating to the Act
CO 4. Understand the concept of corporate excellence and its relevance
CO 5. Comprehend on corporate image and relevance of Work Life Balance and QWL

COURSE CODE : 16P3COMT14
COURSE TITLE : INTERNATIONAL BUSINESS ENVIRONMENT

COURSE OUTCOMES

CO 1. Provide an exposure to students about the various business
CO 2. Environmental factors with a global perspective
CO 3. Gain substantial knowledge in various theories related to international business environment
CO 4. To familiarize students on the various modes of entry into international
CO 5. business along with basic knowledge about MNC's
CO 6. Analysis of various SLEPT factors in international business environment
CO 7. and its implications
CO 8. To enhance student's broad knowledge on international
CO 9. institutions and about various trade agreement
CO 10. Enumerate the importance and implications of various economic
CO 11. groupings in international business
CO 12. Gain an overview about international marketing

SEMESTER 4

COURSE CODE : 16P4COMT16EL1
COURSE TITLE : ADVANCED COST ACCOUNTING

CO 1. Understand the process costing concepts, inter process profit and equivalent production so that logical decision can be taken

CO 2. Identify the role of CVP Analysis and apply the marginal costing principles in decision making situations of businesses
CO 3. Understand the concepts of standard costing and managerial uses of variance analyses and apply cost control through it.
CO 4. Understand the concept of various budget and apply budgetary control in business situation
CO 5. Know the application of cost control techniques
CO 6. Learn about the higher application of cost accounting techniques and methods

COURSE CODE : 16P4COMT17EL1
COURSE TITLE : DIRECT TAXES- ASSESSMENT AND PROCEDURES

COURSE OUTCOMES
CO 1. Assess the tax of firms/AOP/BOI and Companies.
CO 2. Learn the Assessment procedures and various types of returns
CO 3. Learn the various class of income tax authorities and their powers.
CO 4. Understand the provisions of International taxation and concept of GAAR, Advance Pricing Agreement (APA).

COURSE CODE : 16P4COMT18EL1
COURSE TITLE : INTERNATIONAL FINANCIAL MANAGEMENT

COURSE OUTCOMES
CO 1. Understand the basics of international financial system
CO 2. Familiarise in brief the history of international monetary system
CO 3. Familiarise the theories of international finance
CO 4. Examine the advantages and disadvantages of FDI and FPI in India
CO 5. Evaluate the global regulatory environment
CO 6. Examine the various alternatives of financing global business

COURSE CODE : 16P4COMT19EL1
COURSE TITLE : DERIVATIVES AND RISK MANAGEMENT

COURSE OUTCOMES
CO 1. Demonstrate an understanding of the uses of financial engineering and risk management approaches and techniques used by modern organisations.
CO 2. Apply their knowledge of derivatives in solving problems involving financial risks including foreign exchange risk, interest rate risk, credit risk and portfolio risks.
CO 3. Analyse and price diverse derivatives products to generate an optimal risk management strategy.
CO 4. Demonstrate critical thinking, analytical and problem-solving skills in the context of derivatives pricing and hedging practice.

CO 5. Explain the binomial model and its extension in continuous time to the BlackScholes model.
CO 6. Demonstrate an understanding of pricing forwards, futures and options contracts.
CO 7. Be able to decide which securities to use for hedging and/or speculative purposes.
CO 8. Acquire knowledge of how forward contracts, futures contracts, swaps and options work, how they are used and how they are priced

COURSE CODE : 16P4COMT20EL1
COURSE TITLE : SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

COURSE OUTCOMES

CO 1. Understand different investment avenues, and making better decisions in investment
CO 2. Analyse Securities and Portfolios i.e., Risk and Return and Different models of Risk Return analysis
CO 3. Understand the types of risk in security market and methods to reduce risk
CO 4. Enable to take investment decisions after understanding market efficiency How to elect revise and evaluate portfolios and also to apply various tools for the valuation of bonds
CO 5. Construct efficient portfolios Revising constructed portfolios as per risk and return association by using different strategies.
CO 6. Solve Technical Analysis, Share valuation, Bond Valuation, Portfolio construction Revision and Evaluation

BCOM- TAX (S/F), CA & TT

Programme Specific Outcomes:

PSO 1 : Equipping the students with the manpower requirements in various commerce subjects in order to cater to the needs of trade, industry and commerce.
PSO 2: Imbibing ethical values, sustainable team work, professional communication and leadership skill sets in students.
PSO 3 : Instilling entrepreneurship among students in order to sustain their ventures through environmental friendly practices.
PSO 4 : Facilitating assimilation of knowledge, skill and attitude among the students for the creation of responsible citizenry.
PSO 5 : Ensuring higher education, employability, apart from providing global educational perspectives.

Course Outcomes

SEMESTER-1
COURSE TITLE: BUSINESS STATISTICS
CO-1
Explain the features, characteristics, functions and limitations of statistics.

CO-2
Apply the measures of central tendency in business situations
CO-3
Differentiate measures of dispersion and compute it
CO-4
Evaluate the relevance and application of co-efficient of variation in business situations
CO-5
Focus and distinguish the types of index numbers
CO-6
Evaluate the methods of trend determination and its scope in business

COURSE TITLE: FINANCIAL ACCOUNTING
CO-1
Critical Thinking and differentiation of accounting of non- profit organization and profit making organisations
CO-2
Accounting of non-profit organisation leads to effective citizenship
CO-3
Royalty of different natural resources and its treatment in the books of Lessee and lessor leads to discussions and understanding in environment related issues
CO-4
Branch and Consignment Accounting helps in developing global perspective in the era of MNC's

COURSE TITLE: BUSINESS REGULATORY FRAMEWORK
CO-1
Ability to apply knowledge of Indian Contract Act, Sale of Goods Act, Partnership Act and LLP.
CO-2
Ability to identify, and solve legal issues in connection with business.
CO-3
Ability to understand the method and style of legal proceedings for legal practice.
CO-4
On completion of this course, learners will be able to: appreciate the relevance of business law to individuals and businesses and the role of law in an economic, political and social context.
CO-5
Identify the fundamental legal principles behind contractual agreements.
CO-6
Acquire problem solving techniques and to be able to present coherent, concise legal argument.

COURSE TITLE: BUSINESS ENVIRONMENT
CO-1
Provide an exposure to students about the various business environmental factors
CO-2
Gain substantial knowledge in the spheres of business, industry and commerce
CO-3

Familiarize students on the various elements of business environment along with the concepts of business ethics, CSR and corporate governance
CO-4
Provide a thorough understanding on economic environment vis-à-vis various of business environmental policies
CO-5
Understand about foreign investments, BRICS and WTO
CO-6
Equip students on legal environment such as insolvency, bankruptcy code, IPR and consumer protection Act
CO-7
Create awareness about impact of business on natural environment and to take corrective measures in the modern world

SEMESTER:-2
COURSE TITLE: QUANTITATIVE TECHNIQUES FOR BUSINESS RESEARCH
CO-1
Understand research, research methodology, types and its importance in business.
CO-2
Analyse the steps in research process.
CO-3
Apply the Diagrammatic and Graphic Presentation of data and its significance.
CO-4
Check the significance of Correlation analysis and its methods (types Correlation-methods-Karl Pearson's Co-efficient of correlation-Spearman's Rank correlation co-efficient)
CO-5
Evaluate the significance of Regression analysis in business
CO-6
Understand the basic concepts of Probability theory
CO-7
Compute Permutation and combination of probability, the Theorems of Probability (Addition theorem & Multiplication theorem.)
CO-8
Explain research Report writing, types of report, characteristics of a good report and contents of a report.
COURSE TITLE:INTERNATIONAL FINANCIAL REPORTING STANDARDS
CO-1
After the successful completion of the course the students are expected to understand various accounting Standards
CO-2
Understanding the procedure for First time adoption of IFRS by Companies
CO-3
Familarise the students with the difference between IFRS and other standards
CO-4
Create an idea about IASB, Conceptual Framework and need for international accounting standards in the Globalised era
CO-5

Understanding Convergence and conversion to IFRS and recognition, Measurement, presentation, disclosure of events
CO-6
The position of IFRS in India and also the presentation and reporting of Financial Statements as per IFRS

COURSE TITLE:CORPORATE REGULATIONS
CO-1
Know about the concept of company and shares.
CO-2
Know about the application of company law in India.
CO-3
Understand the use of the memorandum of association and article of association in a company, they also learn from this course.
CO-4
Use of various documents and forms in a company.
CO-5
Understand the relationship between company and its stakeholders.
CO-6
Identify the legal compliances of the Company.

COURSE TITLE:BUSINESS COMMUNICATION & MANAGEMENT INFORMATION SYSTEM
CO-1
Understand and appreciate the need, importance and urgency of good business communication
CO-2
To enable students gain effective communication skills
CO-3
Learn preparation of business communication documents apart from formal letters., CV, bio data, quotations and enquiry letters
CO-4
To hone presentation skills and related soft skills of students
CO-5
To familiarize MIS and data base systems apart from enumerating its present day relevance and importance
CO-6
Help to overcome barriers in effective communication

SEMESTER-3
COURSE TITLE: MARKETING MANAGEMENT

CO-1
Understand the Meaning and need of marketing in business/trade.
CO-2
To comprehend the elements of marketing mix and its strategies
CO-3
To understand the pricing policies in the industry and the pricing strategies

CO-4
To understand the changes in the marketing environment.

COURSE TITLE: CORPORATE ACCOUNTING
CO-1
Understand the process of issue ,reissue and forfeiture of shares and apply in business situation
CO-2
Understand the format of final accounts of Company's and prepare final accounts as per Company's act 2013
CO-3
Determination of purchase consideration in the event of amalgamation and to prepare consolidated financial statements and apply in practical situation of merger and acquisition
CO-4
Understand the process of alteration and reduction of share capital
CO-5
Understand the process of liquidation and prepare liquidators final statement of accounts
CO-6
Study of Farm Accounting and Accounting of Hospital will contribute towards sustainable development

COURSE TITLE: E-COMMERCE AND GENERAL INFORMATICS
CO-1
Familiarize the fundamental concepts, terms and the main activities of E-Commerce.
CO-2
Understand about the various components of E-Commerce, its models, strategies, Ecommerce security
CO-3
Logically observe and experience online shopping and dealings in the Electronic market.
CO-4
Learn about how to develop an E-commerce website
CO-5
Identify the usage of different electronic payment systems.
CO-6
Equip the students with modern technologies especially internet & related medium

COURSE TITLE: BUSINESS MANAGEMENT
CO-1
To ensure students' knowledge enhancement on business management and relevant management concepts
CO-2
Understand and comprehend Fayol and Taylor's contributions
CO-3
To understand various management functions, concepts of MBO, MBE and CSR.
CO-4
Make students familiar with the topics of motivation , leadership and relevant related theories

CO-5
Appreciate Human Resource Management and related concepts apart from learning performance appraisal and its techniques
CO-6
Evoke interest in pursuing higher studies in management field

SEMESTER-4
COURSE TITLE: CAPITAL MARKET
CO-1
To familarise students with the capital market and money market
CO-2
To enable students with the fundamentals of trading, IPO and dematerialisation
CO-3
To help students to understand more about SEBI and its contribution to Indian Capital Market
CO-4
To appreciate the emergence of various methods of share floatation and about various Indian Stock Market indices
CO-5
To learn briefly about various international stock markets
CO-6
To understand various capital market concepts like futures, forwards, swaps apart from appraising about the latest trends in Stock Markets

COURSE TITLE: SPECIAL ACCOUNTING
CO-1
Understand the final accounts of Banking Companies and apply in business situations
CO-2
Understand final accounts of Insurance Companies. and apply in practical situations
CO-3
Understand investment accounts and take suitable investment decisions
CO-4
Calculate the amount of Claims by understanding the loss of stock and loss of profit policy
CO-5
Prepare farm accounts and identify expenses and incomes of hospitals

COURSE TITLE: ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT
CO-1
Encourage students to take up entrepreneurship
CO-2
Create awareness on the setting up of an enterprise
CO-3
Familiarise students on the various schemes provided for entrepreneurs
CO-4
Familiarise the students on the organisations that provide financial and non financial assistance for entrepreneurs.
CO-5

Equip students with the basic ideas of preparation of project report.
CO-6
Evaluate the problems in entrepreneurship based on case study and take adequate precautions.

COURSE TITLE: FINANCIAL SERVICES
CO-1
Understand the different types of financial services offered by a service provider
CO-2
Familiarize with the advantages and disadvantages of each financial service
CO-3
Understand the legal and tax implications of each of these financial services.
CO-4
Examine and evaluate the case studies related to these issues
CO-5
Examine the effect of financial services on the market value of a firm.
CO-6
Examine the effect of financial services on the stake holders of a firm

SEMESTER- 5
COURSE TITLE: COST ACCOUNTING
CO-1
Understand the various cost concepts, methods and techniques of cost accounting
CO-2
Understand the accounting and control of material cost
CO-3
Understand the accounting and control of labour cost
CO-4
Understand accounting for overheads, primary and secondary distribution and absorption of overheads and control overhead cost
CO-5
Understand format of cost sheet and prepare cost sheet
CO-6
Understand the reason for difference between cost accounts and financial accounts
CO-7
Apply cost accounting practices
CO-8
To know the application of cost control techniques
CO-9
Apply costing for decision making in business areas

COURSE TITLE:BANKING AND INSURANCE
CO-1
Demonstrate a comprehension of the principles of banking law and its relationship to banks and customers.
CO-2
Demonstrate an awareness of law and practice in a banking context.

CO-3
Engage in critical analysis of the practice of banking law from a range of perspectives.
CO-4
Organize information as it relates to the regulation of banking products and services

COURSE TITLE: ENVIRONMENT MANAGEMENT
CO-1
Create environment consciousness among the educated youth.
CO-2
Evaluate all decisions and policies taking into consideration its effect on the environment
CO-3
Inculcate a habit of preserving and protecting the natural resources.
CO-4
Implement and propagate the environmental consciousness in the surroundings
CO-5
Participate in organisations that promote environmental consciousness.
CO-6
Create a group of responsible citizens contributing towards sustainable growth and development.

COURSE TITLE: FUNDAMENTALS OF ACCOUNTING(OPEN COURSE)
CO 1 Familiarize the student from various disciplines with the meaning of basic accounting terms and principles

CO 2 Students practices how to maintain accounts and get an idea about practical application of accounting

CO 3 Understanding the basic accounting terms, Journal, Ledger, and Trial Balance preparation, and how to prepare final accounts of a sole trading business

CO 4 After the successful completion of the course the students are expected to understand and manage accounts in a real-life situation

SEMESTER-6
COURSE TITLE: APPLIED COST ACCOUNTING
CO-1
Understand the process costing concepts so that logical decision can be taken and apply process costing concepts in business situations
CO-2
Understand the accounting procedures of job ,batch and contract costing and apply in practical situations
CO-3
Identify the role of CVP Analysis and apply the marginal costing principles in decision making situations of businesses
CO-4

Understand the concept of various budget and apply budgetary control in business situation
CO-5
To know the application of cost control techniques
CO-6
Apply costing for decision making in business areas

COURSE TITLE: PRINCIPLES OF BUSINESS DECISIONS
CO-1
Understand the economic concepts and theories applied in decision making
CO-2
Familiarise the standards with the law of demand and its effects in the market
CO-3
Explain the methods of forecasting the demand for a new product in the market
CO-4
Explain the loss of the production and its influencing factors
CO-5
Understand the concept of cost and its determinants
CO-6
Analyse the relationship between cost and output and optimum firm
CO-7
Understand the concept of pricing and price mechanism under various market situations
CO-8
Apply the economic theories in different business situations

COURSE TITLE: PRACTICAL AUDITING
CO-1
Understand the practical application of auditing.
CO-2
Familiarize with the different types of audit in-depth.
CO-3
Examine and to tackle the frauds and manipulations happening in accounts through auditing
CO-4
Equip the students with the theory and methodology of auditing, audit reporting, generally accepted auditing standards & other basic concepts.
CO-5
Explain the legal framework under which a company audits are conducted and apply the professions code of conduct.
CO-6
Demonstrate the ability to undertake research on significant auditing issues and to keep up - to-date with developments in auditing theory and practice.

COURSE TITLE: ACCOUNTING FOR MANAGERIAL DECISIONS
CO-1
Use business finance terms and concepts when discussing.
CO-2
Explain the financial concepts used in making accounting management decision.

CO-3
Use effective communication skills to promote respect and relationship for financial deals.
CO-4
Utilize information by applying a variety of business and industry software and hardware to major financial function.
CO-5
Demonstrate a basic understanding of management accounting.
CO-6
Enable the students to have a thorough knowledge on the management accounting techniques in business decision making.

OPTIONAL COURSES

I FINANCE AND TAXATION

1) FINANCIAL MANAGEMENT(SEM-3)
CO-1
Familiarize the fundamental concepts and goals of financial management
CO-2
Understand the importance of, financing, investment and dividend decisions
CO-3
Evaluate the various alternatives available before arriving at a particular decision
CO-4
Analyze the profitability of various alternatives for financing
CO-5
Familiarize the theories and approaches related to the topics in financial management
CO-6
Equip the students to solve the financial problems related to an enterprise

2) GOODS AND SERVICES TAX(SEM-4)
CO-1
Understand the concepts of indirect tax
CO-2
Evaluate the structure of GST from pre GST period to post GST period.
CO-3
Familiarise with the practical applications of GST
CO-4
Identify the different types of e-filing of returns
CO-5
Comprehend the principles of taxation, objectives of taxes and its impact in the market oriented economy.
CO-6
Enable the student as a tax consultant in preparing the tax planning, tax management, payment of tax, and filing of tax returns.

3) INCOME TAX LAW AND PRACTICE (SEM-5)
CO-1
Understanding the laws of Indian Income Tax and Finance Act.

CO-2
To determine the residential Status of Tax payers.
CO-3
To compute the Income from Salary, House Property, Profits and Gains from Business or Profession and Capital Gains
CO-4
Understand the link between the different heads of Income

4) INCOME TAX-ASSESSMENT AND PROCEDURE(SEM-6)
CO-1
To Understand and compute from the head Income from other sources
CO-2
To learn how to club income and the provisions of Set off and Carry forward of losses for different class of assesse.
CO-3
To learn the provisions of deductions in Income tax and calculate the income of an assesse.
CO-4
To understand the powers of Income tax authorities and learn the assessment procedures.

II COMPUTER APPLICATION
1) INFORMATION TECHNOLOGY FOR BUSINESS(SEM-3)
CO 1
Recall the details they studied about Information Technology
CO 2
Understand ICT in detail
CO 3
Understand the scope of E-world
CO 4
Create websites of their own
CO 5
Analyse internet in detail

2) INFORMATION TECHNOLOGY FOR OFFICE(SEM-4)
CO 1
Understand the basics of computer
CO 2
Create document in Ms word.
CO 3
Create Boucher in page maker.
CO 4
Create documents, accounts and statements in Ms Excel.
CO 5
Create Power Point presentations.
CO 6
Analysing the advanced features of excel.

3) COMPUTERISED ACCOUNTING (SEM-5)

CO 1
Recall the basics of Accounting.
CO 2
Differentiate between Manual and Computerised Accounting.
CO 3
Apply accounting with the help of Tally software.
CO 4
Create automated financial statements and reports.
CO 5
Create employee statements(Payroll).
CO 6
Analyse the scope of Tally.

4) DATA BASE MANAGEMENT SYSTEM FOR BUSINESS (SEM-6)

CO 1
Recall the basics of Database.
CO 2
Create Tables with referencing integrity.
CO 3
Create Database using Ms Access.
CO 4
. Create Queries and Forms in Ms Access.
CO 5
Create Final Reports
CO 6
Analysing types of Queries and Forms.

III TRAVEL AND TOURISM

1) FUNDAMENTALS OF TOURISM(SEM-3)

CO 1
Explain the evolution and growth of tourism in India
CO 2
Describe the basic concepts of tourism
CO 3
Analyse the types of tourism in India and its significance
CO 4
Evaluate each types of tourism based on their characteristics, their advantages and disadvantages.
CO 5
Describe Tourism products of Kerala and India
CO 6
Focus and distinguish types planning for tourism development
CO 7
Outline the tourism planning process
CO 8

Evaluate the significance and the Adversities of tourism.
CO 9
Evaluate the alternative tourism initiatives and the laws enacted by Government of India for the protection of tourism resources.

2) MARKETING OF TOURISM (SEM-4)
CO 1
Understand the basic concepts of marketing and its importance in tourism perspective
CO 2
Analyse the process of market segmentation, its methods and its importance in tourism industry.
CO 3
Analyse the product life cycle model in the perspective of tourism products and destination life cycle using Butler's model.
CO 4
Check the usefulness of the methods of demand measurement used in tourism industry, its determinants and its types
CO 5
Evaluate the elements of tourism marketing environment
CO 6
Critically judge the seven p's of marketing namely product, price, place, promotion, people, process and physical evidence and its significance in tourism marketing
CO 7
Understand the consumer buying behavior and its determining factors.
CO 8
Analyse the role of government and non-government agencies in the protection of consumer interest.

3) TRAVEL AND TOURISM INFRASTRUCTURE (SEM-5)
CO 1
Understand the concept of travel intermediaries.
CO 2
Distinguish between the travel agency and tour operation business and their features and characteristics- advantages and Disadvantages
CO 3
Understand the functions of travel agency and tour operators.
CO 4
Describe the procedures required for setting up a travel agency.
CO 5
Understand types of journey, the cargo handling procedure, the Ticketing procedure and the GDS.
CO 6
Determine Time Zones and flying time calculation.
CO 7
Explain Travel formalities and regulations in international travel.
CO 8

Analyse the importance of tourism Infrastructure and the role of Government in improving and preserving tourism infrastructure.

4) HOSPITALITY MANAGEMENT (SEM-6)

CO 1
Understand the evolution and growth of Hospitality industry.
CO 2
Analyse the organization structure and functions of departments in a Hotel.
CO 3
Explain the role of accommodation in tourism and the types of accommodation.
CO 4
Analyse the Managerial issues in hospitality industry
CO 5
Explain the domestic and international hotel chains in India.
CO 6
Analyse the importance of training in the hotel industry.
CO 7
Check the emerging trends in hospitality management and the role of Government in development of the hotel industry.

DEPARTMENT OF COMMUNICATION

B.A. ANIMATION AND GRAPHICS DESIGN

Programme Specific Outcomes:

PSO 1 : Understand the fundamentals and history of visual design language.

PSO 2 : Apply design principles, techniques in ideation and production of visual messages.

PSO 3 : Create design incorporating various studio, fine art skills such as photography, art, calligraphy, illustrations, print technology and other graphic design processes.

PSO 4 : Develop creativity, critical eye and the ability to solve communication problems.

PSO 5 : Inculcate professional practices such as pre-plan, time management and deadline submission.

PSO 6 : Keep abreast with the trends, practices and ethics of communication design for social awareness and education.

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CCAGD1
COURSE TITLE : MODEL III ENGLISH I - ENGLISH FOR COMMUNICATION

COURSE OUTCOMES

CO 1. Read, write and speak English confidently
CO 2. Express themselves creatively- through writing and storyboards
CO 3. Analyse why and how we need to take care of our planet
CO 4. Evaluate social issues like gender inequality, environmental unsustainability etc. and assess the need for selected movements that are socially and culturally important
CO 5. Apply the knowledge and manage work-life balance thus leading a more balanced life in the future

COURSE CODE : 19U1CRAGD1
COURSE TITLE : HISTORY OF ART AND DESIGN

COURSE OUTCOMES

CO 1. Explain the developments of prehistoric visual representations
CO 2. Compare the development of art from the time of civilizations up to the age of enlightenment
CO 3. Summarize the development of the art of printing and to classify the artistic developments from imaginative to ideological

CO 4. Analyse the impact of industrial revolution and its influence in the graphic design
CO 5. Identify different art movements of 20th century

COURSE CODE : 19U1PRAGD01
COURSE TITLE : ELEMENTS OF GRAPHIC DESIGN

COURSE OUTCOMES

CO 1. Explain basic elements, history and theories of graphic design.
CO 2. Make use of the elements, principles and theories involved in the fundamental study of design.
CO 3. Create designs using techniques, skills and aesthetic sense.
CO 4. Interpret the psychology of the audience for effective communication design inspired by nature.
CO 5. Develop creativity in design production and out of the box thinking.

COURSE CODE : 19U1PRAGD1
COURSE TITLE : RUDIMENTS OF ANIMATION DRAWING (PRACTICAL)

COURSE OUTCOMES

CO 1. Develop the skill of quick drawing Life Sketches with Line of Action
CO 2. Build the dimensions of Perspective
CO 3. Make use of the Anatomy of Human Body
CO 4. Make use of the Anatomy of Animals Birds and Reptiles
CO 5. Analyse Characters according to the concept/story

COURSE CODE : 19U1PCAGD1
COURSE TITLE : TECHNIQUES OF PHOTOGRAPHIC COMPOSITION

COURSE OUTCOMES

CO 1. Explain the types of camera, lenses and other devices used in Photography
CO 2. Analyse the study of Photography/ Cinematic frames and compositions, the study and practice of production enhance their work as film scholars.
CO 3. Identify the different use of lenses, Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Analyse the study of Photography/ Cinematic frames and compositions, the study and practice of production enhance their work as film scholars.

SEMESTER 2

COURSE CODE : 19U2CCAGD2
COURSE TITLE : MODEL III ENGLISH II - ENGLISH AND LIFE SKILLS

COURSE OUTCOMES

CO 1. Understand and analyze gender-related issues
CO 2. Think about what zero tolerance policy at workplace means
CO 3. Talk and write about international gender movements such as #metoo
CO 4. Understand and translate for colleagues India's sexual harassment laws.
CO 5. Understand, analyze and make sense of the psychological effects of sexual abuse on both men and women
CO 6. Practice becoming a more aware and liberal individual who adds value to society

COURSE CODE : 19U2CRAGD2
COURSE TITLE : HISTORY OF ANIMATION & VISUAL EFFECTS

COURSE OUTCOMES

CO 1. Explain the early attempts of animation
CO 2. Explain different experimental animations all over the world and discuss the role of pioneers in the development of animation.
CO 3. Summarize different animation techniques and advancements
CO 4. Analyze the history of visual effects
CO 5. Identify different animation and visual effects studios around the world
CO 6. Identify different art movements of 20th century

COURSE CODE : 19U2CJAGD1
COURSE TITLE : PLANNING FOR ANIMATION

COURSE OUTCOMES

CO 1. Build Concepts and develop story
CO 2. Create Script and Screenplay
CO 3. Develop Story Characters
CO 4. Creation of storyboard layouts.
CO 5. Creation of Animatics

COURSE CODE : 15U2PRAGD2
COURSE TITLE : RASTER GRAPHICS FOR DESIGNERS

COURSE OUTCOMES

CO 1. Construct the area of specialization in post-production where they can perform their best.
CO 2. Build precision, control and fluency within Visual Effects & Motion Graphics work environments.
CO 3. Summarize vocabulary and visual language for motion graphic principles and ethics.
CO 4. Develop an understanding of motion graphic design principles in applied practice.
CO 5. Determine motion graphic project with requirement of 2D, 3D elements and real footages

COURSE CODE : 15U2PRAGD5
COURSE TITLE : VECTOR GRAPHICS FOR DESIGNERS

COURSE OUTCOMES

CO 1. Create illustrations from the development of the original concept to final execution.
CO 2. Apply theories and principles of design and communication to the development of effective illustrations.
CO 3. Explain visually using drawing as a means of visual exploration, idea analysis, problem solving and expression of thought.
CO 4. Use a variety of technologies to create, capture and manipulate illustration elements in producing a final product.
CO 5. Work in a professional manner, maintaining professional relationships and communicating effectively with clients, coworkers, supervisors, and others.
CO 6. Apply appropriate and effective business practices when dealing with clients

SEMESTER 3

COURSE CODE : 15U3CRAGD1
COURSE TITLE : ART & SOCIETY

COURSE OUTCOMES

CO 1. Explain ancient art and civilizations all over the world
CO 2. Summarize the pictorial origins of written language
CO 3. Classify the birth of epics and sagas
CO 4. Analyze the development of art from 500BC to AD 1930
CO 5. Develop art management research

COURSE CODE : 15U3PRAGD3
COURSE TITLE : DESIGN STUDIO I

COURSE OUTCOMES

CO 1. Apply visual vocabulary and use technical skills
CO 2. Relevant to graphic design.
CO 3. In-depth understanding of print and branding communication with know-how basics, techniques and technology.
CO 4. Create design for various events and campaigns using various strategies.
CO 5. Knowledge in tools and technology in the creation, reproduction, and distribution of visual messages.
CO 6. Update the latest design trends in Print and branding

COURSE CODE : 15U3PRAGD4
COURSE TITLE : MOTION STUDIES

COURSE OUTCOMES

CO 1. Demonstrate progress in basic sculpting, puppet making and animation skills
CO 2. Analyze characteristics of well-designed and executed animation.
CO 3. Identify the different use of materials, Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Demonstrate that they understand the post-production filmmaking process especially editing.

COURSE CODE : 15U3PRAGD5
COURSE TITLE : 3D ANIMATION – 1

COURSE OUTCOMES

CO 1. Develop the skill of Basic 3d Maya Modeling
CO 2. Classify Basics of Maya interface and tools
CO 3. Texturing methods
CO 4. Create Lighting techniques
CO 5. Analyse of 3D Models

COURSE CODE : 15U3PCPNT3
COURSE TITLE : SCRIPTING & STORYBOARDING FOR ANIMATION

COURSE OUTCOMES

CO 1. Build Concepts and develop story
CO 2. Create Script and Screenplay
CO 3. Develop Story Characters
CO 4. Creation of storyboard layouts.

CO 5. Creation of Animatics

SEMESTER 4

COURSE CODE : 15U4PRAGD6
COURSE TITLE : ANIMATION STUDIO II

COURSE OUTCOMES

CO 1. Develop the skill of quick Animation drawing
CO 2. Classify Basics of Animation Principles
CO 3. Create Gesture in Character Animation
CO 4. Build Weight, Mass and Momentum in Animation
CO 5. Analyse of Two- & Four-Legged Animation

COURSE CODE : 15U4PRAGD7
COURSE TITLE : DESIGN STUDIO II

COURSE OUTCOMES

CO 1. Create designs according to the content to be communicated.
CO 2. Practice and understanding of tools and technology, including their roles in the creation, reproduction, and distribution of visual messages
CO 3. Understanding of proportion and its application in layout design.
CO 4. Create publication design using different layouts for different mediums according to their function.
CO 5. Analyse, critique and revise designs for better communication
CO 6. Regular updates with trends in designs and industry standards

COURSE CODE : 15U4PRAGD8

COURSE TITLE : 3D ANIMATION II

COURSE OUTCOMES

CO 1. Develop the skill of quick Animation 3D Characters
CO 2. Classify Basics of Animation Principles
CO 3. Create Gesture in Character Animation
CO 4. Build Weight, Mass and Momentum in Animation
CO 5. Analyse of Two & Four Legged Animation

COURSE CODE : 15U4PCPNT4
COURSE TITLE : TYPOGRAPHY

COURSE OUTCOMES

CO 1. Illustrate evolution of typography, terminologies and industrial practices.
CO 2. Create original typographic designs using calligraphy techniques.
CO 3. Develop content using typography as design, text and grid.
CO 4. Create designs for publication, online and branding materials.
CO 5. Experiment with typography as a medium of art and communication.

COURSE CODE : 15U4PCNMD5
COURSE TITLE : INTERACTION DESIGN

COURSE OUTCOMES

CO 1. Understanding the web architecture and web services.
CO 2. Develop the ability to analyze, identify and define the technology required to build and implement a web site.
CO 3. Understand the principles of creating an effective web page, including an in-depth consideration of information architecture.
CO 4. Apply CSS concepts for designing HTML web pages in Dreamweaver
CO 5. Understand how to plan and conduct user research related to web usability.

SEMESTER 5

COURSE CODE : 15U5PRAGD9
COURSE TITLE : ANIMATION STUDIO III

COURSE OUTCOMES

CO 1. Build Concepts and develop story
CO 2. Create Script and Screenplay
CO 3. Create Script and Storyboard
CO 4. Develop Story Characters
CO 5. Pre-Compositing and Final Compositing Video with Audio

COURSE CODE : 15U5PCPNT5
COURSE TITLE : INFORMATION DESIGN

COURSE OUTCOMES

CO 1. Examine the elements in communication design with reference to universal contexts.
CO 2. Analyze complex information design projects.
CO 3. Design user friendly designs for use in environmental systems, sites and standalone multimedia applications.
CO 4. Compile massive, complex information to simple, understandable and interesting communication designs.
CO 5. Create various styles of illustration for different categories of users for books, web and other interactive media.

COURSE CODE : 15U5PCNMD6
COURSE TITLE : ANIMATION FOR WEB

COURSE OUTCOMES

CO 1. Explain the basic concepts of web animation
CO 2. Utilize several Flash tools and tactics learned throughout the course to produce interactive Flash based applications.
CO 3. Demonstrate the ability to effectively utilize the timeline and motion tween effects to produce animation
CO 4. Design, create, and edit a flash-based navigation menus and interactive websites
CO 5. Discuss and define the terms and principles of game design and development.

COURSE CODE : 15U5PCNMD7
COURSE TITLE : MOTION GRAPHICS

COURSE OUTCOMES

CO 1. Construct the area of specialization in post-production where they can perform their best.
CO 2. Build precision, control and fluency within Visual Effects & Motion Graphics work environments.
CO 3. Summarize vocabulary and visual language for motion graphic principles and ethics.
CO 4. Develop an understanding of motion graphic design principles in applied practice.
CO 5. Determine motion graphic project with requirement of 2D, 3D elements and real footages

COURSE CODE : 15U5OCAGD1
COURSE TITLE : EDITING PRINCIPLES

COURSE OUTCOMES

CO 1. Understanding Concepts of editing & Adobe Premier
CO 2. Create Concept of continuity and Imaginary Line.
CO 3. Build Timing and spacing
CO 4. Develop idea of shots and scenes
CO 5. Demonstrate the skills through final output.

SEMESTER 6

COURSE CODE : 15U6PRAGD21
COURSE TITLE : ANIMATION PROJECT

COURSE OUTCOMES

CO 1. Build Concepts and develop story
CO 2. Create Script and Screenplay, Animatics & Storyboard,
CO 3. Analyze characteristics of well-designed and executed animation.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Demonstrate the skills through final output.

COURSE CODE : 15U6PJAGD22
COURSE TITLE : GRAPHIC PROJECT

COURSE OUTCOMES
CO 1. Build project design works to display their specialisation, creativity and skills.
CO 2. Utilize research processes to create strong brand building concepts and strategies.
CO 3. Develop entrepreneurship skills and suggest innovative methods for communication design.
CO 4. Construct live projects from concept to the final production.
CO 5. Design projects using various production mediums (art, photography, content writing design, editing, multimedia) for on and off social media platforms.

M.A. CINEMA AND TELEVISION

Programme Specific Outcomes:

PSO 1 : Understand and evaluate the history of Cinema and Television
PSO 2 : Understand and analyse all processes involved in content creation, distribution and exhibition of Cinema and Television
PSO 3 : Practice content creation in Cinema, Television and Web
PSO 4 : Understand and apply Best Practices and Ethical values in all professions in Cinema and television

Course Outcomes

SEMESTER 1

COURSE CODE : 15P1CTVT01
COURSE TITLE : INTRODUCTION TO COMMUNICATION

COURSE OUTCOMES
CO 1. Compare and contrast the different forms and types of communication, their importance in human and mediated communication
CO 2. Illustrate and apply the process of communication portrayed in different models to various communication contexts

CO 3. Discuss the concepts of mass communication and the global issues related to information and cultural dissemination
CO 4. Evaluate the impact of mass media on different groups of media audience
CO 5. Discuss selected theories of culture and communication and suggest solutions for issues related to culture and communication

COURSE CODE : 15P1CTVT02
COURSE TITLE : CINEMA AND TELEVISION AS AN ART FORM

COURSE OUTCOMES
CO 1. Explain the growth and development of cinema and TV as art forms
CO 2. Summarize the importance of sound in cinema and television
CO 3. Create content with a sense for frame and shots and brilliance in application of technology in cinema and television
CO 4. Relate different film movements and the revolutionism of video in Television medium
CO 5. Elaborate the interactive capacity of cinema and television giving importance to the current and socially relevant subjects

COURSE CODE : 15P1CTVP01
COURSE TITLE : TECHNIQUES OF CINEMA AND TELEVISION: VISUAL ASPECT

COURSE OUTCOMES
CO 1. Outline Cinema, Television & video in the Spectrum of art
CO 2. Analyze the study of Photography/ Cinematic frames and compositions, the study and practice of production enhance their work as film scholars.
CO 3. Identify the different use of lenses, Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Demonstrate that they understand the post-production filmmaking process especially editing.

COURSE CODE : 15P1CTVT03
COURSE TITLE : SHORT FILMS AND DOCUMENTARIES

COURSE OUTCOMES
CO 1. Understand International and national history of documentary film movement to critically analyze, evaluate and create content
CO 2. Create content in video format and Study TV News content and presentation styles
CO 3. Understand history and working of TV Channels (NGC, Discovery, History, BBC, CNN, Doordarshan) to review, analyze and create content
CO 4. Understand classification of documentaries and short films into genres
CO 5. Understand the process of Electronic News Gathering (ENG) to apply the same in TV News reporting

COURSE CODE : 15P1CTVT04
COURSE TITLE : TECHNIQUES OF CINEMA AND TELEVISION: AUDIO ASPECT

COURSE OUTCOMES

CO 1. Understanding and applying the techniques of audio production in the field of sound and picture
CO 2. Providing competencies for working on the tasks of production and post production of the sound and picture
CO 3. Analyzing and practicing skills and knowledge in three related professions (audio and video technology, IT, arts, management) and getting equipped on team work

SEMESTER 2

COURSE CODE : 15P2CTVT05
COURSE TITLE : SHAPING THE CONTENT

COURSE OUTCOMES

CO 1. Develop ideas for scripting for Fiction & Non-Fiction films
CO 2. Explain about the structure of the script
CO 3. Build writing skill for dialogue writing
CO 4. Outline the synthesis in technology of Cinema & Television
CO 5. Develop screenplays for short-fiction and TV serials

COURSE CODE : 15P2CTVT06
COURSE TITLE : AESTHETICS OF CINEMA AND TELEVISION

COURSE OUTCOMES

CO 1. Classify the art and technology of photographic image
CO 2. Illustrate the art of electronic imaging
CO 3. Explain the various recording formats for video
CO 4. Summarize the cinematic projections from Cinemascope to IMAX
CO 5. Evaluate how these elements individually and collectively contribute to the perception and appreciation of cinema.

COURSE CODE : 15P2CTVP03
COURSE TITLE : METHODS OF SHOOTING

COURSE OUTCOMES

CO 1. Create script and shooting script for a 10min production
CO 2. Apply different lighting techniques during shooting
CO 3. Create, analyze and apply lighting techniques and how to control lights during productions.
CO 4. Utilize different video and film formats

CO 5. Develop productions using various techniques from composition, movements, View-point etc.

COURSE CODE : 15P2CTVP04
COURSE TITLE : TELEVISION SHORTS AND SERIALS

COURSE OUTCOMES

CO 1. Relate to various field production, and preparations included in ENG and Investigative journalism.
CO 2. Demonstrate various T.V and panel shows, to make different production related works in voice training, anchoring etc.
CO 3. Analyze the history of serials and shows around the world.
CO 4. Compare Animation and 2D productions around the globe.
CO 5. Create a multi/single camera production of 10min duration.

COURSE CODE : 15P2CTVP02
COURSE TITLE : TECHNIQUES OF CINEMA AND TELEVISION: EDITINGASPECT

COURSE OUTCOMES

CO 1. Understand the techniques of scene and short breakdown
CO 2. Understand the basics of screen technique.
CO 3. The necessity of editing
CO 4. The principles of editing.
CO 5. understand the concept and technique of cinematographic property

SEMESTER 3

COURSE CODE : 15P3CTVP06
COURSE TITLE : SHAPING THE FORM

COURSE OUTCOMES

CO 1. Evaluate and improve the performance of an actor
CO 2. Create and apply effective dialogues in visual platform
CO 3. Produce song sequences and BGM in cinema
CO 4. Understanding in Post Synchronization
CO 5. Create an understanding about sounds in cinema

COURSE CODE : 15P3CTVP07
COURSE TITLE : CINEMA AND TV: PROCESS OF CONSOLIDATION

COURSE OUTCOMES

CO 1. Develop student's creativity in sound and improving dubbing skills and its consolidation methods
CO 2. Show proficiency in disciplinary areas as part of a filmmaking team in post-production, management, audio/music, special effects and television studio production.
CO 3. Work collaboratively with a team to understand the playback situation, playback/Title songs in a story.
CO 4. Develop creative communication skills in choreography for films & Television programmes, and shot a dance sequence with single camera/ multiple camera.
CO 5. Create a live action of panel discussions/ sport/ music etc. using multiple camera for Television.

COURSE CODE : 15P3CTVT07
COURSE TITLE : MEDIA ETHICS AND EDUCATION

COURSE OUTCOMES

CO 1. Remember and Understand Indian media laws and regulations in comparison with those of other nations
CO 2. Understand, evaluate and analyse how media policies and regulations enable or constrain effective media environments
CO 3. Understand and evaluate the rights and responsibilities of media practitioners in the execution of their duties
CO 4. Analyse the problems and limitations of applying old media laws in new media environments
CO 5. Fathom the complex issues associated with media regulation and need for contextualizing legal and ethical practices according to change

COURSE CODE : 15P3CTVT08
COURSE TITLE : RESEARCH METHODOLOGY

COURSE OUTCOMES

CO 1. Develop an understanding of design research.
CO 2. Understand and apply quantitative and qualitative research techniques
CO 3. Have adequate knowledge of measurement & scaling techniques as well as the quantitative data analysis.
CO 4. Demonstrate knowledge of research processes (reading, evaluating, and developing)
CO 5. Identify, explain, compare, and prepare the key elements of a research proposal/report

COURSE CODE : 15P3CTVP05
COURSE TITLE : SHOOTING WITHINTV STUDIO
COURSE OUTCOMES

CO 1. Students will learn about job opportunities in the television industry
CO 2. Students will learn to critically view television and media works
CO 3. Students will gain knowledge of the history of television.
CO 4. To get more understanding of Studio floor
CO 5. Understanding of the process of Direction for Television

SEMESTER 4

COURSE CODE : 15P4CTVT09
COURSE TITLE : FILM ANALYSIS

COURSE OUTCOMES

CO 1. Understand about the basics of theories
CO 2. Implement film theories
CO 3. Understand about the psychological impact of movies
CO 4. Analyzing capacity of classic movies

COURSE CODE : 15P4CTVP08
COURSE TITLE : SYNTHESIS OF CINEMA AND TV TECHNIQUES

COURSE OUTCOMES

CO 1. Evaluate digital video projects and identify the improvement in their post -production stage mainly on editing,
CO 2. Demonstrate an understanding of the entire editing stages.
CO 3. Identify different productions in 2D & 3D animation and Visual effects process and evaluate the steps involved in it.
CO 4. Evaluate different digital video projects, identify items for improvement, and implement changes
CO 5. Work in a team to create, design and produce a action sequence that reflects proper camera, lighting and audio composition.

COURSE CODE : 15P4CTVP10
COURSE TITLE : GRADUATION FILM

COURSE OUTCOMES

CO 1. Develop and execute a creative idea in the form of a structured film
CO 2. Systematically arrange all the necessary elements to showcase his creativity
CO 3. Get hands on experience on all aspects of film making and media content production

M.A. GRAPHIC DESIGN

Programme Specific Outcomes:

PSO 1 : Understand the fundamentals and history of visual design language.
PSO 2 : Apply design principles, techniques in ideation and production of visual messages.
PSO 3 : Create design incorporating various studio, fine art skills such as photography, art, calligraphy, illustrations, print technology and other graphic design processes.
PSO 4 : Develop creativity, critical eye and the ability to solve communication problems.
PSO 5 : Inculcate professional practices such as pre-plan, time management and deadline submission.
PSO 6 : Keep abreast with the trends, practices and ethics of communication design for social awareness and education.

Course Outcomes

SEMESTER 1

COURSE CODE : 15P1GRDT01
COURSE TITLE : ELEMENTS OF VISUAL DESIGN

COURSE OUTCOMES

CO 1. Explain the fundamental elements of graphic design.
CO 2. Make use of the elements, principles and theories of design in the practical assignments given
CO 3. Create designs using techniques, skills and aesthetic sense
CO 4. Interpret the psychology of the audience for effective communication design.
CO 5. Develop creativity in design production and out of the box thinking.

COURSE CODE : 15P1GRDT02
COURSE TITLE : HISTORY OF ART AND DESIGN

COURSE OUTCOMES

CO 1. Explain the role and developments of visual arts in past cultures throughout the world
CO 2. Explain the development of art and aesthetics from early Christian art to 19th century art movements
CO 3. Classify and compare the modern art movements of 20th century
CO 4. Analyze the role and importance of Indian art movements
CO 5. Analyze the history of graphic design including the role of industrial revolution till 20th century

COURSE CODE : 15P1GRDP01
COURSE TITLE : DESIGN STUDIO I

COURSE OUTCOMES
CO 1. Understand of software technology and applying it in designing brands and communication.
CO 2. Application of Visual design elements using principles and theories.
CO 3. Introduce best practices of design profession and apply them in a work environment.
CO 4. Utilize design processes and strategy from concept to delivery to solve communication problems.

COURSE CODE : 15P1GRDP02
COURSE TITLE : INTERACTION DESIGN I

COURSE OUTCOMES
CO 1. Apply the knowledge of web technology in developing web applications
CO 2. Develop the ability to analyze, identify and define the technology required to build and implement a web site.
CO 3. Apply CSS concepts for designing HTML web pages.
CO 4. Develop DHTML pages by using JavaScript DOM events
CO 5. Demonstrate the ability to effectively utilize the timeline and motion tween effects to produce animation in Flash.

COURSE CODE : 15P1GRDP03
COURSE TITLE : PHOTO COMMUNICATION

COURSE OUTCOMES
CO 1. Summarise the history and evaluation of camera
CO 2. Create photographs based on basics
CO 3. Create photographs based on depth of field
CO 4. Utilize the techniques of capturing motions
CO 5. Utilize the techniques of image editing

SEMESTER 2

COURSE CODE : 15P2GRDT02
COURSE TITLE : MEDIA ETHICS AND EDUCATION

COURSE OUTCOMES

CO 1. Remember and Understand Indian media laws and regulations in comparison with those of other nations
CO 2. Understand, evaluate and analyse how media policies and regulations enable or constrain effective media environments
CO 3. Understand and evaluate the rights and responsibilities of media practitioners in the execution of their duties
CO 4. Analyse the problems and limitations of applying old media
CO 5. laws in new media environments
CO 6. Fathom the complex issues associated with media regulation and need for contextualizing legal and ethical practices according to change

COURSE CODE : 15P2GRDP04
COURSE TITLE : TYPOGRAPHY

COURSE OUTCOMES

CO 1. Illustrate evolution of typography, terminologies and industrial practices.
CO 2. Create original typographic designs using calligraphy techniques.
CO 3. Develop content using typography as design, text and grid.
CO 4. Create designs for publication, online and branding materials.
CO 5. Experiment with typography as medium of art and communication.

COURSE CODE : 15P2GRDP05
COURSE TITLE : INTERACTION DESIGN II

COURSE OUTCOMES

CO 1. Understand the web architecture and web services.
CO 2. Understand principles of interaction design that are used in the creation of a web site.
CO 3. Create interactive web pages using html and style sheets using interface elements
CO 4. Apply critical thinking and problem-solving skills required to successfully design and implement a website.
CO 5. Understand the concept of user interface design and its possibilities

COURSE CODE : 15P2GRDP06
COURSE TITLE : INFORMATION DESIGN

COURSE OUTCOMES

CO 1. Understand the various data visualisation methods and illustration techniques.
CO 2. Analyze complex information design projects and refine contents for design.
CO 3. Design user friendly designs for use in environmental systems, sites and standalone multimedia applications.
CO 4. Compile massive, complex information to simple, understandable and interesting communication designs.
CO 5. Create various styles of illustration for different categories of users for books, web and other interactive media.

COURSE CODE : 15P2GRDP07
COURSE TITLE : DESIGN STUDIO II

COURSE OUTCOMES

CO 1. Understand the message and create effective communication designs for different media.
CO 2. Brainstorming for campaign ideas and execute them into communicable designs.
CO 3. Create designs using different medium such as photography and fine arts.
CO 4. Visualize the content design by creating various layouts.
CO 5. Understand the form and function of package design and deliver the work within the deadlines
CO 6. Awareness of design trends, printing materials and techniques in the industry.

SEMESTER 3

COURSE CODE : 15P3GRDP08
COURSE TITLE : PACKAGE DESIGN

COURSE OUTCOMES

CO 1. Relate the relationship between form and function of packaging.
CO 2. Identify branding as a major key of packaging success.
CO 3. Apply the principles and theories of visual design.
CO 4. Create innovative and attractive brand package design solutions.
CO 5. Adapt the trends, printing techniques and technology in the package design industry.

COURSE CODE : 15P3GRDP09
COURSE TITLE : PUBLICATION DESIGN

COURSE OUTCOMES

CO 1. Knowledge & technical skill in tools required for print design.
CO 2. Ability to visualize multiple publications using design skill and art skills.
CO 3. Demonstrate skill and creative thinking to develop a professional design for print.
CO 4. Apply creative problem solving and technical skills in the creation of effective design solutions for print

COURSE CODE : 15P3GRDP10
COURSE TITLE : ADVANCED TYPOGRAPHY

COURSE OUTCOMES

CO 1. Illustrate evolution of typography and industrial practices.
CO 2. Create original typographic designs using calligraphy techniques.
CO 3. Develop content using typography as design, text and grid.
CO 4. Create designs for publication, online and branding materials.
CO 5. Experiment with typography as medium of art and communication.

COURSE CODE : 15P3GRDP11
COURSE TITLE : PROGRAMMING FOR DESIGNERS

COURSE OUTCOMES

CO 1. Explain basic ActionScript programming.
CO 2. Develop interactive applications using the concept of events and methodsUtilize several Flash tools and tactics learned throughout the course to produce an interactive flash- based website
CO 3. Apply knowledge of database connectivity with PHP in website creations.
CO 4. Explain the basic concepts of Processing

COURSE CODE : 15P3GRDP11
COURSE TITLE : MOTION DESIGN

COURSE OUTCOMES

CO 1. Develop a vocabulary and visual language for motion.
CO 2. Apply the motion design techniques in applied practice using software.
CO 3. Demonstrate an understanding of motion graphic design principles in applied practice.
CO 4. Adapt with Industry standard motion graphic- visual effects toolsets and plug-ins.
CO 5. Create motion graphic project with requirement of 2D, 3D elements and real footages.

SEMESTER 4

COURSE CODE : 15P4GRDP14
COURSE TITLE : FINAL THESIS PROJECT

COURSE OUTCOMES

CO 1. Build project design works to display their specialisation, creativity and skills.
CO 2. Utilize research processes using various research methodologies
CO 3. Develop entrepreneurship skills and suggest innovative methods for communication design.
CO 4. Construct live projects from concept to the final production.
CO 5. Function independently on projects as well as provide design solutions.

M.A. DIGITAL ANIMATION

Programme Specific Outcomes:

PSO 1 : Understand the history of Animation, basics of Animation and understanding the Visual Effects, Film Techniques, and develop software skills required to demonstrate competence in these fields.

PSO 2 : Understand all processes involved in Pre-Production, Production and Post Production in Digital animation.

PSO 3 : Be capable of adapting to new ideas and technology and constantly upgrade their skills with an attitude towards independent and lifelong learning.

PSO 4 : Develop confidence for entrepreneurship and innovations through positive attitude for practical living with strong updating in specialized areas.

PSO 5 : Develop conceptual understanding, critical awareness and skills for successful career and entrepreneurship - Explore technical knowledge in diverse areas of Digital Animation, Visual Effects and Film techniques and experience an environment conducive in cultivating skills for successful career, entrepreneurship and higher studies.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1DGAT01
COURSE TITLE : HISTORY OF ANIMATION

COURSE OUTCOMES

CO 1. Explain the brief prehistory of animation
CO 2. Summarize the role of pioneers in animation
CO 3. Analyse the style of Disney animation
CO 4. Examine the experimental animation from NFBC
CO 5. Classify different styles of Japanese animation

COURSE CODE : 16P1DGAP01
COURSE TITLE : 2D DESIGN

COURSE OUTCOMES

CO 1. Develop the skill of quick drawing Life Sketches with Line of Action

CO 2. Build the dimensions of Perspective
CO 3. Make use of the Anatomy of Human Body
CO 4. Make use of the Anatomy of Animals Birds and Reptiles
CO 5. Analyse Characters according to the concept/story

COURSE CODE : 16P1DGAP02
COURSE TITLE : FILM TECHNIQUES

COURSE OUTCOMES

CO 1. Explain the types of camera, lenses and other devices used in Photography
CO 2. Analyze the study of Photography/ Cinematic frames and compositions, the study and practice of production enhance their work as film scholars.
CO 3. Identify the different use of lenses, Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Analyze the study of Photography/ Cinematic frames and compositions, the study and practice of production enhance their work as film scholars.

COURSE CODE : 16P1DGAP03-
COURSE TITLE : CONCEPT , LAYOUT & STORYBOARDING

COURSE OUTCOMES

CO 1. **D**emonstrate progress in basic concept development , story making making and storyboard development skills
CO 2. Analyze well-designed concepts and stories
CO 3. Identify the different story genres, concept quality and perfection of storyboards for productions.
CO 4. Understanding of the industry as a whole by executing all components of development in pre-production planning
CO 5. Demonstrate that they understand the pre-production 3D Film making process especially concept development , story , script and the storyboard

COURSE CODE : 16P1DGAP04
COURSE TITLE : TRADITIONAL ANIMATION

COURSE OUTCOMES

CO 1. Develop the skill of quick Animation drawing
CO 2. Classify Basics of Animation Principles
CO 3. Create Gesture in Character Animation
CO 4. Build Weight, Mass and Momentum in Animation
CO 5. Analyse of Two & Four Legged Animation

SEMESTER 2

COURSE CODE : 16P2DGAT02
COURSE TITLE : HISTORY OF COMPUTER ANIMATION

COURSE OUTCOMES

CO 1. Explain the history and aesthetics of computer animation, with references to related arts such as CGI, 3D animation movies & Visual effects.
CO 2. Demonstrate a wide range of commercial and experimental works produced throughout the world.
CO 3. Evaluate the aesthetics of wide range of animation movies.
CO 4. Analyse issues and situations of different Animation studios in America
CO 5. Analyse issues and situations of different Animation studios in Europe and Canada

COURSE CODE : 16P2DGAP05
COURSE TITLE : OBJECT ANIMATION & PILXILATION

COURSE OUTCOMES

CO 1. Demonstrate progress in basic sculpting, puppet making and animation skills
CO 2. Analyze characteristics of well-designed and executed animation.
CO 3. Identify the different use of materials, Image quality and size for productions.
CO 4. Understand of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Demonstrate that they understand the post-production filmmaking process especially editing.

COURSE CODE : 16P2DGAP06
COURSE TITLE : CG FOUNDATION

COURSE OUTCOMES

CO 1. Construct the specialization of digital Matte Painting foundation where they can perform their best.
CO 2. Develop precision, control and fluency within compositing work environments.
CO 3. Develop a vocabulary and visual language for CGI.
CO 4. Build an understanding of graphic design principles in applied practice.
CO 5. Classify Industry standard graphic- visual effects toolsets and plug-ins

COURSE CODE : 16P2DGAP07
COURSE TITLE : 2D DIGITAL ANIMATION

COURSE OUTCOMES

CO 1. Explain Basic Tools and Interface of the Digital Software
CO 2. Create of Symbols
CO 3. Create Tween Animation And Masking
CO 4. Create Gestures in Character Animation Digitally
CO 5. Create Two & Four Legged Animation

COURSE CODE : 16P2DGAP08
COURSE TITLE : 3D DESIGN

COURSE OUTCOMES

CO 1. Demonstrate progress in basic 3D modeling, texturing , and lighting skills
CO 2. Analyze characteristics of well-designed and executed 3D designs.
CO 3. Identify the different use of materials, Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Demonstrate that they understand the 3d production process especially Modeling.

SEMESTER 3

COURSE CODE : 16P3DGAP09
COURSE TITLE : 3D ADVANCE STUDIES

COURSE OUTCOMES

CO 1. Create different character models
CO 2. Create bone setup using IK and FK
CO 3. Evaluate the basic concept and application of Dynamics
CO 4. Application of skinning and painting
CO 5. Evaluate different character studio mode

COURSE CODE : 16P3DGAP10
COURSE TITLE : COMPOSITING

COURSE OUTCOMES

CO 1. Build the area of specialization in Visual Effects where they can perform their best.
CO 2. Build precision, control and fluency within post production work environments.
CO 3. Develop a vocabulary and visual language for film compositing.
CO 4. Identify and adapt with Industry standard Visual effects toolsets and plug-ins.
CO 5. Summarize various visual effects requirements in video production

COURSE CODE : 16P3DGAP11
COURSE TITLE : EDITING

COURSE OUTCOMES

CO 1. Understand the techniques of scene and short breakdown
CO 2. Understand the basics of screen technique.
CO 3. The necessity of editing
CO 4. The principles of editing.
CO 5. understand the concept and technique of cinematographic property

COURSE CODE : 16P3DGAP12
COURSE TITLE : 3D ANIMATION 1

COURSE OUTCOMES

CO 1. Demonstrate progress in Rigging , Animation & rendering skills
CO 2. Analyse characteristics of well-designed and executed 3D animation.
CO 3. Identify the different use of Techniques, tools, Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning
CO 5. Demonstrate that they understand the whole production 3D filmmaking process through a Final 3D Animation short film.

COURSE CODE : 16P3DGAP13
COURSE TITLE : POST PRODUCTION

COURSE OUTCOMES

CO 1. Discover the area of specialization in post-production where they can perform their best.
CO 2. Build precision, control and fluency within post production work environments.
CO 3. Develop a vocabulary and visual language for film post production.
CO 4. Adapt with Industry standard post production toolsets and plug-ins.
CO 5. Demonstrate an understanding of post production principles in applied practice**.**

SEMESTER 4

COURSE CODE : 16P4DGAP14
COURSE TITLE : 3D ANIMATION PROJECT

COURSE OUTCOMES

CO 1. Demonstrate progress in 3D Modeling , texturing ,lighting , Rigging , Animation & final rendering skills
CO 2. Analyze characteristics of well-designed and executed 3D animation.
CO 3. Identify the different use of Techniques . tools , Image quality and size for productions.
CO 4. Understanding of the industry as a whole by executing all components of development, pre-production, production and post-production planning

CO 5. Demonstrate that they understand the whole production 3D filmmaking process through a Final 3D Animation short film.

COURSE CODE : 16P4DGAP16
COURSE CODE : RESEARCH

COURSE OUTCOMES

CO 1. Analyse how to showcase their production works
CO 2. Create Effective documentation of the planning, process and outcomes of all the Courses
CO 3. Create effective Blog or Site to reflect practice and professional development.
CO 4. Create Specialised Animation Styles, interactive elements and production techniques
CO 5. for a production-oriented output.

COURSE CODE : 16P4DGAP16
COURSE CODE : RESEARCH

COURSE OUTCOMES

CO 1. Demonstrate their capacity to carry out a substantial piece of academic work on a selected topic in the field of Media Studies.
CO 2. Define a research problem for examination and articulate a coherent scheme for examining the topic.
CO 3. Gather the relevant information and analyse and present this information in a way which satisfactorily assesses the topic.
CO 4. Write a thesis report.

MASTER OF COMMUNICATION AND JOURNALISM

Programme Specific Outcomes:

PSO 1 : Demonstrate knowledge and understanding of media industry along with practical and theoretical concept of Journalism and Mass communication.

PSO 2 : Explore information and digital literacy in capturing data from various sources and develop innovative communication aptitude.

PSO 3 : Think critically, creatively, and demonstrate curiosity to discover new horizons in Journalism and Mass communication

PSO 4 : Evaluate the opportunities available from creative environment of Journalism and Mass communication to identify career or develop their own ventures.

PSO5 : Create a continuous learning environment for engaging themselves to update with new knowledge in Journalism and Mass Communication.

Course Outcomes

SEMESTER 1

COURSE CODE : 15P1MCJT01
COURSE TITLE : INTRODUCTION TO COMMUNICATION

COURSE OUTCOMES

CO 1. Compare and contrast the different forms and types of communication, their importance in human and mediated communication

CO 2. Illustrate and apply the process of communication portrayed in different models to various communication contexts

CO 3. Discuss the concepts of mass communication and the global issues related to information and cultural dissemination

CO 4. Evaluate the impact of mass media on different groups of media audience

CO 5. Discuss selected theories of culture and communication and suggest solutions for issues related to culture and communication

COURSE CODE : 15P1MCJT02
COURSE TITLE : HISTORY AND DEVELOPMENT OF JOURNALISM

COURSE OUTCOMES

CO 1. Enhance student's knowledge of media history

CO 2. Develop knowledge about the origin and growth of journalism at global level.

CO 3. Understand the evolution of the Press in India
CO 4. Know about the pioneers who shaped modern journalism
CO 5. Understand the characteristics and growth of Malayalam Journalism

COURSE CODE : 15P1MCJT03
COURSE TITLE : PUBLIC RELATIONS AND CORPORATE COMMUNICATION

COURSE OUTCOMES

CO 1. Explain the various concepts, characteristics, characters involved and organizations related to Public Relations.
CO 2. Illustrate the various tools of Public Relations.
CO 3. Examine the process of implementing PR activities, the communication with stakeholders.
CO 4. Demonstrate and implement the strategic communication plans for PR Campaigns.
CO 5. Examine media especially the trade media and its relevance to the practice of Corporate Communication**.**

COURSE CODE : 15P1MCJT04
COURSE TITLE : NEWS REPORTING

COURSE OUTCOMES

CO 1. Organize and articulate competent new stories understanding the news concepts, structure and types of news
CO 2. Evaluate and analyse the importance of sources and types of information that provide the basis for news stories
CO 3. Extend the importance of diversity in reporting stories and selecting source
CO 4. Plan and organise publishable work for news organizations with multiple distribution platforms
CO 5. Examine the value of multiculturalism and diversity in media writing, and research and write for increasingly multicultural audiences

COURSE CODE : 15P2MCJP01
COURSE TITLE : PRACTICAL: NEWS REPORTING

COURSE OUTCOMES

CO 1. Report news stories presenting facts with clarity, precision, and objectivity
CO 2. Develop news from different types of situations, Press Conferences, cultural events, interviews etc.
CO 3. Apply the skills for news selection, processing, prioritizing and finally, creating news reports
CO 4. Critically evaluate the latest trends followed in reporting
CO 5. Formulate the information in various formats of news presentation

SEMESTER 2

COURSE CODE : 15P2MCJT05
COURSE TITLE : MEDIA MANAGEMENT AND PRODUCTION

COURSE OUTCOMES

CO 1. Illustrate the specificities of management & media management
CO 2. Apply the theoretical foundations in solving issues related to media economics, finance, and business strategy
CO 3. Apply the appropriate management skills and analytical perspective to evaluate the media industries
CO 4. Discuss and critique the economics of media industry
CO 5. Evaluate the opportunities and challenges in media industry

COURSE CODE : 15P2MCJT06

COURSE TITLE : BUSINESS JOURNALISM

COURSE OUTCOMES

CO 1. Outline the basic areas in business journalism and how to write about them with Intelligence and understanding.
CO 2. Compose a range of business stories, including company news, market reports and economic indicators.
CO 3. Discuss key financial terms that can be used for reporting and writing business stories
CO 4. Analyze the functioning of stock markets and evaluate the various financial institutions nationally and internationally
CO 5. Analyse the Kerala, Indian and world economic scenarios

COURSE CODE : 15P2MCJT07
COURSE TITLE : ADVERTISING PRACTICE

COURSE OUTCOMES

CO 1. Analyse the role and importance of advertising.
CO 2. Identify and differentiate the various tools of advertising.
CO 3. Evaluate previous and current advertising environment and the changing trends.
CO 4. Distinguish the process of media selection, media planning, and media buying.
CO 5. Analyse the significance of Integrated Marketing Communication.

COURSE CODE : 15P2MCJT08
COURSE TITLE : EDITING TECHNIQUES AND TRANSLATION

COURSE OUTCOMES

CO 1. Edit copy precisely and consistently, using correct grammar and eliminating libelous passages and items in poor taste

CO 2. Identify the basic ethical issues confronting editors and can practice fair play
CO 3. Formulate skills for news selection, processing, prioritizing and finally, designing the end product and write clear and accurate headlines, leads and captions
CO 4. Layout and design different pages of print newspaper.
CO 5. Understand the concept of News Desk and demonstrate the various editorial roles

COURSE CODE : 15P2MCJP02
COURSE TITLE : EDITING AND TRANSLATION (Practical)

COURSE OUTCOMES
CO 1. Understand the basic elements of news editing
CO 2. Understand the ethical foundations of the journalist profession and its values
CO 3. Handle news selection, processing, prioritizing and finally, designing the end product
CO 4. Develop coordinating skills and the ability to work to deadlines
CO 5. Evaluate the importance of letters to the editor, proof reading, symbols of proof

SEMESTER 3

COURSE CODE : 15P3MCJT09
COURSE TITLE : MEDIA LAWS AND ETHICS

COURSE OUTCOMES
CO 1. Explain the concept of media ethics.
CO 2. Illustrate the obligations and rights of media practitioners in the execution of their duties.
CO 3. Analyze the problems and limitations of applying old media laws and in new media environments.
CO 4. Analyze the complex issues associated with media regulation.
CO 5. Explain the changing media landscapes and their possible legal implications.

COURSE CODE : 15P3MCJT10(B)
COURSE TITLE : HEALTH COMMUNICATION

COURSE OUTCOMES
CO 1. Explain the concept of Health and Disease.
CO 2. Illustrate the important aspects of communicating health news and information to public.
CO 3. Determine how communication processes, policies, and methodologies are deployed to improve quality of public health.
CO 4. Design to convey health news and information in clear, meaningful, and understandable ways to readers, viewers, and listeners across various media platforms.

CO 5. Explain the role of health journalist in delivering the health related news and information to the public.

COURSE CODE : 15P3MCJT11
COURSE TITLE : MAGAZINE JOURNALISM

COURSE OUTCOMES

CO 1. Understand the classification of magazines and various writing styles and analyse the latest trends in magazine publishing
CO 2. Prepare the design and layout for different magazines
CO 3. Prepare different types of contents for magazines such as feature reports of different types, columns, cartoons, photographs, infographic.
CO 4. Evaluate the economics and business of magazines including market research
CO 5. Discuss about the major publishing houses and publications in India

COURSE CODE : 15P3MCJT12

COURSE TITLE : RADIO TELEVISION AND CINEMA

COURSE OUTCOMES

CO 1. Emphasizes the visual aspects of Journalism
CO 2. Understand Electronic News Gathering, News Bulletins
CO 3. Understanding the Radio through practical exercises on Radio Production
CO 4. Practical knowledge on fiction and non- fiction Film making.
CO 5. Understand the history and development of world Cinema

COURSE CODE : 15P3MCJP03
COURSE TITLE : RADIO AND VIDEO PRODUCTION- (PRACTICAL)

COURSE OUTCOMES

CO 1. Shoot and edit news stories using a video camera, external mic, video editing software
CO 2. Produce news stories
CO 3. Record and audio profile story using a digital recording device
CO 4. Practical knowledge on fiction and non- fiction Film making.
CO 5. Evaluate video news stories, identify items for improvement and implement changes

SEMESTER 4

COURSE CODE : 15P4MCJT13
COURSE TITLE : COMMUNICATION FOR DEVELOPMENT

COURSE OUTCOMES

CO 1. Illustrate the concept of Development Communication.

CO 2. Analyze the different approaches and theories.
CO 3. Interpret the ideas and models of communication in the modern society.
CO 4. Analyze the core areas of Development Campaigns.
CO 5. Create messages to inculcate the idea of social responsibility and generate awareness of state and central government welfare measures.

COURSE CODE : 15P2MCJT14
COURSE TITLE : RESEARCH METHODS FOR MEDIA

COURSE OUTCOMES

CO 1. Demonstrate knowledge of research literacy in preparing the right research designs.
CO 2. Apply the knowledge of research methods and working knowledge of the theories and frameworks in doing research projects.
CO 3. Understand the ethical issues involved in conducting media research.
CO 4. Conduct research with methodological clarity and use various methods of data collections and data analysis efficiently.
CO 5. Write a thesis report following the research report format.

COURSE CODE : 15P4MCJT15
COURSE TITLE : NEWMEDIA, FEATURE AND TECHNICAL WRITING

COURSE OUTCOMES

CO 1. Understand the concept of new media technologies with special emphasis on the web world with recent trends
CO 2. Describe and explain the implication of new concepts, products and services within the area of Internet and new media
CO 3. Understand and know how to follow the stages of the writing process (prewriting/writing/rewriting) and apply them to technical and workplace writing tasks
CO 4. Gain the technical skills of mobile newsgathering through the use of mobile devices and apps to gather, produce, and distribute news content
CO 5. Understand the basic components of definitions, descriptions, process explanations, and other common forms of technical writing

COURSE CODE : 15P4MCJP04
COURSE TITLE : PRACTICAL: LABORATORY JOURNAL/ INTERNSHIP

COURSE OUTCOMES

CO 1. Understand the process of selection of news stories (news value), writing style and page layout.
CO 2. Make different layouts for news stories using different software
CO 3. Produce newspapers individually

CO 4. Work with other industry professionals, collaborate with other individuals as members of a team

CO 5. Get exposure and work on live projects in the industry and create portfolios.

COURSE CODE : 15P4MCJPJ
COURSE TITLE : DISSERTATION

COURSE OUTCOMES

CO 1. Demonstrate their capacity to carry out a substantial piece of academic work on a selected topic in the field of Media Studies.

CO 2. Define a research problem for examination and articulate a coherent scheme for examining the topic.

CO 3. Gather the relevant information and analyse and present this information in a way which satisfactorily assesses the topic.

CO 4. Write a dissertation report.

DEPARTMENT OF COMPUTER SCIENCE

B.SC. COMPUTER SCIENCE

Programme Specific Outcomes:

PSO1 : Pursue a successful professional career in the software industry, government, academia, research, or other areas where computer applications are deployed.

PSO2 : Demonstrate proficiency in areas of Computer science such as, networking, web development, database queries, cyber security and software engineering.

PSO3 : Develop programming skills, networking skills, learn applications, packages, programming languages and modern techniques of IT.

PSO4 : Apply theoretical concepts to design and develop programs and develop industry-focused skills for a successful career.

PSO5 : Acquire an understanding in advanced areas of mathematics and statistics.

Course Outcomes

SEMESTER: 1

COURSE CODE : 19U1CCENG01
COURSE TITLE : HOMO LOQUENS: A COURSE IN EFFECTIVE LISTENING AND SPEAKING

COURSE OUTCOMES

CO 1. Understand the mechanics of English language and comprehend the meaning of simple narrations, announcements and instructions.
CO 2. Make inferences about the implications of statements from stress and tone recognize the various registers of speech
CO 3. Listen to formal presentations and prepare lecture notes in the appropriate format
CO 4. Use English for a variety of speaking contexts including conversations, presentations, speeches, discussions and negotiations
CO 5. Critically evaluate presentations, narrations, speeches and analyse and evaluate their content and respond to them appropriately
CO 6. Creatively respond to one's surroundings in the form of drama, poetry, narrations, and songs, and perform them before an audience.

COURSE CODE : 19U1CRCAP1
COURSE TITLE : DIGITAL ELECTRONICS AND MICROPROCESSOR

COURSE OUTCOMES

CO 1. Understand the number system and perform arithmetic operations
CO 2. Implementing the boolean expression Using boolean algebra
CO 3. Design and implement the logic gates
CO 4. Analyse and design combinational and sequential circuit
CO 5. Understand the concept of 8086 microprocessor

COURSE CODE : 19U1CRCAP2
COURSE TITLE : PROGRAMMING IN PYTHON

COURSE OUTCOMES

CO 1. Write algorithms and to draw flowcharts for solving problems
CO 2. Install and run the Python interpreter
CO 3. Understand the Numbers, Math functions, Strings, List, Tuples, Dictionaries and operators in Python
CO 4. Apply different Decision Making statements and loops
CO 5. Implement functions and modules.
CO 6. Understand and summarize different File handling operations and packages

COURSE CODE : 19U1CRCMT1
COURSE TITLE : FOUNDATION OF MATHEMATICS

COURSE OUTCOMES

CO 1. Understand the concepts and prove statements about sets and functions
CO 2. Understand relations, its properties, represention, equivalence relations and partial ordering
CO 3. Understand and apply concepts of Prepositional logic, Predicates and Quantifiers
CO 4. Familiarize mathematical Symbols and standard methods of proofs
CO 5. Understand the basic concepts of Number theory

COURSE CODE : 19U1CRCST01
COURSE TITLE : DESCRIPTIVE STATISTICS

COURSE OUTCOMES

CO 1. Apply different measures of central tendency, their properties and different measures of positional averages
CO 2. Understand different measures of dispersions – absolute and relative measures of dispersion
CO 3. Evaluate moments – raw and central moments – inter relations
CO 4. Understand the concepts of Box plots and Lorenz curve
CO 5. Understand the concepts of skewness and kurtosis, scatter diagram, curve fitting – method of least squares

CO 6. Understand and apply the concepts of fitting of straight line, second degree curve, exponential curve, power curve
CO 7. Understand different types of index numbers, tests to be satisfied by the index numbers, cost of living index numbers and their constructions
CO 8. Understand the concepts of time series data, determination of trend, computation of seasonal indices

SEMESTER: 2

COURSE CODE : 19U2CCENG03
COURSE TITLE : TEXT AND CONTEXT: A GUIDE TO EFFECTIVE READING AND WRITING

COURSE OUTCOMES
CO 1. Perform different reading strategies such as skimming and scanning
CO 2. Demonstrate an understanding of the implicit and explicit meaning of written materials
CO 3. Demonstrate an understanding of the different registers of language.
CO 4. Analyse the use of various writing strategies adopted by writers through close reading
CO 5. Synthesize information from various written sources and present them in the form of summaries.
CO 6. Write original literary creations in different genres as directed, with/without using prompts

COURSE CODE :19U2CRCAP3
COURSE TITLE : OPERATING SYSTEM

COURSE OUTCOMES
CO 1. Identify mechanism to handle processes, memory, I/O devices, and files and develop an appropriate algorithm for it.
CO 2. Discuss issues of Process Management including process structure, synchronization, scheduling and communication.
CO 3. Interpret the reasons for deadlock state, and the solution methods to handle it
CO 4. Differentiate type of memory management techniques used by Operating Systems
CO 5. Appreciate the need of access control and protection in an operating system

COURSE CODE : 19U2CRCAP4
COURSE TITLE : DATA STRUCTURES USING C

COURSE OUTCOMES
CO 1. Understand the basic concepts of c program and different types of data
CO 2. Understand a variety of techniques for designing algorithms
CO 3. Apply wide variety of data structures to solve problems

COURSE CODE : 19U2CRCMT2
COURSE TITLE : ANALYTIC GEOMETRY, THEORY OF EQUATIONS AND NUMERICAL METHODS

COURSE OUTCOMES

CO 1. Derive the equation to tangent, normal at a point on a conic
CO 2. Express polar equation of a line, circle , tangent and normal to conics
CO 3. Determine the number of roots and the roots of a polynomial equation of order at most four
CO 4. Find roots of algebraic and transcendental equation using numerical methods

COURSE CODE : 19U2CRCST02
COURSE TITLE : PROBABILITY AND STATISTICS

COURSE OUTCOMES

CO 1. Understand different approaches to probability - their properties, Addition & Multiplication theorem, Theorem of total probability
CO 2. Understand random variables, probability distributions - their properties, distribution functions, Reliability functions, change of variables (univariate case only).
CO 3. Understand joint distribution of a pair of random variables, marginal & conditional distributions, independence of random variables
CO 4. Understand the concepts of correlation - its properties, different measures of correlation.
CO 5. Understand the regression equations - their identification, Probable error, Coefficient of determination, linear regression (Three variable case), partial & multiple correlations - their expressional properties (no derivation).

SEMESTER: 3

COURSE CODE : 15U3CRCAP05
COURSE TITLE : DATA COMMUNICATION AND COMPUTER NETWORKS

COURSE OUTCOMES

CO 1. Understand the concepts of data communication, types of communication, topology, and categories of network, protocols, standards, transmission modes, ISO-OSI and TCP/IP model.
CO 2. Discuss about analog and digital signals, transmission impairment, transmission modes, transmission media and types of switching
CO 3. Discuss different types of error detection and correction methods, types of framing, flow control protocols and random access protocols in data link layer.
CO 4. Distinguish different types of connecting devices, wired and wireless LAN in network
CO 5. Discuss about the concepts of mobile computing, cloud computing and IoT.
CO 6. Discuss about the cyphers used in cryptography.

COURSE CODE : 15U3CRCAP06
COURSE TITLE : OBJECT ORIENTED PROGRAMMING IN C++

COURSE OUTCOMES

CO 1. Outline the essential features and elements of the C++ programming language.
CO 2. Explain programming fundamentals, including statement and control flow and recursion.
CO 3. Apply the concepts of class, method, constructor, data abstraction, function abstraction, inheritance, overloading, and polymorphism
CO 4. Understand the concept of streams
CO 5. Understand the concept of exception handling

COURSE CODE : 15U3CRCAP7
COURSE TITLE : SYSTEM ANALYSIS AND DESIGN

COURSE OUTCOMES

CO 1. Apply the software development life cycle model to a development project.
CO 2. Collect and analyse user requirments
CO 3. Understand the principles of systems analysis and design
CO 4. Carry out a structured analysis of business systems requirements
CO 5. Design business systems solutions

COURSE CODE : 15U3CRCMT03
COURSE TITLE : CALCULUS

COURSE OUTCOMES

CO 1. Find the higher order derivative of the product of two functions and its applications
CO 2. Expand a function using Taylor's and Maclaurin's series.
CO 3. Conceive the concept of asymptotes and obtain their equations.
CO 4. Apply the concept of partial derivatives.
CO 5. Find the area under a given curve, length of an arc of a curve when the equations are given in parametric and polar form and find the area and volume by applying the techniques of double and triple integrals.
CO 6. Find the area and volume by applying the techniques of double and triple integrals

COURSE CODE : 15U3CPA03
COURSE TITLE : PROBABILITY DISTRIBUTIONS

COURSE OUTCOMES

CO 1. Understand and apply mathematical expectations-moments,moment generating functions
CO 2. Understand conditional expectation ,Cauchy Schwartz inequality
CO 3. Understand the concepts of probability distributions and their properties
CO 4. Understand -Normal, Standard normal and Lognormal distributions
CO 5. Understand lack of memory property, Normal distributions
CO 6. Understand Tchedycheff's inequality,Bernoulli's law of large numbers
CO 7. Methods of sampling
CO 8. Understand sampling distributions, standard error

SEMESTER: 4

COURSE CODE : 15U4CRCAP8
COURSE TITLE : ADVANCED WEB TECHNOLOGY

COURSE OUTCOMES

CO 1. Know regarding internet related technologies. Systematic way of developing a website
CO 2. Demonstrate the ability to author valid externally linked cascading style sheets (CSS)
CO 3. Know the advantages and uses of different types of CSS
CO 4. Create powerful database-driven websites
CO 5. Design dynamic and interactive web pages using PHP

COURSE CODE : 15U4CRCAP08
COURSE TITLE : DATA BASE MANAGEMENT SYSTEM

COURSE OUTCOMES

CO 1. Identify and define the information that is needed to design a database management system and ER modelling concepts
CO 2. Apply relational database theory and be able to describe relational algebra expression, and formulate query, using SQL
CO 3. recognize and identify the use of normalization and functional dependency, indexing technique used in database design.
CO 4. Apply and relate the concept of transaction , Database Security and Authorization
CO 5. Introduce the concepts of Data Ware House ,Data Mining and Hadoop

COURSE CODE : 15U3CRCMT4
COURSE TITLE : VECTOR CALCULUS, THEORY OF EQUATIONS AND NUMERICAL METHODS

COURSE OUTCOMES

CO 1. Compute the gradient of a Scalar Field , the Divergence and Curl of a Vector Point Function,and the directional derivative
CO 2. Interpret the various properties of the gradient, the curl and divergence.
CO 3. Apply the concepts of vector integration, in particular those of the Green‟s theorem, Stoke‟s theorem and divergence theorem.
CO 4. Determine the number of roots and the roots of a polynomial equation of order at most four.
CO 5. Find roots of algebraic and transcendental equation using numerical methods

COURSE CODE : 15U4CPSTA04
COURSE TITLE : STATISTICAL INFERENCE

COURSE OUTCOMES

CO 1. Describe and apply the concept of Estimation and its properties

CO 2. Describe and apply Interval Estimation
CO 3. Apply the concept and methods in testing of hypothesis.
CO 4. Apply Large Sample Tests and non parameteric tests

COURSE CODE : 15U4CRSTA05
COURSE TITLE : SAMPLE SURVEY ANALYSIS AND DESIGN OF EXPERIMENTS

COURSE OUTCOMES

CO 1. Apply the various methods of sampling Simple Random Sampling and estimation techniques
CO 2. Apply the concept of stratified sampling and its estimation techniques
CO 3. Apply ANOVA technique
CO 4. Apply designs of experimentation like CRD,RBD and LSD and the statistical analysis of each of them

SEMESTER: 5

COURSE CODE : 15U5CRCAP10
COURSE TITLE : JAVA PROGRAMMING AND DYNAMIC WEBPAGE

COURSE OUTCOMES

CO 1. Understand the concept of OOP as well as the purpose and usage principles of inheritance, polymorphism, encapsulation and method overloading.
CO 2. Create Java application programs using sound OOP practices (e.g., interfaces and APIs) and proper program structuring (e.g. by using access control identifies, automatic documentation through comments, error exception handling)
CO 3. Create object-oriented, scalable, n-tier applications using Java Servlets and Java Server Pages.
CO 4. Learn how to integrate key components of the Java Enterprise Edition (Java EE).
CO 5. Create dynamic data-driven web applications using servlets and JSP technologies**.**

COURSE CODE : 15U5CRCMT05
COURSE TITLE : MATHEMATICAL ANALYSIS

COURSE OUTCOMES

CO 1. Identify the basic properties of real numbers.
CO 2. Compute the limit points of a set , the interior points of a set , closure of a set etc.
CO 3. Test the convergence of sequence
CO 4. Evaluate limit of sequence using important theorems.
CO 5. Identify the problems related to monotonic sequences.
CO 6. Understand the basic properties of complex numbers.

COURSE CODE : 15U5CRCMT06
COURSE TITLE : DIFFERENTIAL EQUATIONS

COURSE OUTCOMES

CO 1. Obtain an integrating factor which may reduce a given differential equation into an exact one and eventually provide its solution
CO 2. Familarize the orthogonal trajectory and oblique trajectory
CO 3. Find the complementary function and particular integrals of linear differential equation.
CO 4. Describe power series solution,Frobenious method,Bessel eqaution and differential operator method
CO 5. Describe the origin of partial differential equation,Lagranges method and solution of dx/P=dy/Q=dz/R

COURSE CODE : 15U5CRCST06
COURSE TITLE : STATISTICAL QUALITY CONTROL AND OPERATIONS RESEARCH

COURSE OUTCOMES
CO 1. Understand statistical techniques used in industry for quality control
CO 2. Understand OC curve, probability limit, tolerance limit, 3 sigma limit and warning limit
CO 3. Understand process control and product control, draw control chart for variables (mean,Range) and control chart for attributes(p,np and c chart)
CO 4. Understand the concept of Operation Research
CO 5. Solve Linear Programming Problem,Assignment and Transportation problems

COURSE CODE : 15U5OCCAP1
COURSE TITLE : INTERNET WEB DESIGNING AND CYBER LAW

COURSE OUTCOMES
CO 1. Understand the basic concepts related to internet and its standard protocols
CO 2. Understand the basic concepts of internet services.
CO 3. Understand about E-commerce and business
CO 4. Design web pages using HTML
CO 5. Understand key terms and concepts in cyber crimes

SEMESTER: 6

COURSE CODE : 15U6CRCAP11
COURSE TITLE : OPERATING SYSTEM

COURSE OUTCOMES
CO 1. Identify mechanism to handle processes, memory, I/O devices, and files and develop an appropriate algorithm for it.
CO 2. Discuss issues of Process Management including process structure, synchronization, scheduling and communication.
CO 3. Interpret the reasons for deadlock state, and the solution methods to handle it
CO 4. Differentiate type of memory management techniques used by Operating Systems
CO 5. Appreciate the need of access control and protection in an operating system

COURSE CODE : 15U6CRCAP13
COURSE TITLE : CYBER SECURITY

COURSE OUTCOMES

CO 1. Understand the concepts of Ecommerce.
CO 2. Analyse and assess the impact of cybercrime on government, businesses, individuals and society.
CO 3. Evaluate standards and good practices for digital evidence and digital forensics
CO 4. Understand various laws related to cyber crimes
CO 5. Understand intellectual property rights

COURSE CODE : 15U6CRCMT07
COURSE TITLE : REAL ANALYSIS

COURSE OUTCOMES

CO 1. Effectively test the convergence of series .
CO 2. Familiarise theorems on continuity.
CO 3. Compute definite integrals by using Riemann Sum
CO 4. Test uniform convergence of Series **.**

COURSE CODE : 15U6CRSTA07
COURSE TITLE : COMPUTER AIDED DATA ANALYSIS USING EXCEL AND R SOFTWARE

COURSE OUTCOMES

CO 1. Apply elementary statistical analysis and testing using Excel
CO 2. Apply correlation and regression analysis using Excel
CO 3. Explain Basics in R programming
CO 4. Apply statistical analysis using R

BCA

Programme Specific Outcomes:

PSO1 : Apply the theoretical foundations of computer science in modelling and developing solutions to the complex and real world problems.

PSO2 : Comprehend, explore and build up computer programs, applications in the allied areas like Algorithms, Multimedia, Web Design and android applications for efficient design of computer-based systems that meet the needs of industry and society.

PSO3 : Develop skills in android and cloud technology development so as to enable the graduates to take up employment/self-employment in global technical market.

PSO4 : Apply knowledge of layered network models, protocols, technologies, topologies and security policies for building network and internet based applications.

Course Outcomes

SEMESTER: 1

COURSE CODE : 15U1CCENG1
COURSE TITLE : COMMUNICATION SKILLS IN ENGLISH

COURSE OUTCOMES

CO 1. Understand the mechanics of English language and comprehend the plain meaning of simple narrations, announcements and instructions.
CO 2. Make inferences about the implications of statements from stress and tone recognise the various registers of speech.
CO 3. Listen to formal presentations and prepare lecture notes using the appropriate format.
CO 4. Use English language for a variety of speaking contexts including conversations, presentations, speeches, discussions and negotiations.
CO 5. Critically evaluate presentations, narrations, speeches and analyse and evaluate their content and respond to them appropriately.
CO 6. Creatively respond to one's surroundings in the form of dramatic works, poetry, narrations, and songs, and perform them before an audience.
CO 7. Understand the mechanics of English language and comprehend the plain meaning of simple narrations, announcements and instructions.

COURSE CODE : 15U1CPCMT1
COURSE TITLE: FOUNDATIONS OF MATHEMATICS

COURSE OUTCOMES

CO 1. Understand the concepts and prove statements about sets and functions
CO 2. Understand relations, its properties, representation, equivalence relations and partial ordering
CO 3. Understand and apply concepts of Prepositional logic, Predicates and Quantifiers
CO 4. Familiarize mathematical Symbols and standard methods of proofs.
CO 5. Understand the basic concepts of Number theory

COURSE CODE : 15U1CRBCA1

COURSE TITLE : COMPUTER FUNDAMENTALS & ORGANIZATION

COURSE OUTCOMES

CO 1. Describe the fundamental organization of a computer system
CO 2. Distinguish the organizations of various parts of a system memory
CO 3. Identify the principal software and hardware components.
CO 4. Understand number system ,Boolean algebra and basic gates
CO 5. Solve the common business problems using appropriate information technology applications
CO 6. Describe the various network standards and communication software

COURSE CODE : 15U1CRBCA2
COURSE TITLE : PROGRAMMING IN C

COURSE OUTCOMES

CO 1. Solve problems and Produce algorithms, pseudocodes and flowcharts for it.
CO 2. Understand the basic concepts of c program and different types of data.
CO 3. Apply different Decision Making statements and loops
CO 4. Implement functions
CO 5. Understand and summarize different File handling operations

COURSE CODE : 15U1CRBCA3
COURSE TITLE : INTRODUCTION TO LINUX

COURSE OUTCOMES

CO 1. Understand the fundamental concepts of Linux OS
CO 2. Understand the basic set of commands
CO 3. Discuss shell programming in Linux OS
CO 4. Distinguish text processing and filter commands
CO 5. Demonstrate the role and responsibilities of Linux system administrator

SEMESTER: 2

COURSE CODE : 15U2CCENG2
COURSE TITLE : CRITICAL THINKING, ACADEMIC WRITING & PRESENTATION

COURSE OUTCOMES

CO 1. Comprehends fundamental concepts of critical reasoning and develops the capacity to read and respond critically, drawing conclusions, generalizing, differentiating fact from opinion and creating their own arguments.
CO 2. Develops appropriate and impressive writing styles for various contexts.
CO 3. Write and correct structural imperfections and edit what they have written
CO 4. Develops capacity for making academic presentations effectively and impressively.

COURSE CODE : 15U2CPCMT2
COURSE TITLE : DISCRETE MATHEMATICS AND NUMERICAL ANALYSIS

COURSE OUTCOMES

CO 1. Apply the basic concepts in combinatorial graph theory in science, business and industry
CO 2. Apply graph theoretical algorithms to solve problems in daily life.
CO 3. Apply methods to solve system of equations.
CO 4. Apply numerical methods for solving mathematical problems that arise in Science and Engineering
CO 5. Appreciate the need of access control and protection in an operating system

COURSE CODE : 15U2CRBCA4
COURSE TITLE : OPERATING SYSTEM

COURSE OUTCOMES

CO 1. Identify mechanism to handle processes, memory, I/O devices, and files and develop an appropriate algorithm for it.
CO 2. Discuss issues of Process Management including process structure, synchronization, scheduling and communication.
CO 3. Interpret the reasons for deadlock state, and the solution methods to handle it
CO 4. Differentiate type of memory management techniques used by Operating Systems
CO 5. Appreciate the need of access control and protection in an operating system

COURSE CODE : 15U2CRBCA5
COURSE TITLE : OOPS WITH C++

COURSE OUTCOMES

CO 1. Understand the basic concepts of OOPS.
CO 2. Discuss real world problems and simulate using OOPS concepts.
CO 3. Apply the concepts of Object oriented programming
CO 4. Illustrate the process of data file manipulations using c++
CO 5. Apply concepts of templates and exception handling

COURSE CODE : 15U2CRBCA6
COURSE TITLE : DATA STRUCTURES USING C

COURSE OUTCOMES

CO 1. The concept of elementary data organization, Dynamic memory allocation, Pointer, recursion and string operation
CO 2. Algorithm and its efficiency measure by means of asymptotic notation, analyze algorithms and its correctness.
CO 3. Ability to understand different sorting algorithm.
CO 4. Ability to handle operations like searching, insertion, deletion, traversing mechanism etc. on various data structures- Stack, Queue, Linked List
CO 5. Ability to have knowledge of tree and graphs concepts.

SEMESTER: 3

COURSE CODE : 16U3CRBCA7
COURSE TITLE : BASIC STATISTICS

COURSE OUTCOMES

CO 1. Understand different measures of central tendency, their properties and different measures of positional averages.
CO 2. Understand different measures of dispersions – absolute and relative measures of dispersion and Understand the concepts of Box plots and Lorenz curve.
CO 3. Understand the concepts of Probability and approaches to Probability
CO 4. Learn and apply the concept of Index Numbers able to calculate different types of Index Numbers
CO 5. Analyse Time Series data by Determining Trend ,Seasonal Indices using different methods like method of simple averages and Moving Average

COURSE CODE : 16U3CRBCA8
COURSE TITLE : SOFTWARE ENGINEERING

COURSE OUTCOMES

CO 1. Understand professional, ethical and social responsibility of a software engineer
CO 2. Demonstrate the current models, techniques that provides a basis for the software life cycle
CO 3. Demonstrate the use of techniques and tools for engineering practice.
CO 4. Evaluate the impact of potential solutions to software engineering problems in a global society
CO 5. Apply the foundations in software engineering to adapt to changing environments using appropriate theory, principles and processes

COURSE CODE : 16U3CRBCA9
COURSE TITLE : RDBMS

COURSE OUTCOMES

CO 1. Learn and practice data modelling using the entity-relationship and developing database designs.
CO 2. Recall Relational Algebra concepts and use it to translate queries to Relational Algebra statements and vice versa.
CO 3. Apply the Structured Query Language (SQL) syntax to develop relational model
CO 4. Apply normalization techniques to normalize the database
CO 5. Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access.
CO 6. Create a simple database system and demonstrate competence with the fundamental tasks involved with modelling, designing, and implementing a DBMS

COURSE CODE : 16U3CRBCA10
COURSE TITLE : COMPUTER NETWORKS

COURSE OUTCOMES

CO 1. Identify mechanism deployed in Computer networks and to understand the advantages of computer network and types of and devices used for networking.
CO 2. Discuss the Process involved in the networking and functionalities of each layers and detailed working status.
CO 3. Discourse different wireless transmission techniques and the technologies and its standards and practical side of its usage.
CO 4. Differentiate different functionalities each layers of networks and protocols involved in each layers.
CO 5. Practical and experimental usage of trouble shooting commands and its usage and tools for analyzing the network trouble shooting.

COURSE CODE : 16U3CRBCA11
COURSE TITLE : PROGRAMMING IN JAVA

COURSE OUTCOMES

CO 1. Understand the basic concepts of Java Programming
CO 2. Develop understanding about object oriented programming in Java, including defining classes, invoking methods, using libraries.
CO 3. Learn experience of designing, implementing, testing and debugging graphical user interfaces in Java
CO 4. Understand Java Swings for designing GUI applications

SEMESTER: 4

COURSE CODE : 16U4CRBCA12
COURSE TITLE : MOBILE WEB AND APPLICATION DEVELOPMENT

COURSE OUTCOMES

CO 1. Understand mobile application principles
CO 2. Impart knowledge about mobile platform and NW environment
CO 3. Understand the web architecture

COURSE CODE : 16U4VCBCA1
COURSE TITLE : INTRODUCTION TO CLOUD TECHNOLOGY

COURSE OUTCOMES

CO 1. Understand the basics of cloud computing architecture and models
CO 2. Demonstrate the cloud computing types and service models
CO 3. Demonstrate the cloud infrastructure mechanisms
CO 4. Evaluate the risk assessment and risk mitigation strategies,
CO 5. Apply the foundations of cloud computing concepts and explore the case studies**.**

COURSE CODE : 16U4VCBCA2
COURSE TITLE : FUNDAMENTALS OF DATA CENTER

COURSE OUTCOMES

CO 1. Understand the fundamental concepts in data centers and different architectural models.
CO 2. Analyze the data center tradeoffs in terms of Network power, efficiency and cost.
CO 3. Discuss Virtualization and outline its role in enabling the cloud computing system model.
CO 4. Evaluate the data center storage architecture with respect to the FOS
CO 5. Understand the storage virtualization techniques.

COURSE CODE : 16U4CRBCA13
COURSE TITLE : BASIC ANDROID

COURSE OUTCOMES

CO 1. Describe Android Architecture, Android SDK, Android versions, Application components, Intent and Intent filters
CO 2. Design user interface using views, layouts, fragments in Android platform
CO 3. Discuss the use shared preferences, Internal storage, external storage, SQLite database, Content Providers,
CO 4. Discuss the use Media API, Video, Audio and Camera, Sensors, Bluetooth in Android applications, Ability to use maps and location based services
CO 5. Describe the basics of testing android applications

COURSE CODE : 16U4CRBCA14
COURSE TITLE : MOBILE DEVICE AND NETWORK ARCHITECTURE

COURSE OUTCOMES

CO 1. Summarize the basic wireless communication principles and the types of wireless networks
CO 2. Interpret the concepts of cellular networks and the mobile handover mechanisms with in the cellular network.
CO 3. Illustrate the concepts of GSM, 2G, mobile IP and UMTS
CO 4. Explain the features of a mobile device**.**

SEMESTER: 5

COURSE CODE : 16U5VCBCA3
COURSE TITLE : PRINCIPLES OF VIRTUALIZATION

COURSE OUTCOMES

CO 1. Understand the basic of virtualization and its types
CO 2. Deploy and manage an Enterprise Desktop Virtualization environment
CO 3. Deploy and manage the presentation virtualization environment
CO 4. Understand the virtualization software
CO 5. Understand Citrix and VMWare environment

COURSE CODE : 16U5VCBCA4
COURSE TITLE : SERVER OPERATING SYSTEM

COURSE OUTCOMES

CO 1. Demonstrate the Installing and Configuring Windows Server 2008
CO 2. Differentiate between the IPv4 and IPv6 addressing
CO 3. Configure DHCP, DNS and firewall for implementing network services
CO 4. Describe the Configuration of Active Directory Domain Services in windows server 2008
CO 5. Describe the Group Policy in Active Directory Domain Services

CO 6. Demonstrate Server services DNS, DHCP, TELNET, Web service, NIS, NFS

COURSE CODE : 16U5VCBCA5
COURSE TITLE : FUNDAMENTALS OF STORAGE

COURSE OUTCOMES

CO 1. Identify mechanism deployed in information storage and its management.
CO 2. Process involved in the storage system environment
CO 3. Discourse different backup technologies, recovery mechanism and its usage.
CO 4. Deep understanding of different storage mechanisms, operations and how to optimize the storage space and its accessibility.
CO 5. Experimental knowledge about hardware associated with storage.

COURSE CODE : 16U5CRBCA16
COURSE TITLE : ADVANCED ANDROID

COURSE OUTCOMES

CO 1. Define the callback methods to start the service and bind the service, implement IBinder object and Remote Bound Service. Describe IPC using Messenger, Handler and AIDL.
CO 2. Explain the various ways to create and manage different types of notifications and role of Notification Manage, use Embedded application
CO 3. Describe the features of Canvas and OpenGL in rendering Graphics, define the fields and elements of different animation, define and instantiate a Drawable
CO 4. Define the methods used at each stage of process life cycle, tasks, describe the worker thread and UI thread, lifecycle of a thread.
CO 5. Describe the steps to add web view, demostrate XML and JSON parsing, purpose of using SOAP web services and security aspects
CO 6. Describe the user level and kernel level security aspects

SEMESTER: 6

COURSE CODE : 16U6CRBCA16
COURSE TITLE : INTRODUCTION TO MOBILE UI AND UX

COURSE OUTCOMES

CO 1. Classify Human Computer Interaction and model the interfaces for applications.
CO 2. Evaluate the user interface design and the interaction styles used in applications.
CO 3. Develop the User Interface for applications by using design tools.
CO 4. Build JavaScript concepts using Angular JS, HTML and CSS
CO 5. Design the simple user interface applications using Angular JS, HTML, CSS

COURSE CODE : 16U6CRBCA17
COURSE TITLE : MOBILE ECOSYSTEM AND BUSINESS MODELS

COURSE OUTCOMES

CO 1. Understand business foundations and mobile ecosystem
CO 2. Understand the basic of marketing and articulate potential benefits of mobile technology
CO 3. Illustrate the basics of mobile marketing strategies
CO 4. Apply the mobile marketing and advertising strategies
CO 5. Understand the business models of mobile apps

COURSE CODE : 16U6CRBCA18
COURSE TITLE : WEB TECHNOLOGY AND VALUE-ADDED SERVICES IN MOBILE

COURSE OUTCOMES

CO 1. Describe characteristics and requirement of mobile value-added services
CO 2. Discuss about mobile TV, video and OTT services, call waiting, call holding, voice mail box facilities in value added services
CO 3. Interpret how to use operators, variables, arrays, control structures, functions and objects in JavaScript.
CO 4. Appreciate implementing client-side interfaces through the use of the DOM
CO 5. Discuss event handling, browser and media management in JavaScript

COURSE CODE : 16U6CRBCA19
COURSE TITLE : MOBILE TESTING

COURSE OUTCOMES

CO 1. Professional outlook towards the Software Development Life cycle and need for it.
CO 2. Process involved in the software testing and different kinds of testing
CO 3. Familiarize with the different testing tools and its features.
CO 4. Difference in the real testing devices ad emulators
CO 5. Experimental knowledge about Monkey tool for software testing**.**

DEPARTMENT OF ECONOMICS

B.A. ECONOMICS

Programme Specific Outcomes:

PSO 1 : Explain and communicate the functions and behaviour of economic agents at Micro and Macro Economic levels.

PSO 2 : Identify the areas where market mechanism is supplemented, modified and supplanted by government.

PSO 3 : Evaluate the economic relationship among different countries of the world.

PSO 4 : Explain the interaction between economy and environment and the need to obtain balance between them.

PSO 5 : Construct various types of indices and measurements such as index numbers, national income, central tendency, dispersion etc.

PSO 6 : Prepare questionnaires, conducts surveys, tabulate and present the data in graphs charts etc.

Course Outcomes

SEMESTER: 1

COURSE CODE : 15EC1BO1U
COURSE TITLE : HISTORICAL PERSPECTIVES OF ECONOMIC THOUGH

COURSE OUTCOMES

CO 1. Understand the broad contours of Economics, it's methodologies, tools and analysis procedures
CO 2. Knowledge of the basic concepts and terminology of Economics
CO 3. Gains knowledge to apply the methods and theories of social sciences to contemporary issues
CO 4. Understand the basic postulates of various schools of economic thought
CO 5. Describe the roots of economic thought and practices in the modern economic world.
CO 6. Understanding the theoretical background of various economic concepts and theories
CO 7. Discuss the economic thoughts of Kautilya, Naoroji, Gandhiji and Amartya Sen.
CO 8. Acquiring the basic knowledge of research methodology

COURSE CODE : 15U1CPHISI
COURSE TITLE : HISTORICAL CURRENTS OF THE MODERN WORLD

COURSE OUTCOMES

CO 1. Understand the transformation of European society from 13th-15th cy
CO 2. Evaluate the causes of Decline of Feudalism; The debate on the transition from Feudalism to capitalism - Evaluate view of Maurice Dobb and Paul Sweezy
CO 3. To understand various state models
CO 4. To understand Renaissance and its contributions; Understanding European Reformation and Counter reformation
CO 5. Analyzing growth of parliamentary democracy
CO 6. Understanding ideologies of enlightenment thinkers
CO 7. Understanding American, French , Russian, Chinese society before and after the revolution
CO 8. Analyse courses and results of First World War and Second world war and history of inter-war period , cold war, Analyse and evaluate world organisation and regional organization

SEMESTER: 2

COURSE CODE : 15EC2BO2U
COURSE TITLE : DEVELOPMENT AND ENVIRONMENTAL ECONOMICS

COURSE OUTCOMES

CO 1. Demonstrate familiarity with the central themes of economic development
CO 2. Evaluate the structural changes in the development pattern of less developed countries
CO 3. Demonstrate the difference between growth and development and major growth theories
CO 4. Assess the potential effectiveness of various policies in combating economic development
CO 5. Gains knowledge of the interactions of the economy and environment and physical constraints that limits interaction
CO 6. Develops knowledge of the relevant economic theories in understanding and addressing environmental or natural resource issues
CO 7. Becomes familiar with economic techniques to assess environmental problems and to analyse environmental policies
CO 8. Understand the market failure for environment goods and its impact on the economy

COURSE CODE : 15U1CPHIS2
COURSE TITLE : THE CONCISE OF HISTORY OF MODERN INDIA

COURSE OUTCOMES

CO 1. Understand the decline of Mughal Empire
CO 2. Evaluate the Indian states and society in the 18th century

CO 3. Understand the beginning of European settlement ; Understand the colonial perception of history
CO 4. The structure of government and the economic policies of British empire in between 1757 and 1857; Understand the administrative organization and social and cultural policies; Asses the cultural and social awakening in the first half of 19th century
CO 5. Orientalism and discovery of India
CO 6. Asses the nature of revolt of 1857; The administrative changes after 1858; The economic impact of British rule
CO 7. Understanding Indian nationalism; The nationalist movement in between 1858 and 1905; Evaluate the religious and social reform after 1858 and nationalist movements
CO 8. Understand the Gandhian methods for struggle and the Nehruvian era; India and third world countries, environmental movements, and crisis of National Unity

SEMESTER: 3

COURSE CODE : 15U3CRECO03
COURSE TITLE : PRINCIPLES OF MICRO ECONOMICS

COURSE OUTCOMES
CO 1. Acquire basic knowledge about concepts in Microeconomics
CO 2. Gather knowledge about various aspects of demand and supply
CO 3. Evaluate pricing strategies in the market
CO 4. Examine the theory of consumer behaviour
CO 5. Develops knowledge about the theory of production

COURSE CODE : 15U3CRECO04
COURSE TITLE : MODERN BANKING

COURSE OUTCOMES
CO 1. Identify various systems of Commercial banking and central banking and their operations
CO 2. Explain how banks manage their portfolios to strike a balance between liquidity profitability and security
CO 3. Evaluate the strength and weaknesses of Indian banking system and identifies the areas needing reforms
CO 4. Anlyse the digital banking products and services
CO 5. Explain the practical and legal aspects of banker- customer relationship
CO 6. Compare the negotiable instruments and modes of creating charge

COURSE CODE : 15U3CPPOL1
COURSE TITLE : AN INTRODUCTION TO THE CONCEPTS IN POLITICAL SCIENCE

COURSE OUTCOMES
CO 1. Understand fundamental principles and theoretical concepts in Political Science.

CO 2. Analyze the fundamental concepts, characteristics and theories central to comparative politics and international relations.
CO 3. Communicate effectively political knowledge to society.
CO 4. Generate awareness about the principles of Political Science in general and Political process in particular.
CO 5. Understand various political ideologies.

SEMESTER: 4

COURSE CODE : 15U4CRECO05
COURSE TITLE : MICRO ECONOMIC ANALYSIS

COURSE OUTCOMES
CO 1. Acquire basic knowledge on cost analysis
CO 2. Analyse the structure of firms and industry
CO 3. Evaluate various types of markets and factors influencing them
CO 4. Examine factor pricing and output determination in the economy
CO 5. Evaluate the welfare aspects of the economy and the strategies to address them

COURSE CODE : 15U3CRECO06
COURSE TITLE : PUBLIC ECONOMICS

COURSE OUTCOMES
CO 1. Identifies areas of market failures and need for government intervention
CO 2. Compares different sources of public revenue and evaluates the theories of taxation
CO 3. Analyses the incidence, and effects of taxation, expenditure and borrowing
CO 4. Compares various types of public debt and methods of debt redemption
CO 5. Evaluates the fiscal aspects a of federal system of government
CO 6. Evaluates the role of Panchayati Raj institutions

COURSE CODE : 15U4CPPOL2
COURSE TITLE : INDIAN POLITY- GOVERNMENTAL MACHINERY AND PROCESSES

COURSE OUTCOMES
CO 1. Understand the various aspects of the constitution and its making.
CO 2. Analyze the fundamental and theoretical concepts of Indian Constitution.
CO 3. Understand about various rights, including political, civil, social, economic and cultural rights.
CO 4. Generate insights into the state-society dynamics in India and its impact on the polity and governance.
CO 5. Understand the structure and functioning of central and state government.

SEMESTER: 5

COURSE CODE : 15U5CREO07
COURSE TITLE : QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS

COURSE OUTCOMES

CO 1. Helps understand the role of statistics in economic analysis
CO 2. Students will be able to identify, explain, and use economic concepts, theories, models, and data-analytic techniques.
CO 3. Students will acquire the knowledge of economics, mathematics, statistics, and computing flexibly in a variety of contexts thereby providing the foundation for success in their studies and careers.
CO 4. Students will develop the skills to measure and analyze statistical data in order to draw conclusions about various economic problems.
CO 5. Students will develop the necessary skills for preparing questionnaires, collection and classification of data and presentation in charts and graphs.
CO 6. Students will acquire the skills to deliver effective presentations in which they combine visual communication design with oral arguments and/or the written word.

COURSE CODE : 15U5CRECO8
COURSE TITLE : PRINCIPLES OF MACRO ECONOMICS

COURSE OUTCOMES

CO 1. Explains the National Income concepts and measurement of National Income
CO 2. Analyses the circular flow model
CO 3. Evaluates the contributions of classical economists in macro economics
CO 4. Compares the principles of Keynesian economics with classical theory
CO 5. Demonstrate the Keynesian model of income determination
CO 6. Analyses the determinants of consumption saving and Investment

COURSE CODE : 15U5CRECO09
COURSE TITLE : INDIAN ECONOMY

COURSE OUTCOMES

CO 1. Gather knowledge about Indian economy before independence
CO 2. Examine the demographic situation of the Indian Economy
CO 3. Analyse the planning process in India
CO 4. Develops knowledge about national income estimation of the country
CO 5. Evaluates the development issues of the Indian economy

COURSE CODE : 15U5OCECO1
COURSE TITLE : FOUNDATIONS OF ENVIRONMENTAL ECONOMICS

COURSE OUTCOMES

CO 1. Analyses the economy-environment interactions
CO 2. Examines the importance of eco system and bio diversity from economic point of view
CO 3. Analyses the environmental degradation from mark failure point of view
CO 4. Explain the valuation of environmental damages

COURSE CODE : 15U5CRECO10
COURSE TITLE : ECONOMICS OF FINANCIAL MARKETS

COURSE OUTCOMES

CO 1. Understand the basics of Indian financial system and the functioning of Indian money market and capital market.
CO 2. Understand the importance of the financial system in directing the use of scarce capital.
CO 3. Evaluate the use of major instruments and components of money market and capital market
CO 4. Develop knowledge and familiarity with internet-based trade and transactions
CO 5. Apply knowledge of financial market in day-to-day transactions and investment decisions.

SEMESTER: 6

COURSE CODE : 15U6CRECO11
COURSE TITLE : QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS

COURSE OUTCOMES

CO 1. Understand the role of statistics in economic analysis
CO 2. Students will be able to identify, explain, and use economic concepts, theories, models, and data-analytic techniques.
CO 3. Students will acquire the knowledge of economics, mathematics, statistics, and computing flexibly in a variety of contexts thereby providing the foundation for success in their studies and careers.
CO 4. Students will develop the skills to measure and analyze statistical data in order to draw conclusions about various economic problems.
CO 5. Students will develop the necessary investigative skills for conducting original economic research and participating effectively in project teams.
CO 6. Students will acquire the skills to deliver effective presentations in which they combine visual communication design with oral arguments and/or the written word**.**

COURSE CODE : 15U6CRECO12
COURSE TITLE : MACROECONOMIC ANALYSIS

COURSE OUTCOMES

CO 1. Understand various theories associated with consumption function.
CO 2. Understand and evaluate various concepts and theories of investment.
CO 3. Understand various theories of inflation and analyze its influence on various economies.
CO 4. Analyze fiscal and monetary policy decisions to counter fluctuations in business cycles.
CO 5. Understand the concept of simultaneous equilibrium in the money and goods market and apply the principles in the real-life situations.

COURSE CODE : 15U6CRECO13
COURSE TITLE : DEVELOPMENT ISSUES OF THE INDIAN ECONOMY

COURSE OUTCOMES

CO 1. Analyse the agricultural base of Indian economy
CO 2. Evaluate the nature and characteristics of Indian industrial sector
CO 3. Analyse the growth of service sector in the country.
CO 4. Analyse the role of international trade on the economic growth of the country
CO 5. Identify the nature and characteristics of Kerala economy

COURSE CODE : 15U6CRECO14B
COURSE TITLE : INTRODUCTORY ECONOMETRICS

COURSE OUTCOMES

CO 1. Understand the meaning and methodology of econometrics.
CO 2. Analyse the application of Population Regression Function and Sample Regression Function in econometrics
CO 3. Understands the concept of Ordinary Least Square estimators and its various assumptions
CO 4. Develops the skills to build predictive models that help in decision making.
CO 5. Equip students to get a knowledge regarding how to do a social science research using empirical data with the help of econometric tools.
CO 6. Summarize the various econometric tools that enable the students to make valid inferences.

COURSE CODE : 15U6CRECO15
COURSE TITLE : INTERNATIONAL ECONOMICS

COURSE OUTCOMES

CO 1. Explains the basic concepts and tools of international economics
CO 2. Analyses the basic factors lying behind international trade
CO 3. Analyses the Balance of payment accounts

CO 4. Examines the structure and working of foreign exchange markets
CO 5. Evaluates the role and importance of commercial policy
CO 6. Explains the structure and working of international monetary system

M.A. ECONOMICS

Programme Specific Outcomes:

PSO1 : Apply the tools and methods of economics, statistics and econometrics for solving various theoretical and practical problems.

PSO2 : Evaluate environmental, developmental, national and international economic issues in multi-dimensional perspectives.

PSO3 : Interpret economic theories and principles and appraise the impact of local, national and global economic changes and public policy on various sectors and markets.

PSO4 : Evaluate of economic theories, policies and socio-economic issues critically and creates new knowledge, by synthesizing existing knowledge and applying economic reasoning.

PSO5 : Formulate research problems, collects and, analyses empirical data by applying economic concepts and theories and prepares study reports and research papers

Course Outcomes

SEMESTER: 1

COURSE CODE : 16P1ECOT01
COURSE TITLE : MICRO ECONOMIC THEORY 1

COURSE OUTCOMES

CO 1. Enable in taking rational buying decisions and also help a firm to design suitable marketing strategies
CO 2. Equip with the knowledge and skill in effective decision making under uncertain market situations, and also understands the importance of time allocation and household management
CO 3. Develops the skill in analyzing business phenomena in terms of transaction cost saving.
CO 4. Discuss the economic level of information search possible under different situations and the concept of bounded rationality

CO 5. Understand of economies of scope and learning curves and help in analyzing the nature and functioning of modern multiproduct firms

COURSE CODE : 16P1ECOT02

COURSE TITLE : MACRO ECONOMICS

COURSE OUTCOMES

CO 1. Evaluates Keynesian Income Expenditure model up to four sectors
CO 2. Understands the IS-LM model up to four sectors
CO 3. Understands the concept of consumption and consumption functions
CO 4. Evaluates various post Keynesian consumption theories
CO 5. Develops an understanding about the concept and types of investment
CO 6. Compares Keynesian and Post-Keynesian investment theories
CO 7. Develops basic knowledge about labor market searches and unemployment
CO 8. Understands the concept and theories of trade cycle
CO 9. Analyses global recession and its policy implications

COURSE CODE : 16P2ECOT03

COURSE TITLE : INDIAN ECONOMY: ISSUES AND POLICIES – I

COURSE OUTCOMES

CO 1. Understand economic growth of the country and to analyze the contribution of each sectors to income output and employment of the country
CO 2. Learn the role and significance of NITI AAYOG in planning of the country and to identify its drawbacks and achievements
CO 3. Understand the role of India in the globalized era and to critically analyze the recent policy initiatives
CO 4. Identify the importance of agriculture sector and analyzing its performance since independence. Also identifying the role of the agrarian sector in the international arena and its impact in terms of trade of the country.
CO 5. Identify the role of industries in accelerating economic growth and to analyze the trends in industrial productivity
CO 6. Understand the new economic reforms and to assess its impact
CO 7. Understand the role played by service sector in employment generation and economic development
CO 8. Understand and analysing the overall impact of the the three sectors in nation building.

COURSE CODE : 16P1ECOT04

COURSE TITLE : ECONOMICS OF DEVELOPMENT AND GROWTH I

COURSE OUTCOMES

CO 1. Develops conceptual clarity on the various dimensions of development

CO 2. Enables the student to evolve new strategies for achieving sustainable development and inclusive growth
CO 3. Equips the student community with the theoretical and empirical material for enhancing their capability to address the basic problems confronted by the society
CO 4. Understands and critically evaluates alternative theories of growth
CO 5. Understands of the recent literature, both empirical and analytical, on theories of underdevelopment and growth in developing countries
CO 6. Develops conceptual clarity on the various dimensions of development
CO 7. Analyses various theories associated with its growth and development
CO 8. Identify the strategic factors in the development of the less developed countries

COURSE CODE : 16P1ECOTO5
COURSE TITLE : QUANTITATIVE TOOLS FOR ECONOMIC ANALYSIS

COURSE OUTCOMES

CO 1. Understand the concepts of Probability, Random variables- Discrete and continuous types, probability distribution functions and its properties
CO 2. Understand Mathematical Expectation, moments. Standard distributions binomial, Poisson, normal and lognormal distributions
CO 3. Understand and apply Central limit theorem
CO 4. Understand Population and Sampling, Determination of sample size, Sampling distributions - Statistic, sampling distributions of sample mean
CO 5. Applications of Sampling distributions
CO 6. Chi square, t and F distributions
CO 7. Estimates - point and interval estimation, Maximum Likelihood Estimation and momentsc Confidence interval for the mean of a population using small and large samples.
CO 8. Understand the concept of hypothesis and applications of different methods of testing hypothesis.
CO 9. Applications of parametric and nonparametric tests

SEMESTER: 2

COURSE CODE : 16P2ECOT06
COURSE TITLE : MICROECONOMIC THEORY- II

COURSE OUTCOMES

CO 1. Develop skill in formulating business strategy in the context of market imperfections
CO 2. Understands the basic theory of distribution and the source of income generation
CO 3. Understand the use of game theory of models in decision making
CO 4. Understand the different managerial theories of the firm
CO 5. Analyse the impact of micro decisions on macro instability
CO 6. Develops skill in applying compensation principle under situations where a proposed change causes damage to someone but gains to others

COURSE CODE : 16P2ECOT07
COURSE TITLE : ADVANCED MACRO ECONOMIC THEORY AND POLICY

COURSE OUTCOMES

CO 1. Compares Classical and Keynesian Approaches to Inflation
CO 2. Understands the Phillips Curve
CO 3. Compares the concepts of Monetarism and Fiscalism
CO 4. Develops an understanding about Rational Expectations Hypothesis
CO 5. Develops an understanding about the concept Real Business Cycle Theory
CO 6. Understands Neo Keynesian and Disequilibrium Models
CO 7. Evaluates Post Keynesian Theories
CO 8. Understands the concept and theories of New Keynesian Macro Economics
CO 9. Analyse Insider Outsider Models

COURSE CODE : 16P2ECOT08
COURSE TITLE : INDIAN ECONOMY: ISSUES AND POLICIES – II

COURSE OUTCOMES

CO 1. Understand the basic characteristics of Indian economy, it's problems and prospects.
CO 2. Understand the nature of demographic profile, the causes and the effect of population growth and its distribution in India.
CO 3. Gain knowledge about the labour market trend and the employment scenario in the country.
CO 4. Be aware of the magnitude of poverty and inequality in India and understand the poverty alleviation measures in the country.
CO 5. Comprehend the significance of fiscal reforms in India post 1991.
CO 6. Understand the structure of Indian financial system and the role of banking and insurance sectors.
CO 7. Gain knowledge about the structure and direction of India's foreign trade.
CO 8. Understand the structural changes, characteristics, emerging trends and issues of Kerala Economy**.**

COURSE CODE : 16P2ECOT09
COURSE TITLE : ECONOMICS OF DEVELOPMENT AND GROWTH II

COURSE OUTCOMES

CO 1. Develop conceptual clarity on the various dimensions of development
CO 2. Enable the student to evolve new strategies for achieving sustainable development and inclusive growth
CO 3. Equip the student community with the theoretical and empirical material for enhancing their capability to address the basic problems confronted by the society
CO 4. Understand and critically evaluates alternative theories of growth

CO 5. Understand of the recent literature, both empirical and analytical, on theories of underdevelopment and growth in developing countries
CO 6. Develop conceptual clarity on the various dimensions of development
CO 7. Analyse various theories associated with its growth and development
CO 8. Identify the strategic factors in the development of the less developed countries

COURSE CODE : 16P2ECOT10
COURSE TITLE : STATISTICAL TOOLS FOR ECONOMIC ANALYSIS

COURSE OUTCOMES

CO 1. Understand the concepts of Probability, Random variables- Discrete and continuous types, probability distribution functions and its properties
CO 2. Understand Mathematical Expectation, moments. Standard distributions –binomial, Poisson, normal and lognormal distributions
CO 3. Understand and apply Central limit theorem
CO 4. Understand Population and Sampling, Determination of sample size, Sampling distributions - Statistic, sampling distributions of sample mean
CO 5. Applications of Sampling distributions –Chi square, t and F distributions
CO 6. Understands Estimation - point and interval estimation. Method of Estimation, Maximum Likelihood Estimation and Method of moments. Confidence interval for the mean of a population using small and large samples.
CO 7. Understand null and alternative hypotheses, simple and composite hypotheses, one tailed and two tailed tests.
CO 8. ApplY parametric and non-parametric tests

SEMESTER: 3

COURSE CODE : 16P4ECOT11
COURSE TITLE : INTERNATIONAL TRADE THEORY & POLICY

COURSE OUTCOMES

CO 1. Analyse the theories of International trade
CO 2. Identify the effect of trade on factor rewards consequences of factor growth and effect of growth on trade
CO 3. Evaluate the traditional and Neo protectionist measures
CO 4. Analyse the effects of economic integration on member and non-member countries

COURSE CODE : 16P3ECOT12
COURSE TITLE : PUBLIC ECONOMICS II

COURSE OUTCOMES

CO 1. Examine the role of government in an organized society
CO 2. Develop an understanding about the nature and theories of Public Goods
CO 3. Analyse the social goals of fiscal policy in a developing economy

CO 4. Examine the theories of public choice and to analyse how decisions on public choices are reached
CO 5. Evaluate the role and importance of finance commissions in India

COURSE CODE : 16P3ECOT13
COURSE TITLE : RESEARCH METHODS IN ECONOMICS

COURSE OUTCOMES

CO 1. Comprehend the basic concepts and principles of economic research
CO 2. Search for, select and critically evaluate research articles and papers
CO 3. Understand interdisciplinary approach in social science research
CO 4. Prepare a literature review and formulate research questions
CO 5. Formulate a research design with valid hypothesis
CO 6. Gain experience in the collection of data and its analysis
CO 7. Understand technology-enabled data processing in research
CO 8. Develop skills in writing a research proposal or a project plan

COURSE CODE : 16P3ECOT14
COURSE TITLE : BASIC ECONOMETRICS

COURSE OUTCOMES

CO 1. Get equipped to empirically validate the economic theories studied so far using different econometric tools.
CO 2. Understand the methodology of econometrics to get a knowledge regarding the various steps involved in the estimation of an econometric model.
CO 3. Analyse application of quantitative as well as qualitative economic variables in estimating econometric model.
CO 4. Learning more about the estimation and testing process and to identify how good a model is by understanding a general linear regression model
CO 5. Learning econometrics through software programmes like Gretl and SPSS and to learn its interpretation for economic analysis.

COURSE CODE : 16P3ECOT15ELA
COURSE TITLE : MONETARY ECONOMICS(ELECTIVE)

COURSE OUTCOMES

CO 1. Understand the concept of money and analyses the theories that relate to the existence of money, explaining why it is demanded by individuals
CO 2. Capacitate the students to have a thorough understanding of various theoretical approaches to the determinants and measures of money supply and its role in causing business cycles
CO 3. Analyze the different schools of thought regarding the demand for money
CO 4. Understand interest rate differentials and various theories related to and analyze the monetary equilibrium criteria.

CO 5. Understand the monetary policy formulations, its targets and its objectives and to create an interest in the recent monetary reforms initiated in India and to analyze the merits and disadvantages of different monetary policies used by Central Banks.

CO 6. Describe and analyse the main channels of the monetary transmission mechanism, through which monetary policy can have real effects on the economy

SEMESTER: 4

COURSE CODE : 16P4ECOT16
COURSE TITLE : INTERNATIONAL FINANCIAL SYSTEM & ECONOMIC POLICY

COURSE OUTCOMES

CO 1. Analyse the evolution of International Monetary Systems (IMS)
CO 2. Explains the functioning of Foreign exchange market in a global perspective
CO 3. Evaluate the theories of exchange rate determination and Balance of payment adjustment
CO 4. Analyse the problems of internal and external balance under different degrees of capital movements and under different exchange regimes

COURSE CODE : 16P4ECOT16
COURSE TITLE : PUBLIC ECONOMICS II

COURSE OUTCOMES

CO 1. Develops an understanding of various theories of Public Expenditure
CO 2. Analyse the concept of budget and various stages in its preparation
CO 3. Evaluates various methods in public debt management and examine the situation of India
CO 4. Evaluates the role of public sector enterprises in economic development including PPP
CO 5. Develops an understanding of federal finance

COURSE CODE : 16P4ECOT20ELE
COURSE TITLE : ECONOMICS OF SOCIAL SECTOR

COURSE OUTCOMES

CO 1. Provide a comprehensive theoretical outlook on important social sectors
CO 2. Equip with the knowledge of basic theoretical framework of social sector and be able to apply it in a practical setting
CO 3. Develops the skill in analyzing sector-wise working of Indian economy
CO 4. Develop a critical approach to evaluate the interplay of social sector in the development proces
CO 5. Understand the status of health and education sector in a developing economy.

COURSE CODE : 16P4ECOT18ELC
COURSE TITLE : ENVIRONMENTAL ECONOMICS (Elective)

COURSE OUTCOMES

CO 1. Understand the basics of environmental economics and to know the linkage between economics and environment
CO 2. Gain a theoretical understanding about the foundations of environmental economics
CO 3. Understand and analyse the mathematical valuation of environmental values and various pricing methods to assess its impact
CO 4. Understand about the environmental accounting and its integration with the system of national accounts
CO 5. Analyse the contribution of environment to the GNP of the country and to know the importance of sustainable development as a goal for the better world
CO 6. Identify, evaluate and scrutinise the environmental policies and to analyse the recent trends

COURSE CODE : 16P4ECOT19ELE
COURSE TITLE : CAPITAL MARKET

COURSE OUTCOMES

CO 1. Understand the basics of savings and investment, capital market instruments and major investment avenues.
CO 2. Understand the origin and development of capital market and its influence on Indian economy.
CO 3. Attain familiarity with the concepts and terms used in the new issue market such as IPO, FPO, rights issue and book building.
CO 4. Understand the functioning of stock exchanges and the stock market indices in India.
CO 5. Evaluate the interrelationship between interest rate and investment.
CO 6. Understand the pricing and hedging of options, futures and other contingent claims and their role in risk management.
CO 7. Apply the principles and functions of portfolio management in capital market investments
CO 8. Analyze the valuation of securities, earning ratios and financial statement analysis**.**

DEPARTMENT OF ENGLISH

B.A. ENGLISH COPY EDITOR

Programme Specific Outcomes:

PSO1 : Demonstrate knowledge about the socio-historical and cultural context of literary works in English and demonstrate in-depth knowledge about select texts

PSO2 : Identify and describe the thematic and literary features of select works in English and align them with the socio-political and cultural milieu.

PSO3 : Articulate knowledge through oral, written or performative means, using appropriate style and register.

PSO4 : Edit text, set the layout, create illustrations and publish articles, journals and books.

PSO5 : Demonstrate an understanding of various critical theories and reading strategies and engage with texts – literary, performance, visual etc, – from the point of view of various critical approaches and draw from them the dynamics of the relationship between nature and culture.

PSO6 : Conduct independent research in the area of literary and cultural studies and produce new and critical knowledge.

Course Outcomes

SEMESTER: 1

COURSE CODE : 19U1CCENG1
COURSE TITLE : COMMUNICATION SKILLS IN ENGLISH

COURSE OUTCOMES

CO 1. Understand the mechanics of English language and comprehend the plain meaning of simple narrations, announcements and instructions.

CO 2. Make inferences about the implications of statements from stress and tone recognise the various registers of speech

CO 3. Listen to formal presentations and prepare lecture notes using the appropriate format.

CO 4. Use English language for a variety of speaking contexts including conversations, presentations, speeches, discussions and negotiations

CO 5. Critically evaluate presentations, narrations, speeches and analyse and evaluate their content and respond to them appropriately

CO 6. Creatively respond to one's surroundings in the form of dramatic works, poetry, narrations, and songs, and perform them before an audience.
CO 7. Understand the mechanics of English language and comprehend the plain meaning of simple narrations, announcements and instructions

COURSE CODE : 19U1CCENG2
COURSE TITLE : READING LITERATURE IN ENGLISH

COURSE OUTCOMES
CO 1. Explain the nuances of English Language through literature.
CO 2. Compare the Varied parameters of English language.
CO 3. Discover comprehensive ability.
CO 4. Connect the efficiency of the students with realities of life.
CO 5. Evaluate the beauty of literary expression.

COURSE CODE : 19U1CPENG1
COURSE TITLE : ENGLISH FOR COPY EDITING 1

COURSE OUTCOMES
CO 1. Understand the salient aspects of essay development
CO 2. Apply effectively various English grammar rules in different language compositions.
CO 3. Develop essays employing different patterns of essay writing.
CO 4. Demonstrate skill to express ideas clearly in oral and written expressions
CO 5. Edit prose passages to make them worthy of publication.
CO 6. Distinguish between various levels of linguistic competence.

COURSE CODE : 19U1CRENG01
COURSE TITLE : INTRODUCTION TO THE STUDY OF LANGUAGE AND LITERATURE

COURSE OUTCOMES
CO 1. Understand what constitutes literature as a discipline.
CO 2. Familiarise with the main writers, various genres and movements of English literature.
CO 3. Outline major literary trends and theoretical developments.
CO 4. Appreciate different forms of literary writing.
CO 5. Evaluate literary texts in relation to their genres and periods
CO 6. Illustrate ideas with relevant examples.

COURSE CODE : 19U1VCENG1
COURSE TITLE : INFORMATION TECHNOLOGY AND COMPUTER APPLICATIONS

COURSE OUTCOMES
CO 1. Understand the history of computing and internet.

CO 2. Be familiar with emerging trends and technologies in computing such as 3D printing, virtual reality and artificial intelligence.
CO 3. Identify, evaluate and utilize online information sources.
CO 4. Demonstrate the awareness of emerging web technologies and applications.
CO 5. Demonstrate proficiency in day-to-day computing skills including the use of software such as web browsers, word processors and media players and editors.

SEMESTER: 2

COURSE CODE : 19U2CCENG3
COURSE TITLE : CRITICAL THINKING, ACADEMIC WRITING AND PRESENTATION

COURSE OUTCOMES
CO 1. Comprehend fundamental concepts of critical reasoning and develops the capacity to read and respond critically, drawing conclusions, generalizing, differentiating fact from opinion and creating their own arguments.
CO 2. Develop appropriate and impressive writing styles for various contexts.
CO 3. Write and correct structural imperfections and edit what they have written.
CO 4. Develop capacity for making academic presentations effectively and impressively.

COURSE CODE : 15U2CCENG4
COURSE TITLE : MUSINGS ON VITAL ISSUES

COURSE OUTCOMES
CO 1. Explore the world of literature further and appreciate the universality of human experience and aspirations.
CO 2. Comprehend different genres of writings – essays, poetry and short story.
CO 3. Evaluate literature and develop their ability to read texts critically.
CO 4. Develop a sense of appreciation and proficiency in language.

COURSE CODE : 15U2CRENG02
COURSE TITLE : METHODOLOGY OF HUMANITIES AND LITERATURE

COURSE OUTCOMES
CO 1. Understand what constitutes literature as a discipline.
CO 2. Familiarise with the main writers, various genres and movements of English literature.
CO 3. Outline major literary trends and theoretical developments.
CO 4. Familiarise with the major theoretical approaches to literature.
CO 5. Examine larger questions such as culture, gender, marginality etc.
CO 6. Interpret literary texts from various theoretical perspectives.

COURSE CODE : 15U2CPENG2
COURSE TITLE : ENGLISH FOR COPY EDITING 2

COURSE OUTCOMES
CO 1. Understand the basics of English grammar.

CO 2. Apply punctuation marks promptly.
CO 3. Create different sentence structures in English.
CO 4. Edit amateur prose pieces.
CO 5. Develop standard oral and written communication.
CO 6. Evaluate various levels of language proficiency

COURSE CODE : 19U1VCENG2
COURSE TITLE : COMPUTER APPLICATIONS AND DTP

COURSE OUTCOMES

CO 1. Demonstrate a comprehensive understanding of printing and publishing technology.
CO 2. Apply the methods and procedures of online publication.
CO 3. Operate desktop printing applications such as CorelDraw, Photoshop and InDesign.
CO 4. Be able to successfully complete simple typesetting works.
CO 5. Acquire proficiency in graphic design and image manipulation.
CO 6. Gain experience in editing, typesetting and publishing a student newsletter and magazine.

SEMESTER: 3

COURSE CODE : 15U3CCENG5
COURSE TITLE : REFLECTIONS ON INDIAN POLITY, SECULARISM & SUSTAINABLE ENVIRONMENT

COURSE OUTCOMES

CO 1. Communicate effectively in English.
CO 2. Understand the vital aspects of Indian polity viz. democracy, federalism and secularism.
CO 3. Respond critically to the questions of sustainable development.
CO 4. Assimilate and creatively respond to Gandhian thoughts.
CO 5. Compare and contrast scholarly texts (both content and style).
CO 6. Appreciate the literary and the aesthetic dimensions of select texts.

COURSE CODE : 15U3CRENG03
COURSE TITLE : LITERATURE AND INFORMATICS

COURSE OUTCOMES

CO 1. Understand the relationship between technology and literature
CO 2. Analyze how technology is transforming important aspects of life
CO 3. Examine the various activities of life from the point of view of the long term implications of
    a. technology
CO 4. Explore the possibilities of information technology in enriching human activities.
CO 5. Use technology ethically

CO 6. Apply the concepts learnt from the course in evaluating in critiquing literary and cultural texts.

COURSE CODE : 15U3CRENG04
COURSE TITLE : READING PROSE

COURSE OUTCOMES

CO 1. Explore the evolution of English prose writing.
CO 2. Understand the range and variety of prose writings across literature.
CO 3. Explore various global literary themes that appear in prose writings.
CO 4. Compare and contrast the issues, conflicts and preoccupations of writers across the globe.
CO 5. Evaluate and analyse historical contexts of various ideologies across the world.
CO 6. Critically engage with the complex nature of writing around the world.
CO 7. Critically appreciate the diversity prose in the light of a rational and logical temperament.

SEMESTER: 4

COURSE CODE : 15U4CRENG05
COURSE TITLE : READING POETRY

COURSE OUTCOMES

CO 1. Demonstrate knowledge and understanding of individual literary works as representatives of their genre and period, and the relationships between them.
CO 2. Demonstrate an understanding of the ways in which cultural values are expressed in literature.
CO 3. Identify the significance of the context in which a work is written and received. Analyse language, structure, techniques and style and evaluate their effects on the reader as well as the connections between style and meaning
CO 4. Engage in independent literary criticism on both familiar and unfamiliar literary texts.
CO 5. Write a sustained literary commentary using an effective choice of register and style using the terminology and concepts appropriate to the study of literature

COURSE CODE : 15U4CRENG06
COURSE TITLE : READING FICTION

COURSE OUTCOMES

CO 1. Explore the evolution of English prose writing.
CO 2. Understand the range and variety of prose writings across literature.
CO 3. Explore various global literary themes that appear in prose writings.
CO 4. Compare and contrast the issues, conflicts and preoccupations of writers across the globe.

CO 5. Evaluate and analyse historical contexts of various ideologies across the world.
CO 6. Critically engage with the complex nature of writing around the world.
CO 7. Critically appreciate the diversity prose in the light of a rational and logical temperament.

COURSE CODE : 15U4VCENG4
COURSE TITLE : VOCATIONAL 4: THE TECHNIQUE OF COPY-EDITING

COURSE OUTCOMES

CO 1. Develop a comprehensive understanding of the theoretical and practical aspects of different techniques of copy editing
CO 2. Develop an awareness of the roles and functions of copy editors while producing varieties of books including the text books.
CO 3. Understand the legal and ethical issues related to copy editing.
CO 4. Familiarize contemporary practices of techniques in copy editing.
CO 5. Master the technical terminologies and apply those terms in the practice of copy editing.
CO 6. Demonstrate different techniques of copy editing while editing different kinds of books. Copy edit a book before it goes to the final print.

SEMESTER: 5

COURSE CODE : 15U5CRENG07
COURSE TITLE : READING DRAMA

COURSE OUTCOMES

CO 1. Identify the aspects and features of theatre
CO 2. Describe the development of dramatic techniques in different drama traditions
CO 3. Demonstrate familiarity with the plays of master dramatists
CO 4. Analyse dramatic texts on the basis of structure, characterisation, staging etc.
CO 5. Apply a variety of dramatic techniques in performing one act plays
CO 6. Critique theatrical productions and evaluate directorial styles and acting Write and perform short plays

COURSE CODE : 15U5CRENG08
COURSE TITLE : LANGUAGE AND LINGUISTICS

COURSE OUTCOMES

CO 1. Understand the origin, nature and evolution of language
CO 2. Analyze the key concepts of linguistics.
CO 3. Recognize the structure and various parts of language.
CO 4. Apply various phonetic rules.
CO 5. Examine English language at phonemic, morphemic and syntactic levels.
CO 6. Distinguish various dialectical aspects of English

COURSE CODE ; 15U5CRENG09
COURSE TITLE : LITERARY CRITICISM: THEORY AND PRACTICE

COURSE OUTCOMES

CO 1. Understand the fundamental literary and critical concepts and underlying distinctions among them.
CO 2. Understand the theoretical and critical concepts in their contexts
CO 3. Explore the various writing strategies and techniques of textual analysis.
CO 4. Apply the various theoretical framework and concepts to literary and cultural texts.
CO 5. Develop a coherent, synoptic view of the discipline of criticism

COURSE CODE : 15U5CRENG10
COURSE TITLE : POSTCOLONIAL LITERATURES

COURSE OUTCOMES

CO 1. Understand the social-historical-political economic contexts of colonialism and postcolonialism in India and other countries affected by colonial rule
CO 2. Understand the scope of postcolonial literatures in India and elsewhere, primarily as a response to the long shadow of colonialism, not just of colonial occupation
CO 3. See through a corpus of representative postcolonial texts from different colonial locations: the effects of colonial rule on the language, culture, economy and habitat of specific groups of people affected by it
CO 4. Appreciate and analyze the growing spectres of inequality arising out of colonial occupation and the role played by postcolonial literatures to resist it in India and similar locations
CO 5. Critically engage with issues of racism and imperialism during and after colonial occupation

SEMESTER: 6

COURSE CODE : 15U6CRENG11
COURSE TITLE : WOMEN'S LITERATURE

COURSE OUTCOMES

CO 1. Understand and appreciate the representation of the experience of woman in literature.
CO 2. Understand the theoretical concepts of feminism in British, American and Indian contexts.
CO 3. Familiarise with the rich repertoire of the literary creativity of women.
CO 4. Link the status of woman to social discrimination and social change.
CO 5. Recognize and redefine the gender based constructs in one's own social and cultural milieu.
CO 6. Imbibe the values of gender justice and mutual respect. Stimulate the potential for creative and critical analysis.

COURSE CODE : 15U6CRENG12
COURSE TITLE : INDIAN WRITING IN ENGLISH

COURSE OUTCOMES

CO 1. Demonstrate an understanding of the various phases of the evolution of Indian writing in English.
CO 2. Demonstrate familiarity with the thematic concerns, genres and trends of Indian writing in English.
CO 3. Critically engage with Indian literary texts written in English in terms of colonialism / post colonialism, regionalism, and nationalism
CO 4. Demonstrate an understanding of the pluralistic aspects of Indian culture and identity.
CO 5. Critically appreciate the creative use of the English language in Indian English Literature
CO 6. Approach Indian English Literature from multiple positions based on historical and social locations

COURSE CODE : 15U6CRENG14
COURSE TITLE : AMERICAN LITERATURE

COURSE OUTCOMES

CO 1. Understand the trends and movements in American Literature.
CO 2. Evaluate the distinctive generic and literary features of American prose, poetry and theatre.
CO 3. Situate a text or author with reference to their specific American historical milieu.
CO 4. Compare texts and authors across the spectrum of American literature.
CO 5. Appreciate critically the literary merits of individual American writers.
CO 6. Locate works from the American canon vis-à-vis their counterparts from other regional literatures.

COURSE CODE : 15U6CRENGEL1
COURSE TITLE : REGIONAL LITERATURES IN TRANSLATION

COURSE OUTCOMES

CO 1. Get familiarized with the cultural heterogeneity and linguistic plurality of our country through its literature written in regional languages.
CO 2. Engage with various theoretical positions in translation.
CO 3. Assess, compare and review translations.
CO 4. Critically appreciate the process of translation.
CO 5. Reflect on the politics of translation.
CO 6. Translate literary and non-literary texts.

MA IN ENGLISH LANGUAGE AND LITERATURE

Programme Specific Outcomes:

PSO1 : Demonstrate a comprehensive understanding of the socio-historical and literary background of English Literature and various other Literatures in English.

PSO2 : Identify and describe the thematic and literary features of select works in English and align them with the socio-political and cultural milieu

PSO3 : Demonstrate an understanding of various critical theories and reading strategies and engage texts - literary, performance, visual etc. –from the point of view of the various critical approaches and to draw from them the dynamics relationship between nature and culture.

PSO4 : Conduct research that engages with and responds to diverse audiences of scholars, students, and community members.

PSO5 : Articulate his/her knowledge in oral, written or performative means, using appropriate style and register and demonstrate ethical standards and personal values in all activities

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1ENGT01
COURSE TITLE : CHAUCER AND ROOTS OF ENGLISH

COURSE OUTCOMES

CO 1. Know the growth of English language and literature up to the age of Chaucer
CO 2. Describe the linguistic and literary features of the early literatures in English
CO 3. Demonstrate an understanding of the influence of other Languages on English
CO 4. Recognise the linguistic and thematical differences between the old and middle English Language and literature.
CO 5. Apply the appropriate 'critical apparatus' in reading early literatures of English.
CO 6. Critique literary texts of old English and Middle English period.

COURSE CODE : 16P1ENGT02
COURSE TITLE : WRITINGS OF THE RENAISSANCE

COURSE OUTCOMES

CO 1. Understand the theoretical models in Renaissance studies with special focus on NewHistoricism and Cultural Materialism
CO 2. Evaluate the individual genius of representative Renaissance writers.
CO 3. Apply theoretical formulas in the readings of select Renaissance works.

CO 4. Examine historical, cultural and ideological trends of the times.
CO 5. Compare individual Renaissance writers to estimate their literary merits and their impactson subsequent literary history.
CO 6. Appreciate the aesthetic dimensions of the literary produce of the time based on the closereadings of representative writers.
CO 7. Critique Renaissance literature to throw light on the ideological undercurrents that shaped the literary sensibility of the times.

COURSE CODE : 16P1ENGT03
COURSE TITLE : LITERATURES OF THE ENGLISH REVOLUTION AND ENLIGHTENMENT

COURSE OUTCOMES

CO 1. Understand the socio-historical and political background of 18th century literature.
CO 2. Understand the philosophical and scientific developments of 18th century and implication for the literary writings of the period.
CO 3. Analyse the literary and the non-literary texts of the 18th century in the light of their socio-political, philosophical and scientific background
CO 4. Analyse different texts and relate them to different genres and subgenres.
CO 5. Evaluate the literary and non-literary texts in the light of their underlying philosophical implications.
CO 6. Evaluate the contemporary significance of the 18th texts in the context of contemporary theories.

COURSE CODE : 16P1ENGT04
COURSE TITLE : LITERARY CRITICISM AND ACADEMIC WRITING

COURSE OUTCOMES

CO 1. Identify key concepts in literary criticism from the classical Greek period up to the late twentieth century.
CO 2. Apply insights from critical approaches and theories to the reading of texts.
CO 3. Demonstrate an understanding of key critical approaches such as neoclassical criticism, Romanticism, New Criticism, Modernism, Formalism, Marxist criticism, Reader Response theories.
CO 4. Recognise the historical, political and aesthetic dimensions of the growth of literary criticism including issues such as canon formation, evolution of genres and methods of literary analysis.
CO 5. Understand the conventions and formats of academic writing, enabling them to write publishable articles that comply with the latest style manuals.
CO 6. Critique the performance practices that can be observed in theatres, media and in public spaces.
CO 7. Conduct original critical readings of contemporary texts informed by relevant critical schools of thoughts and also to evaluate similar critical works on literary works.

COURSE CODE : 16P1ENGT05
COURSE TITLE : INDIAN ENGLISH LITERATURE

COURSE OUTCOMES

CO 1. Get acquainted with the major Indian writers and their monumental works as an independentfield of literature in English.
CO 2. Understand the evolution of Indian writing in English from the colonial phase till the present.
CO 3. Get a deeper understanding of the notion of 'Indianness' and Indian sensibility through theworks in Indian English Literature.
CO 4. Demonstrate an understanding of the social, political, and cultural issues reflected in IndianEnglish literature.
CO 5. Evaluate the literary, cultural, historical and political impact of works of Indian writers inEnglish and their role in bringing about social awareness and transformation.
CO 6. Classify the major genres in Indian writing in English.
CO 7. Conduct original research in the field of Indian English Literature and bring out the findings inthe form of dissertations/research papers.

SEMESTER 2

COURSE CODE : 16P2ENGT06
COURSE TITLE : LITERATURE OF THE NINETEENTH CENTURY

COURSE OUTCOMES

CO 1. Identify and analyse the socio-economic-political contexts that inform the literature of the period.
CO 2. Demonstrate an understanding of the literary history of the 19th century texts that reflect a range of historical, cultural and aesthetic values.
CO 3. Understand the conflict between self and society in different literary genres of the period.
CO 4. Appreciate different aspects of the rise of the novel to the expansion of Colonialism and Capitalism.

COURSE CODE : 16P2ENTG07
COURSE TITLE : MODERNISM IN CONTEXT

COURSE OUTCOMES

CO 1. Understand the broad cultural and historical contexts behind the various modern literary and artistic movements.
CO 2. Understand the literary circumstances that shaped the processes of literary production from 20th century to present.
CO 3. Identify and analyse the use of modernist techniques in different genres.

CO 4. Locate the modernist discourses in the background of imperial expansion, urbanization, industrialization, world war, rise of communism, Nazism, fascism etc.
CO 5. Engage with the idea of modernism and the rise of modernist aesthetics.
CO 6. Analyse and interpret literary texts in their contexts and locate them.

COURSE CODE : 16P2ENGT08
COURSE TITLE : DIMENSIONS OF THE POSTMODERN

COURSE OUTCOMES

CO 1. Distinguish between different postmodern literary genres and recognise the interconnection between different postmodern genres and texts.
CO 2. Demonstrate an understanding of the socio-political, cultural and technological milieu of the postmodern texts.
CO 3. Recognise various literary techniques used in the postmodern texts and associate them with the discursive practices aligned to it.
CO 4. Apply various literary theories to various texts and cultural practices to expose their ideological implications
CO 5. Apply various literary theories to various texts and cultural practices to expose their ideological implications
CO 6. Conduct original research into various genres and texts of Postmodernism, both in the mainstream and in the alternative literatures, and bring out the findings in the form of dissertations/research papers.

COURSE CODE : 16P2ENGT09
COURSE TITLE : LANGUAGE AND LINGUISTICS

COURSE OUTCOMES

CO 1. Identify the key branches of linguistics and their scope of study as detailed in the syllabus.
CO 2. Distinguish between the different processes of word formation in English, providing examples of each.
CO 3. Demonstrate an understanding of the evolution of the English language, tracing its history from its roots in the Indo-European language family through Old, Middle and Modern English.
CO 4. Recognise the various stages of language acquisition in children.
CO 5. Use the phonetic script to accurately transcribe words and to read transcribed text.
CO 6. Apply the principles of componential analysis to study the structure of sentences in accordance with the systems of PS grammar and TG grammar.
CO 7. Follow emergent areas of research in linguistics and form viable research questions based on their interest in language studies.

COURSE CODE : 16P1ENG10
COURSE TITLE : THEORIES OF KNOWLEDGE

COURSE OUTCOMES

CO 1. Explain the differences between literary criticism and literary theory and the philosophical background of literary theories
CO 2. Explain the linguistic principles of literary theory
CO 3. Explain the assumptions and principles of various contemporary literary theories
CO 4. Apply various literary theories to various texts and cultural practices to expose their ideological implications
CO 5. Evaluate the social, cultural and literary texts and practices in the light of contemporary theories
CO 6. Develop innovative ways of looking at the socio-cultural and political life of the contemporary society.

SEMESTER 3

COURSE CODE : 16P3TENG11
COURSE TITLE : AMERICAN LITERATURE

COURSE OUTCOMES

CO 1. Identify the complexity of origin, development, and reception of American Literature.
CO 2. Understand the depth and diversity of American Literature from the colonial period to the contemporary era.
CO 3. Explore the meaning of religion, democracy, and romanticism through the various prescribed American works.
CO 4. Compare and contrast the issues, conflicts, preoccupations, and themes of the various literatures of America.
CO 5. Critically engage with the complex nature of American society, given its journey from specific religious obligations and their literary transformations to the non-Christian sensibilities.
CO 6. Describe the major conventions, tropes, and themes of Puritan and early American literature; identify and discuss those features with regard to individual works.

COURSE CODE : 16P3ENGT12
COURSE TITLE : CULTURAL STUDIES

COURSE OUTCOMES

CO 1. Identify key concepts in literary theory with special focus on Cultural Studies
CO 2. Understand analytical techniques and interpretive strategies employed in Cultural Studies.
CO 3. Estimate the intellectual contributions of individual theoreticians.
CO 4. Apply interdisciplinary approaches to the praxis of Cultural Studies.
CO 5. Evaluate value judgements in cultural practices with special focus on literary representations.

CO 6. Conduct original critical readings of cultural practices, texts, ethnographic literary trends.
CO 7. Critique select cultural practices and the ideological undercurrents present in them.

COURSE CODE : 16P3ENGT13
COURSE TITLE : GENDER STUDIES

COURSE OUTCOMES

CO 1. Achieve a knowledge base about the history of Gender Studies as an academic discipline with an understanding of its growth in relation to other fields of study.
CO 2. Get a deeper understanding of the impact of gender denominations on one's identity and individual history.
CO 3. Identify the interactions and intersections of identities and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space and time.
CO 4. Analyse historical and contemporary systems of privilege and oppression related to gender, race, sexuality, ethnicity etc.
CO 5. Evaluate the current social issues pertaining to gender effectively and suggest solutions for the same.
CO 6. Examine and critique the ideological assumptions underpinning the social institutions and systems of representation regarding gender.
CO 7. Apply the central concepts and theories from Gender Studies in evaluating his/her experiences and the events that happen around

COURSE CODE : 16P3ENGT14
COURSE TITLE : MODES OF FICTION

COURSE OUTCOMES

CO 1. Understand many genres of fictions including short stories and novels across cultures.
CO 2. Distinguish between different variants of fictions and recognise how writers across the world deal with this literary genre.
CO 3. Demonstrate an understanding of the socio-political, cultural and technological milieu of the representative texts
CO 4. Recognise various literary techniques used in the fictions and associate them with the discursive practices aligned to it.
CO 5. Apply the appropriate 'critical apparatus' in the reading of different literary texts
CO 6. Critique the ideology of fictions in the prescribed text.
CO 7. Conduct original research into various genres and texts of short stories and novels, both in the mainstream and in the alternative literatures, and bring out the findings in the form of dissertations/research papers.

COURSE CODE : 16P3ENGT15
COURSE TITLE : TEXTS AND PERFORMANCE

COURSE OUTCOMES

CO 1. Identify the elements of drama and performance
CO 2. Distinguish between dramatic texts and performance texts and recognise the interconnection between the two.
CO 3. Demonstrate an understanding of the socio-political, cultural and technological milieu of the dramatic texts and the innovation of the performance languages consequent upon the changing times.
CO 4. Recognise various dramatic methods, and associate them with the discursive practices aligned to it.
CO 5. Apply the appropriate 'critical apparatus' in the reading of both dramatic and performance texts.
CO 6. Critique the performance practices that can be observed in theatres, media and in public spaces.
CO 7. Conduct original research into various performance practices, both in the mainstream performance spaces and in alternative spaces, and bring out the findings in the form of dissertations/research papers

SEMESTER 4
COURSE CODE : 16P4ENGT16
COURSE TITLE : LITEARTURE AND THE EMPIRE

COURSE OUTCOMES

CO 1. Identify the key issues and themes in Post colonial Literature and their scope of study as detailed in the syllabus.
CO 2. Analyse the basic tenets of postcolonial theory and literature
CO 3. Evaluate the awareness of the historical contexts of literary production and reception.
CO 4. Explain how race, gender, history and identity are presented and problematised in the select postcolonial texts prescribed for study.
CO 5. Critically evaluate the arguments and assumptions of postcolonial texts and its various modes of interpretation.
CO 6. Critique the colonial, neo-colonial and postcolonial phases of history portrayed in the prescribed texts and how the various strategies adopted by the bougeoise class leaders for attaining the same.
CO 7. Follow emergent areas of research in postcolonial studies and form viable research questions based on their interest in cultural studies.

COURSE CODE : 16P4ENGT17EL
COURSE TITLE : MODERN EUROPEAN DRAMA

COURSE OUTCOMES

CO 1. Identify the social and historical contexts which inform the modern European Drama.
CO 2. Discern the relationship between realism and social revolution, anti-realism and modernist sensibility, war and post war theatre.
CO 3. Demonstrate an understanding of the rise of modernism in theatre, and the rise of the director and stage designer.
CO 4. Recognise various dramatic styles such as epic theatre, absurd theatre, theatre of cruelty, postmodernist theatre and poor theatre and associate them with the modernist world view.
CO 5. Apply the appropriate 'apparatus criticus' in the reading of the modernist dramatic works.
CO 6. Critique the contemporary dramatic works in the light of the understanding of the history and tradition of modernist theatre.
CO 7. Conduct original research into the thematic, literary and performance aspects of Modern European drama as well as drama from the rest of the world.

COURSE CODE : 16P4ENGT18EL
COURSE TITLE : SHAKESPEARE ACROSS CULTURES

COURSE OUTCOMES

CO 1. Understand and situate the timeless genius of Shakespeare across cultures, literatures and authors.
CO 2. Analyse the rereading of Shakespeare's plays down the history.
CO 3. Assess the impact of Shakespeare at the theoretical and textual level.
CO 4. Critically evaluate the culture industry behind the legacy of Shakespeare.
CO 5. Critique the history through the many adaptations of Shakespeare's plays.
CO 6. Pursue the emergent areas of research in Cultural Studies by posing viable research questions in terms of Shakespeare's continuing legacy.

COURSE CODE : 16P4ENGT19EL

COURSE TITLE : MALAYALAM LITERATURE IN TRANSLATION

COURSE OUTCOMES

CO 1. Attain an understanding of the rich repository of works written in Malayalam.
CO 2. Get familiarised with the writers of repute from the regional language.
CO 3. Analyse the various thematic concerns of the regional writers in their works.
CO 4. Investigate how the socio-political and cultural movements that shaped the identity of Kerala get a representation in the works written in Malayalam.
CO 5. Examine and critique the ways in which the regional writers in Malayalam represent the native soil in their works by situating the works in the local socio-cultural milieu.
CO 6. Evaluate the limitations pertaining to translation by comparing and contrasting the source language and the target language.

CO 7. Attempt translating a regional text into English applying the theories and conventions of translation.

COURSE CODE : 16P4ENGT20EL
COURSE TITLE : ECOLOGY AND LITERATURE

COURSE OUTCOMES

CO 1. Identify the key concepts of ecocriticism as a methodology and critical practice.
CO 2. Demonstrate awareness of ecological issues and matters of concern such as environmental pollution, anthropogenic climate change, loss of biodiversity etc.
CO 3. Demonstrate an understanding of the critical strategies deployed in understanding depictions of nature in literature.
CO 4. Appreciate nature and literature in tandem through readings that are aware of the ecological significance and eco-aesthetic content of texts.
CO 5. Trace the link between nature and culture and allied notions such as tradition and progress, urban and rural life, ecology and industry etc.
CO 6. Engage with secondary and additional reading material on ecocriticism and allied fields, including emergent areas of research.
CO 7. Develop critically informed opinions and/or research questions relating literature, art and the natural world

COURSE CODE : 16P4ENGT21EL
COURSE TITLE : UNDERSTANDING CINEMA: FILM THEORY

COURSE OUTCOMES

CO 1. Understand what is cinema and many 'theoretical' definitions of it.
CO 2. Distinguish between different genres in cinema and recognise the interconnection between different film genres.
CO 3. Demonstrate an understanding of the socio-political, cultural and technological milieu in which cinema as an art form came into being.
CO 4. Recognise various cinematic techniques used in films and associate them with the discursive practices aligned to it.
CO 5. Apply the appropriate 'critical apparatus' in the reading of different films
CO 6. Critique many ideologies cinema consciously or unconsciously propagate in the context of the prescribed texts.
CO 7. Conduct original research into various genres and texts of films, both in popular and in the alternative spaces, and bring out the findings in the form of dissertations/research papers.

COURSE CODE : 16P4ENG22EL
COURSE TITLE : COMPARATIVE INDIAN LITERATURE

COURSE OUTCOMES

CO 1. Identify key concepts in Comparative Literature with special focus on unearthing the common and diverse strands in Indian literatures

CO 2. Explain the analytical techniques and interpretive strategies employed in Comparative Literature.
CO 3. Estimate the intellectual contributions of individual theoreticians in Comparative Literature
CO 4. Apply interdisciplinary approaches to the praxis of Comparative Literature and conduct original critical readings
CO 5. Appreciate texts produced at different spaces and times so as to decipher intertextuality
CO 6. Critically examine the concepts and praxes of translation

COURSE CODE : 16P4ENGT22EL
COURSE TITLE : HEALTH HUMANITIES AND TRAUMA NARRATIVES

COURSE OUTCOMES
CO 1. Understand the interface between medicine, narrative, trauma and memory
CO 2. Understand the psychological and theoretical foundations of medical humanities
CO 3. Analyse the various theories and texts which deal with trauma, memory and the role
CO 4. of narratives in dealing with them.
CO 5. Analyse graphic novels in the light of medical humanities/health humanities
CO 6. Apply the appropriate critical strategies of medical humanities/health humanities to texts.
CO 7. Evaluate the role of graphic novels in health humanities

COURSE CODE : 16P4ENGT23EL
COURSE TITLE : THE PUBLIC SPHERE AND ITS CONTEMPORARY CONTEXT

COURSE OUTCOMES
CO 1. Understand the concept of public sphere
CO 2. Understand the conceptual variations and limits of Habermasian notion of public sphere
CO 3. Apply the concept of public sphere to the understanding of censorship, borders, surveillance, market economy and neoliberal tendencies
CO 4. Apply the concept of public sphere to the understanding of contemporary world of globalization and its varied manifestations
CO 5. Apply the concept of public sphere to the understanding of literary texts
CO 6. Evaluate the contemporary society and its societal practices in the light of the concept of public sphere

COURSE CODE : 16P4ENGT24EL
COURSE TITLE : MODERN EUROPEAN FICTION

COURSE OUTCOMES
CO 1. Understand and appreciate the concept of modernity.

CO 2. Understand the way literature shaped the public memory of holocaust, world war and other tragic events.
CO 3. Appreciate the development of the novel and its qualities during the period of European modernism.
CO 4. Engage with the major philosophical developments and artistic movements like realism, naturalism, surrealism, expressionism, cubism, Dadaism etc.
CO 5. Deliberate on the cultural objects and practices that define modernity and the modern identity.
CO 6. Engage in close textual analysis.

COURSE CODE : 16P4ENGT25EL
COURSE TITLE : LITERATURE OF SELF-REFLEXIVITY-

COURSE OUTCOMES
CO 1. Recognize self reflexive elements in narrative forms
CO 2. Identify self- reflexive texts in literary history.
CO 3. Demonstrate an understanding of the theoretical background of self- reflexivity in literature.
CO 4. Recognise various forms of self reflexivity in various genres of literature
CO 5. Apply the appropriate 'critical apparatus' in reading literatures of self- reflexivity.
CO 6. Critique literary texts having self reflexive elements.
CO 7. Conduct original research into various forms contemporary self reflexive literary texts and art forms.

DEPARTMENT OF ENVIRONMENTAL SCIENCE

M.SC. ENVIRONMENTAL STUDIES

Programme Specific Outcomes:

PSO 1 : Students become conscientious of the need for environmental protection and conservation and get moulded to be the future guardians of nature

PSO 2 : Students get equipped to use various tools and techniques for the study of environment

PSO 3 : Students become able to understand, think and evolve strategies for management and conservation of the environment.

PSO 4 : Students get trained in understanding environmental disasters and develop strategies to mitigate them.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1EVST01
COURSE TITLE : FUNDAMENTALS OF ENVIRONMENTAL STUDIES

COURSE OUTCOMES

CO 1. Interpret core concepts and methods from ecological sciences and their application in environmental problem-solving.

CO 2. Describe the transnational character of environmental problems and ways of addressing them.

CO 3. Analyse the primary environmental problems (e.g., invasive species, climate change, small populations, pollution) and the science behind those problems.

CO 4. Develop specific skills necessary to achieve understanding of and solutions to environmental problems, including those necessary for assessment of environmental impact of human activity, and for monitoring of the health of environmental systems.

CO 5. Develop knowledge and skills needed to effectively manage human resources

CO 6. Develop skills required to research and analyze environmental issues scientifically and learn how to use those skills in situations that may involve environmental problems and/or issues.

COURSE CODE : 16P1EVST02
COURSE TITLE : RESEARCH METHODOLOGY I

COURSE OUTCOMES

CO 1. Tabulate statistical information given in descriptive form.
CO 2. Use graphical techniques and interpret
CO 3. Compute various measures of central tendency, dispersion.
CO 4. Compute correlation coefficient and Regression
CO 5. Compute probability of various events based on Binomial Poisson and Normal Distribution
CO 6. Large Sample Tests, Small Sample test , Chi square Test, Anova , Non Parameteric Test

COURSE CODE : 16P1EVST03
COURSE TITLE : RESEARCH METHODOLOGY II

COURSE OUTCOMES
CO 1. Explain some basic concepts of research and its methodologies
CO 2. Identify appropriate research topics
CO 3. Define appropriate research problem and parameters
CO 4. Prepare a project proposal (to undertake a project)
CO 5. Organize and conduct research (advanced project) in a more appropriate manner
CO 6. Prepare a research report and thesis
CO 7. Prepare a research proposal (for grant)

COURSE CODE : 16P1EVST04
COURSE TITLE : INFORMATION TECHNOLOGY APPLICATIONS IN RESEARCH

COURSE OUTCOMES

CO 1. Identify the importance of IT enabled services and challenges.
CO 2. Identify the components of a computer system and demonstrate basic proficiency in commonly used applications.
CO 3. Interpret the ability to effectively integrate IT-based solutions into the user environment.
CO 4. Illustrate various IT web services for betterment of knowledge.

SEMESTER 2

COURSE CODE : 16P2EVST05
COURSE TITLE : TECHNIQUES IN RESEARCH

COURSE OUTCOMES
CO 1. Know the different analytical techniques.
CO 2. Understand and learn to apply different types of separation techniques
CO 3. Learn and apply principle, construction and working of GC and HPLC.
CO 4. Acquire an extended knowledge about chromatographic techniques used for separation of amino acids and able to apply.
CO 5. Discuss the problem based on distribution coefficient and extraction techniques.

COURSE CODE : 16P2EVST06
COURSE TITLE : EARTH AND ATMOSPHERE

COURSE OUTCOMES

CO 1. Discuss the principle and scope of Environmental Science
CO 2. Describe the concept of life and life supporting systems
CO 3. Explain the various components of Physical Environment and geomorphological processes
CO 4. Examine the effect of climate change on ecosystems and human welfare
CO 5. Discuss the climatic regions of India with special reference to tropical monsoon climate
CO 6. Demonstrate the use of soil survey, aerial photos, topographic maps and other resource data in landscape management
CO 7. Assess the various impacts of invasive species on environment

COURSE CODE : 16P2EVST07
COURSE TITLE : DISASTER MANAGEMENT

COURSE OUTCOMES

CO 1. Discuss the disaster management, its components (eg: definitions, terminologies, types, impacts), structure (phases, administrative and institutional) and significance.
CO 2. Implement disaster management into public policy and planning based on the vulnerability of places and communities.
CO 3. Discuss to develop emergency operations plan (EOP- eg: Components, structure, Activities, SAR)
CO 4. Understand the significance of the Community-Based Approach to education and public awareness in tackling disasters. Studying disaster response and recovery methods
CO 5. Describe the stages of disaster recovery and associated problems vulnerable groups in disaster and post-disaster times.
CO 6. Identifying the stages of disaster recovery and associated problems vulnerable groups in disaster and post-disaster times.

COURSE CODE : 16P2EVST08
COURSE TITLE: REMOTE SENSING AND GIS

COURSE OUTCOMES

CO 1. Recognize and explain at a basic level fundamental physical principle of remote sensing
CO 2. Describe main Remote Sensing Systems and programs (sensors, platforms, etc.) and assess its potential to spatial analysis

CO 3. Recognize which remote sensing techniques suite their specific needs.
CO 4. Find the information content of remotely sensed data and how to retrieve the information.
CO 5. Explain fundamental concepts and practices of GIS and advances in Geospatial Information Science and Technology (GIS&T).
CO 6. Recognize and explain basic computational properties of remote sensing data acquisition, storage, and processing.
CO 7. Demonstrate competency with the ArcMap software to enhance and interpret data
CO 8. Apply GIS analysis to address geospatial problems and/or research questions.
CO 9. Develop a strategy to implement an effective GIS
CO 10. Develop critical thinking skills in solving geospatial problems

SEMESTER 3

COURSE CODE : 16P3EVST09
COURSE TITLE : ENVIRONMENTAL POLLUTION AND TOXICOLOGY

COURSE OUTCOMES
CO 1. Identify the sources of pollution.
CO 2. Understand the concepts involved in pollution control technologies.
CO 3. Evaluate methods of regulating, controlling and attenuating pollution.
CO 4. Develop knowledge of the environmental toxicants and their effects.
CO 5. Illustrate methods of purification of sewage water and recycling / reuse of solid waste.

COURSE CODE : 16P3EVST10
COURSE TITLE : ENVIRONMENTAL MONITORING AND MANAGEMENT

COURSE OUTCOMES
CO 1. Find professional level employment and pursue research for contributing to the betterment of humanity and in shaping a sustainable society
CO 2. Explain the environmental, social and economic framework in which environmental management decisions are made.
CO 3. Develop environmental strategies, policies, programmes and systems that promote sustainable development.
CO 4. Analyze environment management systems and formulate solutions that are technically sound, economically feasible, and socially acceptable.
CO 5. Decide measures for resource conservation.
CO 6. Formulate environmental monitoring and assessment reports and monitor progress of environmental improvement programs.

COURSE CODE : 16P3EVST11
COURSE TITLE : BIODIVERSITY CONSERVATION AND SOCIAL ISSUES

COURSE OUTCOMES

CO 1. Develop a sense of conservation attitude

CO 2. Formulate plans for biodiversity conservation in various committees pertaining to the same

CO 3. Examine man-wildlife conflicts

CO 4. Estimate the biodiversity of an ecosystem

CO 5. Apply various methods of water conservation techniques around their locality

DEPARTMENT OF MANAGEMENT STUDIES

BBA

Programme Specific Outcomes:

PSO 1 : Demonstrate a comprehensive understanding of integrated marketing communication theories and concepts along with being capable of understanding and resolving managerial issues in a successful manner

PSO 2 : Possess the right aptitude to communicate and negotiate effectively, to achieve individual and business goals; be able to upgrade their professional and managerial skills in the media management field, and display their talent in workplace

PSO 3 : Explore and reflect about challenges, develop opportunities in the media and marketing industry environment; and demonstrate effective communication skills consistent with a professional marketing environment

PSO 4 : Understand one's own capability to set achievable targets and complete them; and develop integrated marketing solutions for businesses by employing appropriate media strategies.

PSO 5 : Launch a successful business career in a meaningful way, contributing to personal, Professional and societal growth; and pursue lifelong learning and achieve holistic development.

PSO 6 : Take up challenging assignments and work for nation building in various sectors and industries.

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CCENG1
COURSE TITLE : COMMUNICATION SKILLS IN ENGLISH

COURSE OUTCOMES

CO 1. Understand what constitutes literature as a discipline.
CO 2. Familiarise with the main writers, various genres and movements of English literature.
CO 3. Outline major literary trends and theoretical developments.
CO 4. Appreciate different forms of literary writing.
CO 5. Evaluate literary texts in relation to their genres and periods.
CO 6. Illustrate ideas with relevant examples.

COURSE CODE : 19U1CPBBA1
COURSE TITLE : INTRODUCTION TO BUSINESS COMMUNICATION

COURSE OUTCOMES

CO 1. Ability to think critically, creatively and independently
CO 2. Ability to express oneself clearly, both in writing and orally
CO 3. Ability to carry out journalistic research and interviews
CO 4. Ability to prepare content for news media outlets
CO 5. Ability to meet deadlines

COURSE CODE : 19U1CRBBA1
COURSE TITLE : PRINCIPLES OF MANAGEMENT

COURSE OUTCOMES

CO 1. Understand what constitutes literature as a discipline.
CO 2. Familiarise with the main writers, various genres and movements of English literature.
CO 3. Outline major literary trends and theoretical developments.
CO 4. Appreciate different forms of literary writing.
CO 5. Evaluate literary texts in relation to their genres and periods.
CO 6. Illustrate ideas with relevant examples.

COURSE CODE : 19U1CRBBA2
COURSE TITLE : ACCOUNTING

COURSE OUTCOMES

CO 1. Learn accounting principles and identify the needs for accounting
CO 2. Identify the books of accounts, objectives of maintaining them and the steps involved in the accounting process
CO 3. Acquire skill and knowledge in preparing accounts and Financial statements.
CO 4. Familiar with accounting errors and their rectifications

COURSE CODE : 19U1CRBBA3
COURSE TITLE : MANAGERIAL ECONOMICS

COURE OUTCOMES

CO 1. Introduce the concepts of Economics
CO 2. Discuss the Practical application
CO 3. Knowledge about the basics of Managerial Economics
CO 4. Application of the concepts in real life
CO 5. Recognise the importance

SEMESTER 2

COURSE CODE : 16U2CRBBA4
COURSE TITLE : FUNDAMENTALS OF MARKETING

COURSE OUTCOMES

CO 1. Introduction to managerial decisions in the marketing area
CO 2. Understand how to identify target market
CO 3. Educate marketing communication
CO 4. Understand the importance of channels in marketing
CO 5. Know about the new trends in area of marketing

COURSE CODE : 16U2CPBBA2
COURSE TITLE : ORGANISATION BEHAVIOUR

COURSE OUTCOMES

CO 1. Understand the Behavioural science and its importance
CO 2. Understand the significance of motivation and perception
CO 3. Understand the role of leader in business organization
CO 4. Understand the use of power and politics in formal organization
CO 5. Understand the importance of work value and work culture

COURSE CODE : 16U2CRBBA5
COURSE TITLE : BUSINESS STATISTICS

COURSE OUTCOMES

CO 1. Describe and discuss the key terminology, concepts tools and techniques used in business statistical analysis
CO 2. Define and compute the various measures of central tendency
CO 3. Understand the concept, define and compute the different measures of dispersion
CO 4. Learn how correlation analysis describes the degree in which two variables are linearly related to each other
CO 5. Understand the coefficient of determination as a measure of the strength and relationship between two variables
CO 6. Use regression analysis to estimate the relationship between two variables
CO 7. Learn why forecasting changes takes place over a time are an important part of decision making

COURSE CODE : 16U2CRBBA6
COURSE TITLE : CINEMA STUDIES

COURSE OUTCOMES

CO 1. Equip with various editing knowledge (chronological editing, cross cutting etc)
CO 2. Familiar with sound and colour integration

CO 3. Gain knowledge in various film genre
CO 4. Get a clear picture on the evolution of film
CO 5. Euipped with knowledge for making short films

SEMESTER 3

COURSE CODE : 16U3CRBBA7
COURSE TITLE : FINANCIAL MANAGEMENT

COURSE OUTCOMES

CO 1. Familiar with the sources of fund and the procedure in selection of funds from appropriate source
CO 2. Acquire skill and knowledge in evaluation of proposals.
CO 3. Able to plan personal and business financial requirements.
CO 4. Able to invest funds profitably
CO 5. Able to take appropriate financial decisions
CO 6. Acquire practical skills to manage cash.
CO 7. Familiar with the tools of financial analysis

COURSE CODE : 16U3CRBBA8
COURSE TITLE : HUMAN RESOURCES MANAGEMENT

COURSE OUTCOMES

CO 1. Introduce the subject to the students
CO 2. Familiarize with the basic HR concepts
CO 3. Understand the real life organizational scenario
CO 4. Understand in depth about HR Managerial and Operational Functions
CO 5. Enable better management of people

COURSE CODE : 16U3CRBBA9
COURSE TITLE : ADVERTISING MANAGEMENT

COURSE OUTCOMES

CO 1. Plan implement monitor and evaluate advertisement projects by applying principles of ad management
CO 2. Participate in the development of creative solutions to address advertising challenges
CO 3. enable them to analyze the art and craft of persuasive technology
CO 4. Comprehensive understanding of the sciences of communication
CO 5. Aware of global advertising

COURSE CODE : 16U3CRBBA11

COURSE TITLE : EVENT MANAGEMENT

COURSE OUTCOMES

CO 1. Understand the Event Industry
CO 2. Understand the shifts in specific categories in service industry
CO 3. Understand the role of event in community and employment
CO 4. Understand the use of technology in generating event experiences
CO 5. Understand the Types of customer experiences in event industry management

COURSE CODE : 16U3CRBBA03
COURSE TITLE : INTRODUCTION TO PUBLIC RELATION

COURSE OUTCOMES

CO 1. Familiar with various concepts of PR
CO 2. Understand PR as a disciple of management
CO 3. Importance of PR strategies
CO 4. Ethical aspects of PR

SEMESTER 4

COURSE CODE : 16U4CRBBA12
COURSE TITLE : INTRODUCTION TO BRAND AND BUSINESS

COURSE OUTCOMES

CO 1. Demonstrate knowledge of nature and process of branding and brand management
CO 2. Evaluate scope of brand management activity across organisations and analyse its relationship to other business areas
CO 3. Appraise key issues in managing brand portfolio and making strategic brand decisions
CO 4. Formulate and justify brand development decisions
CO 5. Analyse brand related problems and develop appropriate strategies and initiatives
CO 6. Comprehend the role of a marketing professional

COURSE CODE : 16U4CRBBA13
COURSE TITLE : MASS MEDIA ITS FORMS AND EFFECTS

COURSE OUTCOMES

CO 1. Equipped to grasp the complex relationship between communication/media theories
CO 2. Know different types of media their characteristics, merits and demerits
CO 3. Learn about the origins of media, their roles, the role in marketing communication
CO 4. Understand about the concept of media planning,buying,operations and campaign management

CO 5. Educate the students about new developments in media

COURSE CODE : 16U4CRBBA14
COURSE TITLE : ENGAGEMENT PLANNING AND NEW MEDIA

COURSE OUTCOMES

CO 1. One should position new media in contemporary academic and business landscapes.
CO 2. Explore technological growth and how one should conceptualise the relationship between new media and society.
CO 3. Aware of alternative storytelling forms to reach their audiences in the modern world.
CO 4. Enable the student to gather information and run a digital marketing campaign on their own.

COURSE CODE : 16U4CRBBA16
COURSE TITLE : INTEGRATED MARKETING COMMUNICATION

COURSE OUTCOMES

CO 1. Integrated marketing communications is an approach to planning communications that gives businesses the potential to get better results from campaigns and reduce marketing costs.
CO 2. By integrating tools such as advertising, direct mail, social media, telemarketing and sales promotion, a firm can provide clarity, consistency and maximum communications impact.

COURSE CODE : 16U4CRBBA17
COURSE TITLE : MEDIA PLANNING AND BUYING

COURSE OUTCOMES

CO 1. Familiar with the basic nuances of media planning and its importance
CO 2. Determine which media to use for dissemination
CO 3. Select media time and space
CO 4. Draft effective media plan
CO 5. Apply methods of analysis to determine the process involved in selection of different ad media channels
CO 6. Use appropriate techniques and strategies to present an ad plan and maintain requisite documentation

SEMESTER 5

COURSE CODE : 16U5CRBBA18
COURSE TITLE : INTRODUCTION TO PHOTOGRAPHY

COURSE OUTCOMES

CO 1. Understand the lighting elements of photography.
CO 2. Explain the types of camera, lenses and other devices used in Photography
CO 3. Discuss the significance of photographic aesthetics and photography types that can be used for commercial purposes
CO 4. Analyze various photo editing techniques
CO 5. Analyze the study of Photography/ Cinematic frames and compositions, the study and practice of production enhance their work as film scholars.

COURSE CODE : 16U5CRBBA19
COURSE TITLE : PRINT MEDIA AND BROADCAST

COURSE OUTCOMES

CO 1. Understand the Media Industry
CO 2. Understand the significance of media history
CO 3. Understand the role of newspaper and magazine over community development
CO 4. Understand the use of radio technology in generating awareness in society
CO 5. Understand the importance of TV and social media in communication

COURSE CODE : 16U5CRBBA20
COURSE TITLE : TELEVISION PRODUCTION AND PLANNING

COURSE OUTCOMES

CO 1. Understand about the working of a television studio and out door
CO 2. Understand about post production
CO 3. Understand and applying the techniques of audio production in the field of sound and picture
CO 4. Understand about different sound recoding methods
CO 5. Understand about television production planning
CO 6. Understand about studio lighting

COURSE CODE AND TITLE: 16U5CRBBA22
COURSE TITLE : JOURNALISM

COURSE OUTCOMES

CO 1. Become an intelligent consumer of the mass media

CO 2. Have skills necessary in communicating in the print media with emphasis on writing, interviewing, observing, reporting, reacting and synthesizing;
CO 3. Understand the necessity of research to add validity, emphasis and depth to writing
CO 4. understand the legal, moral and ethical responsibilities inherent in free press
CO 5. Awareness of the world around him, both social and political.

SEMESTER 6

COURSE CODE : 16U6CRBBA23
COURSE TITLE : MULTIMEDIA

COURSE OUTCOMES
CO 1. Equipped with various multimedia tools like GRB, CMYK
CO 2. Handle 2D Animation tools like SWF, FLA, FLV
CO 3. Gain knowledge in various multimedia formats and editing tools
CO 4. Gain knowledge in streaming media
CO 5. Clear and wide picture on multimedia system and application

COURSE CODE : 16U6CRBBA24
COURSE TITLE : DIGITAL MARKETING

COURSE OUTCOMES
CO 1. Equip with all digital marketing tools
CO 2. Handle digital tools like Google Adsense, Ad Manager, Zoho etc
CO 3. Acquire skill and knowledge in preparing social media campaigns
CO 4. Run advertisements and promotions over facebook,instagram,twitter,LinkdInetc
CO 5. Learn the benefits of promoting products and services over digital platforms

COURSE CODE : 16U6CRBBA 25
COURSE TITLE : CUSTOMER RELATIONSHIP MANAGEMENT

COURSE OUTCOMES
CO 1. Understand the CRM Process
CO 2. Understand the significance of e-enabled CRM
CO 3. Understand the role of CRM in supply chain
CO 4. Understand the use of technology
CO 5. Understand the practical importance of CRM

COURSE CODE : 16U6CRBBA26
COURSE TITLE : BUSINESS LAW

COURSE OUTCOMES

CO 1. Remember the basic concepts of Business Law

CO 2. Understand the different aspects of Business Law

CO 3. Identify and differentiate various business litigation

CO 4. Describe the essentials of contact which is applicable in business

CO 5. Analyse the Business- legal problem scenario

DEPARTMENT OF MATHEMATICS

B.SC. MATHEMATICS

Programme Specific Outcomes:

PSO 1 : Understand the basic concepts and tools of mathematical logic, Set theory, Theory of Equations and Number Theory

PSO 2 : Understand the concepts of Geometry, Trigonometry, Calculus and Analysis, Abstract structures, Algebra, Methods of proofs and Differential Equations

PSO 3 : Translate real world problems into mathematical problems and find its Solutions

PSO 4 : Understand the application of mathematics in other science, engineering and discuss Human rights and mathematics for environmental studies

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CRMAT01
COURSE TITLE : CALCULUS

COURSE OUTCOMES

CO 1. Determine whether a given function is increasing or decreasing.
CO 2. Apply the concepts of maxima and minima of a function to real world problems
CO 3. Compute the Limits using L'Hopitals rule.
CO 4. Apply Rolle's Theorem and Mean Value theorem to solve real world problems.
CO 5. Compute the area and volume of solids using definite integrals
CO 6. Calculate the partial derivatives, maxima and minima of functions of more than one independent variable and use the Lagrange Multiplier method for extremum problems

COURSE CODE : 19U1CPPHY1
COURSE TITLE : PROPERTIES OF MATTER, MECHANICS AND FOURIER ANALYSIS

COURSE OUTCOMES

CO 1. Understand the concepts of Elastic moduli- Poisson's ratio- twisting couple-determination of rigidity modulus
CO 2. Understand the basic concepts of Rotational dynamics of rigid bodies
CO 3. Understand the role of oscillations in Physics life

CO 4. Role of Fourier analysis in Physics – Basic Introduction

COURSE CODE : 19U1CRSTA01
COURSE TITLE : DESCRIPTIVE STATISTICS
COURSE OUTCOMES

CO 1. Understand different measures of central tendency, their properties and different measures of positional averages.
CO 2. Understand different measures of dispersions – absolute and relative measures of dispersion.
CO 3. Understand the concepts of Box plots and Lorenz curve.
CO 4. Understand moments – raw and central moments – inter relations.
CO 5. Understand the concepts of skewness and kurtosis, scatter diagram, curve fitting – method of least squares.
CO 6. Understand and apply the concepts of fitting of straight line, second degree curve, exponential curve, power curve.
CO 7. Understand different types of index numbers, tests to be satisfied by the index numbers, cost of living index numbers and their constructions.
CO 8. Understand the concepts of time series data, determination of trend, computation of seasonal indices.

SEMESTER 2

COURSE CODE : 19U2CRMAT02
COURSE TITLE : ADVANCED CALCULUS AND TRIGONOMETRY

COURSE OUTCOMES

CO 1. Compute higher order derivative by applying Leibnitz theorem
CO 2. Determine the Taylor and Maclaurin series expansions of given functions
CO 3. Find curvature and related parameters of a given curve or curves
CO 4. Calculate the arc length of a given curve and area enclosed by curves
CO 5. Find area and volume problems using multiple integrals
CO 6. Understand the concepts of Trigonometric functions, their properties and summation of trigonometric series

COURSE CODE : 19U2CPPHY2
COURSE TITLE : ELECTRIC AND MAGNETIC PHENOMENA, THERMODYNAMICS AND SPECIAL THEORY OF RELATIVITY

COURSE OUTCOMES

CO 1. Analyzing the concepts Dielectrics
CO 2. Apply the concepts Magnetic materials

CO 3. Introduce the role of equilibrium thermodynamics
CO 4. Applying the concepts of Special theory of relativity

COURSE CODE : 19U2CRSTA02
COURSE TITLE : PROBABILITY AND STATISTICS

COURSE OUTCOMES

CO 1. Analyse different approaches to probability - their properties, Addition & Multiplication theorem, Theorem of total probability.
CO 2. Introduce random variables, probability distributions - their properties, distribution functions, Reliability functions, change of variables (univariate case only).
CO 3. Comprehend joint distribution of a pair of random variables, marginal & conditional distributions, independence of random variables.
CO 4. apply the concepts of correlation - its properties, different measures of correlation.
CO 5. Introduce the regression equations - their identificaion, Probable error, Coefficient of determination, Linear regression (Three variable case), partial & multiple correlations - their expressional properties (no derivation).

SEMESTER 3

COURSE CODE : 15U3CRMAT03
COURSE TITLE : VECTOR CALCULUS, THEORY OF EQUATIONS AND MATRICES

COURSE OUTCOMES

CO 1. Find the gradient of a Scalar Field, the Divergence and Curl of a Vector Point Function, and the directional derivative.
CO 2. Understand the applications of vector integration
CO 3. Determine the number of roots of polynomial equation of order at most four
CO 4. Compute inverses and powers of matrices using Cayley Hamilton theorem

SEMESTER: FOUR

COURSE CODE : 15U4CRMAT04
COURSE TITLE : ANALYTIC GEOMETRY, NUMERICAL METHODS AND NUMBER THEORY

COURSE OUTCOMES

CO 1. Remember the standard equations of parabola, hyperbola, and ellipse
CO 2. Understand the parametric forms of parabola, hyperbola, and ellipse
CO 3. Classify the second order curves based on their equations.

CO 4. Find the equations of line segments and loci related to conic sections
CO 5. Solve polynomial equations using numerical methods.
CO 6. Understand Congruences, Fermat‟s Theorem, Eulers theorem and Wilson‟s Theorem.

SEMESTER: FIVE
COURSE CODE : 15U5CRMAT05
COURSE TITLE : REAL ANALYSIS - I
COURSE OUTCOMES

CO 1. Find the limit points, interior points and closure of a set
CO 2. Verify the convergence of sequences and series
CO 3. Determine the limits of functions.
CO 4. Understand theorems on limits

COURSE CODE : 15U5CRMAT06
COURSE TITLE : DIFFERENTIAL EQUATIONS

COURSE OUTCOMES
CO 1. Understand the method for solving ordinary differential equations
CO 2. Understand linear differential equations and its solutions
CO 3. Compute the solutions of second order linear differential equations using power series method
CO 4. Understand partial differential equations and method of solving the same

COURSE CODE : 15U5CRMAT07
COURSE TITLE : ALGEBRA

COURSE OUTCOMES
CO 1. Understand concepts of binary operations and groups
CO 2. Understand the concepts of subgroups, cyclic group
CO 3. Understand Lagrange's theorem and its applications
CO 4. Understand the concepts of homomorphism and factor groups
CO 5. Compute factor groups
CO 6. Understand the concepts of Rings, Fields, Integral Domains
CO 7. Understand the concepts of prime and maximal Ideals

COURSE CODE : 15U5CRMAT08
COURSE TITLE : HUMAN RIGHTS AND MATHEMATICS FOR ENVIRONMENTAL STUDIES

COURSE OUTCOMES

CO 1. Understand the nature of environmental issues
CO 2. Understand the different types of natural resources and ecosystems
CO 3. Understand the various environmental pollutions and social issues.
CO 4. Understand the patterns in the nature through mathematics.
CO 5. Understand the concepts of Human Rights

COURSE CODE : 15U5OCMAT
COURSE TITLE : APPLICABLE MATHEMATICS

COURSE OUTCOMES

CO 1. Understand the concepts of quadratic equations, logarithm, combinatorics
CO 2. Understand the concepts of probability and differential calculus
CO 3. Understand the concepts of LCM, HCF, Fractions, Ratio and Proportion and Percentage
CO 4. Understand the concept of simple interest, compound interest, and time and work and elementary algebra

SEMESTER: SIX

COURSE CODE : 15U6CRMAT09
COURSE TITLE : REAL ANALYSIS – 2

COURSE OUTCOMES

CO 1. Understand the basic theorems relating continuity, derivability and integrability of functions.
CO 2. Understand the concept of Riemann integration
CO 3. Understand improper integrals, beta and gamma functions
CO 4. Understand the concepts of convergence of sequence and series of functions.

COURSE CODE : 15U6CRMAT10
COURSE TITLE : COMPLEX ANALYSIS

COURSE OUTCOMES

CO 1. Understand theorems on limit and continuity of functions of one complex variable.
CO 2. Understand the significance of the Cauchy Riemann equations.
CO 3. Understand the sufficient conditions for differentiability.
CO 4. Understand the relationship between analytic and harmonic functions.
CO 5. Understand the concepts of convergence of complex sequences and series
CO 6. Understand residue calculus and its applications

COURSE CODE : 15U6CRMAT11
COURSE TITLE : L**INEAR ALGEBRA AND GRAPH THEORY**

COURSE OUTCOMES

CO 1. Understand the concepts of vector space, subspace, linear independence, dimension and row space.
CO 2. Understand the concepts of linear transformation and matrix representation
CO 3. Understand the concepts of different types of graphs.
CO 4. Understand the concept of matching in a graph, the Marriage problem and various assignment problems.

COURSE CODE : 15U6CRMAT12
COURSE TITLE : FOURIER SERIES, LAPLACE TRANSFORMS AND METRIC SPACES

COURSE OUTCOMES

CO 1. Find the Fourier transform of a given function.
CO 2. Find the Laplace transform of a given function.
CO 3. Understand the concepts of metric spaces, subspaces, open and closed sets
CO 4. Understand the concept of convergence, completeness and continuity in a metric space.

COURSE CODE : 15U6CRMAT13
COURSE TITLE : OPERATIONS RESEARCH

COURSE OUTCOMES

CO 1. Translate the real world problems in to corresponding LPP
CO 2. Understand the concepts of duality in LPP
CO 3. Understand the concepts of transportation and assignment problem.
CO 4. Understand the concept of game theory

COURSE CODE : 15U6CRMAT14
COURSE TITLE : BASIC PYTHON PROGRAMMING AND TYPESETTING IN LATEX

COURSE OUTCOMES

CO 1. Understand the concepts of python programming
CO 2. Solve mathematical problems using python programming
CO 3. Construct a basic document using LaTex
CO 4. Construct a document including figures and tables using LaTex

COURSE CODE : 15U6CRMAT15
COURSE TITLE : NUMERICAL ANALYSIS

COURSE OUTCOMES

CO 1. Solve algebraic and transcendental equations using numerical methods
CO 2. Understand the concepts of interpolation
CO 3. Understand the concepts of DFT and IDFT
CO 4. Compute derivatives and antiderivatives using numerical methods

M.SC. MATHEMATICS

Programme Specific Outcomes:

PS01 : Assimilate advanced techniques in mathematics.
PSO2 : Develop problem solving skills and apply them independently to solve problems in pure and applied mathematics.
PSO3 : Develop analytical and logical skills that will enhance skills to mathematically model real time problems and apply mathematical tools to solve them
PSO4 : Inculcate an aptitude for research

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1MATT01
COURSE TITLE : LINEAR ALGEBRA

COURSE OUTCOMES

CO 1. Recall vector spaces, subspaces, basis and dimension and understanding coordinates and summary of row equivalence.
CO 2. Understand linear transformations their algebra and representation of transformations by matrices.
CO 3. Assimilate ideas of canonical forms, characteristic values and annihilating polynomials.
CO 4. Develop ideas of simultaneous triangulation and diagonalisation and direct sum decomposition.

COURSE CODE : 16P1MATT02
COURSE TITLE : BASIC TOPOLOGY

COURSE OUTCOMES

CO 1. Analyse the concept of Topological spaces, base and subbase.

CO 2. Apply the concept of continuity and quotient spaces on different topology.
CO 3. Understand the concept of local connectedness and path connected.
CO 4. Differentiate levels of spaces based on axioms.

COURSE CODE : 16P1MATT03
COURSE TITLE : MEASURE THEORY AND INTEGRATION

COURSE OUTCOMES

CO 1. Understand the basics of Measure theory.
CO 2. Apply Measure theory in the other disciplines.
CO 3. pply Measure theory for Integration with respect to an arbitrary measure.
CO 4. Understand the importance of Measure theory in the study of Real and Complex analysis.
CO 5. Apply measure theory in probability.
CO 6. Apply measure theory in the study of LPspaces.

COURSE CODE : 16P1MATT04
COURSE TITLE : ORDINARY DIFFERENTIAL EQUATION

COURSE OUTCOMES

CO 1. Explain the basic theory of linear systems and its solution
CO 2. Understand the concept of power series solution
CO 3. Understand the Picard's existence theorem
CO 4. Understanding the concept of Strum Liouville problem and methods of solving it
CO 5. Introduce the concept of Laplace transforms and techniques of solving it

COURSE CODE : 16P1MATT05
COURSE TITLE : COMPLEX ANALYSIS

COURSE OUTCOMES

CO 1. Understand analytic function as a mapping on the plane, Mobius transformation and branch of logarithm.
CO 2. Understand Cauchy’s theorems and integral formulas on open subsets of the plane.
CO 3. Understand the concept of homotopy and homotopic version of Cauchy’s theorem and simply connectivity.
CO 4. Understand how to count the number of zeros of analytic function giving rise to open mapping theorem and Goursat theorem as a converse of Cauchy’s theorem.
CO 5. Know about the kind of singularities of meromorphic functions which helps in residue theory and contour integrations.

CO 6. Handle integration of meromorphic function with zeros and poles leading to the argument principle and Rouche's theorem.
CO 7. Understand analytic function as a mapping on the plane, Mobius transformation and branch of logarithm.

SEMESTER 2

COURSE CODE : 16P2MATT06
COURSE TITLE : ABSTRACT ALGEBRA

COURSE OUTCOMES

CO 1. Develop ideas of finitely genearted abelian groups, Sylow theorems and applications
CO 2. Understand the concept of rings of polynomials, facrorisation of polynomials and ideal structure
CO 3. Asssimilate the idea of extension fields, algebraic extensions and geometric constructions.
CO 4. Develop ideas of automorphisms of fields, isomorphism extension theorem and Galois theory.

COURSE CODE : 16P2MATT07
COURSE TITLE : ADVANCED TOPOLOGY

COURSE OUTCOMES

CO 1. Understand Urysohn Characterization of Normality ,Tietze Characterization of Normality, Products and co-products.
CO 2. Analyze embedding and Metrisation, valuation Functions in to Products, embedding Lemma and Tychnoff Embedding, The Urysohn Metrisation Theorem.
CO 3. Develop the idea of convergence and related properties of nets and filters.
CO 4. Understand compactness, variations of compactness.

COURSE CODE : 16P2MATT08
COURSE TITLE : ADVANCED COMPLEX ANALYSIS

COURSE OUTCOMES

CO 1. Understand the concepts of power series to expand a complex function as Taylors and Laurantz series
CO 2. Perceive entire functions, Jensen's formula, the genus and order of an entire function, Hadamard Factorization theorem.
CO 3. Interpret Harmonic functions, Basic properties of harmonic functions and Harmonic functions on the disk and discuss Reiman Mapping theorem
CO 4. Analysis Elliptic functions and Weistrass function

COURSE CODE : 16P2MATT09
COURSE TITLE : FUNCTIONAL ANALYSIS

COURSE OUTCOMES

CO 1. Understand the basics of Functional analysis
CO 2. Apply Functional analysis in the other disciplines.
CO 3. Understand theory of Operators and Functionals using Linear Algebra.
CO 4. Discover the link of Functional analysis with geometry , differential equations etc.

COURSE CODE : 16P2MATT10
COURSE TITLE : REAL ANALYSIS

COURSE OUTCOMES

CO 1. Studying functions of bounded variations, rectifiable curves, paths and equivalence of paths.
CO 2. Developing the ideas of Riemann-Stieljes integral and studying integration and differentiation.
CO 3. Assimilating the ideas of uniform convergence and continuity, uniform convergence and integration, uniform convergence and differentiation.
CO 4. Analysing power series, exponential and trigonometric functions.

SEMESTER 3

COURSE CODE : 16P3MATT11
COURSE TITLE : PARTIAL DIFFERENTIAL EQUATIONS

COURSE OUTCOMES

CO 1. Explain the basic theory simultaneous diff equation
CO 2. Analyze the concept of Pffafian diff equation
CO 3. Explain the formation and solution of first order partial differential equation.
CO 4. Explain about the orthogonal trajectories and compatible system.
CO 5. Apply different methods to find the solution of higher order pde.

COURSE CODE : 16P3MATT12
COURSE TITLE : ADVANCED FUNCTIONAL ANALYSIS

COURSE OUTCOMES

CO 1. Analyze the basics of Functional analysis
CO 2. Apply Functional analysis in the other disciplines.
CO 3. Equip the students for NET
CO 4. Create counter examples
CO 5. Analyse practical problems

COURSE CODE : 16P3MATT13
COURSE TITLE : Graph Theory

COURSE OUTCOMES

CO 1. Explain basic concepts, sub graphs, degrees of vertices. Paths and connectedness, automorphism of a simple graph, line graphs, basic concepts and tournaments.
CO 2. Comprehend connectivity vertex cuts and edge cuts. Connectivity and edge connectivity, blocks.
CO 3. Certain definitions and simple properties, counting the number of spanning trees and Cayley's formula.
CO 4. Analyze vertex and edge independent Sets, Eulerian Graphs, Hamiltonian Graphs, Vertex Coloring and certain definitions.
CO 5. Explain edge coloring and planarity: certain definitions and properties, dual of a plane graph. The four color theorem and the Heawood five color theorem

COURSE CODE : 16P3MATT14
COURSE TITLE : OPERATION RESEARCH

COURSE OUTCOMES

CO 1. Apply different mathematical method to solve Inventory problems.
CO 2. Evaluate the optimal solution of Non - Integer programming problem by using different Algorithms.
CO 3. Evaluate a Dynamic Programmimg Problem.
CO 4. Apply simplex method to solve Linear Programming problem. Apply algorithm to find the solution of minimum path problem and maximum flow problem.

COURSE CODE : 16P3MATT15
COURSE TITLE : Number Theory

COURSE OUTCOMES

CO 1. Classify arithmetic function with their average orders.
CO 2. Explain equivalent forms of prime number theorem.
CO 3. Determine the solutions of polynomial congruences and simultaneous linear congruences.
CO 4. Analyze factorization into irreducibles in Euclidean Domains and quadratic fields.
CO 5. Analyze prime factorization of Ideals, the norm of an ideal, non-unique factorization of cyclotomic fields.

SEMESTER 4

COURSE CODE : 16P4MATT16
COURSE TITLE : DIFFERENTIAL GEOMETRY

COURSE OUTCOMES

CO 1. Perceive ideas of Graphs and level sets, vector fields, the tangent space, surfaces, vector
CO 2. fields on surfaces, orientation
CO 3. Understand the fundamentals of The Gauss map, geodesics, Parallel transport
CO 4. Assimilate the ideas of the Weingarten map, curvature of plane curves, Arc length and line integrals
CO 5. Developing skills related to Curvature of surfaces

COURSE CODE : 16 P4MATT17EL
COURSE TITLE : MULTIVARIATE CALCULUS AND INTEGRAL TRANSFORMS

COURSE OUTCOMES

CO 1. Explain Weirstras theorem, otherforms of Fourierseries, the Fourier integral theorem, the exponential form of the Fourier integral theorem, integral transforms and convolutions, the convolution theorem for Fourier transforms.
CO 2. Analyze Multivariable Differential Calculus The directional derivative, directional derivatives and continuity, the total derivative, the total derivative expressed in terms of partial derivatives, An application of complex- valued functions, the matrix of a linear function, the Jacobian matrix, the chain rate matrix form of the chain rule.
CO 3. Interpret Implicit functions and extremum problems, the mean value theorem for differentiable functions, a sufficient condition for differentiability.
CO 4. Explain Integration of Differential Forms, primitive mappings, partitions of unity, change of variables, differential forms, Stokes theorem.

COURSE CODE : 16P4MATT18EL
COURSE TITLE : COMBINATORICS

COURSE OUTCOMES

CO 1. Analyze permutations and combinations & its applications.
CO 2. Explain Pigeonhole principle and Ramsey numbers and its applications.
CO 3. Apply generating functions and its implications.
CO 4. Analyze recurrence relation and methods to solve that.

COURSE CODE : 16P4MATT19EL
COURSE TITLE : THEORY OF WAVELETS

COURSE OUTCOMES

CO 1. Analyze the basics of Wavelet theory.
CO 2. Analyze various applications of wavelets
CO 3. Apply wavelet theory in Linear algebra.
CO 4. Summarize the scope of wavelet theory in the field of medical science.
CO 5. Explain the concepts of Haar measure

DEPARTMENT OF PHYSICS

B.SC. PHYSICS

Programme Specific Outcomes:

PSO 1 : Comprehend the core concepts of Physics
PSO 2 : Acquire analytical and logical skills for higher Education.
PSO 3 : Excel in Experimental and Theoretical Physics.
PSO 4 : Take up jobs in allied fields.
PSO 5 : Excel in competitive exams.

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CRPHY01
COURSE TITLE : METHODOLOGY IN PHYSICS

COURSE OUTCOMES

CO 1. Understand the development of physics in the last century and new scientific concepts from various scientist.
CO 2. Understand Number systems and its significance.
CO 3. Apply vector algebra in Physics.
CO 4. Apply basic measurement techniques in Physics and experimental data.

COMPLEMENTARY CHEMISTRY FOR PHYSICS
COURSE CODE : 19U1CPCHE1
COURSE TITLE : GENERAL CHEMISTRY

COURSE OUTCOMES

CO 1. Describe different models of atomic structure.
CO 2. Define acids and bases and explain the concept of equilibrium.
CO 3. Understand the concept of solubility and its applications in various fields.
CO 4. Explain the fundamentals of nuclear chemistry.
CO 5. Generate a basic idea on applications of nuclear energy in various fields and the possible hazards.
CO 6. Explain the fundamentals of analytical chemistry.
CO 7. Understand the basics of thermodynamics.

COMPLEMENTARY MATHEMATICS FOR PHYSICS
COURSE CODE : 19U1CPMAT01
COURSE TITLE : DIFFERENTIAL CALCULUS AND TRIGONOMETRY

COURSE OUTCOMES

CO 1. Understand limits, derivatives of a functions and its applications.
CO 2. Determine whether a given function is increasing or decreasing.
CO 3. Apply the concepts of maxima and minima of a function to real world problems
CO 4. Understand the concepts of derivative of functions of more than one variable
CO 5. Understand the concepts of Trigonometric functions, their properties and summation of trigonometric series

SEMESTER 2

COURSE CODE : 19U2CRPHY02
COURSE TITLE : MECHANICS AND PROPERTIES OF MATTER

COURSE OUTCOMES

CO 1. Understand superposition of waves.
CO 2. Analyse the theory of oscillation.
CO 3. Define the basic concepts of angular velocity- angular acceleration- angular momentum.
CO 4. State parallel and perpendicular axes theorems.

COMPLEMENTARY CHEMISTRY FOR PHYSICS
COURSE CODE : 19U2CPCHE2
COURSE TITLE : BASIC ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Understand the basics of organic chemistry.
CO 2. Understand various purification techniques like solvent extraction, distillation and crystallization.
CO 3. Develop an idea on stereochemistry of organic compounds
CO 4. Explain the basics of organic reaction mechanism.
CO 5. Discuss the classification and synthesis of polymers.
CO 6. Discuss the hazards of synthetic polymers/ plastics.
CO 7. Understand the concept of biodegradable alternatives for plastics.

COMPLEMENTARY MATHEMATICS FOR PHYSICS
COURSE CODE : 19U2CPMAT02
COURSE TITLE : INTEGRAL CALCULUS AND MATRICES

COURSE OUTCOMES

CO 1. Understand definite integrals and The fundamental theorem of Calculus
CO 2. Determine the area and volume of surfaces in space .
CO 3. Understand the concepts of Double Integrals

CO 4. Apply the concepts of multiple integrals to find the area and volume of regions in space
CO 5. Understand the concepts of matrices
CO 6. Apply the concepts of matrices to solve system of linear equations and characteristic roots

SEMESTER 3

COURSE CODE : 19U3CRPHY03
COURSE TITLE : OPTICS, LASER AND FIBER OPTICS

COURSE OUTCOMES

CO 1. Analyze the important and fascinating areas of interference with many experiments associated with it.
CO 2. Apply concepts of Fraunhofer and Fresnel diffraction and analyse wavelengths of a light source using grating.
CO 3. Understand basics of polarisation and techniques for production and detection of polarised light.
CO 4. Understand basic physics of lasers and optical fibers.

COMPLEMENTARY CHEMISTRY FOR PHYSICS
COURSE CODE : 19U3CPCHE03.1
COURSE TITLE : ADVANCED PHYSICAL CHEMISTRY – I

CO 1. Know the basics of nanomaterials and nanotechnology.
CO 2. Understand symmetry and point groups of simple molecules.
CO 3. Describe the properties of solid state and liquid state.
CO 4. Define phases and explain the phase diagram of one- and two-component systems.
CO 5. Explain the theories of adsorption

COMPLEMENTARY MATHEMATICS FOR PHYSICS
COURSE CODE : 19U3CPMAT03
COURSE TITLE : DIFFERENTIAL EQUATIONS, MATRICES AND TRIGONOMETRY

CO 1. Understand the methods of solving important types of first order ordinary differential equations.
CO 2. Understand the origin of first order p.d.e's and their solution.
CO 3. Understand different types of matrices and rank of a matrix
CO 4. Apply the concept of matrices in solving system of linear equations
CO 5. Find the Eigen values and Eigen vectors of a given matrix
CO 6. Understand the applications of Cayley Hamilton theorem
CO 7. Understand trigonometric functions, their expansions and summation of infinite series using the C+iS method

SEMESTER 4

COURSE CODE : 19U4CRPHY04
COURSE TITLE : SEMICONDUCTOR PHYSICS

COURSE OUTCOMES

CO 1. Understand the basic physics of semiconductors, p-n junctions, rectifiers, voltage multipliers and simple waveshaping circuits.
CO 2. Understand the basic physics of transistor operation and analyse various transistor amplifier circuits
CO 3. Understand the physics of simple oscillator circuits
CO 4. Understand basics and applications of operational amplifiers as well as modulation techniques like AM and FM

COMPLEMENTARY CHEMISTRY FOR PHYSICS
COURSE CODE : 19U4CPCHE04.1
COURSE TITLE : ADVANCED PHYSICAL CHEMISTRY – II

COURSE OUTCOMES

CO 1. Know the basics of spectroscopy.
CO 2. Understand the fundamental principles of chemical kinetics and photochemistry.
CO 3. Explain the applications of electromotive force, electrochemistry and redox reactions

COMPLEMENTARY MATHEMATICS FOR PHYSICS
COURSE CODE : 19U4CPMAT04
COURSE TITLE : FOURIER SERIES, LAPLACE TRANSFORMS, FOURIER TRANSFORMS, AND GROUPS.

CO 1. Find the Fourier series expansion of a given periodic function in a specified interval.
CO 2. Find the Fourier transform of a given function.
CO 3. Find the Laplace transform of a given function.
CO 4. Understand the concepts of groups, cyclic groups, permutation groups

SEMESTER 5
COURSE CODE : 15U5CRPHY05
COURSE TITLE : CLASSICAL & QUANTUM MECHANICS

COURSE OUTCOMES

CO 1. Explain the basic formalisms in classical mechanics
CO 2. Illustrate the failure of Classical physics and to explain the new emergence of matter wave concept

CO 3. Illustrate the basic formulations of Quantum Mechanics

COURSE CODE : 15U5CRPHY06
COURSE TITLE : PHYSICAL OPTICS AND PHOTONICS

COURSE OUTCOMES

CO 1. Explain the basic principles of Optics, lasers, holography and fiber technology.
CO 2. Apply the principles of Optics to Optical systems.
CO 3. Solve specific problems in optics and lasers.
CO 4. Analyze Optical systems and phenomenon based on the theory of Optics.

COURSE CODE : 15U5CRPHY07
COURSE TITLE : THERMAL AND STATISTICAL PHYSICS

COURSE OUTCOMES

CO 1. Understand the basic concepts in thermodynamics and the formulations to appreciated various applications which made our life easy and comfortable.
CO 2. Acquire the skill in describing mathematical formulations in thermodynamics extend it various thermo dynamical phenomena happening in our day to day life.
CO 3. Understand and appreciate the significance of statistical approach to explain the complicated behavior of atoms and molecules in the micro world.

COURSE CODE : 15U5CRPHY8
COURSE TITLE : DIGITAL ELECTRONICS

COURSE OUTCOMES

CO 1. Describe the basic understanding of number systems and logic circuits
CO 2. Use the methods of systematic reduction of Boolean algebra
CO 3. Express Karnaugh maps
CO 4. Explaining the basic sequential and Combinational circuits

COURSE CODE : 15U5OCPHY01
COURSE TITLE : ENERGY AND ENVIRONMENTAL STUDIES

COURSE OUTCOMES

CO 1. Understand the various energy sources, particularly the sun and usage of solar energy.
CO 2. Understand basic ideas on environmental pollution.
CO 3. Understand the basic ideas of enviromental impact assessment and waste management.

SEMESTER 6
COURSE CODE : 15U6CRPHY09
COURSE TITLE : COMPUTATIONAL PHYSICS

COURSE OUTCOMES

CO 1. Explain the operation and architecture of 8085 microprocessor and basics of computer hardware
CO 2. Know C++ Programming and developing simple C++ Programmes
CO 3. Explain the Numerical methods involved in Solving various Physics Problems.

COURSE CODE AND TITLE
15U6CRPHY10: NUCLEAR AND PARTICLE PHYSICS

COURSE OUTCOMES

CO 1. Explain the basic principles of Nuclear physics.
CO 2. Apply the principles of quantum mechanics and classical physics to Nuclear and particle physics
CO 3. Solve specific problems in Nuclear and particle physics
CO 4. Criticize the environmental impact of the production of Nuclear energy.

COURSE CODE : 15U6CRPHY11
COURSE TITLE : CONDENSED MATTER PHYSICS

COURSE OUTCOMES

CO 1. Explain the basic concepts in Crystalline Physics
CO 2. Analyze the theories related to free electrons in metals
CO 3. Explain the basics of Super conductivity and nanomaterials

COURSE CODE : 15U6CRPHY12
COURSE TITLE : RELATIVITY AND SPECTROSCOPY

COURSE OUTCOMES

CO 1. Explain the general and special theory of relativity
CO 2. Explain atomic spectra and apply it to the study of magneto-optic phenomenon
CO 3. Explain the basic concepts of molecular energy levels and hence evaluate molecular spectrum

COURSE CODE : 15U6CRPHY13
COURSE TITLE : OPTOELECTRONICS

COURSE OUTCOMES

CO 1. Understand the basic concepts of photonics and prcesses in semiconductors.
CO 2. Understand working and operation of semiconductor optoelectronic devices.
CO 3. Understand the basic ideas of optical communication.

M.SC. PHYSICS

Programme Specific Outcomes:

PSO 1 : Develop the skills of critical analysis and problem-solving required in the application of principles of Physics.

PSO 2 : Acquire a working knowledge of experimental and computational techniques and instrumentation required to work independently in research or industrial environments.

PSO 3 : Demonstrate a strong capability of organizing and presenting acquired knowledge both in oral and written platforms.

PSO 4 : Compete for current employment opportunities successfully.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1PHYT1
COURSE TITLE : MATHEMATICAL METHODS IN PHYSICS – I

COURSE OUTCOMES

CO 1. Explain the concepts of different mathematical methods in physics
CO 2. Apply to solve different physical Problems.
CO 3. Categorize different types of matrices
CO 4. Explain the concepts of differential equations to solve physical problems

COURSE CODE : 16P1PHYT2
COURSE TITLE : CLASSICAL MECHANICS

COURSE OUTCOMES

CO 1. Summarize the concepts of Lagrangian and Hamiltonian formalism, canonical transformation, Poisson bracket
CO 2. Apply to the problems related to classical mechanics
CO 3. Explain the concepts of rigid body dynamics
CO 4. Explain the concepts of principle of equivalence, Einstein`s field equations, nonlinear systems

COURSE CODE : 16P1PHYT03
COURSE TITLE : ELECTRODYNAMICS

COURSE OUTCOMES

CO 1. Outline the concepts of electrodynamics.
CO 2. Apply Maxwell's Equations in various situations

CO 3. Apply the concepts of relativity in various cases
CO 4. Apply the concepts of waveguides.

COURSE CODE : 16P1PHYT04
COURSE TITLE : ELECTRONICS

COURSE OUTCOMES
CO 1. Describe the theoretical aspects of OP-amps
CO 2. Apply the OP-amp circuits for various Amplifiers
CO 3. Design the op-amp compensating networks
CO 4. Evaluate problems of Op-amps

SEMESTER 2

COURSE CODE : 16P2PHYT5
COURSE TITLE : MATHEMATICAL METHODS IN PHYSICS – II

COURSE OUTCOMES
CO 1. Explain the concepts of different mathematical methods in physics
CO 2. Apply to solve different physical problems.
CO 3. Summarize the concepts of group theory
CO 4. Apply the concepts of partial differential equations to solve physical problems

COURSE CODE : 16P2PHYT06
COURSE TITLE : QUANTUM MECHANICS – 1

COURSE OUTCOMES
CO 1. Define the formalism of Non relativistic Quantum Mechanics.
CO 2. Demonstrate principles of quantum mechanics.
CO 3. Apply the principles of quantum mechanics to specific quantum mechanical systems.
CO 4. Solve specific problems in quantum mechanics

COURSE CODE : 16P2PHYT07
COURSE TITLE : CONDENSED MATTER PHYSICS

COURSE OUTCOMES
CO 1. Apply the concept of X-ray diffraction to interpret crystalline structure.
CO 2. Compare different solids using band theory.
CO 3. Analyse various dielectric and magnetic properties of crystals
CO 4. Describe the latest trends in Nanotechnology

COURSE CODE : 16P2PHYT08
COURSE TITLE : THERMODYNAMICS AND STATISTICAL MECHANICS

COURSE OUTCOMES

CO 1. Summarize the concepts of thermodynamics and probability.
CO 2. Illustrate the foundations of Statistical mechanics
CO 3. Model the problems related to Canonical and Grand Canonical ensemble
CO 4. Interpret the concepts of Phase Transitions

SEMESTER 3

COURSE CODE : 16P3PHYT09
COURSE TITLE : QUANTUM MECHANICS –II

COURSE OUTCOMES

CO 1. Define the formalism of time dependent perturbation theory, scattering theory in the framework of non-relativistic Quantum Mechanics.
CO 2. Explain the fundamentals of scattering theory, relativistic quantum theory and quantum field theory.
CO 3. Apply non relativistic quantum theory to systems under perturbation and quantum mechanical bodies undergoing scattering. Apply relativistic quantum mechanics to quantum mechanical systems.
CO 4. Solve specific problems in non-relativistic and relativistic quantum mechanics.

COURSE CODE : 16P3PHYT10
COURSE TITLE : COMPUTATIONAL PHYSICS

COURSE OUTCOMES

CO 1. Explain the basic idea about the techniques used in curve fitting and interpolation
CO 2. Evaluate the basic idea about the computational techniques used in Numerical Differentiation and Integration
CO 3. Explain the basic idea about the computational techniques used in solving Ordinary Differential equation and System of Equations
CO 4. Explain the basic idea about the computational techniques used in solving Partial Differential Equation

COURSE CODE : 16P3PHYT11
COURSE TITLE : MICROELECTRONICS AND SEMICONDUCTORDEVICES

COURSE OUTCOMES

CO 1. Identify mechanism to handle processes, memory, I/O devices, and files and develop an appropriate algorithm and the basic ideas about microprocessors

CO 2. Discuss issues of Process Management including process structure, the basic idea about various IC s like 8085,8086 etc
CO 3. Differentiate type of memory management techniques used in microcontrollers and 8051 architecture
CO 4. Appreciate the need and applications in the study of Schottky barrier diode

COURSE CODE : 16P3PHY12
COURSE TITLE : INTEGRATED ELECTRONICS AND DIGITAL SIGNAL PROCESSING

COURSE OUTCOMES
CO 1. Understand various process steps involved in IC fabrication
CO 2. Understand basics of signal processing and classification of signals
CO 3. Understand and apply various signal process to solve problems
CO 4. Analyze the difference between FT, DTFT, CTFT, DFT, FFT etc

SEMESTER 4

COURSE CODE : 16P4PHYT13
COURSE TITLE : ATOMIC AND MOLECULAR PHYSICS

COURSE OUTCOMES
CO 1. Explain the concepts of atomic spectroscopy and to apply it for analyzing a given atomic spectrum
CO 2. Analyse a given rotational spectra and vibrational spectra from the concepts of molecular spectroscopy
CO 3. Illustrate the spectra of given molecules using techniques of electronic and Raman spectroscopy
CO 4. Explain the theory behind new spectroscopic techniques like NMR, ESR and Mossbauer spectroscopy

COURSE CODE : 16P4PHYT14
COURSE TITLE : NUCLEAR AND PARTICLE PHYSICS

COURSE OUTCOMES
CO 1. Describe the nature of nucleus and its various constituents
CO 2. Analyze the nature of nucleus by applying the quantum mechanical scattering.
CO 3. Understand the nuclear models and nuclear reactions
CO 4. Analyze and understand elementary particles and quarks.

COURSE CODE : 16P4PHYT15
COURSE TITLE : OPTOELECTRONICS

COURSE OUTCOMES

CO 1. Outline the concepts of semiconductors, LEDs and fiber optics.
CO 2. Outline laser principles and output control.
CO 3. Outline the concepts of photodetectors and photovoltaics.

COURSE CODE : 16P4PHYT16
COURSE TITLE : INSTRUMENTATION AND COMMUNICATIONELECTRONICS

COURSE OUTCOMES

CO 1. Identify mechanism to handle transducers, their basic ideas and applications
CO 2. Discuss issues of Process and Management of digital instruments including construction , structure, and applications
CO 3. Differentiate communication in space, terrestrial etc. including SSB. Impart leadership in Radio, CRO and TV

DEPARTMENT OF SOCIOLOGY

B.A. SOCIOLOGY

Programme Specific Outcomes:

PSO1 : Illustrate the pedagogy of sociology as a general science of society and communicate it effectively to public.

PSO 2 : Apply the functional and theoretical concepts of sociology to the real life situations.

PSO 3 : Analyse the major social issues and examine their causative factors.

PSO 4 : Formulate effective solutions to control and solve social problems.

PSO 5 : Prepare research proposals to assess the social impact of various welfare schemes of governmental and non-governmental institutions.

Course Outcomes

SEMESTER 1

COURSE CODE : 19U1CRSOC01
COURSE TITLE : FUNDAMENTALS OF SOCIOLOGY

COURSE OUTCOMES

CO 1. Outline the historical background of the emergence of social science and the development of sociology

CO 2. Analyse the development of sociology in the Indian context and its present status.Demonstrate the relevance of Sociology as a social science

CO 3. Acquire basic sociological skills and familiarise with major perspectives and dimensions

COURSE CODE : 19U1CPHISI
COURSE TITLE : HISTORICAL CURRENTS OF THE MODERN WORLD

COURSE OUTCOMES

CO 1. Understand the transformation of European society from 13th-15th cy

CO 2. Evaluate the causes of Decline of Feudalism; The debate on the transition from Feudalism to capitalism - Evaluate view of Maurice Dobb and Paul Sweezy

CO 3. Understand various state models

CO 4. Understand Renaissance and its contributions; Understanding European Reformation and Counter reformation

CO 5. Analyze growth of parliamentary democracy

CO 6. Understand ideologies of enlightenment thinkers

CO 7. Understand American, French , Russian, Chinese society before and after the revolution

CO 8. Analyse courses and results of First World War and Second world war and history of inter-war period , cold war, Analyse and evaluate world 195Organization and regional organization

SEMESTER 2

COURSE CODE : 19U2CRSOC02
COURSE TITLE :VBASIC CONCEPTS IN SOCIOLOGY

COURSE OUTCOMES

CO 1. Analyze the Conceptual bases and terminologies of the subject
CO 2. Interpret the intrinsic connection between Socialization process and Culture
CO 3. Identify the major forms of associative and dissociative social processes in the society.
CO 4. Develop the skill to analyze the mechanisms of social control and the causes and consequences of social inequalities in society.

COURSE CODE : 19U1CPHIS2
COURSE TITLE : THE CONCISE OF HISTORY OF MODERN INDIA

COURSE OUTCOMES

CO 1. Understand the decline of Mughal Empire
CO 2. Evaluate the Indian states and society in the 18th century
CO 3. Understand the beginning of European settlement ; Understand the colonial perception of history
CO 4. The structure of government and the economic policies of British empire in between 1757 and 1857; Understand the administrative organization and social and cultural policies; Asses the cultural and social awakening in the first half of 19th century
CO 5. Orientalism and discovery of India
CO 6. Asses the nature of revolt of 1857; The administrative changes after 1858; The economic impact of British rule
CO 7. Understanding Indian nationalism; The nationalist movement in between 1858 and 1905; Evaluate the religious and social reform after 1858 and nationalist movements
CO 8. Understand the Gandhian methods for struggle and the Nehruvian era; India and third world countries, environmental movements, and crisis of National Unity

SEMESTER 3

COURSE CODE : 15U3CCSAN3A
COURSE TITLE : TRANSLATION AND COMMUNICATION

COUSRE OUTCOMES

CO 1. Learning the art of translation

CO 2. Understanding translation as a Linguistic activity
CO 3. Understanding translation as a cultural ,economic and professional activity
CO 4. familiarising the technology of Translation
CO 5. Understand moral values through Drama
CO 6. Inculcating students with reading and communication skills in Sanskrit
CO 7. Understand the tools to beautify the literature through Drama and Translation
CO 8. Students identify the richness of Indian Literature

COURSE CODE : 15U3CCFRN3A
COURSE TITLE – AN ADVANCED COURSE IN FRENCH I

COUSRE OUTCOMES

CO 1. Understand the basic concepts of French language including grammar, vocabulary and sentence structure
CO 2. Understand the basic communication skills necessary for living in France and French speaking countries.
CO 3. Describe oneself and ones surroundings using a repertory of words and expressions in a simple and structured grammatical manner.
CO 4. Develop business communication skills
CO 5. Express an issue of concern including topics like environmental, social or health issues, enumerate its causes and consequences and suggest solutions
CO 6. Understand the mannerisms, culture and tradition of France and Francophone countries and compare it to one's own country and develop co-cultural feeling
CO 7. Understand and appreciate the history of France and Francophone countries and compare it to one's own country
CO 8. Understand the special features of France including gastronomy, social institutions, policies, the present French scenario and compare it to one's own country

COURSE CODE : 15U3CRSOC03
COURSE TITLE : FOUNDATIONS OF SOCIOLOGICAL THOUGHT

COUSRE OUTCOMES

CO 1. Understand the Intellectual roots of Sociological theorizing
CO 2. Get thorough knowledge of the theoretical interpretation of the founding fathers of sociology.
CO 3. Develop the capacity to establish the organic link between theory building and Research through the theoretical view of Durkheim.
CO 4. Acquire the capacity to perceive contemporary social reality by infusing Weberiansociological insights

COURSE CODE : 15U3CRSOC04
COURSE TITLE : SOCIAL RESEARCH METHODS

COURSE OUTCOMES

CO 1. At the end of the course a student will be able to:
CO 2. Understand the essence of Sociological knowledge production-formulation of research problem,hypothesis,operationalization of concepts, types of research
CO 3. Able to get thorough knowledge of the different research methods employed by sociologist to generate sociological knowledge.
CO 4. Develop the capacity to design sociological research and strategies of sampling followed sociologist
CO 5. Enabled to acquire the capacity to analyze and interpret the data and preparation of research report and drawing sociological inferences

COURSE CODE : 15U3CPPOL1
COURSE TITLE : AN INTRODUCTION TO THE CONCEPTS IN POLITICAL SCIENCE

COURSE OUTCOMES
CO 1. Understand fundamental principles and theoretical concepts in Political Science.
CO 2. Analyze the fundamental concepts, characteristics and theories central to comparative politics and international relations.
CO 3. Communicate effectively political knowledge to society.
CO 4. Generate awareness about the principles of Political Science in general and Political process in particular.
CO 5. Understand various political ideologies.

SEMESTER 4

COURSE CODE : 15U4CCSAN4A
COURSE TITLE : HISORICAL SURVEY OF SANSKRIT LITERATURE AND KERALA CULTURE

COURSE OUTCOMES
CO 1. Students familiarize the Culture and Civiliazation
CO 2. Students understand the influence of Epic and in Indian Literature
CO 3. Students get an awareness about Indian classical poetic tradition
CO 4. Students familiarize the Mahakavyas and It's Influence
CO 5. Students identify the values and philosophy in Sanskrit literature
CO 6. Students get an awareness about Indian Philosophers and renovators in Kerala
CO 7. Understand the tools to beautify the literature through Drama and Translation
CO 8. Students identify the richness of Indian Literature

COURSE CODE : 15U4CCFRN4A
COURSE TITLE : AN ADVANCED COURSE IN FRENCH II

COUSRE OUTCOMES
CO 1. Understand the basic concepts of French language including grammar, vocabulary and sentence structure

CO 2. Understand the basic communication skills necessary for living in France and French speaking countries.
CO 3. Describe oneself and ones surroundings using a repertory of words and expressions in a simple and structured grammatical manner.
CO 4. Develop business communication skills
CO 5. Express an issue of concern including topics like environmental, social or health issues, enumerate its causes and consequences and suggest solutions
CO 6. Understand the mannerisms, culture and tradition of France and Francophone countries and compare it to one's own country and develop co-cultural feeling
CO 7. Understand and appreciate the history of France and Francophone countries and compare it to one's own country
CO 8. Understand the special features of France including gastronomy, social institutions, policies, the present French scenario and compare it to one's own country

COURSE CODE : 15U4CPPOL2
COURSE TITLE : INDIAN POLITY- GOVERNMENTAL MACHINERY AND PROCESSES

COURSE OUTCOMES
CO 1. Understand the various aspects of the constitution and its making.
CO 2. Analyze the fundamental and theoretical concepts of Indian Constitution.
CO 3. Understand about various rights, including political, civil, social, economic and cultural rights.
CO 4. Generate insights into the state-society dynamics in India and its impact on the polity and governance.
CO 5. Understand the structure and functioning of central and state government.

COURSE CODE : 15U4CRSOC05
COURSE TITLE : SOCIAL STRUCTURE AND CHANGE IN INDIA

COUSRE OUTCOMES
CO 1. Identify the Pluralistic nature of Indian society- the factors promoting unity as well as disunity
CO 2. Understand the basic social institutions of Indian society
CO 3. Critically evaluate the role of Caste in the socio-cultural life of the people as system of social stratification
CO 4. Assess the ongoing process of change in the social structure by analyzing major economic, cultural and technological factors

COURSE CODE : 15U4CRSOC06
COURSE TITLE : PERSPECTIVES ON INDIAN SOCIETY

COUSRE OUTCOMES

CO 1. Understand the development of sociological thinking in India along with major issues of contextualization ,indigenization and globalization of knowledge ,colonial legacy
CO 2. Able to get thorough knowledge of indological approaches to the understanding of Indian society.
CO 3. Develop the knowledge about the possibilities and limitation of Marxist and subaltern perspectives
CO 4. Enabled to acquire the knowledge about structural and integrated perspectives in understanding Indian society

SEMESTER 5

COURSE CODE : 15U5CRSOC07
COURSE TITLE : MODERN SOCIOLOGICAL THEORIES

COUSRE OUTCOMES
CO 1. Understand functional theories and delving into the contributions of Talcott Parson and Robert Merton.
CO 2. Analyze the Conflict perspective and theories propounded by Karl Marx and Lewis Coser.
CO 3. Explore symbolic interactionism and the significance and contributions of the Chicago school.
CO 4. Discuss exchange theory and contributions of George Homans and Peter M Blau

COURSE CODE : 15U5CRSOC08
COURSE TITLE : ELEMENTS OF SOCIAL PSYCHOLOGY

COUSRE OUTCOMES
CO 1. Understand the thrust areas and methods of social psychology.
CO 2. Demonstrate the factors and attributes responsible for the development of human personality
CO 3. Identify the undercurrents of human behaviour
CO 4. Differentiate between individual behaviour and crowd behaviour and explore the crowd psychology

COURSE CODE : 15U5CRSOC09
COURSE TITLE : SOCIOLOGY OF WORK AND INDUSTRY

COUSRE OUTCOMES
CO 1. Understand the essence of Sociological understanding of work and industry-systems of production and development of industrial mode of production, concept like emotional labour, knowledge worker
CO 2. Get thorough knowledge of the industrial dynamics-industrial relations, industrial disputes, causes, settlement strategies.

CO 3. Develop knowledge about sociological perspectives on work and industrial management
CO 4. Enabled to acquire knowledge about human resource management ,models and paradoxes

COURSE CODE : 15U5CRSOC010
COURSE TITLE : LIFE SKILL EDUCATION

COUSRE OUTCOMES

CO 1. Identify life skills, its needs in various spheres of life and its role in development of personality.
CO 2. Develop skills to make informed career choices and enhance knowledge and aptitude.
CO 3. Explore holistic development and equipping students to acquiring skills for self-management.
CO 4. Understand the need for communication skills and how digital media enables effective learning.

COURSE CODE : 15U5OCRSOC01
COURSE TITLE : ELEMENTS OF SOCIAL PSYCHOLOGY

COUSRE OUTCOMES

CO 1. Understand the thrust areas and methods of social psychology.
CO 2. Demonstrate the factors and attributes responsible for the development of human personality
CO 3. Identify the undercurrents of human behaviour
CO 4. Differentiate between individual behaviour and crowd behaviour and explore the crowd psychology

SEMESTER 6

COURSE CODE : 15U6CRSOC11
COURSE TITLE : CULTURE AND SOCIETY

COUSRE OUTCOMES

CO 1. Discuss the concept of culture, cultural anthropology and various methods involved in its study
CO 2. Explore the relation between culture, Society civilization and its complex structure
CO 3. Understand the attributes of culture and how it shapes personality, tracing the evolution of Indian anthropology.
CO 4. Analyze of the various schools of thought on the evolution of culture.

COURSE CODE : 15U6CRSOC12
COURSE TITLE : SOCIOLOGY OF DEVELOPMENT

COUSRE OUTCOMES

CO 1. Understand the essence of Sociological implications of development in relation to concept like human development, social development, sustainable development
CO 2. Develop knowledge about sociological perspectives on development with special reference, to Gandhi and Wallenstein
CO 3. Get thorough knowledge of the developmental strategies incorporated by Indian society
CO 4. Enabled to acquire knowledge about developmental issues

COURSE CODE : 15U6CRSOC13
COURSE TITLE : SOCIAL PATHOLOGY

COUSRE OUTCOMES

CO 1. Understand social disorganization and social maladjustments which exist in the society along with social organization
CO 2. Analyze the Pathological issues pertaining to children and suggest measures to solve them.
CO 3. Differentiate between various crimes; their nature, causes and methods of correction
CO 4. Identify the major threats of Substance abuse and Terrorism and to explore effective strategies to control them.

COURSE CODE : 15U6CRSOC14
COURSE TITLE : URBAN SOCIOLOGY

COUSRE OUTCOMES

CO 1. Understand the major focus and relevance of the science of Urban Sociology.
CO 2. Identify the different types of urban areas and the complex process of urbanization
CO 3. Explore the divergent problems of urban centers and suggest viable measures to solve them.
CO 4. Evaluate the strategies of Governmental and non-governmental agencies on Urban planning and development.

COURSE CODE : 15U6CRSOC15
COURSE TITLE : MEDIA AND SOCIETY

COUSRE OUTCOMES

CO 1. Analyze the concept of media, its types, significance and the social history of the state and media.
CO 2. Understand the various methodologies employed for media studies
CO 3. Discuss the various approaches involved in media studies
CO 4. Explore the social impact of media and how it shapes the political reality.

M.A. SOCIOLOGY

Programme Specific Outcomes:

PSO 1 : Internalization of the concepts and theorems of the discipline of Sociology and its related branches, appropriate to its epistemological and practical concerns.

PSO 2 : Evaluation of the pros and cons of the social world with a critical mind by the mastering of the subject pedagogy.

PSO 3 : Creation of environmental sensitiveness with a proper alertness to the Incongruities of the physical and socio -cultural surroundings.

PSO 4 : Equipment to field works, social exposure programs, outreaches and internships.

PSO 5 : Creation of an able sect of citizens with a universal perception to identify and interact with the issues and prospects of the global world.

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1SOCT01
COURSE TITLE : FOUNDATIONS OF SOCIOLOGY

COURSE OUTCOMES

CO 1. Equipment of learners with an introductory understanding of the basics of the discipline of Sociology for a thorough internalization of its subject matter.
CO 2. Revelation of the 'Nature of the discipline' and a Conceptual schematization of the 'Basic Processes
CO 3. Categorization of Institutionalized Patterns of Behavior in human Society
CO 4. Inculcation of a training based on the learning of the society and to impart it to various segments of society.

COURSE CODE : 16P1SOCT02

COURSE TITLE : CONTEMPORARY THEORY I

COURSE OUTCOMES

CO 1. Appraise the world of Sociology and to enquire into sociological wisdom and facts. Impart the conceptual and theoretical orientation of Sociology and its foundation
CO 2. Demonstrate the relevance of Sociology as a social science and its contemporary theoretical orientations

CO 3. Acquire basic sociological skills and familiarizing with major perspectives and dimensions and to implement its scope in various walks of life
CO 4. Comparative investigation into the core principles of different theoretical views.

COURSE CODE : 16P1SOCT03
COURSE TITLE : SOCIOLOGY OF INDIAN SOCIETY

COURSE OUTCOMES

CO 1. Demonstrate their understanding of descriptive statistics by practical application of quantitative reasoning and data visualization
CO 2. Demonstrate their knowledge of the basics of inferential statistics by making valid generalizations from sample data
CO 3. Recognize the significance of statistical methodology in finding pitfalls.
CO 4. Critical attitudes develop for "life-long learning" and evaluate the importance of statistical literacy in today's data rich world.

COURSE CODE : 16P1SOCT04
COURSE TITLE : SOCIAL RESEARCH METHODS

COURSE OUTCOMES

CO 1. Develop an insight on the fundamental framework of research method and comprehend the role of research and acquire research process' overview
CO 2. Extend the ability to classify various research designs and techniques and attain the ability to think like a researcher – by understanding concepts, constructs, variables, and definitions, research problems and hypotheses
CO 3. Extend an understanding of the ethical magnitude of conducting applied research and to appreciate the method of research writing and assess its quality.
CO 4. Classify the types of measurement scales; questionnaire designing – reliability and validity and to differentiate methods of data collection, attitude measurement, scaling, sampling techniques

COURSE CODE : 16P1SOCT05
COURSE TITLE : SOCIOLOGY OF RURAL SOCIETY

COURSE OUTCOMES

CO 1. Familiarization of the introductory concepts of Sociology of Rural society.
CO 2. Illustration of the major theoretical perspectives of Rural Sociology and their analytical applications.
CO 3. Imparting of knowledge for a systematic understanding of major aspects of rural society, issues faced by the rural people, various government policies and initiatives for rural development.

SEMESTER 2

COURSE CODE : 16P2SOCT06
COURSE TITLE : CONTEMPORARY SOCIOLOGICAL THEORY II

COURSE OUTCOMES

CO 1. To develop an insight on contemporary theories and describe its role in building sociological knowledge.
CO 2. To extend the ability of conceptual acceptance of the discipline and to demonstrate the historical/cultural context in which theories were developed
CO 3. To extend insights on how critical theory had been revived and what where its major initiatives
CO 4. To realise the need of an integrated paradigm in Theoretical framework in order to add to the existent paradigms noted in Sociology: A Multiple Paradigm Science.

COURSE CODE : 16P2SOCT07
COURSE TITLE : SOCIOLOGY OF MEDIA

COURSE OUTCOMES

CO 1. Demonstrate their understanding of descriptive statistics by practical application of quantitative reasoning and data visualization
CO 2. Demonstrate their knowledge of the basics of inferential statistics by making valid generalizations from sample data
CO 3. Recognize the significance of statistical methodology in finding pitfalls.
CO 4. Critical attitudes develop for "life-long learning" and evaluate the importance of statistical literacy in today's data rich world.

COURSE CODE : 16P2SOCT08
COURSE TITLE : PERSONALITY AND COUNSELLING

COURSE OUTCOMES

CO 1. Organization of the concepts, terms and approaches in psychology
CO 2. Demonstration of the factors and attributes responsible for the development of human personality.
CO 3. Internalisation of the undercurrents of human behaviour and Enable to understand the difference between individual and crowd behaviour.
CO 4. Development of a healthy personality and to understand various dispositions.

COURSE CODE : 16P2SOCT09
COURSE TITLE : SOCIOLOGY OF URBAN SOCIETY

COURSE OUTCOMES

CO 1. Study Urban sociology as a major branch of Sociology
CO 2. Identify the different life setting between urban and rural areas and various approaches to study urban living

CO 3. Assess implications of urbanisation
CO 4. Illustrate the concept of urban problems and urban development
CO 5. Examine major urban problems and social disorganisation

COURSE CODE : 16P2SOCT10
COURSE TITLE : STATISTICS FOR SOCIOLOGY

COURSE OUTCOMES

CO 1. Demonstrate their understanding of descriptive statistics by practical application of quantitative reasoning and data visualization

CO 2. Demonstrate their knowledge of the basics of inferential statistics by making valid generalizations from sample data
CO 3. Recognize the significance of statistical methodology in finding pitfalls.
CO 4. Critical attitudes develop for "life-long learning" and evaluate the importance of statistical literacy in today's data rich world.

SEMESTER 3

COURSE CODE : 16P3SOCT11
COURSE TITLE : CONTEMPORARY SOCIOLOGICAL THEORY III

COURSE OUTCOMES

CO 1. Develop an intellectual capacity on the fundamental framework of contemporary theory and grasp the role of theory and acquire critical overview on it.
CO 2. Extend the capacity to identify various theoretical perspectives of critical school by understanding concepts, constructs, paradigms, theorists etc.
CO 3. Extend an indulgence of the principled magnitude of theory and research in postmodern period
CO 4. Develop the cognitive capacity to relate postmodern theories to everyday life.

COURSE CODE : 16P3SOCT12
COURSE TITLE : APPLICATION OF RESEARCH SKILLS

COURSE OUTCOMES

CO 1. Internalize the basic terms, theories and emerging themes in Industry and work
CO 2. Compose all major approaches in studying Industry and work
CO 3. Acquire a grasp of Symbolic Interactionism and Exchange perspectives in Sociology
CO 4. Analytical skills on the emerging trends in Sociological theories

COURSE CODE : 16P3SOCT13
COURSE TITLE : ENVIRONMENTAL SOCIOLOGY

COURSE OUTCOMES

CO 1. Draw attention to the key concepts, facts, problems, trends, process, hypothesis and patterns.

CO 2. Explain Theories of Environment and society, which integrate diverse approaches to environment sustainability
CO 3. Recognize and explain the disaster and mitigation strategies
CO 4. Demonstrate interest in developing awareness and protecting our planet.

COURSE CODE : 16P3SOCT14
COURSE TITLE : SOCIOLOGY OF GLOBALISATION

COURSE OUTCOMES
CO 1. Introduce Globalization and all the related concepts
CO 2. Demonstrate the modern theorists to learn their theoretical outputs and to relate them to the situations around
CO 3. Generate an understanding on how Science and Technology is an institution by itself.
CO 4. Encouragement to comprehend how the world has shrunk due to the advancement of science & technology, trade, communication and transportation and how globalization has influenced marriage, family and religion

COURSE CODE : 16P3SOCT15
COURSE TITLE : SOCIAL CHANGE AND DEVELOPMENT

COURSE OUTCOMES
CO 1. Describe the key concepts, facts, problems, trends, process, hypotheses and pattern of development.
CO 2. Explain theories of development and society that integrates diverse approaches to sustainable social system.
CO 3. Recognize and explain unconstructive phase of industrialization and capitalism
CO 4. Display interest in developing awareness about Alternate Development models

SEMESTER 4

COURSE CODE : 16P4SOCT16
COURSE TITLE : CULTURAL ANTHROPOLOGY
COURSE OUTCOMES
CO 1. Develop an academic capacity on the fundamental framework of culture and hold the role of related theories and acquire critical overview on it.
CO 2. Extend an indulgence of the principled magnitude of culture, language and communication in India and the world in postmodern period
CO 3. Encompass the ability to identify various theoretical perspectives in anthropology understanding concepts, constructs, paradigms, theorists etc.
CO 4. Develop the cognitive capacity to relate postmodern cultural trends theories to everyday life and initiate research perceptions

COURSE CODE : 16P4SOCT17
COURSE TITLE : GENDER AND SOCIETY

COURSE OUTCOMES

CO 1. Familiarize with the key issues, questions and debates in Gender Studies.
CO 2. Exposure to the implications of gender in society, major issues relating to gender categories
CO 3. Develop gender-view as a major characteristic of evolving survival strategies in the era of technological development.
CO 4. Cultivate gender-view as a key characteristic of adaptive mechanisms in the context of globalisation and development

COURSE CODE : 16P4SOCT18
COURSE TITLE : INDUSTRY AND SOCIETY

COURSE OUTCOMES
CO 1. Internalize the basic terms, theories and emerging themes in Industry and work
CO 2. Compose all major approaches in studying Industry and work
CO 3. Acquire a grasp of Symbolic Interactionism and Exchange perspectives in Sociology
CO 4. Analytical skills on the emerging trends in Sociological theories

COURSE CODE : 16P4SOCT19
COURSE TITLE : POPULATION AND SOCIETY

COURSE OUTCOMES
CO 1. Provide students a basic knowledge on population realities, the dynamics of population and population transitions with due importance to its socio political implications
CO 2. Explain theories of population and society, which integrates diverse approaches to population sustainability
CO 3. Recognize and explain the disaster and mitigation strategies
CO 4. Demonstrate interest in developing awareness and population control

COURSE CODE : 16P4SOCT20
COURSE TITLE : SOCIOLOGY OF KERALA SOCIETY

COURSE OUTCOMES
CO 1. Familiarize with the historical, colonial and post - colonial dimensions of Kerala society.
CO 2. Encouragement to develop an understanding of the structural changes experienced by Kerala society on account of various social, economic and political forces.
CO 3. Illustrate why Kerala is called a consumerist State and learn the features of trade union culture of Kerala and analyse the structural changes happening in Kerala and its sociocultural importance
CO 4. Comprehend how migrant labourers contribute to the Kerala economy, the social distress evident among the young generation and changes happening in marriage, family and inheritance.

DEPARTMENT OF ZOOLOGY

B.SC. ZOOLOGY

Programme Specific Outcomes:

PSO 1 : Examine faunal diversity through scientific classification to grasp and appreciate the complex interactions among them and the environment and their role in sustainable environment.

PSO 2 : Demonstrate the principles of aquaculture, sericulture, apiculture, vermiculture, poultry and cattle farming for the economic prosperity of the society.

PSO 3 : Explain the concepts and principles of biochemistry, animal physiology, cell biology, molecular biology, genetics, biotechnology, general informatics and bioinformatics, endocrinology, developmental biology, evolution, zoogeography, ethology, ecology, disaster management, toxicology, microbiology, immunology, nutrition, community health, sanitation, ecotourism, biostatistics and research methodology and their applications in day-to-day life.

PSO 4 : Perform laboratory procedures in the areas of morphology, anatomy, taxonomy, applied zoology, biochemistry, animal physiology, cell biology, molecular biology, genetics, biotechnology, general informatics and bioinformatics, endocrinology, developmental biology, evolution, zoogeography, ethology, ecology, microbiology and immunology.

Course Outcome

SEMESTER 1

COURSE CODE : 19U1CRZOO01
COURSE TITLE : ANIMAL DIVERSITY - NON CHORDATA I

COURSE OUTCOMES

CO 1. Understand the history, branches and the scope of Biology
CO 2. Understand the concept of Symmetry and Coelom
CO 3. Understand the principles, nomenclature, classification, approaches and modern trends in taxonomy.
CO 4. Understand the concept of Two kingdom and Five kingdom classification in taxonomy

CO 5. Differentiate the animals in to phyla based on their characters.
CO 6. Analyze the life cycle and reproduction of Kingdom Protista and Animalia.

COMPLEMENTARY BOTANY FOR ZOOLOGY
COURSE CODE : 19U1CPBOT1
COURSE TITLE : CRYPTOGAMS, GYMNOSPERMS AND PLANT PATHOLOGY

COURSE OUTCOMES
CO 1. Understand the diversity of cryptogams and gymnosperms
CO 2. Understand the reproductive behavior in algae, fungi, bryophytes, pteridophytes and gymnosperms
CO 3. Understand ecological significance and economic importance of cryptogams and gymnosperms
CO 4. Know the evolutionary trends in cryptogams and gymnosperms
CO 5. Identify the plant diseases and it's control measures

COMPLEMENTARY CHEMISTRY FOR ZOOLOGY
COURSE CODE : 19U1CPCHE1: GENERAL CHEMISTRY

COURSE OUTCOMES
CO 1. Describe different models of atomic structure.
CO 2. Define acids and bases and explain the concept of equilibrium.
CO 3. Understand the concept of solubility and its applications in various fields.
CO 4. Explain the fundamentals of nuclear chemistry.
CO 5. Generate a basic idea on applications of nuclear energy in various fields and the possible hazards.
CO 6. Explain the fundamentals of analytical chemistry.
CO 7. Understand the basics of thermodynamics.

SEMESTER 2

COURSE CODE : 19U2CRZOO02
COURSE TITLE : ANIMAL DIVERSITY - NON CHORDATA-II

COURSE OUTCOMES
CO 1. Understand the taxonomic characteristics of non-chordate animals
CO 2. Understand the diversity of Phylum Platyhelminthes and Aschelminthes
CO 3. Understand the pathogenecity of worms of the phyla Platyhelithes and Aschelminthes
CO 4. Understand the taxonomic characteristics of Phylum Annelida
CO 5. Understand the diversity of Annelids
CO 6. Understand the taxonomic characteristics of Phylum Arthropoda, Phylum Mollusca and Phylum Echinodermata

CO 7. Understand the diversity of Phylum Arthropoda, Phylum Mollusca and Phylum Echinodermata
CO 8. Understand the evolutionary significance and taxonomic characteristics of Minor Phyla and Phylum Hemichordata

COURSE CODE : 19U2PRZOO01 PRACTICAL 1
COURSE TITLE : ANIMAL DIVERSITY – NON CHORDATA

COURSE OUTCOMES

CO 1. Understand the principles of biological laboratory instruments
CO 2. Develop skill in using simple as well as compound light microscopes
CO 3. Apply the skill of drawing using a camera lucida to trace the outline of a microscopic organism
CO 4. Identify, at least ten specimens, up to its genus by examining its morphology
CO 5. Understand the approaches and systems of classification as well as modern trends in animal taxonomy
CO 6. Understand the characteristics and classification of the Kingdom Protista
CO 7. Understand the Classification of Kingdom Animalia and the characteristics of Mesozoa, Parazoa and Metazoa
CO 8. Understand the characteristics and diversity of organisms that belong to different invertebrate animal phyla

COMPLEMENTARY BOTANY FOR ZOOLOGY
COURSE CODE : 19U2CPBOT2
COURSE TITLE : PLANT PHYSIOLOGY

COURSE OUTCOMES

CO 1. Know about basic mechanisms of various physiological processes related to plant life
CO 2. Understand the vital plant physiological functions such as photosynthesis and respiration in plants
CO 3. Know the functions of various plant growth regulators
CO 4. Know the water relation of plants and its significance.
CO 5. Understand and carry out experiments related to plant physiology

COMPLEMENTARY CHEMISTRY FOR ZOOLOGY
COURSE CODE ; 19U2CPCHE2: BASIC ORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. Understand the basics of organic chemistry.
CO 2. Understand various purification techniques like solvent extraction, distillation and crystallization.
CO 3. Develop an idea on stereochemistry of organic compounds
CO 4. Explain the basics of organic reaction mechanism.
CO 5. Discuss the classification and synthesis of polymers.
CO 6. Discuss the hazards of synthetic polymers/ plastics.

CO 7. Understand the concept of biodegradable alternatives for plastics.

SEMESTER 3

COURSE CODE : 15U3CRZOO03
COURSE TITLE : ANIMAL DIVERSITY – CHORDATA

COURSE OUTCOMES

CO 1. Understand the general classification of Phylum Chordata, sub phyla Urochordata and Cephalochordata their classes and specific examples
CO 2. Understand the classification of Sub phylum Vertebrata, divisions Agnatha and Gnathostomata, super class Pisces and its various classes with typical examples
CO 3. Understand the accessory respiratory organs in fish, parental care, scales in fishes, migration, common culture fishes and lung fishes
CO 4. Understand super class Tetrapoda, class Amphibia,elaborate study of type – frog, various orders under class Amphibia
CO 5. Understand the class Reptilia, its various subclasses with examples, identifying poisonous and non poisonous snakes
CO 6. Understand the class Aves, its various subclasses, migration in birds and flight adaptations in birds
CO 7. Understand the characteristics of Class Mammalia and detailed study of type - Rabbit
CO 8. Understand the various sub classes under Mammalia, their orders and examples and dentition in mammals and aquatic mammals

COMPLEMENTARY BOTANY FOR ZOOLOGY
COURSE CODE : 15U3CPBOT3
COURSE TITLE : ANGIOSPERM TAXONOMY AND ECONOMIC BOTANY

COURSE OUTCOMES

CO 1. Understand the morphology of angiosperms
CO 2. Understand the interdisciplinary aspects of taxonomy
CO 3. Understand botanical nomenclature
CO 4. Understand and apply the classification of angiosperms based on their floral features
CO 5. Understand and prepare standard herbarium sheets
CO 6. Understand the economic importance of angiosperms

CHEMISTRY COMPLEMENTARY FOR ZOOLOGY
COURSE CODE : 15U3CPCHE3.2
COURSE TITLE : INORGANIC AND BIOINORGANIC CHEMISTRY

COURSE OUTCOMES

CO 1. IIlustrate the role of chemistry in agriculture
CO 2. Know about oxygen carriers in biological systems
CO 3. Demonstrate the role of chemistry in enzymes and nucleic acids
CO 4. Analyse about the role of elements in medicine

SEMESTER 4

COURSE CODE : 15U4CRZOO04
COURSE TITLE : APPLIED ZOOLOGY

COURSE OUTCOMES

CO 1. Understanding of traditional methods of aquaculture and different cultivable fishes of Kerala and management practices for developing entrepreneurial skills.
CO 2. Understanding of fish culture techniques, fish diseases, fish preservation and processing aquarium fish management practices for developing entrepreneurial skills.
CO 3. Understanding of prawn culture, mussel culture and pearl culture
CO 4. Understanding of sericulture, species of silkworms, life history of silkworms, diseases and pests and management practices for developing entrepreneurial skills.
CO 5. Understanding of vermiculture and various species of earthworms
CO 6. Understanding of vermicomposting
CO 7. Understanding of Honey bee species, apiary, bee keeping methods, bee pasturage
CO 8. Understanding of diseases and pests of honey bees and apiculture management

COMPLEMENTARY BOTANY FOR ZOOLOGY
COURSE CODE : 15U4CPBOT4
COURSE TITLE : ANATOMY AND APPLIED BOTANY

COURSE OUTCOMES

CO 1. Understand the plant cell structure in a detailed manner
CO 2. Understand the tissue level organization in plant system
CO 3. Know and carry out the plant anatomical specimen preparations
CO 4. Understand the details of wood anatomy
CO 5. Understand the anomalous anatomical features in plant system
CO 6. Understand and apply the morphological and anatomical adaptations of plants to different habitats

CO 7. Understand various techniques and procedures in crop improvement
CO 8. Understand and carry out emasculation, layering, budding and grafting

CHEMISTRY COMPLEMENTARY FOR BOTANY
COURSE CODE : 15U4CPCHE4.2
COURSE TITLE : ADVANCED BIO-ORGANIC CHEMISTRY

COURSE OUTCOMES
CO 1. Examine the classification and properties of amino acids
CO 2. Demonstrate the classification, properties and structure of carbohydrates
CO 3. Evaluate the fundamentals of vitamins, hormones, steroids and lipids
CO 4. Analyse the basics of natural products
CO 5. Know about heterocyclic compounds
CO 6. Examine the fundamentals of chromatographic techniques

SEMESTER 5

COURSE CODE : 15U5CRZOO05
COURSE TITLE : CELL BIOLOGY AND MOLECULAR BIOLOGY

COURSE OUTCOMES
CO 1. Comprehend the history and scope of cell and molecular biology, cell theory, prokaryotes, eukaryotes, Actinomycetes, Mycoplasmas, virus, virion and viroids and prions
CO 2. Explain plasma membrane, the various models of plasma membrane and its modifications, cell permeability and functions
CO 3. Describe the ultrastructure of the cytoplasm and the various cell organelles and their functions
CO 4. Explain the structure and functions of the nucleus and a basic understanding of chromosomes and its structure
CO 5. Explain and compare cell division both mitosis and meiosis and the various cell signalling mechanisms
CO 6. Comprehend the basic nature of the genetic material, DNA structure, types, replication, modern concept of gene, prokaryotic and eukaryotic genome
CO 7. Interpret the central dogma of molecular biology, genetic code and protein synthesis in prokaryotes and eukaryotes
CO 8. Explain gene regulatory mechanisms, operon concept both lac operon and typtophan operon

COURSE CODE : 15U5CRZOO06
COURSE TITLE : ENVIRONMENTAL BIOLOGY, TOXICOLOGY AND DISASTER MANAGEMENT

COURSE OUTCOMES
CO 1. Illustrate the history, development, branches and scopes of Environmental Biology, Toxicology and Disaster Management

CO 2. Explain the structure, functions and classification of ecosystems.
CO 3. Appraise the conservation programs for the ecosystems and global environment
CO 4. Evaluate the importance of natural resources for the survival of humankind and evaluate the environmental issues caused by the misuse or overexploitation of these resources
CO 5. Summarise the harmful effects of waste materials, toxic materials, chemicals and minerals to the organisms and human health
CO 6. Distinguish natural and anthropogenic disasters and outline hazard preparedness and mitigation measures

COURSE CODE : 15U5CRZOO07
COURSE TITLE : EVOLUTION, ZOOGEOGRAPHY AND ETHOLOGY

COURSE OUTCOMES

CO 1. Understand origin of life on earth - origin of universe, chemical evolution, Miller-Urey experiment & Haldane and Oparin theory
CO 2. Differentiate various theories of organic evolution – Lamarckism, Weisman's germplasm theory, Mutation theory, Modern Synthetic theory(Neo Darwinism) and Neutral theory of molecular evolution
CO 3. Understand the concepts of population genetics and evolution - Genetic basis of variation, Hardy Weinberg equilibrium and gene frequencies
CO 4. Examine the basics of evolution above species level including adaptive radiation, microevolution, macroevolution, evolution of horse, mega evolution, punctuated equilibrium, speciation and evolution of horse& geological time scale
CO 5. Analyze the basic concepts of oorigin of oceans and continents, zoogeographical realms, insular fauna, biogeography of India with special reference to Western Ghats and the types, means and barriers of animal distribution
CO 6. Evaluate the definition, history and scope of Ethology
CO 7. Compare different types of learning
CO 8. Understand the basic concepts of sociobiology and evolution of human behavior, primates and human socio groups& human pheromones

COURSE CODE : 15U5RZOO08
COURSE TITLE : BIOCHEMISTRY, HUMAN PHYSIOLOGY AND ENDOCRINOLOGY

COURSE OUTCOMES

CO 1. Understand the structure, biological importance and metabolism of important carbohydrates, protein and lipids
CO 2. Understand the mechanism of enzyme action and role of enymes in metabolism.
CO 3. Understand the importance of balanced diet, role of vitamins and minerals in diet and nutritional disorders
CO 4. Understand the functional aspects of respiration and repiratorydisorders
CO 5. Understand the functional aspects of cardiovascular circulation, disorders related to it and the clinical aspects

CO 6. Understand the structure and function of human nitrogenous excretory organs and renal disorders
CO 7. .Understand structure and functional facets of neuro muscular system and physiological features of sports and exercise
CO 8. Understand the functional aspects of endocrine glands and the disorders associated with it

COURSE CODE : 15U5OCZOO1
COURSE TITLE : HUMAN GENETICS, NUTRITION, COMMUNITY HEALTH AND SANITATION

COURSE OUTCOMES

CO 1. Identify the basic principles of human genetics, the disorders associated with it and awareness on pre natal diagnosis
CO 2. Analyze the genetic principle of blood group inheritance, importance of blood donation, causes of infertility, DNA fingerprinting and its applications
CO 3. Evaluate the psychoneuroimmunology of physical activity, exercise, yoga and programmers' related to community health promotion
CO 4. Discuss the importance of balanced diet, and awareness on nutritional disorders
CO 5. Examine the principles of accident prevention and first aid
CO 6. Describe the microbiology of food borne diseases and their prevention Understand the pathology and control measures of emerging diseases, vector borne and life style diseases

SEMESTER 6

COURSE CODE : 15U6CRZOO09
COURSE TITLE : REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY

COURSE OUTCOMES

CO 1. Understand the definition, sub-divisions, terms, early history, applications and scope of embryology
CO 2. Understand the concepts of gametogenesis, fertilization, cleavage, blastulation, gastrulation, fate maps and egg types
CO 3. Understand the embryology of human, chick, frog and drosophila
CO 4. Understand the sexual cycle
CO 5. Understand the experimental embryology and regeneration in animals
CO 6. Understand the concept of teratology
CO 7. Understand the birth and developmental defects

COURSE CODE : 15U6CRZOO10
COURSE TITLE : GENETICS AND BIOTECHNOLOGY

COURSE OUTCOMES

CO 1. Understand of scope and importance of genetics, brief explanation of terms and laws of genetics
CO 2. Understand of gene interactions. Linkage and recombination of genes
CO 3. Understand of sex determination in man, honey bees, hormonal influence and environmental influence on sex and study of mutations, its types and molecular basis of mutations and understanding the concept of extra nuclear inheritance
CO 4. Understand of bacterial genetics, bacterial gene transfer, drug resistance, transposons, transposable genetic elements
CO 5. Understand of Human genetics, genetic disorders in man, autosomal and sex chromosomal anomalies,
CO 6. Understand of biotechnology, scope, importance, basic aspects of genetic engineering,, tools, vectors, DNA isolation, techniques in gene transfer
CO 7. Understand of general techniques in biotechnology, gene cloning, blotting techniques, hybridization techniques, stem cultures
CO 8. Understand of practical applications of biotechnology and problems and hazards of genetic engineering

COURSE CODE : 15U6CRZOO11
COURSE TITLE : MICROBIOLOGY AND IMMUNOLOGY

COURSE OUTCOMES

CO 1. Understand the history and scope of microbiology and outline classification of bacteria, fungi and viruses
CO 2. Understand the methods in microbiology
CO 3. Understand basic bacteriology.
CO 4. Understand basic virology
CO 5. Differentiate the types and carriers of microbial infections and the diseases caused.
CO 6. Understand the basics of immunology, antigens and antibodies.
CO 7. Understand the clinical applications of antigen-antibody reaction.
CO 8. Understand immune response system and their disorders.

COURSE COODE : 15U6CRZOO12
COURSE TITLE : GENERAL INFORMATICS, BIOINFORMATICS, BIOSTATISTICS AND RESEARCH METHODOLOGY

COURSE OUTCOMES

CO 1. MS Word, MS Excel, MS Access
CO 2. Internet: Access a web page on any biological topic.
CO 3. Frequency distribution, Range and standard deviation and Correlation using any biological data.
CO 4. Download a specified sequence from NCBI and search with it in BLAST, Download molecular structure data files of DNA, Sugar, Water etc and inspect them through Rasmol

CO 5. Download a specified DNA sequence from NCBI and identify ORF & genes, if any, in it.
CO 6. Download a specified AA sequence from NCBI and plot its hydrophobicity profile.
CO 7. Download and study at least two samples of genome sequences.
CO 8. Spotters—copies of genome sequences and proteins.
CO 9. Graphical representation of data. Construction of bar diagrams, Histograms, Pie diagram and Line graphs.
CO 10. Micrometry –calibration and measurement of microscopic objects –low power
CO 11. Paper chromatography
CO 12. Instrumentation

COURSE CODE : 15U6CRZOO13
COURSE TITLE : NUTRITION, COMMUNITY HEALTH AND SANITATION

COURSE OUTCOMES

CO 1. Appreciate the importance of health, physical activity, exercise, yoga and programmes related to community health promotion
CO 2. Explain the concept of balanced diet and awareness on nutritional disorders
CO 3. Examines the principles of accident prevention and first aid
CO 4. Discuss the pathology of water borne diseases and their prevention; waste water and solid waste management
CO 5. Appreciates the need for preventing food borne diseases
CO 6. Examine the various emerging pathogens and diseases

M.SC. ZOOLOGY

Programme Specific Outcomes:

PSO 1 : Demonstrate the advanced concepts of life at different levels of biological organization, from gene to genome, cell, tissue, organ, organ-systems and whole organisms; and drawing upon this knowledge, relate physiological adaptations, development, reproduction, behaviour and evolution of different forms of life.

PSO 2 : Interpret the ecological interconnectedness of life on earth; to relate the physical features of the environment to the structure of populations, communities and ecosystems; and analyse the various environmental issues for providing scientifically sound and socially acceptable solutions.

PSO 3 : Experiment with techniques and methods of analysis appropriate for different branches of biology with scientific temperament and problem-solving attitude.

PSO 4 : Acquire techniques and skills in the design and execution of research in

different branches of Zoology and in careers related to teaching in Zoology; as well as in having innovative ideas and necessary training to initiate unique start-ups and entrepreneurship in the realm of life sciences

Course Outcomes

SEMESTER 1

COURSE CODE : 16P1ZOOT01
COURSE TITLE : BIOSYSTEMATICS AND ANIMAL DIVERSITY

COURSE OUTCOMES

CO 1. Understand the basic concepts of systematic and taxonomy
CO 2. Discuss the procedures in taxonomy and ethics in publications
CO 3. Appreciate the contributions made by scientists and organisations towards conservation of animal diversity
CO 4. Analyze the present status of Indian fauna and the role played by ZSI for conservation of Indian fauna
CO 5. Examine the diversity of Palaeofauna
CO 6. Discuss the animal architecture
CO 7. Compare the invertebrate fauna by their characteristics
CO 8. Compare the vertebrate animals by their characteristics

COURSE CODE : 16P1ZOOT02
COURSE TITLE : EVOLUTIONARY BIOLOGY AND ETHOLOGY

CO OUTCOMES

CO 1. Describe the concepts of organic evolution
CO 2. Comprehend and analyse the evidences of biological evolution
CO 3. Discuss the process of animal evolution through studying the population genetics and ontogeny
CO 4. Describe the theories regarding human evolution and analyse the molecular evidences of our phylogeny
CO 5. Analyze the significance of studying Ethnology
CO 6. Describe the causal factors of behaviour and different types of behaviour
CO 7. Analyze the Neurophysiologic aspects of behaviour
CO 8. Discuss the processes underlying the expression of behaviour patterns by animals

COURSE CODE : 16P1ZOOT03
COURSE TITLE : BIOPHYSICS, INSTRUMENTATION AND BIOLOGICAL TECHNIQUES

COURSE OUTCOMES

CO 1. Interpret the biophysical principles that govern the functioning of life processes.
CO 2. Examine the interactions of electromagnetic radiations with matter.

CO 3. Illustrate the techniques for studying live cells and preserved cells under the microscope.
CO 4. Examine the principles of chromatographic and electrophoretic separation and characterisation of biomolecules.
CO 5. Elaborate the technique of centrifugation and its multiple uses in studying cells and biomolecules.
CO 6. Discover the physics behind radioactivity measurement for medical as well as environmental dosimetry.
CO 7. Explain the basic principles of bio-nanotechnology and its potential in biomedical applications
CO 8. Interpret the principles of colorimetric, spectroscopic, and biochemical assay techniques for monitoring physico-chemical perturbations of life processes.

COURSE CODE : 16P1ZOOT04
COURSE TITLE : BIOSTATISTICS, DIGITAL ANALYTICS AND RESEARCH METHODOLOGY

COURSE OUTCOMES
CO 1. Relate basics of statistics and measures of central tendency and dispersion
CO 2. Interpret correlation and regression analysis
CO 3. Solve probability, hypothesis testing and vital statistics
CO 4. Analyse the basics of computer application and software
CO 5. Utilize the application of SPSS and Primer6
CO 6. Perceive the basic concepts of research
CO 7. Summarize research formulation and design

SEMESTER 2

COURSE CODE : 16P2ZOOT05
COURSE TITLE : ECOLOGY, PRINCIPLES AND PRACTICES

COURSE OUTCOMES
CO 1. Perceive the fundamentals of ecology and environment – Physical environment, concept of homeostasis
CO 2. Relate the cybernetic nature of ecosystem - feedback control & redundancy of components; resistance and resilience stability, Gaia hypothesis.
CO 3. Discuss the structure and function of Ecosystem – Ecological energetics, Animals and nutrient acquisition Biomass and productivity measurement, Biogeochemical cycles
CO 4. Explain the concepts of population ecology – Population group properties, growth forms, life history strategies, population structure,
CO 5. Examine the concepts of population interactions and the concept of metapopulation
CO 6. Explain the concepts of community - community structure and attributes, ecotone and edge effect. Development and evolution of the ecosystem, guild
CO 7. Differentiate the different kinds of natural resources: Soil, mineral resources, forest resources, aquatic resources, depletion of resources and impacts on quality of life.
CO 8. Differentiate different types energy resources- Energy use pattern, recent issues and concepts in energy production and utilization.

COURSE CODE : 16P2ZOOT06
COURSE TITLE : GENETICS AND BIOINFORMATICS

COURSE OUTCOMES

CO 1. Understand the principles of Genetic Transmission
CO 2. Understand the Molecular Organization of Chromosomes and Fine structure of Genes
CO 3. Understand Genetic Linkage, Recombination and Chromosome mapping
CO 4. Understand DNA replication and Gene Mutation
CO 5. Understand the concepts of Human Genetics, Extra-chromosomal Inheritance, Epigenetics, Quantitative and Population Genetics
CO 6. Understand various Bioinformatics databases and their functional areas
CO 7. Understand the idea of sequence similarity search and sequence analysis methodology
CO 8. Understand the basic idea of Genomics, Proteomics, systems biology and metabolomics

COURSE CODE : 16P2ZOOT07
COURSE TITLE : DEVELOPMENTAL BIOLOGY

COURSE OUTCOMES

CO 1. Define gametogenesis and the process of formation of embryos, and molecular mechanisms that regulate embryo formation
CO 2. Assess the process of fertilization and molecular mechanisms working for keeping the identity of species
CO 3. Recall the critical nature of axis and structure formation during early embryonic life
CO 4. Illustrate the factors and molecules that have critical roles in normal formation of embryos
CO 5. Discuss the process of post embryonic development and regeneration
CO 6. Identify the different perturbations during embryo formation
CO 7. Discover the applied aspects of embryogenesis for treatment of infertility in human beings
CO 8. Examine the potential of stem cells and scope of therapeutic cloning

COURSE CODE : 16P2ZOOT08
COURSE TITLE : BIOCHEMISTRY

COURSE OUTCOMES

CO 1. Understand structure and classification of different biomolecules – protein, lipid, carbohydrate and nucleic acid.
CO 2. Examine the metabolic pathways of different biomolecules
CO 3. Discuss the disorders of the biomolecules
CO 4. Evaluate the different enzymes and its kinetics
CO 5. Analyze the biological roles of biomolecules
CO 6. Discuss the synthesis and derivatives of biomolecules

SEMESTER 3

COURSE CODE : 16P3ZOOT09
COURSE TITLE : ANIMAL PHYSIOLOGY

COURSE OUTCOMES

CO 1. Explain and compare the functioning of organ systems across the animal world
CO 2. Illustrate the mechanism of regulating food intake in human beings as well as problems related with overeating and resultant obesity
CO 3. Explain the structure of different types of hearts in animals, and examine the functioning of respiratory and circulatory systems of human beings together with their diseases
CO 4. Explain the osmoregulatory and excretory systems of human body and the factors regulating these processes
CO 5. Outline the functioning of neurons, nerves and muscles
CO 6. Illustrate the structure of sense organs and the transduction processes which convert changes in physical/chemical environment into nerve signals
CO 7. Examine the mechanism of thermoregulation in human body
CO 8. Analyze the chemical coordination system of animal body and examine the reproductive physiology in relation to endocrinology of mammals

COURSE CODE : 16P3ZOOT10
COURSE TITLE : CELL AND MOLECULAR BIOLOGY

COURSE OUTCOMES

CO 1. Understand the structure of a living cell and its associations at molecular level
CO 2. Appreciate the role played by various cell organelles and cytoskeleton
CO 3. Analyze the role played by cell signaling pathways
CO 4. Describe the process involved in cell cycle and molecules involved
CO 5. Distinguish between a cancerous cell from non-cancerous one
CO 6. Examine the concept of gene expression
CO 7. Discuss the role played by various molecules at different levels of gene regulation

COURSE CODE : 16P3ZOOT11
COURSE TITLE : MICROBIOLOGY AND BIOTECHNOLOGY

COURSE OUTCOMES

CO 1. Perceive the basic concepts of microbiology – Methods, classification, functional anatomy of prokaryotic cells
CO 2. Discuss the advanced concepts of microbial metabolism, nutrition, growth, interactions and ecology
CO 3. Discuss the advanced concepts of virology
CO 4. Explain the concepts of applied microbiology – Bacteriology of air, water and soil; food microbiology, medical microbiology, bioweapons and bioterrorism
CO 5. Perceive the basic definitions and scope of biotechnology, intellectual property rights, biosafety and bioethics
CO 6. Differentiate the various tools and techniques in Recombinant DNA Technology

CO 7. Differentiate the various tools and techniques in Animal Biotechnology
CO 8. Extend the advanced concepts of the applications of biotechnology in healthcare, industry, agriculture and environmental biotechnology

COURSE CODE : 16P3ZOOT12
COURSE TITLE : IMMUNOLOGY

COURSE OUTCOMES

CO 1. Explain the overview of immune system
CO 2. Outline antigens and antibodies and their interactions
CO 3. Explain the complement system
CO 4. Classify and interpret the Immune effector mechanisms
CO 5. Explain about allergy and hypersensitivity
CO 6. Explain about the Major Histocompatibility Complex (MHC)
CO 7. Explain the mechanism of immune reactions behind health problems and diseases
CO 8. Explain and intepret the basics of immunological techniques

SEMESTER 4

COURSE CODE : 16P4ZOOT13
COURSE TITLE : ENVIRONMENTAL SCIENCE: CONCEPTS AND APPROACHES

COURSE OUTCOMES

CO 1. Examine the concepts of physical environment – Lithosphere, atmosphere and hydrosphere
CO 2. Differentiate the fundamental and advanced concepts of weather and climate
CO 3. Outline the climate of India
CO 4. Examine the concepts of Landscape ecology
CO 5. Appreciates the need for Biodiversity Conservation
CO 6. Evaluate the major environmental/conservation laws and rules and biogeography of India
CO 7. Examine the concepts of biological invasions

COURSE CODE : 16P4ZOOT14
COURSE TITLE : ENVIRONMENTAL POLLUTION AND TOXICOLOGY

COURSE OUTCOMES

CO 1. Understand the concepts of pollution
CO 2. Understand air and water pollution
CO 3. Understand the sources and the factors affected by soil pollution
CO 4. Understand the management of solid waste, the various rules in place regarding hazardous waste, biomedical and plastic waste
CO 5. Understand the concepts of noise, thermal and oil pollution
CO 6. Understand the concepts of Radiation pollution
CO 7. Understand the definition, doses and toxic chemicals in the environment
CO 8. Understand occupational toxicology, toxicity testing and biomonitoring of toxic chemicals

COURSE CODE : 16P4ZOOT15
COURSE TITLE : ENVIRONMENTAL MANAGEMENT AND DEVELOPMENT

COURSE OUTCOMES

CO 1. Discuss the principles of environmental management, modelling and auditing
CO 2. Discuss the fundamental and advanced concepts of environmental management concepts
CO 3. Describe environmental planning, ecoremediation and restoration
CO 4. Examine the concepts and objectives of EIA and its processes like Baseline data collection, Impact assessment, Impact prediction, EMP
CO 5. Examine the concepts EIA documentation, types of impact assessment, SEA, CIA, SIA
CO 6. Evaluate the concepts and principles of remote sensing and GIS and their applications to environmental studies
CO 7. Understand Environment and Development, land use pattern, participatory environmental management strategies
CO 8. Discuss the concepts of sustainable development