SYLLABUS DIBRUGARH UNIVERSITY FYUGP 2020

B.Sc. IN CHEMISTRY (NEP)

PROGRAMME LEARNING OUTCOMES

By the end of the programme an undergraduate student of Chemistry should be able to:

1. Understand the basic principles of various branches of Chemistry.
2. Demonstrate a range of practical skills to conduct and infer experiments independently and in groups.
3. Apply the key concepts and standard methodologies to solve problems related to Chemistry.
4. Apply methodologies to the solution of unfamiliar types of problems.
5. Exhibit skills leading to employability in Chemistry and allied industries.
6. Comprehend the fundamental aspects of research in Chemistry.
7. Possess the level of proficiency in the subject required for post-graduation as well as for pursuing research in Chemistry and related interdisciplinary subjects.
8. Demonstrate teaching competencies required for keeping oneself professionally engaged.

TEACHING LEARNING PROCESS

The programme allows using of varied pedagogical methods and techniques both within the classroom and in laboratories.

- Lecture
- Tutorial
- Power Point presentation
- Project Work/Dissertation
- Seminars/workshops/conferences
- Industry Visits/Field Visits and Report

TEACHING LEARNING TOOLS

- White/Green/Black Board
- LCD projectors/Monitor
- Smart Board
- Model Demonstration
- Learning through lab experiments
- Industry and research visits

ASSESSMENT

- Home assignment
- Project Report
- Seminar Presentation
- Objective /MCQ test
- In semester examinations (Theory and Practical)
- End Semester examinations (Theory and Practical)
- Viva-voce

COURSE OUTCOMES

Title of the Course : Chemistry C1: Inorganic + Physical + Organic
Course Code: C - 01
Nature of the Course: CHEMISTRY MAJOR (1st sem)

COURSE OBJECTIVES:

• To give idea about the basic knowledge of chemistry in different field of specializations (viz. inorganic, organic and physical chemistry)

After the completion of this course, the learner will be able to:

CO1: Develop a solid understanding of fundamental concepts in periodic properties, bonding, gas and liquid properties, organic chemistry, and stereochemistry.
CO2: Apply theoretical knowledge to solve problems and predict chemical behavior.
CO3: Perform experimental techniques proficiently, analyze data, and draw accurate conclusions.
CO4: Enhance critical thinking, analytical skills, and the ability to communicate scientific information effectively.

Title of the Course: Fundamentals of Chemistry-1
Course Code: MINOR-01
Nature of the Course: CHEMISTRY MINOR COURSE-1

COURSE OBJECTIVES:

To develop the basic knowledge of chemistry in relation to atomic structure, bonding. To emphasize on different states of matter & their mechanical treatment; to develop preliminary knowledge in basic organic chemistry, hydrocarbons, stereochemistry & conformational analysis etc.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:
CO1: Analyze and apply fundamental principles of atomic structure and chemical bonding to predict the behavior of elements and compounds.
CO2: Apply methods and procedures to solve the Schrödinger wave equation, determine electronic configurations, and analyze periodic properties.
CO3: Explain Schrödinger's wave equation, periodic properties, kinetic gas equation, and the significance of electronic displacements and mechanisms in organic reactions.
CO4: Use principles of ionic bonding, kinetic theory, and organic reaction mechanisms to solve related problems and predict outcomes in practical scenarios.
CO5: Differentiate between various types of molecular interactions, such as ionic bonds, hydrogen bonds, and van der Waals forces, and interpret the behavior of gases and liquids under different conditions.
CO6: Assess the stability and solubility of ionic compounds, the effects of temperature and pressure on physical properties of liquids, and the strength of organic acids and bases.
CO7: Conduct qualitative inorganic analysis, prepare aliphatic hydrocarbons, and utilize laboratory techniques to measure physical properties of liquids and identify various radicals in samples.

Title of the Course: Basic Analytical Chemistry
Course Code: SEC - 01
Nature of the Course: CHEMISTRY SEC-01

COURSE OBJECTIVES:

- To provide a basic understanding of chemical analysis of soil, water, food products, cosmetics and separation techniques (viz. chromatography, ion exchange, etc.)

COURSE OUTCOMES:
At the end of this course, students will be able to-
CO1: Develop a thorough understanding of the principles and practices in analytical chemistry, including sampling, measurement accuracy, and data presentation.
CO2: Gain practical experience in analyzing soil, water, and food products, understanding their composition, and detecting adulterants.
CO3: Learn the techniques in chromatography and ion-exchange, and apply these techniques to real-world samples.
CO4: Acquire skills in analyzing cosmetics and conducting advanced practical experiments to measure various chemical parameters.

CO5: Enhance critical thinking and problem-solving abilities in the context of analytical chemistry applications.

Title of the Course: Chemistry C2: Inorganic + Physical + Organic
Course Code: C - 02
Nature of the Course: CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To give concept about the chemistry of non-transition elements, metallurgy, 1st law of thermodynamics, solid state chemistry and chemistry of aliphatic hydrocarbons.

COURSE OUTCOMES:
At the end of this course, students will be able to
CO1: Develop a comprehensive understanding of the properties and reactions of non transition elements and metals.
CO2: Gain in-depth knowledge of chemical thermodynamics and the properties of solids, including crystallography and X-ray diffraction.
CO3: Master the formation and reactions of carbon-carbon sigma and pi bonds, with a focus on alkanes, alkenes, and alkynes.
CO4: Acquire practical laboratory skills in the purification and analysis of organic compounds, enhancing problem-solving abilities and technical expertise in analytical techniques.

Title of the Course: Fundamentals of Chemistry-2
Course Code: MINOR-02
Nature of the Course: CHEMISTRY MINOR COURSE-2

COURSE OBJECTIVES:

- To develop the basic knowledge of chemistry in relation to atomic structure, bonding. To emphasize on different states of matter & their mechanical treatment.
- To develop preliminary knowledge in basic organic chemistry, hydrocarbons, stereochemistry & conformational analysis etc.

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

CO1: Apply the concepts of Werner's theory, isomerism in coordination compounds and Valence Bond and Crystal Field theories, to understand and solve problems related to the structure and function of coordination compounds.
CO2: Evaluate the bonding and structural properties of various inorganic and organic compounds by applying concepts of covalent bonding theories, including hybridization, VSEPR, resonance and MO.
CO3: Gain a clear understanding of coordination chemistry, including its theories, naming rules, and types of ligands.
CO4: Learn about chemical bonding, molecular structures, and the basics of solid-state chemistry.
CO5: Understand stereochemistry and the chemistry of aliphatic hydrocarbons, including how to make and react them.
CO6: Develop practical lab skills in measuring surface tension, viscosity, and pH, and in making buffer solutions, which will improve your problem-solving and technical abilities in analytical techniques.

Title of the Course: Basic Analytical Chemistry-02
Course Code: SEC - 02
Nature of the Course: CHEMISTRY SEC-02

COURSE OBJECTIVES:

- The course aims to provide students with a basic scientific and technical understanding of the production, behavior and handling of hydrocarbon fuels, petrochemicals and lubricants. This will enable them to be industry ready to contribute effectively in the field of petroleum chemistry and technology.

COURSE OUTCOMES: At the end of this course, students will be able to-
CO1: Develop a thorough understanding of energy sources, their classification, and the calorific value of fuels.
CO2: Gain comprehensive knowledge of coal, its industrial uses, and the production and applications of its derivatives.
CO3: Learn about the petroleum and petrochemical industry, including the composition and processing of crude petroleum, and the significance of various petrochemicals.
CO4: Understand the classification, properties, and applications of lubricants.
CO5: Acquire hands-on experience in conducting experiments related to lubricants and fuel analysis, enhancing problem-solving and technical skills in analytical techniques.

Title of the Course: Chemistry C3: Inorganic + Physical + Organic
Course Code: C - 03
Nature of the Course: CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To develop the basic knowledge of chemistry in relation to d and f block elements and coordination compounds
- To develop the basic knowledge of chemistry in relation to chemical thermodynamics and ionic equilibrium
- To develop the basic knowledge of chemistry in relation to cycloalkanes and conformational analysis and chemistry of halogenated hydrocarbons.

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

CO1: Develop a solid understanding of the properties and behaviors of d and f block elements and coordination compounds.

CO2: Gain comprehensive knowledge of chemical thermodynamics and ionic equilibrium.

CO3: Learn the concepts and applications of cycloalkanes, conformational analysis, and halogenated hydrocarbons.

CO4: Acquire practical laboratory skills in measuring surface tension and viscosity, enhancing analytical and problem-solving abilities.

Title of the Course: Chemistry C4: Inorganic + Physical + Organic
Course Code: C - 04
Nature of the Course: CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To understand the concepts of acids and bases, including Brönsted-Lowry and Lewis theories, and the application of HSAB principles.
- To learn about inorganic reaction mechanisms, conductance, and electrochemistry, including substitution reactions in complexes, conductometric titrations, and the principles of electrochemical cells.
- To explore aromatic hydrocarbons, electrophilic aromatic substitution, and the chemistry of C-O bonds in alcohols, phenols, ethers, and epoxides,
- To conduct experimental work in conductometry, thermochemistry, and qualitative organic analysis.

COURSE OUTCOMES: At the end of this programme, students will be able to-

CO1: Develop a solid understanding of the properties and behaviors of acids, bases, and inorganic reaction mechanisms.

CO2: Gain comprehensive knowledge of conductance, electrochemistry, aromatic hydrocarbons, and the chemistry of the C-O bond.
CO3: Learn the concepts and applications of theoretical principles in practical contexts.
CO4: Acquire practical laboratory skills in inorganic synthesis, enhancing analytical and problem-solving abilities.

Title of the Course: Fundamentals of Chemistry - 3
Course Code: MINOR-03
Nature of the Course: CHEMISTRY MINOR COURSE-3

COURSE OBJECTIVES:

- To give the concept of physico-chemical methods involved in metallurgy; first and second law thermodynamics; aromatic hydrocarbons and reactions involved etc.

COURSE OUTCOMES:

At the end of this course, students will be able to-
CO1: Develop a clear and comprehensive understanding of non-metal chemistry, metallurgical principles, thermodynamics, and organic chemistry.
CO2: Gain detailed knowledge of the properties, preparation methods, and reactions of important chemical compounds.
CO3: Apply theoretical principles in practical scenarios, including laboratory experiments.
CO4: Acquire practical skills in qualitative analysis, enhancing analytical and problem solving abilities in chemical investigations.

Title of the Course: Inorganic Materials of Industrial Importance
Course Code: SEC - 03
Nature of the Course: CHEMISTRY SEC-03

COURSE OBJECTIVES:

- The course introduces the students to the diverse roles of inorganic materials in the industry. It gives an insight into how these raw materials are converted into products used in day-to-day life. Students learn about silicates, fertilizers, surface coatings and batteries. The course helps develop the interest of students in the frontier areas of inorganic and material chemistry.

COURSE OUTCOMES:

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

CO1: Develop a comprehensive understanding of silicate industries, fertilizers, surface coatings, and battery technology.

CO2: Apply theoretical knowledge to analyze and evaluate the production processes, properties, and applications of materials used in these industries.

CO3: Assess the effectiveness, environmental impact, and technological advancements in silicate industries, fertilizer production, surface coatings, and battery technology.

CO4: Apply critical thinking skills to address challenges related to material production, environmental sustainability, and technological innovation in these industries.

CO5: Conduct experiments to determine free phosphoric acid in fertilizers and CaO in cement and create pigments like Prussian blue, Malachite green, and chrome yellow, and evaluate their properties.

Title of the Course: Chemistry C5: Inorganic

Course Code: C-05

Nature of the Course: CHEMISTRY MAJOR

OBJECTIVES:

- To develop the knowledge of chemistry in relation to nuclear chemistry.
- To develop the knowledge of chemistry in relation to various statistical methods of analysis
- To develop the preliminary idea on organometallic chemistry
- To introduce various organic reagents and their applications in inorganic analysis

COURSE OUTCOMES:

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

CO1: To define mass defect, binding energy, accuracy, precession, etc.

CO2: To identify different organic reagents in inorganic analysis

CO3: To distinguish nuclear fission and fusion reactions

CO4: To explain18 electron rule

CO5: To elucidate the structures of mononuclear and binuclear carbonyls using VBT

CO6: To apply organic reagents in inorganic analysis

CO7: To estimate of Ca 2+ and Mg 2+ by EDTA and Cu2+ by iodometric method

Title of the Course: Chemistry C6: Physical
Course Code: C - 06
Nature of the Course: CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To acquaint students in details on chemical kinetics, catalysis and surface chemistry.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:

CO1: Develop a comprehensive understanding of chemical kinetics, surface chemistry, and catalysis principles and their applications.

CO2: Apply theoretical knowledge and experimental techniques to analyze reaction mechanisms, rate laws, and surface phenomena.

CO3: Evaluate the factors influencing reaction rates, adsorption processes, and catalytic mechanisms using kinetic data and experimental results.

CO4: Apply critical thinking skills to design experiments, interpret experimental data, and solve problems related to reaction kinetics and surface chemistry.

Title of the Course: Chemistry C7: Organic
Course Code: C - 07
Nature of the Course: CHEMISTRY MAJOR

OBJECTIVES:

- To make the students familiar about chemistry of carbonyl compounds, carboxylic acids, thiols and amines.
- To provide knowledge about natural as well as synthetic polymers.

COURSE OUTCOMES:

After the end of the course students will be able to

CO1: Learn preparation and properties aldehyde, ketone, carboxylic acid, thiols, amines, etc.

CO2: Understand and analyze the mechanisms of key name reactions involving organic compounds, such as Aldol condensation, Cannizzaro reaction, and Hofmann rearrangement.

CO3: Perform systematic qualitative analysis of organic compounds containing functional groups such as -OH, -NH2, -NO2, -CONH2, -CHO, and -COOH.

Title of the Course: Chemistry C8: Symmetry & Quantum Chemistry-I
Course Code: C - 08
Nature of the Course: CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To make the students familiar with symmetry elements & point groups and the various aspects of basic quantum mechanics with special reference to classical mechanics.

COURSE OUTCOMES: After the completion of this course, the learner will be able to:

C01: Develop a comprehensive understanding of symmetry and group theory principles, quantum mechanics foundations, and experimental techniques in analytical chemistry.
CO2: Apply theoretical knowledge and experimental skills to identify molecular symmetries, analyze quantum mechanical systems, and conduct analytical experiments.
CO3: Evaluate molecular structures, wave functions, and experimental data to assess symmetry elements, energy levels, and chemical concentrations.
CO4: Apply critical thinking skills to solve problems related to molecular symmetry, quantum mechanics, and experimental analysis in chemistry.
CO5: Perform pH metric titrations, prepare buffer solutions to analyze the interaction between different types of acids and bases, including strong acid vs. strong base, weak acid vs. strong base, and strong acid vs. weak base.
CO6: Determine the concentration of optically active substances through polarimetric methods, enhancing the understanding of optical activity and its applications in chemical analysis.

Title of the Course : Fundamentals of Chemistry-4
Course Code : MINOR-04
Nature of the Course : CHEMISTRY MINOR COURSE-4

COURSE OBJECTIVES:

- To develop the knowledge about industrial chemistry like-glass, ceramics and cements.
- To develop the knowledge about nuclear chemistry.
- To study the principles of chemical kinetics and the properties of different types of solutions.
- To study the preparations and the properties of aryl halides, alcohols, phenols and ethers.

COURSE OUTCOMES:

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

CO1: Recall key concepts in industrial chemistry, nuclear chemistry, chemical kinetics, and solution chemistry.
CO2: Develop a comprehensive understanding of the principles underlying industrial chemistry, nuclear chemistry, chemical kinetics, and solution chemistry.
CO3: Apply theoretical knowledge and experimental skills to analyze and solve problems related to industrial processes, reaction kinetics, and solution behavior.
CO4: Analyze reaction mechanisms, solution properties, and experimental data to draw conclusions and make predictions.
CO5: Evaluate the effectiveness of reaction mechanisms, solution properties, and experimental procedures to assess their reliability and accuracy.
CO6: Design experiments, propose solutions, and develop new methodologies to address challenges in chemistry and enhance understanding of chemical phenomena.

Title of the Course: Chemistry C9: Inorganic
Course Code: C-09
Nature of the Course: CHEMISTRY MAJOR

OBJECTIVES:

- To develop the basic knowledge of chemistry in relation to organometallic compounds and catalysis by organometallic compounds.
- To emphasize on different terms related to organometallic compounds, metal clusters and inorganic polymers.
- To develop the preliminary knowledge about synergic effect, PSEP Theory, synthesis, structural aspects and applications of inorganic polymers, etc.
- To develop the basic knowledge of chemistry in relation to different types chromatographic methods.

COURSE OUTCOMES:

At the end of this programme, students will be able to-
CO 1. Analyze and apply isolobal analogies and general methods of preparation for mono and binuclear carbonyls of 3d series transition metals.
CO 2. Evaluate the role of triethylaluminium in the polymerization of ethene and the species present in the ether solution of Grignard reagents, including their structures.
CO 3. Analyze the preparation, structure, aromaticity, and reactivity of ferrocene, and compare its aromaticity and reactivity with that of benzene.
CO 4. Apply and explain the mechanisms of industrial catalytic processes involving organometallic compounds, including alkene hydrogenation, hydroformylation, Wacker process, and Fischer-Tropsch reaction.

CO 5. Evaluate the synthesis, properties, and structures of transition metal clusters and nitrosyl compounds, including the application of polyhedral skeletal electron pair theory (PSEPT) for cluster compounds.
CO 6. Analyze the types, synthesis, structural aspects, and applications of inorganic polymers, including silicones, siloxanes, borazines, silicates, and phosphazenes.
CO 7. Apply chromatographic methods such as paper, thin layer, column, and gas chromatography for the separation of compounds, and explain the principles of High Performance Liquid Chromatography (HPLC).
CO 8. Conduct experimental estimations of Nickel (II) using DMG and determine the percentage of mixed oxides in ores such as hematite, dolomite, and limestone.

Title of the Course : Chemistry C10: Physical
Course Code : C - 10
Nature of the Course : CHEMISTRY MAJOR

COURSE OBJECTIVES:
- To understand physical chemistry in the form of physical forces which govern our surroundings, their mathematical expression and applications.

After the completion of this course, the learner will be able to:
CO1: Understand fundamental concepts of dilute solutions and colligative properties.
CO2: Understand thermodynamic principles in systems of variable composition and chemical equilibrium and also analyze ideal gases and equilibrium systems.
CO3: Analyze experimental data from titrations and conductometric measurements.
CO4: Evaluate experimental results and theoretical principles in solution chemistry.
CO5: Design and conduct experiments to investigate solution behavior and properties.

Title of the Course: Chemistry C11: Organic
Course Code: C - 11
Nature of the Course: CHEMISTRY MAJOR

Course objective:
1. To make the students familiar about chemistry of Heterocyclic compounds, carbohydrates Nucleic acids, etc.
2. To provide basic concept of disconnection approach

COURSE OUTCOMES:
After the end of the course students will be able to-

CO1: Understand the classification, nomenclature, structure, synthesis, and properties of various heterocyclic compounds, amino acids, peptides, nucleic acids, and pharmaceutical compounds.
CO2: Apply the principles of synthesis and reaction mechanisms to heterocyclic compounds, amino acids, peptides, and pharmaceutical compounds, and perform practical techniques such as isolation, separation, and estimation in the laboratory.
CO3: Analyze the aromaticity and substitution reactions of heterocyclic compounds, the primary structures of peptides and proteins, and the disconnection approach in organic synthesis.
CO4: Evaluate the synthesis and biological roles of nucleic acids and enzymes, and assess the therapeutic uses and modes of action of various pharmaceutical compounds.
CO5: Synthesize peptides using N-protecting, C-protecting, and C-activating groups, and design retrosynthetic pathways for monofunctionalized and bifunctionalized compounds.
CO6: Perform experimental procedures to isolate and characterize DNA, separate amino acids, estimate protein content, and prepare biodiesel, demonstrating proficiency in laboratory techniques.

Title of the Course: Fundamentals of Chemistry-5
Course code: MINOR-05
Nature of the course: CHEMISTRY MINOR COURSE-5

COURSE OBJECTIVES:

- To develop the idea about supra molecular and nano materials
- To develop the basic knowledge of chemistry in relation to metal ions present in biological systems, toxicity of metal ions.
- To develop the knowledge about the principles of conductance, including conductivity, transference numbers, and their applications.
- To learn electrochemistry concepts such as EMF, Nernst equation, electrode potentials, and their practical applications.
- To study the preparations and the properties of aldehydes, ketones and carboxylic acid.

COURSE OUTCOMES:

At the end of this course students will be able to-
CO1: Gain insight into material chemistry, including supra molecular interactions, solid state reactions, and the synthesis and characterization of nano materials.
CO2: Understand the role of various metals in biological systems and the toxicity of certain metal ions.

CO3: Apply knowledge of conductance principles to analyze the behavior of electrolytes and conductometric titrations and to understand reversible and irreversible cells, EMF measurements, and commercial applications of galvanic cells.
CO4: Analyze the properties and reactions of aldehydes, ketones, carboxylic acids, and their derivatives in both aliphatic and aromatic compounds.
CO5: Design and conduct experiments in potentiometric titrations and conductometry to determine specific conductance, degree of dissociation, and conductometric titrations for various acid-base systems.

Title of the Course : Chemistry C12: Inorganic
Course Code : C-12
Nature of the Course : CHEMISTRY MAJOR

OBJECTIVES:

- To develop the basic knowledge of chemistry in relation to metal ions present in biologicalsystems, toxicity of metal ions.
- To develop idea about supra molecular and nano materials
- To develop the knowledge about industrial chemistry like-glass, ceramics and cements.

COURSE OUTCOMES:
At the end of this course, students will be able to:
CO1: Recognize roles and classifications of metal ions in biological systems to understand supramolecular interactions and nanomaterial properties.
CO2: Identify properties and manufacturing processes of glass, ceramics, and cement.
CO3: Explain biological and medical roles of metal ions and apply chemistry principles to synthesize nanomaterials.
CO4: Analyze metal ion effects in biological systems and assess applications of nanomaterials and composites.
CO5: Evaluate functions of metalloproteins, metalloenzymes and nanomaterial synthesis methods.
CO6: Perform qualitative analysis of inorganic salts and identify interfering radicals.

Title of the Course : Chemistry C13: Physical
Course Code : C - 13
Nature of the Course : CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To acquaint students in details on phase equilibria, colloidal state,and various aspects of photochemistry.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:

CO1: Develop a comprehensive understanding of phase equilibria and interpret phase diagrams for both single-component and multi-component systems, including solid liquid equilibria and binary solutions.

CO2: Apply knowledge of colloidal state principles to analyze phenomena such as electrokinetics, colloidal stability, coagulation, and emulsions.

CO3: Utilize theories of colloidal stability and properties in practical scenarios, such as determining Avogadro's number and understanding mechanisms of coagulation.

CO4: Analyze the characteristics of electromagnetic radiation and the fundamental laws governing photochemistry and understand photochemical reactions, quantum yield, and the significance of photochemistry in biochemical processes.

CO5: Design and execute experiments to investigate critical solution temperature, distribution phenomena, and colloidal properties, applying the principles acquired during the course.

Title of the Course : Chemistry C14: Organic

Course Code : C - 14

Nature of the Course : CHEMISTRY MAJOR

Course objective:

1. To make the students familiar about chemistry of carbohydrates, dyes and lipids
2. To provide basic concept of Pericyclic reaction and spectroscopy.

COURSE OUTCOMES:

After the end of the course students will be able to-

CO1: Understand the fundamental principles and applications of various spectroscopic techniques (UV, IR, NMR, Mass Spectrometry) and their roles in identifying organic molecules.

CO2: Apply spectroscopic methods to analyze and interpret the structures of simple organic compounds, and perform laboratory experiments to extract, saponify, and determine values related to lipids and other compounds.

CO3: Analyze the structural and functional aspects of carbohydrates, lipids, and dyes, including their classification, synthesis, and reactions, using both theoretical and practical approaches.

CO4: Evaluate the mechanisms and stereochemistry of pericyclic reactions, and assess the chemical properties and synthesis of various dyes, considering their industrial and biological significance.

CO5: Synthesize and characterize organic compounds, including carbohydrates and dyes, utilizing learned reactions and spectroscopic techniques, and plan experimental approaches for analyzing chemical properties of substances.

CO6: Develop practical skills through hands-on experiments, such as the identification of organic compounds by IR and NMR spectroscopy, extraction of caffeine, and determination of saponification and iodine values of oils and fats.

Title of the Course : Chemistry C15: Spectroscopy
Course Code : C - 15
Nature of the Course : CHEMISTRY MAJOR

COURSE OBJECTIVES:

- To make the students familiar with the interaction of electromagnetic radiation with matter in various forms.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:
CO1: Understand spectroscopy principles, including interaction with molecules and types of spectra of rotation spectroscopy and Raman scattering concepts.
CO2: Apply vibrational and electronic spectroscopy to analyze molecular structures
CO3: Use spin resonance spectroscopy to interpret spectra and identify molecules.
CO4: Analyze spectroscopic data to draw conclusions about molecular properties.
CO5: Design and conduct spectroscopic experiments to determine concentrations and study reaction kinetics.

Title of the Course: Fundamentals of Chemistry - 6
Course Code: Minor 06
Nature of the Course: CHEMISTRY MINOR COURSE-6

COURSE OUTCOMES:

- To develop the knowledge about potable water, sampling and purification methods of water.
- To develop the knowledge about determination of dissolved oxygen, pH, acidity and alkalinity of a water sample.
- To understand the principles and applications of phase and chemical equilibrium, including Gibbs Phase Rule, phase diagrams, free energy changes, and the relationships governing chemical equilibrium.
- To develop the knowledge about amines, diazonium salts, amino acids, peptides and proteins

COURSE OUTCOMES:

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

CO1: Understand the principles of water analysis, including methods for determining pH, acidity, alkalinity, and dissolved oxygen,

CO2: Understand the significance of phase equilibrium, Gibbs Phase Rule, and phase diagrams in one-component and two-component systems.

CO3: Apply thermodynamic concepts to analyze chemical equilibrium, including the relationship between free energy change and the law of chemical equilibrium.

CO4: Apply knowledge of organic chemistry to understand the preparation and reactions of amines, diazonium salts, amino acids, peptides, and proteins.

CO5: Analyze experimental data obtained from water analysis, phase equilibrium studies, and chemical equilibrium calculations to draw conclusions and make predictions.

CO6: Design and conduct experiments to purify organic compounds using crystallization and distillation methods and solve problems related to the determination of purity criteria, such as melting and boiling points, and the preparation of specific organic compounds.

PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES (FYUGP)

Of

Computer Science

As

(MINOR and GEC)

Course Outcome:

Upon completion of the program, graduates will possess the following attributes:

- An in-depth understanding of computer science and its various subfields.
- The ability to design, develop, and maintain computer systems and software applications.
- Strong problem-solving and analytical skills.
- Effective communication and teamwork skills.
- The ability to think critically and creatively.
- An understanding of ethical and professional issues related to computer science

PROGRAMME LEARNING OUTCOMES

Upon completion of the program, graduates will be able to:

- Design, develop, and maintain computer systems and software applications using various programming languages and tools.
- Develop and manage database management systems.
- Develop and implement computer networks.
- Analyze algorithms and data structures.
- Develop and implement cloud computing solutions.
- Develop and implement artificial intelligence solutions.
- Apply mathematical and computational thinking and analysis to solve computer scienceproblems.
- Understand and analyze ethical and professional issues related to computer science.
- Communicate effectively with team members and stakeholders.
- continuously update their knowledge and skills in the rapidly evolving field of computer science.

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Program Specific Outcomes (PSOs)

After the successful completion of B.Sc. Computer Science program, the learners are expected to

 PSO1: Impart the fundamental principles and methods of Computer Science to a wide range of applications.

 PSO2: Develop and deploy applications of varying complexity using the acquired knowledge in various programming languages, data structures and algorithms, database and networking skills.

 PSO3: To investigate, analyze complex problems by the application of suitable mathematical and research tools, to design Information Technology products and solutions

 PSO4: To identify and utilize the state-of-the-art tools and techniques in the design and development of software products and solutions.

 PSO5: Ability to identify, interpret, analyze and design solutions using appropriate algorithms of varying complexities in the field of information and communication technology.

Program Outcomes (POs)

At the end of the program, the learners will be able to:

PO1: Formulate, model, design solutions, procedure and use software tools to solve real world problems. **PO 2**: Design and develop computer programs/computer -based systems in the areas such as networking, web design, security, cloud computing, IoT, data science and other emerging technologies.

PO 3: Familiarize with the modern-day trends in industry and research based settings and thereby innovate novel solutions to existing problems.

PO 4: Apply concepts, principles, and theories relating to computer science to new situations.

PO 5: Use current techniques, skills, and tools necessary for computing practice.

PO 6: Apply standard Software Engineering practices and strategies in real-time software project development.

PO 7: Pursue higher studies of specialization and take up technical employment.

PO 8: Work independently or collaboratively as an effective team member on a substantial software project.

PO 9: Communicate and present their work effectively and coherently.

PO 10: Display ethical code of conduct in usage of Internet and Cyber systems.

PO 11: Engage in independent and life-long learning in the background of rapid changing IT industry

COURSE OUTCOME OF 1ST SEMESTER COMPUTER SCIENCE (MINOR)

MINOR-1: **CYBER SECURITY**

CREDIT : 04

Course Objective

The course able to

To introduce the concept of cyberspace, internet governance, and cyber security issues and challenges.

- To familiarize with different types of cyber crimes, modus operandi of cyber criminals, and legal perspective of cyber crime.
- To enable to understand social media platforms, their challenges, opportunities, and pitfalls, and the security issues related to social media.
- To provide with an understanding of e-commerce and digital payments, their components, threats, and security best practices.
- To introduce to digital device security, password policy, security patch management, and Wi-Fi security and to familiarize with different tools and technologies for cyber security

Course learning Outcomes:

After the completion of this course, the learner will be able to:

CO1: Understand the architecture of cyberspace, communication and web technology, internet infrastructure for data transfer and governance, and internet society.

CO2: Identify the different types of cyber crimes, their modus operandi, reporting and remedial measures, and the legal perspective of cyber crime in India.

CO3: Analyze social media platforms, their challenges, opportunities, and pitfalls, and the security issues related to social media.

CO4: Describe the different components of e-commerce and digital payments, their threats, and security best practices.

CO5: Apply digital device security, password policy, security patch management, and Wi-Fi security best practices.

CO6: Use different tools and technologies for cyber security, such as host firewall, antivirus, and data backup

COURSE OUTCOME OF 1ST SEMESTER COMPUTER SCIENCE (GEC)

GEC-1: **OFFICE AUTOMATION TOOLS**

CREDIT : 03

Course Objective

The course able to

- Install and configure office suite software such as Microsoft Office and Libre Office for various tasks.
- Format documents, create tables, and use drawing tools to develop advanced word processing skills.
- Utilize basic formulas and functions, create macros, and construct pivot tables in spreadsheets for data analysis.
- Design and deliver effective presentations by adding and formatting text, pictures, graphic objects, charts, and using transitions and animations.
- Explain the benefits and use of cloud office automation tools, specifically Office 365, in enhancing work efficiency

Course learning Outcomes:

After the completion of this course, the learner will be able to:

CO1: Install and configure Microsoft Office and Libre Office software for various tasks.

CO2: Use formatting options, create tables, and employ drawing tools in word processing documents.

CO3: Develop spreadsheets utilizing basic formulas and functions, create macros, and construct pivot tables to analyze data.

CO4: Design and produce effective presentations by adding and formatting text, pictures, graphic objects, including charts and objects, and formatting slides, notes, and hand-outs, and using transitions and animations.

CO5: Implement and utilize cloud-based office automation tools to enhance work efficiency and collaboration

COURSE OUTCOME OF 2ND SEMESTER COMPUTER SCIENCE (MINOR)

MINOR2: FOUNDATION OF COMPUTER SCIENCE

CREDIT :04

Course Objective

- To discuss about basics of computers and their applications.
- To explain fundamental concepts of computer hardware and software.
- To discuss about different types of operating systems and their functions.
- To explore about different computer viruses.
- To familiar with a variety of computer applications, including word processing, spreadsheets, databases.

Course learning Outcomes:

After the completion of this course, the learner will be able to:

CO1: Identify computer hardware and peripheral devices. CO2: Familiar with software applications.

CO3: Understand the risks of different computer viruses.

CO4: Learn different DOS commands and SHELL Programming.

CO5: Apply the basic concepts of a word processing package, electronic spreadsheet and PowerPoint tools

COURSE OUTCOME OF 2ND SEMESTER COMPUTER SCIENCE (GEC)

GEC2: BASIC HARDWARE MAINTENANCE

CREDIT :03

Course Objective

- Describe the various components of computer hardware and their functions.
- Explain the functioning of different hardware components within a computer.
- Assemble and disassemble computer hardware components effectively.
- Test and diagnose computer hardware components using appropriate techniques and tools.
- Use a multimeter to test and troubleshoot computer hardware components

Course learning Outcomes:

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:

CO1: Describe the different hardware components of a computer and their functions.

CO2: Identify and differentiate between different types of hardware components.

CO3: Assemble, dissemble, and test a computer system.

CO4: Use a multimeter to test the power supply unit (SMPS) and other hardware components.

CO5: Troubleshoot and repair common hardware issues with keyboard and mouse.

COURSE OUTCOME OF 3RD SEMESTER COMPUTER SCIENCE (MINOR)

MINOR3: **DATA STRUCTURE AND PROGRAMMING PARADIGMS**

CREDIT :04

Course Objective

- Illustrate the fundamental concepts of data structures and programming paradigms.
- Develop skills in implementing and manipulating various data structures.
- Analyze and compare different programming paradigms and their applications.
- Apply appropriate data structures and programming paradigms to solve computational problems.
- Evaluate algorithms in terms of time complexity and space complexity.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:

CO1: Differentiate between various data types and data structures.

CO2: Develop algorithms for common operations on arrays, linked lists, stacks, queues, and trees.

CO3: Evaluate the efficiency of algorithms in terms of time and space complexity. CO4: Design and implement abstract data types using appropriate data structures.

CO5: Assess the suitability of different programming paradigms for solving specific computational problems.

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COURSE OUTCOME OF 3RD SEMESTER COMPUTER SCIENCE (GEC)

GEC3: BASICS OF PHOTOSHOP

CREDIT : 03

Course Objective

- To introduce the Photoshop interface and tools.
- To familiarize with importing and saving files in Photoshop.
- To provide an understanding of layers, masks, and selections in Photoshop.
- To introduce the basic retouching tools in Photoshop.
- To provide an understanding of color correction tools and text in Photoshop.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:

CO1: Navigate and utilize the Photoshop interface and tools.

CO2: Import and save files in Photoshop and understand different file formats and resolutions.

CO3: Work with layers, masks, and selections in Photoshop.

CO4: Retouch images using basic tools such as the spot healing brush tool, clone stamp tool, and patch tool.

CO5: Apply color correction techniques using tools such as curves, levels, and hue/saturation, and create and format text layers in Photoshop.

COURSE OUTCOME OF 3RD SEMESTER COMPUTER SCIENCE (VAC)

VAC5: DIGITAL FLUENCY

CREDIT : 02

Course Objective

- To introduce the concept of digital fluency and its importance in today's world.
- To provide an understanding of computer basics, including hardware, software, and operating systems.
- To familiarize with internet and web browsing, including search engines, email, and social media.
- To teach about online safety, including cyber security threats, protecting personal information, and safe online behaviour.

COURSE OUTCOMES:

After the completion of this course, the learner will be able to:

CO1: Define digital fluency and identify the skills required to be digitally fluent.

CO2: Identification of computer hardware and software, including operating systems and file management.

CO3: Navigate the web, perform effective online searches, and create and manage email accounts.

CO4: Create and manage social media accounts, understand privacy and security settings, and post and share content.

CO5: Illustrate online safety and be able to identify and mitigate cyber security risks.

COURSE OUTCOME OF4TH SEMESTER COMPUTER SCIENCE (MINOR)

MINOR4: OPERATING SYSTEMS AND NETWORK MANAGEMENT

CREDIT : 04

Course Objective

- To introduce the concepts associated with operating system and their design considerations.
- To provide necessary tools for choosing operating system for certain environment.
- To understand the networking concepts.
- To expose the relationship between operating systems and computer networks

COURSE OUTCOMES:

After successful completion of this course, learners will be able to

CO1: Classify different types of OS.

CO2: Compare different approaches to OS design; CO3: Explain computer networks and their applications.

CO4: Configure Linux OS for a machine as a domain name server and a network file server;

CO5: Describe the concept of distributed file system.

CO6: Configure and manage network devices.

COURSE OUTCOME OF 5TH SEMESTER COMPUTER SCIENCE (MINOR)

MINOR5: DIGITAL SYSTEMS AND COMPUTER ARCHITECTURE

CREDIT : 04

Course Objective

- To understand different logical circuits.
- To familiarize the students with I/O devices and their controllers
- To understand basic computer architecture and design.
- To learn about CPU architecture and instruction execution process

COURSE OUTCOMES:

After successful completion of this course, learners will be able to

CO1: Explain different number systems.

CO2: Define the structure and design of combinational circuits and sequential circuits.

CO3: Explain different computer architectures and hardware.

CO4: Evaluate problems of digital logic.

CO5: Understand CPU architecture and execution process.

CO6: Explain bus organization and bus arbitration process.

COURSE OUTCOME OF 6TH SEMESTER COMPUTER SCIENCE (MINOR)

MINOR6: WEB APPLICATION DEVELOPMENT WITH DATABASE

CREDIT : 04

Course Objective

- To introduce the idea of internet and web technologies.
- To explain the different web development tools.
- To discuss different types of databases.
- To explain the process of developing web applications using database.

COURSE OUTCOMES:

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

CO1: Explain different web technologies.

CO2: Use different databases

CO3: Design databases.

CO4: Learn the Connectivity of database to web applications.

CO5: Develop Websites and Web Applications

COURSE OUTCOME OF 7TH SEMESTER COMPUTER SCIENCE (MINOR)

MINOR7: PROGRAMMING IN PYTHON

CREDIT : 04

Course Objective

- Learn the basics of programming language.
- Develop, document, and debug modular Python programs.
- Apply suitable programming constructs and built-in data structures to solve a problem.
- Use and apply various data objects in Python.
- Use classes and objects in application programs and handle

COURSE OUTCOMES:

CO1: plain the structure and basic components of a Python program, including syntax, operations, and standard data types.

CO2: Apply Python to develop scripts involving basic input/output operations, use of control structures like loops and conditional statements, and handling basic file operations.

CO3 Differentiate between mutable and immutable data types and analyze the use of built -in Python structures like lists, tuples, dictionaries, and sets in various programming scenarios.

CO4: Calculate Python code for efficiency and readability, and select appropriate error and exception handling techniques to enhance program robustness and reliability.

CO5: Design and implement a Python program that integrates object-oriented programming concepts and employs complex data structures and functions to solve real-world problems.

COURSE OUTCOME OF 8TH SEMESTER COMPUTER SCIENCE (MINOR)

MIN0R8: INTRODUCTION TO ARTIFICIAL INTELLIGENCE

CREDIT : 04

Course Objective

- To introduce the concept of Artificial Intelligence and its related fields like Machine Learning.
- To instruct on defining a problem as a state space search and the issues in designing the search problem.
- To explain different search techniques.
- To introduce the basic concepts of propositional and predicate logic and their applications in AI.
- To explain knowledge representation and different issues in knowledge representation.

COURSE OUTCOMES:

After the completion of this course, the learners will be able to

CO1. Understand the importance of AI and its related fields like Machine Learning.

CO2. Define a problem as a state space search and identify the issues in designing the search problem.

CO3. Apply various search techniques like basic search methods, heuristic search, generate and test, and hill climbing.

CO4. Use propositional and predicate logic to solve problems in AI.

CO5. Represent knowledge using various approaches and address the issues in knowledge representation.

FOUR YEAR UNDERGRADUATE PROGRAMME IN ECONOMICS (NEP)

PROGRAMME OUTCOMES (POs): After completion of this programme –

PO1-Critical Thinking: Graduates will be able to critically analyze economic theories and models, apply logical reasoning, and understand their implications in real-world contexts.

PO2-Problem Solving: Graduates will acquire enhanced problem-solving skills by applying economic principles and quantitative techniques to address economic issues and policy challenges.

PO3-Effective Communication: Graduates will be able to communicate economic concepts, theories, and findings clearly and effectively.

PO4-Research and Analytical Skills: Graduates will be able to formulate research proposals, specifically to craft relevant research questions and hypotheses; present findings, theories, methods, and proofs utilizing knowledge from multiple branches of Economics and associated fields.

PO5-Technological Proficiency: Graduates will be proficient in using modern technological tools and software for economic analysis, data management, and presentation.

PO6-Ethical Awareness: Graduates will be able to apply ethical principles in economic decision-making, recognizing the societal and environmental impacts of economic activities.

PO7-Global Perspective: Graduates will develop a global outlook on economic issues, understanding the interconnectedness of economies and the implications of global economic policies and events.

PO8-Lifelong Learning: Graduates will foster a commitment to continuous learning and staying updated with the latest developments in the field of economics.

PO9-Interdisciplinary Knowledge: Graduates will be able to integrate knowledge from various disciplines such as statistics, mathematics, political science, sociology, history etc. to provide a comprehensive understanding of economic phenomena.

PO10-Leadership and Teamwork: Graduates will cultivate leadership qualities and the ability to work collaboratively in diverse teams to address complex economic problems.

PROGRAMME SPECIFIC OUTCOMES (PSOs): After completing the programme the students should be able to

PSO1-Comprehend the behavioral patterns of different economic agents and acquire the competency to apply the fundamentals of Microeconomics and Macroeconomics in understanding the economic aspects of allied sectors.

PSO2-Evaluate the developmental parameters of an economy with the help of economic theories and examine the existing socio-economic issues of developing nations and formulate strategies to pave the way for further development.

PSO3- Analyse and review the historical developments in the economic thoughts propounded by different schools and make a comparative assessment with the contemporary issues in Economics.

PSO4-Identify key issues and formulate ideas to undertake research studies and apply quantitative techniques to address the unresolved issues in Economics and other relevant disciplines.

PSO5-Demonstrate the potential for a variety of challenging careers through innovation, critical thinking, problem solving and lifelong learning, thereby being competitive in the job market by acquiring skills in using statistical software for research, employability and entrepreneurship.

PSO 6-Contribute to the academic advancement of the subject and society at large by pursuing advanced studies in Economics.

BA 1ST SEMESTER

Course Title : Introductory Microeconomics

Course Code : ECOC1

Nature of Course : Major

Course Outcomes: On completion of this Course, a student will be able to –

CO 1: Comprehend the introductory principles of Microeconomics.

LO 1.1: Define the meaning of Microeconomics.

LO 1.2: Discuss how scarcity and the need to make choices are central to economic analysis.

LO 1.3: Identify and analyze the trade-offs and opportunity costs in decision-making processes.

CO 2: Apply the basics of microeconomics in behaviour patterns of firms and households and relate with the laws of demand and supply.

LO 2.1: Explain the law of demand, determinants of demand, individual and market demand and shift in demand.

LO 2.2: Explain the law of supply, determinants of supply, individual and market supply and shift in supply.

CO 3: Apply the fundamentals of microeconomics to understand the behaviour of consumers and attainment of consumer's equilibrium.

LO 3.1: Define budget constraint.

LO 3.2: Explain the meaning and properties of an Indifference curve.

CO 4: Apply the principles of microeconomics in relation to production function, costs and revenues and demonstrate the basics of market mechanism and the equilibrium condition of different forms of markets.

LO 4.1: Define the basics of a firm under perfectly competitive market structure.

LO 4.2: State the relation between revenue, cost and equilibrium under perfect competition.

LO 4.3: Explain the characteristics of firms under imperfect market structure.

CO 5: Evaluate the features of input market.

LO 5.1: Explain the features of firms using one and two variable factors respectively in the short run and long run labour market.

LO 5.2: Discuss the determination of rent and profit maximizing condition in input market

LO 5.3: Explain the fundamentals of capital market.

BA 1ST SEMESTER

Course Title : Elementary Microeconomics

Course Code : MINECO1

Nature of Course : Minor

Course Outcomes: On completion of this Course, a student will be able to –

CO 1: Comprehend the introductory principles of Microeconomics.

LO 1.1 Describe the meaning of Microeconomics.

LO 1.2 Define the meaning of scarcity and opportunity cost.

CO 2: Apply the basics of microeconomics in behaviour patterns of firms and households and relate with the laws of demand and supply.

LO 2.1: Explain the law of demand, determinants of demand, shifts of demand versus movements along a demand curve and market demand.

LO 2.2: Explain the law of supply, determinants of supply, shifts of supply versus movements along a supply curve and market supply.

LO 2.3: Explain the condition of market equilibrium.

CO 3: Apply the fundamentals of microeconomics to understand the behaviour of consumers and producers and attainment of producer's and consumer's equilibrium.

LO 3.1: Define the meaning of budget constraint.

LO 3.2: Explain the meaning and properties of indifference curve.

LO 3.3: Explain the fundamentals of utility and its applications in consumer theory.

LO 3.4: Explain the Production function with one and two variables.

LO 3.5: State the meaning and properties of an Isoquant and equilibrium in production.

CO 4: Apply the principles of microeconomics in relation to production function, costs and revenues and demonstrate the basics of market mechanism and characteristics of different forms of markets.

LO 4.1: Explain the features of cost and revenue in the short run and long run respectively.

LO 4.2: Discuss the features of different forms of markets.

LO 4.3: Explain the equilibrium condition of firms under perfect competition.

BA 1ST SEMESTER

Course Title : Economic History of India

Course Code : GECECO1

Nature of Course : Generic Elective

Course Outcome: After successful completion of this course students will be able to

CO1: Analyze and evaluate the economic structure and policies of pre-independence India, understanding the factors contributing to economic backwardness.

LO1: Explain the economic structure and policies of pre-independence India.

LO2: Discuss the impact of socio-cultural attitudes and inheritance laws on India's economic development.

LO3: Evaluate the drain theory and its implications on India's economy.

LO4: Compare and contrast the economic ideas of Ranade and Gandhi.

CO2: Examine the agrarian structure, agricultural markets, and institutions, and their impact on India's agricultural productivity and rural economy.

LO1: Describe the agrarian structure and land relations in colonial India.

LO2: Analyze the role of agricultural markets, credit systems, and irrigation in shaping agricultural productivity.

LO3: Assess the causes and consequences of the commercialization of agriculture in colonial India.

LO4: Discuss the issues of rural indebtedness, famines, and the evolution of food policies.

CO3: Evaluate the industrial development and transportation systems in colonial India and their impacts on the economy.

LO1: Describe the state of industrial development in mid-nineteenth century India and the phenomenon of deindustrialization.

LO2: Identify the factors that led to the emergence of modern capitalist industrial enterprises in India.

LO3: Discuss the constraints to industrial breakthrough in colonial India.

LO4: Analyze the development of transportation systems (railways, roadways, waterways) and their economic impact.

CO4: Evaluate the economic policies and priorities under British rule, including foreign capital, trade, and fiscal policies, and their impact on India's economy.

LO1: Explain the imperial priorities and their impact on India's economic development.

LO2: Discuss the role and impact of foreign capital in colonial India.

LO3: Analyze the growth and composition of foreign trade and the nature of public debt during the colonial period.

LO4: Evaluate the government and fiscal policies implemented under British rule and their consequences for the Indian economy.

BA 2 nd SEMESTER

Course Title : Introductory Macroeconomics

Course Code : ECOC2

Nature of the Course : Major

Course Outcomes: After successful completion of this course students will be able to

CO1: Distinguish between different macroeconomic schools of thought and understand the fundamental objectives and scope of macroeconomics, laying the foundation for advanced macroeconomic analysis.

LO1.1: Differentiate between microeconomics and macroeconomics and understand the evolution of macroeconomics as a distinct field.

LO1.2: Explain the nature and scope of macroeconomics and identify the key objectives of macroeconomic study.

LO1.3: Compare and contrast the different schools of macroeconomic thought: classical, Keynesian, and monetarist.

LO1.4: Analyze the relationship between microeconomic thinking and macroeconomic models and discuss the balance between short-term stabilization and long-term economic growth.

CO2: Define national income and various accounting methods, and assess the limitations and significance of GDP as an indicator of economic health and social welfare.

LO2.1: Understand the importance of measuring economic activity and the various approaches to national income accounting.

LO2.2: Define and differentiate between GDP and GNP, and explain the concepts of stocks and flows.

LO2.3: Describe the circular flow of income in an economy and the methods of measuring GDP: income method, expenditure method, and value added method.

LO2.4: Evaluate the limitations of GDP as a measure of economic activity, including its relationship with the underground economy and social welfare, and understand the significance of sustainable accounting.

CO3: Analyze the components and determinants of aggregate demand and aggregate supply, and understand how these factors interact to influence overall economic activity.

LO3.1: Define aggregate demand and its components, and identify the determinants of consumption, government spending, firm investment, and net exports.

LO3.2: Explain the consumption function, including marginal propensity to consume (MPC) and average propensity to consume (APC), and the determinants of saving, including marginal propensity to save (MPS) and average propensity to save (APS).

LO3.3: Analyze the investment function and the factors that influence investment demand.

LO3.4: Describe the concept of aggregate supply, its determinants, and the factors that can shift the aggregate supply curve.

CO4: Critically evaluate the classical and Keynesian theories of output and employment determination, and apply these concepts to understand historical and contemporary economic fluctuations.

LO4.1: Understand the classical theory of output and employment determination and Say's law of markets.

LO4.2: Analyze the Great Depression of the 1930s and the failure of the classical school, leading to the Keynesian revolution.

Lo4.3: Explain the Keynesian theory, including the equality between output and aggregate demand, the concept of the multiplier, and the determination of equilibrium income.

Lo4.4: Discuss the changes in equilibrium income and the factors that can lead to such changes.

CO5: Explain the functions and types of money, determinants of money supply and demand, and the determination of equilibrium rate of interest.

LO5.1: Define money and its various functions, and describe the different types of money, including fiat money, fiduciary money, metallic money, and paper money.

LO5.2: Explain the supply of money and the role of the central bank, and understand the different measures of money as defined by the RBI.

LO5.3: Discuss the demand for money and the quantity theory of money, including the motives for holding money: transaction, precautionary, and speculative.

LO5.4: Analyze the determination of the equilibrium rate of interest using the Keynesian liquidity preference theory.

BA 2nd SEMESTER

Title of the Course: Elementary Macroeconomics

Course Code : MINECO2

Nature of the Course : Minor

Course Outcomes: After successful completion of this course students will be able to

CO1: Describe the distinction between microeconomics and macroeconomics, including the development and objectives of macroeconomic theory.

LO1.1: Explain the distinctions between microeconomics and macroeconomics.

LO1.2: Trace the historical evolution of macroeconomics as a distinct discipline.

LO1.3: Identify and describe the primary schools of macroeconomic thought, including classical, Keynesian, and monetarist perspectives.

LO1.4: Discuss the objectives of macroeconomics in terms of short-term stabilization and long-term economic growth.

CO2: Gain a comprehensive understanding of how economic activity is measured and the significance of national income accounting.

LO2.1: Define and differentiate between GDP and GNP, including the concepts of stocks and flows.

LO2.2: Illustrate the circular flow of income in an economy.

LO2.3: Compare and contrast the income, expenditure, and value-added approaches to measuring GDP.

LO2.4: Evaluate the limitations of GDP as a measure of economic activity and its relationship to social welfare.

CO3: Define the concepts of aggregate demand (AD) and aggregate supply (AS) including the identification of factors responsible for the shifts of AD and AS.

LO3.1: Define aggregate demand and explain its components and determinants.

LO3.2: Analyze the consumption function, including the concepts of MPC and APC.

LO3.3: Discuss the determinants of saving and investment, including the functions of MPS, APS, and investment demand.

LO3.4: Explain the concept of aggregate supply and identify factors that cause shifts in the aggregate supply curve.

CO4: Compare and contrast the classical and Keynesian theories of output and employment determination and their relevance to economic equilibrium.

LO4.1: Describe the classical theory of output and employment determination and Say‟s law of markets.

LO4.2: Analyze the impact of the Great Depression on the classical school and the rise of Keynesian economics.

LO4.3: Explain the Keynesian theory of equilibrium between output and aggregate demand, including the concept of the multiplier.

LO4.4: Calculate equilibrium income and understand its implications for macroeconomic stability.

CO5: Elaborate the role of money in the economy, the various types and measures of money, and the causes and effects of inflation.

LO5.1: Define money and its functions, and differentiate between different types of money (fiat, fiduciary, metallic, paper).

LO5.2: Identify and explain the various measures of money supply (M0, M1, M2, M3, M4). LO5.3: Discuss the quantity theory of money and its implications for prices and inflation.

LO5.4: Analyze the causes and types of inflation, its social costs and benefits, and the relationship between nominal and real interest rates.

BA 2ND SEMESTER

Course Title: Contemporary Indian Economy

Course Code: GECECO2

Nature of Course: Generic Elective

Course Outcomes: On completion of this course students will be able to –

CO1: Analyze the key aspects of India's industrial policies, infrastructure development, and their impact on business performance.

L.O 1.1: Describe the changes in the New Industrial Policy and the impacts of public sector reforms, privatization, and disinvestment.

L.O 1.2: Evaluate the factors influencing the Ease of Doing Business in India and the performance of MSMEs.

L.O 1.3: Assess the role of MNCs in India's industrial development and initiatives like "Make in India."

L.O.1.4: Analyze the development of infrastructure sectors such as health, education, transportation, and power.

CO2: Understand and evaluate the fiscal and monetary policies of India, including recent reforms and their implications on the economy.

L.O. 2.1: Explain the key aspects of fiscal reforms including Public Debt Management, FRBM Act, and GST.

L.O. 2.2: Discuss the recommendations of the latest Finance Commissions and their implications.

L.O 2.3: Analyze the organization of India‟s money market and recent financial sector reforms.

L.O 2.4: Review the monetary policy of RBI, the role and functions of SEBI, and the changing roles of the Reserve Bank of India, foreign banks, and non-banking financial institutions.

CO3: Examine the direction, composition, and policies related to India's foreign trade and balance of payments since 1991.

L.O. 3.1: Analyze the direction and composition of India‟s foreign trade.

L.O. 3.2: Discuss the trends in India‟s balance of payments since 1991, focusing on current and capital account convertibility.
L.O. 3.3: Evaluate the trends and patterns of FDI and FPI in India.

L.O. 3.4: Explain India‟s EXIM policy and the new Foreign Trade Policy.

CO4: Analyze key socio-economic issues in India, including demographic trends, urbanization, the impact of COVID-19, and agricultural policies.

L.O 4.1: Discuss India‟s population policy and the concept of demographic dividend.

L.O4.2: Evaluate the state of human development in India and the initiatives for urbanization such as the Smart City Mission.

L.O. 4.3: Analyze the economic and social impact of the COVID-19 pandemic and initiatives like Atma Nirbhar Bharat Abhiyan.

L.O 4.4: Examine agricultural price policy, subsidies, the public distribution system, and initiatives like MGNREGA aimed at doubling farmers‟ incomes and promoting the non-farm sector.

BA 3RD SEMESTER

Course Title : Introductory Mathematical Methods for Economics

Course Code : ECOC3

Nature of Course : Major

Course Outcomes: After successful completion of this course students will be able to

CO1: Explain the foundational concepts like sets, relations and functions, evaluate limits and continuity, and apply these concepts to solve numerical problems.

LO1.1: Describe different types of sets and perform set operations.

LO1.2: Explain and construct ordered pairs, Cartesian products, and relations.

LO1.3: Explain functions, their properties and types, and graph different types of functions

LO1.4: Evaluate limits and continuity of functions

CO2: Apply matrices and determinants in solving linear equations and performing static and dynamic input-output analysis.

LO2.1: Perform elementary matrix operations, including addition and multiplication.

LO2.2: Determine the rank of a matrix and calculate determinants.

LO2.3: Compute the inverse of a matrix.

LO2.4: Apply Cramer's rule to solve systems of linear equations.

LO2.5: Conduct static and dynamic input-output analysis using matrices

CO3: Apply rules of differentiation to analyze economic functions, including demand, cost, and revenue, and interpret their economic significance

LO3.1: Apply differentiation rules to functions with one independent variable.

LO3.2: Use derivatives in economic applications such as elasticity of demand and cost/revenue functions.

LO3.3: Explain the relationship between average and marginal costs using derivatives.

LO3.4: Compute second and higher-order derivatives and apply them to economic problems

CO4: Use different techniques of integration to solve economic problems, including calculation of producer's and consumer's surplus.

LO4.1: Understand and apply basic rules of integration.

LO4.2: Use various techniques of integration including substitution, integration by parts, and partial fraction decomposition.

LO4.3: Derive total functions from marginal functions through integration.

LO4.4: Evaluate definite integrals and apply them to compute produce's and consumer's surplus.

CO5: Understand and solve first order linear differential equations and exact differential equations, with applications to economic problems.

LO1: Identify and solve first order linear differential equations using standard methods and interpret their solutions in the context of economic problems.

LO2: Determine and solve exact differential equations and apply these solutions to relevant economic scenarios.

BA 3RD SEMESTER

Course Title : Indian Economy- Trends in Economic Indicators

Course Code : ECOC4

Nature of Course : Major

Course Outcomes: After successful completion of this course students will be able to

CO1: To evaluate the trajectory of India's economic development since independence and analyze the shifts in development strategies from import substitution to post-1991 globalization.

LO 1.1: Identify the key features of the Indian economy on the eve of independence.

LO 1.2: Compare and contrast the goals and components of alternative development strategies employed by India since independence.

LO 1.3: Analyze the impact of import substitution and protectionist policies on India's economic development.

LO 1.4: Evaluate the effectiveness and challenges of the post-1991 globalization strategies, including stabilization and structural adjustment packages.

CO2: To explore the interplay between population dynamics and human development indicators in the context of India, and assess India's standing in the global human development landscape.

LO 2.1: Describe the demographic features and trends in India, including population size, growth rates, and age-sex composition.

LO 2.2: Explain the concept of demographic dividend and its implications for economic development in India.

LO 2.3: Evaluate the effectiveness of the National Population Policy in addressing demographic challenges.

LO 2.4: Assess India's human development record using indicators such as the Human Development Index and compare it with global benchmarks.

CO3: To analyze the concepts of poverty and inequality in the Indian context, and examine the strategies and policies aimed at poverty alleviation and reducing income inequality.

LO 3.1: Define and explain the concept of poverty and its incidence in India.

LO 3.2: Interpret poverty estimates and trends over time, and analyze the relationship between economic growth and poverty reduction.

LO 3.3: Identify the causes of income inequality in India and assess its magnitude and nature.

LO 3.4:Evaluate government policies and measures aimed at reducing poverty and addressing income inequality in India.

CO4: To examine the dynamics of India's labour force, occupational patterns, and unemployment trends, and analyze the role of government policies in addressing unemployment challenges.

LO 4.1: Describe the growth and structure of India's labour force and its relationship with economic development.

LO 4.2: Analyze the types and nature of unemployment prevalent in India.

LO 4.3: Evaluate the changing dimensions of unemployment and employment patterns over time.

LO 4.4: Assess the effectiveness of government policies and measures in addressing unemployment challenges and promoting inclusive growth.

CO5: To analyze India's economic interactions with the world economy and conduct a comparative assessment of India's development experience with high-performing Asian economies.

LO 5.1: Describe India's economic integration with the global economy and identify key drivers of international economic interactions.

LO 5.2: Compare and contrast India's development strategies with those of high-performing Asian economies such as Singapore, South Korea, and Taiwan.

LO 5.3: Analyze the factors contributing to the economic success of high-performing Asian economies and their relevance to India's development trajectory.

LO 5.4: Evaluate the lessons learned from international comparisons to inform India's future economic policies and strategies.

BA 3RD SEMESTER

Course Title : Basics of Indian Economy

Course Code : MINECO3

Nature of Course : Minor

Course Outcomes: After successful completion of this course students will be able to

CO1: Understand and evaluate the evolution of development strategies in India since independence, focusing on selfreliance, import substitution, protectionism, and post-1991 globalization reforms.

LO1.1: Describe the key features and goals of India‟s development strategy immediately after independence.

LO1.2: Analyze the impact of import substitution and protectionist policies on India's economic development.

LO1.3: Explain the shift towards globalization post-1991 and the structural adjustment packages implemented.

LO1.4: Critically evaluate the outcomes of the different development strategies on India's economic growth and development.

CO2: Assess the demographic characteristics and trends in India, including population growth, composition, and policy implications.

LO2.1: Explain the size and growth rates of India's population and their implications.

LO2.2: Analyze the trends in birth and death rates in India and their demographic impact.

LO2.3: Discuss the concept of demographic dividend and its potential in India. LO2.4: Evaluate the National Population Policy and its effectiveness in addressing demographic challenges.

CO3: Analyze the nature, incidence, and strategies for alleviating poverty and income inequality in India. LO3.1: Define and measure the concept and incidence of poverty in India.

LO3.2: Assess the relationship between economic growth and poverty levels.

LO3.3: Identify the causes and magnitude of income inequality in India.

LO3.4: Evaluate the effectiveness of government policies and measures aimed at reducing poverty and inequality.

CO4: Examine the structure and dynamics of the labor force, occupational patterns, and unemployment in India.

LO4.1: Describe the growth and distribution of the labor force in India.

LO4.2: Analyze the occupational structure and its relation to economic development.

LO4.3: Discuss the nature, types, and magnitude of unemployment in India.

LO4.4: Evaluate government policies and measures to address unemployment and their effectiveness.

CO5: Evaluate human development indicators and India's performance in human development at both national and global levels.

LO5.1: Define key human development indicators and their importance.

LO5.2: Compare human development across different states in India.

LO5.3: Assess India's human development record in a global context.

LO5.4: Analyze the factors contributing to variations in human development across different regions and states in India.

BA 3RD SEMESTER

Course Title: Basic Development Economics

Course Code: GECECO3

Nature of Course: Generic Elective

Course Outcomes: After successful completion of this course students will be able to

CO1: Understand and analyze the concepts of development and underdevelopment, including various theories of economic growth and growth strategies.

LO1.1: Distinguish between the concepts of economic growth and development, and explain the development gap.

LO1.2: Identify the key features of underdevelopment and the processes of structural change in developing economies.

LO1.3: Compare and contrast the major theories of economic growth, including Classical, Harrod-Domar, Lewis, Neo-Classical, and New Growth theories.

LO1.4: Evaluate different growth strategies such as balanced growth, unbalanced growth, and the critical minimum thesis.

CO2: Assess the various factors influencing development, different measures of development, and concepts and measures of poverty and inequality.

LO2.1: Analyze the role of agriculture, capital, technology, and institutions in the development process.

LO2.2: Explain the relationship between population growth and economic development.

LO2.3: Compare different measures of development, including GNP per capita, PQLI, and HDI.

LO2.4: Evaluate various concepts and measures of poverty and inequality and their implications for development.

CO3: Explore the concepts of capabilities and functionings, human development, and the link between environment and development, including sustainable development and climate change.

LO3.1: Describe the concepts of capabilities and functionings and their relevance to human development.

LO3.2: Assess the environmental challenges faced by developing and developed countries and their impact on sustainable development.

LO3.3: Analyze the linkage between environmental issues such as global warming and climate change and their impact on agriculture and the economy.

LO3.4: Evaluate policy options for addressing environmental challenges in both developing and developed countries, considering the SDGs.

CO4: Understand the relationship between trade, globalization, and economic development, including trade policies and the historical perspective of globalization.

LO4.1: Explain the role of trade in economic growth and its potential as an engine of growth.

LO4.2: Compare import substitution and export promotion as trade policy strategies.

LO4.3: Analyze the Terms of Trade with a focus on the Prebisch-Singer Hypothesis.

LO4.4: Discuss the historical perspective of globalization and identify the key issues and challenges associated with globalization.

BA 4TH SEMESTER

Course Title: Intermediate Microeconomics

Course Code: ECOC5

Nature of the course: Major

Course Outcomes: On completion of this Course, a student will be able to –

CO 1: Analyse the behaviour of consumers and apply the tools of economics to evaluate consumer's equilibrium conditions.

LO 1.1: Explain the axioms of rational choice and how they lead to the development of utility functions.

LO 1.2: Illustrate consumer preferences using indifference curves and utility functions.

LO 1.3: Conduct utility maximization analysis graphically in both two-good and n-good cases.

LO 1.4: Describe income and substitution effects of price changes and distinguish between normal, inferior, and Giffen goods.

LO 1.5: Apply Slutsky's equation to analyze consumer choices.

LO 1.6: Distinguish between compensated and ordinary demand curves and their implications.

LO 1.7: Analyze consumer behavior under risk and inter-temporal choices.

CO 2: Use the concepts of marginal revenue and cost to analyze firm profitability.

LO 2.1: Explain production functions and the significance of isoquants.

LO 2.2: Analyze the marginal rate of technical substitution and the elasticity of substitution in production.

LO 2.3: Explore returns to scale and production scenarios with one or multiple variable inputs.

LO 2.4: Evaluate special cases of production functions and their relevance to technical progress.

LO 2.5: Analyze the production transformation curve for multiple products.

LO 2.6: Analyze economies of scale and scope and their implications for firms.

LO 2.7: Evaluate recent developments in cost theory and their practical applications.

CO 3: Apply the model of perfect competition to predict welfare implication of public policy interventions such as taxes and subsidies.

LO 3.1: Analyze the process of profit maximization in perfectly competitive markets.

LO 3.2: Examine short-run and long-run equilibrium in competitive markets.

LO 3.3: Apply concepts such as the invisible hand and analyze the impact of excise taxes and subsidies on competitive markets.

CO 4: Analyse the performance of firms under monopoly and oligopoly market structures.

LO 4.1: Apply various pricing strategies under monopoly, including price discrimination and peak-load pricing.

LO 4.2: Understand and evaluate the characteristics and economic implications of monopolistic competition.

LO 4.3: Analyze different models of oligopoly behavior and their implications for pricing and output decisions. LO 4.4: Evaluate collusive behaviors in oligopoly, including cartels and price leadership.

BA 4TH SEMESTER

Course Title: Economy of Assam

Course Code: ECOC6

Nature of the course: Major

Course outcomes: On completion of this Course, a student will be able to –

CO 1: Critically appraise the performance of the Assam economy in terms of growth of SGDP, employment, poverty and other indicators.

LO1.1: Identify and explain the key natural and human resources of Assam.

LO1.2: Understand and analyze the trends in GDP and per-capita income in Assam.

LO1.3: Evaluate the issues of poverty and unemployment in Assam.

LO1.4: Assess the indicators of human development and inter-district disparities in Assam.

CO 2: Analyse the role of agricultural sector in addressing food security and employment in Assam and evaluate the impact of various policies on agricultural intensification and modernization.

LO2.1: Comprehend the role and performance of agriculture in Assam's economy.

LO2.2: Analyze the land-use and cropping patterns in Assam.

LO2.3: Evaluate the trends in area and production of various crops, including food crops, horticulture, and plantation crops.

LO2.4: Understand the challenges and opportunities in agricultural marketing, finance, pricing, and sustainable agricultural practices in Assam.

CO 3: Examine the performance of the industrial sector in Assam, including its structure, major industries, policies, financial sources, and the challenges and prospects faced by the industry.

LO3.1: Grasp the role and performance of the industrial sector in Assam.

LO3.2: Identify and discuss the industrial structure, including major industries, MSMEs, and cottage industries.

LO3.3: Evaluate the policies and programmes aimed at industrial development in Assam.

LO3.4: Assess the sources of industrial finance and the problems and prospects of the industrial sector in Assam.

CO 4: Assess the state of infrastructure in Assam, covering transport, communication, education, health, power, and irrigation, along with the policies and programmes aimed at infrastructural development.

LO4.1: Gain a comprehensive understanding about the significance of transport and communication infrastructure in Assam.

LO4.2: Evaluate the status and challenges in the education and health infrastructure in Assam.

LO4.3: Analyze the power and irrigation infrastructure and their impact on Assam's economy.

LO4.4: Discuss the policies and programmes designed to enhance infrastructural development in Assam.

CO 5: Describe the fiscal landscape of Assam, the sources of finance, the sharing of central taxes and grants, and the expenditure patterns of the state.

LO5.1: Identify and explain the revenue and non-revenue sources of finance in Assam.

LO5.2: Comprehend the mechanisms of sharing central taxes and grants-in-aid.

LO5.3: Analyze the expenditure patterns of the Assam government.

LO5.4: Evaluate the fiscal policies and their impact on the economic development of Assam.

BA 4TH SEMESTER

Course Title: Statistical Methods for Economics

Course Code: ECOC7

Nature of the course: Major

Course Outcomes: After successful completion of this course students will be able to

CO1: Apply the fundamental concepts of descriptive statistics to summarize and describe the essential features of data.

LO1.1: Define and calculate measures of central tendency (mean, median, mode) and explain their significance.

LO1.2: Describe and compute measures of dispersion (range, quartile deviation, mean deviation, standard deviation).

LO1.3: Explain and calculate measures of skewness and kurtosis to understand data distribution.

LO1.4: Understand the concept of moments and their use in statistical analysis.

CO2: Apply probability theory and distribution models to solve problems involving uncertainty and variability.

LO2.1: Explain basic probability concepts, including classical and empirical definitions, and solve problems using addition and multiplication theorems.

LO2.2: Analyze and apply conditional probability, independence of events, and Bayes' Rule.

LO2.3: Define and calculate mathematical expectation, and understand probability mass function and probability density function.

LO2.4: Understand and apply theoretical distributions (Binomial, Poisson, Normal), and explain Poisson distribution as a limiting case of binomial distribution.

CO3: Conduct sampling and hypothesis testing to draw inferences about populations from sample data.

LO3.1: Differentiate between sampling and census methods and describe various sampling techniques.

LO3.2: Identify and distinguish between sampling and non-sampling errors in statistics.

LO3.3: Define statistical hypotheses, understand the distributions of test statistics, and differentiate between Type I and Type II errors.

LO3.4: Conduct and interpret hypothesis tests using chi-square, t-test, and F-test.

CO4: Analyze relationships between variables using correlation and regression techniques.

LO4.1: Explain and calculate covariance and interpret scatter diagrams.

LO4.2: Compute and interpret Spearman‟s rank correlation and Karl Pearson‟s coefficient of correlation.

LO4.3: Understand the concept of regression, derive regression lines, and use the method of least squares.

LO4.4: Calculate and interpret the coefficient of determination (R^2) and standard error of estimate.

CO5: Construct and interpret various types of index numbers for economic and business analysis.

LO5.1: Explain the types and uses of index numbers.

LO5.2: Construct index numbers using the simple aggregate method and the weighted aggregate method (Laspeyres, Paasche, Fishe’s price index).

LO5.3: Compute simple and weighted averages of price relatives and discuss the problems involved in constructing index numbers.

LO5.4: Analyze the applications of index numbers in economic and business contexts.

BA 4TH SEMESTER

Course Title: Intermediate Mathematical Methods for Economics

Course Code: ECOC8

Nature of the course: Major

Course Outcomes: After successful completion of this course students will be able to

CO1: Understand and apply first-order difference equations to model and analyze economic phenomena.

LO1.1: Define and solve first-order difference equations.

LO1.2: Interpret the solutions of difference equations in economic contexts.

LO1.3: Apply difference equations to model economic dynamics, such as inventory control and market equilibrium.

LO1.4: Analyze the stability of economic models using difference equations.

CO2: Use partial and total differentiation to analyze and solve problems in economics, including production and consumer theory.

LO2.1: Perform partial and total differentiation of functions involving several variables.

LO2.2: Apply differentiation techniques to analyze indifference curves and derive expansion paths.

LO2.3: Evaluate production functions, including homogeneous functions, using Euler"s Theorem.

LO2.4: Analyze and compare the properties of Cobb-Douglas and CES production functions.

CO3: Apply methods of unconstrained optimization to solve economic problems involving single and multiple variables.

LO3.1: Perform unconstrained optimization for functions of one variable and interpret economic applications.

LO3.2: Solve unconstrained optimization problems involving multiple variables.

LO3.3: Analyze economic scenarios such as discriminating monopoly and multiproduct monopoly using optimization techniques.

LO3.4: Interpret the results of optimization in the context of economic decision-making.

CO4: Use Lagrange multipliers to solve constrained optimization problems and apply these methods to consumer and producer equilibrium.

LO4.1: Explain the concept of constrained optimization and the role of Lagrange multipliers.

LO4.2: Apply Lagrange multipliers to solve optimization problems with equality constraints.

LO4.3: Analyze consumer equilibrium using constrained optimization techniques.

LO4.4: Apply constrained optimization to determine producer equilibrium and interpret the results.

CO5: Formulate and solve linear programming problems using simplex methods and interpret economic implications of duality.

LO5.1: Explain the assumptions underlying linear programming and formulate linear programming problems.

LO5.2: Solve linear programming problems using simplex method.

LO5.3: Analyze the economic interpretation of duality in linear programming.

LO5.4: Compare and contrast the primal and dual problems in linear programming and their economic implications.

BA 4TH SEMESTER

Course Title: Mathematical Methods for Economics

Course Code: MINECO4

Nature of the course: Minor

Course Outcomes: After successful completion of this course students will be able to

CO1: Understand and apply fundamental mathematical concepts such as sets, relations, and functions to economic models.

LO1: Define different types of sets and operations on sets.

LO2: Explain ordered pairs and Cartesian products.

LO3: Describe the properties and graphs of various functions including polynomial, rational, exponential, and logarithmic functions.

LO4: Demonstrate the concepts of limit and continuity for a function.

CO2: Utilize matrix algebra and determinants to solve systems of linear equations and analyze economic models.

LO1: Perform elementary operations on matrices including addition and multiplication.

LO2: Calculate the rank and inverse of a matrix.

LO3: Apply determinants and their properties to solve linear equations using Cramer's rule.

LO4: Solve economic problems involving systems of linear equations using matrix methods.

CO3: Apply differentiation techniques to analyze economic functions such as cost, revenue, and demand. LO1: Explain the rules of differentiation for functions of one variable.

LO2: Calculate elasticity of demand and relate it to economic behavior.

LO3: Differentiate between average and marginal costs using derivatives.

LO4: Use second and higher order derivatives to solve economic problems and analyze cost functions.

CO4: Employ integration techniques to derive total functions from marginal functions and solve economic problems.

LO1: Apply basic rules of integration to solve indefinite integrals.

LO2: Use substitution rule, integration by parts, and partial fractions to integrate functions.

LO3: Derive total cost and revenue functions from marginal functions using integration.

LO4: Solve economic problems involving indefinite integrals.

CO5: Apply definite integrals to compute economic measures such as producer’s and consumer’s surplus.

LO1: Explain the concept of definite integrals and their properties.

LO2: Calculate producer’s surplus using definite integrals.

LO3: Calculate consumer’s surplus using definite integrals.

LO4: Solve economic problems involving definite integrals and interpret the results in economic terms.

PROGRAMME OUTCOME WITH ENGLISH COURSES (FYUGP)

Graduate Attributes:

Disciplinary Knowledge:

- Demonstrate the attribute of comprehensive knowledge and understanding of the discipline of English
- Develop a comprehensive knowledge of the various contexts surrounding the production of texts
- Read and interpret these representative works as outcomes of interconnectedness between the larger socio-political milieu and the literary representation of the same.

Critical Thinking:

- Develop critical thinking ability through a philosophical approach in reading the texts and applying them in the analysis of real-life situations.

Research-related Skills:

- Develop the attributes of research in English
- Conduct research by identifying a research problem, exploring research gap, and application of theoretical frameworks in exploring areas of interdisciplinary research.

Reflective Thinking and Problem Solving:

- A successful completion of the program with its emphasis on skill-based learning should enable the graduates to understand and use their own learning and skills to meet the challenges of everyday life.

Communication Skills:

- Develop the ability to have an effective communication in and outside the classroom
- Demonstrate their thoughts and expressions in clear terms.

Digital Learning and Competence:

- Develop digital learning and competence
- Attain proficiency in the use of ICT tools and digital literacy

Programme Specific Outcomes (PSOs):

After completion of the programme the following outcomes are expected:

PSO1: Graduates will develop an understanding of the different ages of the history of

English literature from the medieval to the present age

PSO2: Graduates will be engaged in learning beyond the textbooks and pursue a critical scrutiny of the socio-cultural milieu

PSO3: Graduates will exhibit interpersonal communication skills within and outside the classroom

PSO4: Graduates will apply the skills of translation, creative writing and soft skills

PSO5: Demonstrate competencies required for preparing one for the prospects of diverse professions.

Programme Outcomes (POs):

An undergraduate student of English should be able to:

PO 1. Develop an understanding of the major concepts, theoretical perspectives and recent areas of studies in English literature.

PO 2. Use critical thinking ability in both understanding a text and in analysing real life situations.

PO 3. Develop a critical approach towards the socio-political and cultural milieu of a society through the study of literary texts

PO 4. Apply effective communicative skills in and outside the classroom

PO 5. Apply the professional competencies such as digital learning, creative writing, translation.

PO 6. Demonstrate the abilities to pursue higher studies in English and cultural studies

PO 7. Demonstrate competencies in learning to update knowledge and practice targeted to improve professional knowledge and practice.

COURSE OUTCOME FOR B.A. PROGRAMME

MAJOR IN ENGLISH

COURSE CODE: ENGLISH- C-1

COURSE TITLE: British Poetry and Drama: 14th To 17th Centuries

COURSE OUTCOME: The students will be able to:

- Evaluate the Age of Chaucer
- Examine the genre of Elizabethan drama and the ethos of Renaissance Humanism with respect to the works of Shakespeare and Christopher Marlowe
- Trace the development of Romantic comedy during the Elizabethan age
- Describe Metaphysical Poetry and its thematic complexity

COURSE CODE: ENGLISH- C-2

COURSE TITLE: British Poetry and Drama: 17th to 18th Century

COURSE OUTCOME: The students will be able to:

- Evaluate the socio-political and cultural contexts of the 17th century and
- Develop an understanding of the diverse literary movements, forms and genres of the 17th century
- Prepare in-depth analyses of the major 17th century texts
- Synthesise ideas from the prescribed 17th century texts to create new interpretations and critical perspectives

COURSE CODE: ENGLISH- C-3

COURSE TITLE: British Literature – 18th Century

COURSE OUTCOME: The students will be able to:

- Illustrate the ethos of the 18th century as reflected in literature of the period
- Examine the historical context of Restoration comedy, encompassing the sociopolitical, cultural and literary influences
- Describe the rise of the novel as a genre in the 18th century
- Discuss mock-epic as a genre and its literary significance
- Evaluate the form and function of elegy in 18th century English literature

COURSE CODE: ENGLISH- C-4

COURSE TITLE: Literary Criticism

COURSE OUTCOME: The students will be able to:

- Develop a comprehensive knowledge on classical literary criticism through a reading of Plato and Aristotle's works
- Examine the foundational principles of poetic art and Roman literary criticism through a reading of Horace and Longinus
- Develop a comprehensive understanding about Philip Sidney's *An Apology for Poetry*

Discuss the major arguments presented in Dryden's *An Essay on Dramatic Poesy*

- Outline the thematic concerns in the literary criticism of the 18th century through a reading of Pope and Samuel Johnson

COURSE CODE: ENGLISH- C-5

COURSE TITLE: British Romantic Literature

COURSE OUTCOME: The students will be able to:

- Evaluate the salient features of the Romantic Age
- Comprehend the growth of early Romantic and Romantic poetry in England
- Trace the growth of the novel form in the Romantic age
- Identify the significance of the age in terms of production of literature

COURSE CODE: ENGLISH- C-6

COURSE TITLE: British Literature: 19th Century

COURSE OUTCOME: The students will be able to:

- Develop a critical understanding of the socio historical reality of nineteenth century Britain
- Outline the growth of English novel in the period
- Analyse the developments in English poetry in the Victorian age
- Assess the contribution of the Victorian Age in shaping British Literature

COURSE CODE: ENGLISH- C-7

COURSE TITLE: Indian Classical Literature

COURSE OUTCOME: The students will be able to:

- Outline the historical context of Ancient India, including its aesthetic theory
- Explore the rich Indian classical literary tradition including its distinctive aesthetic philosophies
- Define the development of classical literature in the context of medieval
- Draw a comparative assessment between the Indian and the Western classical literary tradition

COURSE CODE: ENGLISH- C-8

COURSE TITLE: Indian Writing in English

COURSE OUTCOME: The students will be able to:

- Develop an understanding of the historical contexts of Indian Writing in English
- Outline the growth of Indian English novel as a genre
- Examine the growth of Indian English Poetry
- Identify the trajectory of Indian English short stories

COURSE CODE: ENGLISH- C-9

COURSE TITLE: British Literature: The Early 20th Century

COURSE OUTCOME: The students will be able to:

- Develop an understanding of the political, social, and cultural context of the 20^{th} century Britain
- Outline the growth of English Fiction in the early twentieth century
- Evaluate the Modernist Poetry of the era

COURSE CODE: ENGLISH- C-10

COURSE TITLE: European Classical Literature

COURSE OUTCOME: The students will be able to:

- Develop an understanding of the European Classical Tradition
- Outline the growth of the Classical Greek Epic
- Define the significance of the classical Greek and Roman Tragedy
- Draw an outline of the classical Roman epic tradition

COURSE CODE: ENGLISH- C-11

COURSE TITLE: Literary Criticism II

COURSE OUTCOME: The students will be able to:

- Develop an understanding of English literary criticism in the nineteenth century
- Contextualise literary criticism in the Modern age
- Explain the developments of Practical Criticism and Feminist Criticism

COURSE CODE: ENGLISH- C-12

COURSE TITLE: Postcolonial Literature

COURSE OUTCOME: The students will be able to:

- Develop an understanding of the making of Postcolonial Literature
- Appreciate the contribution of the African world to Postcolonial literature
- Develop an understanding of literature from Latin America
- Develop an understanding of short stories from the erstwhile colonised world

COURSE CODE: ENGLISH- C-13

COURSE TITLE: World Literature

COURSE OUTCOME: The students will be able to:

- Outline the major issues addressed by the different genres of world literature
- Assess the significance of Diasporic and Young Adult fiction
- Discuss the women's question in world literature
- Examine the contribution of poetry to world literature

COURSE CODE: ENGLISH- C-14

COURSE TITLE: American Literature

COURSE OUTCOME: The students will be able to:

- Analyse the socio-historical background of American literature
- Outline the growth of American Drama
- Evaluate the unique features of American fiction
- Draw an outline of the development of American poetry

COURSE CODE: ENGLISH- C-15

COURSE TITLE: Literary Theory

COURSE OUTCOME: The students will be able to:

- Develop an understanding of Marxism as an important school of theory
- Appreciate Feminism as a major school of thought
- Evaluate the significance of Poststructuralism
- Examine the significance of the Postcolonial school of thought

MINOR IN ENGLISH

COURSE CODE: ENGLISH- Minor-1

COURSE TITLE: British Poetry and Drama: 14th To 17th Centuries

COURSE OUTCOME: The students will be able to:

- Evaluate the Age of Chaucer
- Examine the genre of Elizabethan drama and the ethos of Renaissance Humanism with respect to the works of Shakespeare and Christopher Marlowe
- Trace the development of Romantic comedy during the Elizabethan age
- Describe Metaphysical Poetry and its thematic complexity

COURSE CODE: ENGLISH- Minor -2

COURSE TITLE: British Poetry and Drama: 17th to 18th Century

COURSE OUTCOME: The students will be able to:

- Evaluate the socio-political and cultural contexts of the 17th century and
- Develop an understanding of the diverse literary movements, forms and genres of the 17th century
- Prepare in-depth analyses of the major 17th century texts
- Synthesise ideas from the prescribed 17th century texts to create new interpretations and critical perspectives

COURSE CODE: ENGLISH- Minor -3

COURSE TITLE: British Literature – 18th Century

COURSE OUTCOME: The students will be able to:

- Illustrate the ethos of the 18th century as reflected in literature of the period
- Examine the historical context of Restoration comedy, encompassing the sociopolitical, cultural and literary influences
- Describe the rise of the novel as a genre in the 18th century
- Discuss mock-epic as a genre and its literary significance
- Evaluate the form and function of elegy in 18th century English literature

COURSE CODE: ENGLISH- Minor -4

COURSE TITLE: British Romantic Literature

COURSE OUTCOME: The students will be able to:

- Evaluate the salient features of the Romantic Age
- Comprehend the growth of early Romantic and Romantic poetry in England
- Trace the growth of the novel form in the Romantic age
- Identify the significance of the age in terms of production of literature

COURSE CODE: ENGLISH- Minor -5

COURSE TITLE: British Literature: 19th Century

COURSE OUTCOME: The students will be able to:

- Develop a critical understanding of the socio historical reality of nineteenth century Britain
- Outline the growth of English novel in the period
- Analyse the developments in English poetry in the Victorian age
- Assess the contribution of the Victorian Age in shaping British Literature

COURSE CODE: ENGLISH- Minor -6

COURSE TITLE: British Literature: The Early 20th Century

COURSE OUTCOME: The students will be able to:

- Develop an understanding of the political, social, and cultural context of the 20^{th} century Britain
- Outline the growth of English Fiction in the early twentieth century
- Evaluate the Modernist Poetry of the era

GENERIC ELECTIVE COURSE IN ENGLISH

COURSE CODE: ENGLISH- GEC-1

COURSE TITLE: Introducing English Poetry

COURSE OUTCOME: The students will be able to:

- State the fundamental definition and nature of poetry, and its types
- Demonstrate a comprehensive understanding of the elements of poetry and analyse their use in various poems
- Evaluate the key characteristics and themes of Metaphysical, Romantic,
- Develop a comprehensive understanding of the theoretical underpinning of poetry as discussed by Coleridge, Wordsworth, and T.S. Eliot

COURSE CODE: ENGLISH- GEC-2

COURSE TITLE: Introducing English Drama

COURSE OUTCOME: The students will be able to:

- Trace the origin and growth of drama in England and its various forms
- Evaluate the different types of theatre spaces
- Explain the elements of drama and their significance in theatrical productions
- Evaluate Aristotle's Poetics and its significance in the context of theories on drama
- Develop a comprehensive understanding of the various types of drama

COURSE CODE: ENGLISH- GEC-3

COURSE TITLE: Introducing English Fiction

COURSE OUTCOME: The students will be able to:

- Trace the rise of novel as a form and genre from the 18th century onwards
- Evaluate the different forms of fiction
- Outline the new developments in fiction writing
- Evaluate various elements of fiction to engage critically with complex narratives and texts

ABILITY ENHANCEMENT COURSE IN ENGLISH

COURSE CODE: ENGLISH- AEC-2

COURSE TITLE: English Language and Communication Skills

COURSE OUTCOME: The students will be able to:

- Discuss Communication Theory, Types and Modes
- Engage in advanced speaking skills
- Develop the ability to read and understand texts by demonstrating skills in comprehension, summarisation, paraphrasing, analysis and interpretation
- Develop proficiency in diverse writing skills

SKILL ENHANCEMENT COURSE IN ENGLISH

COURSE CODE: ENGLISH- SEC-1

COURSE TITLE: Soft Skills

COURSE OUTCOME: The students will be able to:

- Develop proficiency in verbal and written communication skills for effective personal, academic, and professional interactions
- Cultivate an understanding and appreciation of cultural diversity to communicate effectively in cross-cultural settings

- Acquire essential technological and professional communication skills for career readiness and advancement

COURSE CODE: ENGLISH- SEC-2

COURSE TITLE: Creative Writing

COURSE OUTCOME: The students will be able to:

- Explain the meaning and significance of Creative writing
- Develop a detailed understanding of the elements of creative writing
- Exhibit a comprehensive understanding of various forms and genres of creative writing

COURSE CODE: ENGLISH- SEC-3

COURSE TITLE: Basic Concepts of Translation

COURSE OUTCOME: The students will be able to:

- Evaluate the principles and practices of Translation studies
- Develop a comprehensive understanding on different theories of translation
- Examine the cultural, political, and postcolonial dimensions of translation
- Understand the various methods of translation and the complex role of the translator in the process of translation

FOUR YEAR UNDER-GRADUATE PROGRAMME (FYUGP) IN GEOGRAPHY, DIBRUGARH UNIVERSITY

- **THE PREAMBLE**

Geography is a vast and diverse field of study that examines the earth's physical and human features and their interrelationships. It is a vital discipline that helps us understandand appreciate the world we live in. Geography is not only about learning the names of countries and their capital cities; it is about comprehending the complexities of the naturaland cultural landscapes and the processes that shape them.

In the present-day context, the significance of geography cannot be overstated. As the world becomes increasingly globalized, interdependent, and rapidly changing, geography provides us with essential tools to analyze and interpret the challenges and opportunities that arise. For instance, geospatial technologies such as geographic information systems (GIS), remote sensing, and satellite imagery are extensively used in diverse fields, including urban planning, natural resource management, disaster response, climate change adaptation, and public health. Geography also plays a vital role in understanding social and cultural phenomena, such as migration patterns, language distribution, and ethnic diversity. In summary, geography is a discipline that contributes to our knowledge and understanding of the world and helps us make informed decisions about our planet's present and future.Change is the unchangeable law of nature and therefore, society is not a static entity. With the continuous changes taking place in the society, the nature and scope of geography also changes and enlarges.The main purpose of the Undergraduate Programme in Geography is to develop and disseminate knowledge, skills and values through education, field-based training and research relevant for promoting, maintaining and improving the functioning of individuals, families, groups, organizations and communities existing in the society.

The curriculum for Geography at undergraduate level therefore, has incorporated certain new components of learning in order to make it relevant to the contemporary society and modern practices. It is expected that the prepared LOCF for Education at undergraduate level and FYUGP will be of immense relevance to the prospective graduates having interest in education and practice. It will be very advantageous to make students of Geography more dynamic and adaptable by enhancing their skills leading to their increased employability. The discipline will also help in shaping the students' overall personalities to take on the challenges of an emerging competitive society. It has incremental learning experiences that will enhance the abilities of students who come from diverse backgrounds. It will also provide opportunities to develop individual potentialities and to produce a pool of betterprofessionals each year.

- **INTRODUCTION:**

Higher Education in India is considered as a critical core in the development and growth strategy of the nation. According to NEP 2020, Higher Education should put an emphasis on recognising, identifying, and fostering each student's unique strengths by educating teachers and parents about the need of encouraging each student's holistic development in both curricular and co-curricular areas. It must be flexible enough to allow students to select their learning paths and programmes and, in turn, pick their own life choices based on their talents

and interests. For a pluralistic world, there should be a focus on multidisciplinary and a comprehensive education in the sciences, social sciences, arts, humanities, and sports to ensure the unity and integrity of all knowledge.

Geography is a multifaceted discipline that explores the interactions between the natural and human worlds, and the spatial patterns and processes that shape our planet. It encompasses a broad range of sub-disciplines, including physical geography, humangeography, environmental geography, and geospatial sciences, each with their unique perspectives and methodologies. The Four-Year Undergraduate Programme (FYUGP) in Geography provides students with a comprehensive understanding of this dynamic field through a balanced mix of theoretical and practical courses.

The Bachelor of Arts/Science in Geography degree of Dibrugarh University adapted as per the recommendations of NEP 2020 will also be of either three- or four-year duration,with multiple exit options within the period with appropriate certification. After completionof one year a UG certificate, after completion of two years a UG diploma, after completion of three years a Bachelor's degree in the programme will be provided to the students. The four year undergraduate programme in Geography will allow the student an opportunity to experience the full range of holistic and multidisciplinary education, along with the chosen Major and Minor choices of the students.

- **AIMS OF FOUR YEAR UNDER-GRADUATE PROGRAMME (FYUGP) IN GEOGRAPHY:**
  1. Provide a comprehensive understanding of the discipline of geography: The FYUGP in Geography aims to introduce students to the breadth and depth of the field of geography, including its sub-disciplines, theories, methods, and applications. Students will gain a broad-based knowledge of the natural and human systems that shape the earth's landscapes and environments, as well as the social and cultural processes that influence them.
  2. Develop critical thinking and analytical skills: The FYUGP in Geography aims to develop students' ability to analyse and interpret geospatial data and phenomena usinga range of tools and technologies. Students will learn how to identify and evaluate spatial patterns, relationships, and trends, and apply critical thinking and problem-solving skills to real-world scenarios.
  3. Foster an interdisciplinary and holistic approach to problem-solving: The FYUGP in Geography aims to cultivate an interdisciplinary and holistic approach to understanding and addressing complex issues that affect the environment, society, and economy. Students will learn how to integrate knowledge and methods from different disciplines, such as biology, geology, economics, sociology, and political science, to develop innovative and sustainable solutions to environmental and social problems.
  4. Provide opportunities for experiential learning and research: The FYUGP in Geography aims to provide students with opportunities for experiential learning and research, through field trips, internships, research projects, and collaborations with faculty and peers. Students will gain hands-on experience in using geospatial technologies, conducting fieldwork, collecting and analysing data, andcommunicating their findings to diverse audiences.

5. Prepare graduates for diverse career paths and lifelong learning: The FYUGP in Geography aims to prepare graduates for diverse career paths in the public, private, and non-profit sectors, as well as for further education and lifelong learning. Graduates will be equipped with a range of transferrable skills, including communication, teamwork, leadership, and problem-solving, that will enable them to adapt to changing professional and societal contexts.

- **GRADUATE ATTRIBUTES OF THE FYUGP IN GEOGRAPHY:**

1. **Disciplinary knowledge**: Graduates of the FYUGP in Geography will possess a deep and comprehensive understanding of the principles, theories, and methodologies of the field of geography, including its sub-disciplines such as physical geography, human geography, and geomatics. They will have a strong foundation in the theoretical and empirical underpinnings of geography, and be able to apply this knowledge to analyze and interpret environmental and social phenomena. They will also be able to articulate the relevance and significance of geography to contemporary environmental and social issues.
2. **Geospatial literacy**: Graduates of the FYUGP in Geography will possess a strong foundation in geospatial literacy, including the ability to analyze and interpret geospatial data, use geographic information systems (GIS), and apply remote sensing techniques. They will have a thorough understanding of the principles of cartography, geodesy, and spatial statistics, and be able to apply these principles to real-worldproblems.
3. **Critical thinking and problem-solving:** Graduates of the FYUGP in Geography will be skilled critical thinkers and problem-solvers, able to identify and analyze complex environmental, social, and economic issues, and develop innovative and sustainable solutions. They will have experience in using qualitative and quantitative methods to collect and analyze data, and be able to communicate their findings effectively to diverse audiences.
4. **Interdisciplinary perspective:** Graduates of the FYUGP in Geography will have an interdisciplinary perspective on complex issues, drawing on knowledge and methods from diverse fields such as ecology, economics, sociology, and political science. They will be able to integrate this knowledge to develop holistic and nuanced understandings of complex issues, and develop innovative and sustainable solutions.
5. **Global and cultural competence**: Graduates of the FYUGP in Geography will have a global and cultural competence, with an understanding of the diverse cultural, social, and economic contexts in which environmental and social issues occur. They will be able to work effectively with people from different cultural backgrounds, and have a nuanced understanding of the implications of cultural differences for environmental and social problem-solving.
6. **Ethical and professional practice:** Graduates of the FYUGP in Geography will be committed to ethical and professional practice, with an understanding of the ethical and legal issues involved in environmental and social problem-solving. They will be able to work collaboratively and responsibly with colleagues and stakeholders, and have a commitment to lifelong learning and continuous professional development.

PEO Number Objective Description

PEO1 Graduates will acquire in-depth knowledge of Geography including concepts, theories, and methodologies relevant to contemporary issues and challenges.

PEO2 Graduates will develop a comprehensive understanding of Geography as a multidisciplinary field encompassing physical, human, and environmental dimensions.

PEO3 Graduates will possess a broad understanding of Geography and apply theoretical knowledge and practical skills to address real-world problems and contribute to sustainable development initiatives.

PEO4 Demonstrate proficiency in geographic technologies and analytical tools for data collection, visualization, and decision-making.

PEO5 Cultivate professional competencies such as critical thinking, problem-solving, and interdisciplinary collaboration necessary for success in academic and professional settings

PEO6 Graduates will be inspired to engage in advanced studies and research activities to address the educational needs of the nation.

Program Specific Outcomes (PSOs)

The following table describes the outcomes that graduates of the BA/B.Sc. Geography programs are expected to achieve after the successful completion of their studies:

PSO Number Outcome Description

PSO1 Graduates will adeptly solve a variety of problems and will be able to critically analyse their findings.

PSO2 Graduates will analyse and interpret results, and foster innovation by developing ideas that reflect broader Geo-environmental contexts.

PSO3 Graduates will apply their knowledge to design effective methodologies for addressing real-world problems.

PSO4 Graduates will utilize learned techniques, skills, and modern tools appropriately to address specific challenges.

PSO5 Graduates will acquire enhanced problem-solving abilities, analytical thinking and creativity,

PSO6 Graduates will be proficient in writing comprehensive reports, creating impactful presentations, and efficiently communicating findings.

PSO7 Graduates will build the confidence necessary to excel in competitive exams such as NET, SET, UPSC/APSC etc.

Program Outcomes (POs)

The following table describes the outcomes that graduates of the B.A/B.Sc. Geography programs are expected to achieve the following upon successful completion of their studies:

PO Number Outcome Description

PO1: Graduates will comprehend fundamental concepts and be able to expand upon the concepts, theories, methods and techniques in Geography.

PO2: Graduates will possess advanced knowledge and deep insights in various Geographical domains.

PO3: Graduates will master diverse problem-solving methodologies applicable to Socio-economic and environmental problems.

PO4: Graduates will be adept at communicating geographical ideas with precision and clarity.

PO5: Graduates will enhance their professional skills and gain expertise in specialized areas of geography.

PO6: Graduates will acquire skills necessary for engaging in independent research.

PO7: Graduates will become professionals capable of addressing real-life problems.

PO8: Graduates will be trained to prepare reports such as field reports, dissertation, thesis, etc. with clarity.

TEACHING LEARNING PROCESS

The programme allows to use varied pedagogical methods and techniques both within classroom and beyond.

- Lecture
- Tutorial
- Power point presentation
- Documentary film on related topic
- Project Work/Dissertation
- Group Discussion and debate
- Seminars/workshops/conferences
- Field visits and Report/Excursions
- Laboratory Work/Practical
- Mentor/Mentee

TEACHING LEARNING TOOLS

- Projector
- Smart Television for Documentary related topic
- LCD Monitor
- WLAN
- White/Green/Black Board
- Computer Lab with GIS and Remote Sensing tools
- Soil and Water Testing Lab
- UAV (Drones)
- Tracing Table
- Dumpy's Level, Theodolite
- GPS,
- Toposheets and Satellite Image
- Globes, Charts, Maps
- Plane Table Set, Prismatic Compass,
- Levelling Staff, Rotameter

ASSESSMENT

- Home assignment
- Project Report
- Class Presentation: Oral/Poster/Power point
- Group Discussions and debate
- Seminars
- Laboratory work

- Peer review
- Quizzes
- Other participatory learning activities
- In semester examinations
- End Semester examinations

Table 2: Marks Distribution

	4 Credit Course **with** Practical	**4** Credit Course **without** Practical	**3** Credit Course **with** Practical	**3** Credit Course **without** Practical
End-Sem	**45T+15P(**10 Exam+3 PNB+ 2VV**)** = **60** Marks	**60T** = **60** Marks	**45T+15P(**10 Exam+3 PNB+2 VV**)** = **60**Marks	**60T= 60** Marks
In-Sem	**20 IE** (2×10) **+ 10P + 10** (GD, Seminar, Debate etc.) = **40** Marks	**30 IE** (2×15) + **10** (GD, Seminar, Debate etc.) = **40** Marks	**20 IE** (2×10) + **10P + 10** (GD, Seminar, Debate etc.) = **40** Marks	**30 IE** (2×15) + **10** (GD, Seminar, Debate etc.) = 4**0** Marks

Abbreviations:

T (Theory), **P** (Practical), **PNB** (Practical Note Book), **IE** (Internal Examination), **VV** (Viva-Voce), **GD** (Group Discussion)

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FYUGP STRUCTURE AS PER UGC CREDIT FRAMEWORK OF MAY, 2024

Year	Semester	Course	Title of the Course	Total Credit
Year 01	1st Semester	C - 1	Geomorphology	4
		Minor 1	Geomorphology and Oceanography	4
		GEC - 1	(A) Physical Geography (B) Human Geography	3
		AEC 1	Modern Indian Language	4
		VAC 1	Understanding India/ Health and Wellness	2
		SEC 1	Disaster Management	3
	Total			**20**
	2nd Semester	C - 2	Climatology	4
		Minor 2	Climatology and Biogeography	4
		GEC 2	(A) Fundamentals of Geomorphology (B) Fundamentals of Economic Geography	3
		AEC 2	English Language and Communication Skills	4
		VAC 2	Environmental Science/ Yoga Education	2
		SEC 2	Methods and Techniques of Field Study	3
	Total			**20**
The students on exit shall be awarded Undergraduate Certificate (in the Field of Study/Discipline) after securing the requisite 40 Credits in Semester 1 and 2 provided they secure 4 credits in work based vocational courses offered during summer term or internship / Apprenticeship in addition to 6 credits from skill-based courses earned during 1st and 2nd Semester				
Year 02	3rd Semester	C - 3	Environmental Geography	4
		C - 4	Remote Sensing and GIS in Geography	4
		Minor 3	Human, Social and Cultural Geography	4
		GEC – 3	(A) Climatology (B) Settlement Geography	3
		VAC 3	Digital and Technological Solutions / Digital Fluency	2

		SEC – 3	Cartographic techniques	3
		Total		**20**
	4th Semester	C - 5	Human and Settlement Geography	4
		C - 6	Political Geography	4
		C - 7	Statistical methods in Geography	4
		C - 8	Biogeography and Oceanography	4
		Minor 4	Geography of Resource and Economic Development	4
		Total		**20**
Grand Total (Semester I, II, III and IV)				**80**
The students on exit shall be awarded Undergraduate Diploma (in the Field of Study/Discipline) after securing the requisite 80 Credits on completion of Semester IV provided, they secure additional 4 credit in skill based vocational courses offered during First Year or Second Year summer term				
	5th Semester	C – 9	Regional Geography of World	4
		C – 10	Cartographic techniques and Map Projection	4
		C – 11	Economic Geography	4
		Minor 5	Population and Settlement Geography	4
			Internship + Community Engagement (NCC /NSS /Adult Education /Student mentoring / NGO /Govt. Institutions, etc.) Or Internship/CE	2+2 Or 4/4
		Total		**20**
Year 03	**6th Semester**	C – 12	Geographic Thought	4
		C – 13	Surveying Techniques	4
		C – 14	Geography of India	4
		C – 15	Geography of North East India and Assam	4
		Minor 6	Environmental Geography and Sustainable Development	4
			Total	**20**
Grand Total (Semester I, II, III and IV, V and VI)				**120**
The students on exit shall be awarded Bachelor of (in the Field of Study/Discipline) Honors (3 years) after securing the requisite 120 Credits on completion of Semester 6.				
Year 04	**7th Semester**	C – 16	Select Any One • Fundamentals of Fluvial Geomorphology • Fundamentals of Regional Planning • Fundamentals of Disaster Management	4
		C – 17	Geography of Tourism	4

		C – 18	Population Geography	4
		Minor 7	Political Geography	4
			Research Ethics and Methodology	4
		Total		**20**
	8th Semester	C – 19	Select Any One • Advanced Fluvial Geomorphology • Advanced Regional Planning • Advanced Disaster Management	4
		C – 20	Social and Cultural Geography	4
		Minor –8	Geography of Health and Wellbeing	4
			Dissertation (Collection of Data, Analysis and Preparation of Report) / Any 2 DSE Courses of 4 credits each in lieu of Dissertation	8
			DSE1 Urban Geography	4
			DSE2 Geography of Rural Development	4
			DSE3 Soil Geography	4
		Total		**20**
Grand Total (Semester I, II, III and IV, V, VI, VII and VIII)				**160**
The students on exit shall be awarded Bachelor of (in the Field of Study/Discipline) (Honours with Research) (4 years) after securing the requisite 160 Credits on completion of Semester 8.				

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 1ST SEMESTER

TITLE OF THE COURSE	**:**	**GEOMORPHOLOGY**
COURSE CODE	**:**	**GGRC1**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60 (End Sem) (45T+15P) + 40 (In Sem)**

Course Description:

This course provides an in-depth understanding of the earth's physical form and structure. It explores the fundamental concepts and processes in geomorphology, focusing on both internal (endogenetic) and external (exogenetic) processes that shape the earth's surface. Students will learn to analyse various landforms and their evolution through lectures, tutorials, and practical exercises, equipping them with skills essential for careers in environmental and land-use management.

Prerequisites:

There are no formal prerequisites for this course.

Course Objectives:

- Enhance understanding of geomorphology and its fundamental concepts.
- Acquire knowledge about the earth's interior and its movements.
- Understand diverse geomorphic processes and their impact on landform development under various geo-climatic conditions.
- Comprehend the processes responsible for the development of diverse landforms on the earth's surface.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Understand key concepts and terminologies in geomorphology.
ILO 1.1: Recall definitions of geomorphological terms.
ILO 1.2: Identify different geomorphic processes.
ILO 1.3: List various landforms created by geomorphic processes.

CO2: Explain the earth's interior structure and geomorphic processes.

ILO 2.1: Describe the structure of the earth's interior.
ILO 2.2: Explain the concepts of isostasy, plate tectonics, and geosynclines.
ILO 2.3: Discuss the processes of weathering and mass wasting.

CO3: Apply geomorphic knowledge to analyse and interpret landscapes and landforms.
ILO 3.1: Use topographical maps to interpret landforms.
ILO 3.2: Perform morphometric and slope analysis on various terrains.
ILO 3.3: Analyse fluvial, karst, aeolian, glacial, and coastal landforms.

CO4: Differentiate between erosional and depositional processes.
ILO 4.1: Compare and contrast different types of erosional landforms.
ILO 4.2: Identify depositional features in various environments.
ILO 4.3: Assess the impact of climatic conditions on geomorphic processes.

CO5: Integrate geomorphic principles to solve complex geomorphological problems.
ILO 5.1: Combine knowledge of endogenetic and exogenetic processes to explain landform evolution.
ILO 5.2: Create models representing different geomorphic processes.
ILO 5.3: Propose solutions to geomorphological issues in environmental management.

CO6: Critically evaluate geomorphic processes and their implications on landform development.
ILO 6.1: Judge the effectiveness of different geomorphic theories.
ILO 6.2: Evaluate the role of geomorphic processes in landscape modification.
ILO 6.3: Appraise the implications of human activities on geomorphic processes

TITLE OF THE COURSE	**: GEOMORPHOLOGY AND OCEANOGRAPHY**
COURSE CODE	**: MINGGR1**
NATURE OF THE COURSE	**: MINOR**
TOTAL CREDITS	**: 4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**: 60 (End Sem) (45T+15P) + 40 (In Sem)**

Course Descriptions:

This course provides an overview of geomorphology and oceanography, focusing on the processes shaping the Earth's surface and the dynamics of oceanic systems. It covers fundamental concepts in geomorphology, including landforms, geological processes, and the interaction between land and water bodies. Additionally, it explores key aspects of oceanography, such as ocean currents, waves, tides, and marine ecosystems. Practical sessions offer hands-on experience in interpreting topographic maps, drawing profiles, and analysing bathymetric data.

Prerequisites: None

Course Objectives

- To introduce students to the fundamental concepts of geomorphology and oceanography.
- To develop an understanding of the processes shaping the Earth's surface and oceanic

dynamics.

- To enhance students' analytical skills in interpreting topographic maps and bathymetric data.
- To cultivate an appreciation for the interconnectedness of geological and oceanic systems.
- To provide practical experience in applying theoretical knowledge to real-world scenarios.
- To prepare students for further studies or careers in Earth sciences, environmental science, or related fields.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Describe the nature and scope of geomorphology and oceanography.

TITLE OF THE COURSE	**: PHYSICAL GEOGRAPHY**
COURSE CODE	**: GECGGR1A**
NATURE OF THE COURSE	**: GENERIC ELECTIVE COURSE (GEC)**
TOTAL CREDITS	**: 3 CREDITS**
DISTRIBUTION OF MARKS	**: 60 (End Sem) + 40 (In-Sem)**

Course Description:
The Physical Geography course introduces students to the fundamental concepts and processes governing the Earth's physical environment. It covers topics such as the Earth's structure, atmosphere, lithosphere, biosphere, and hydrosphere. Through theoretical study and practical applications, students gain an understanding of Earth systems and their interconnectedness.

Prerequisites:
No specific prerequisites are required.

Course Objectives:

- To explain the concept, definition, and scope of earth systems.
- To understand the atmospheric composition and structure.
- To acquire knowledge about the interior of the earth and its interior movements.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Define Physical Geography and its scope.
ILO1.1: Identify and list the key components of Physical Geography.
ILO 1.2: Explain how Physical Geography differs from other branches of geography.
ILO 1.3: Apply the concepts of Physical Geography to analyse real-world phenomena.

CO2: Describe the composition and structure of the atmosphere.
ILO 2.1: Explain the composition of the Earth's atmosphere in terms of gases.
ILO 2.2: Illustrate the vertical structure of the atmosphere.
ILO 2.3: Compare and contrast the characteristics of different atmospheric layers.

CO3: Classify different types of air masses and explain their modifications.
ILO 3.1: Classify air masses based on their source regions and characteristics.
ILO 3.2: Describe the process of air mass modification.
ILO 3.3: Analyse the influence of air masses on weather patterns in different regions.

CO4: Identify and differentiate between various types of Earth movements.
ILO 4.1: Identify the different types of Earth movements, such as orogenic and epeirogenic.
ILO 4.2: Differentiate between volcanic and seismic activities.
ILO 4.3: Interpret maps and diagrams showing Earth's tectonic activities.

CO5: Explain the concept of the hydrological cycle and its significance.
ILO 5.1: Describe the stages of the hydrological cycle.
ILO 5.2: Discuss the importance of the hydrological cycle in shaping landscapes.
ILO 5.3: Evaluate human impacts on the hydrological cycle and associated ecosystems.

CO6: Analyse the causes and consequences of sea level changes.
ILO 6.1: Identify natural and anthropogenic causes of sea level changes.
ILO 6.2: Evaluate the impact of sea level changes on coastal regions and ecosystems.
ILO 6.3: Propose mitigation strategies to address the effects of sea level rise.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 1ST SEMESTER

TITLE OF THE COURSE	**:**	**HUMAN GEOGRAPHY**
COURSE CODE	**:**	**GECGGR1B**
NATURE OF THE COURSE	**:**	**GENERIC ELECTIVE COURSE (GEC)**
TOTAL CREDITS	**:**	**3 CREDITS**
DISTRIBUTION OF MARKS	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Description:
This course, Human Geography, delves into the various dimensions of human interaction with the Earth's surface and how it shapes societies and cultures. Through a mix of theoretical frameworks and case studies, students explore topics such as population growth and distribution, theories of population, the relationship between space and society, and the dynamics of tribal life in India.

Prerequisites:
No specific prerequisites are required for this course.

Course Objectives:

- To understand the fundamental concepts and theories in Human Geography and their contemporary relevance.
- To analyse the factors influencing population growth and distribution, and comprehend the theories explaining population dynamics.

- To explore the relationship between space and society, including the concept of social space and cultural regions.
- To gain insights into the diversity and dynamics of tribal life in India, focusing on major tribes and their socio-cultural characteristics.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Recall and define key concepts in Human Geography, including environmental determinism, demographic transition theory, and cultural regions.
ILO 1.1: Identify and define key terms and concepts in Human Geography.
ILO 1.2: Recall and explain the theories of environmental determinism and demographic transition.
ILO 1.3: Describe the characteristics of different cultural regions.

CO2: Demonstrate an understanding of the factors influencing population growth and distribution, and the relationship between space and society.
ILO 2.1: Explain the factors affecting population growth and distribution.
ILO 2.2: Interpret the relationship between space and society.
ILO 2.3: Summarize the main characteristics of social space and cultural regions.

CO3: Apply theoretical frameworks to analyse real-world examples of population dynamics and cultural landscapes.
ILO 3.1: Apply demographic transition theory to analyse population trends in different regions.
ILO 3.2: Apply concepts of social space and cultural regions to analyse cultural landscapes.
ILO 3.2: Analyse case studies of population distribution using geographical methods and tools.

CO4: Analyse and evaluate the complexities of tribal life in India, including the socio-cultural characteristics of major tribes.
ILO 4.1: Analyse the socio-cultural characteristics of major tribes in India.
ILO 4.2: Evaluate the impact of socio-economic factors on tribal communities.
ILO 4.3: Compare and contrast the lifestyles of different tribes in India.

CO5: Synthesize information from various sources to propose solutions to challenges faced by tribal communities.
ILO 5.1: Synthesize information to propose strategies for sustainable development in tribal areas.
ILO 5.2: Develop recommendations for policies aimed at improving the socio-economic conditions of tribal communities.
ILO 5.3: Create a comprehensive understanding of the complexities of tribal life through interdisciplinary approaches.

CO6: Critically evaluate the relevance and applicability of theories and concepts in understanding contemporary human geographical phenomena.
ILO 6.1: Critically justify the strengths and limitations of demographic transition theory.
ILO 6.2: Assess the relevance of environmental determinism and possibilism in explaining human-environment interactions.
ILO 6.3: Critique the representation of cultural regions and human groups in geographical literature and discourse.

ILO 1.1: Define and differentiate between geomorphology and oceanography.
ILO 1.2: Explain the significance of geomorphic and oceanographic processes in shaping the Earth's surface.
ILO 1.3: Analyse geomorphological and oceanographic concepts to understand real world landscapes and marine environments.

CO2: Analyse the processes and landforms associated with endogenetic and exogenetic forces.
ILO 2.1: Analyse the causes and effects of endogenetic forces such as tectonic movements and exogenetic forces like weathering and erosion.
ILO 2.2: Integrate knowledge of Earth's interior structure and surface processes to explain the formation of specific landforms.
ILO 2.3: Critically evaluate the impact of geological processes on human activities and the environment.

CO3: Evaluate the factors influencing ocean salinity, temperature, waves, tides, and currents.
ILO 3.1: Understand the factors influencing ocean salinity, temperature variations, and oceanic circulation patterns.
ILO 3.2: Apply knowledge of oceanographic processes to interpret regional variations inmarine environments.
ILO 3.3: Analyse the relationships between oceanic phenomena such as waves, tides, and currents.

CO4: Apply practical techniques for interpreting topographical maps and geomorphic data.
ILO 4.1: Apply practical skills to interpret topographical maps and analyse geomorphic data.
ILO 4.2: Synthesize information from multiple sources, including topographical maps and field observations, to draw conclusions about landscape evolution.
ILO 4.3: Evaluate the accuracy and reliability of data obtained through practical techniques.

CO5: Critically analyse the interplay between geological processes and environmental dynamics.
ILO 5.1: Analyse the interactions between geological processes and environmental factors such as climate change and land use.
ILO 5.2: Evaluate the sustainability of human activities in geomorphologically and oceanographically sensitive areas.
ILO 5.3: Develop strategies for mitigating the impact of geological hazards on human populations and ecosystems.

CO6: Demonstrate effective communication of geomorphological and oceanographic concepts.
ILO 6.1: Communicate geomorphological and oceanographic concepts effectively through written reports, presentations, and discussions.

ILO 6.2: Present complex geological information in a clear and accessible manner to diverse audiences.
ILO 6.3: Collaborate with peers to develop interdisciplinary solutions to geomorphological and oceanographic challenges.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 1ST SEMESTER

TITLE OF THE COURSE	**:**	**DISASTER MANAGEMENT**
COURSE CODE	**:**	**SEC106**
NATURE OF THE COURSE	**:**	**SKILL ENHANCEMENT COURSE (SEC)**
TOTAL CREDITS	**:**	**3 CREDITS (2+1=3)**
DISTRIBUTION OF MARKS	**:**	**60 (End Sem) (45T+15P) + 40 (In Sem)**

Course Description:

The Disaster Management course under the B.A./B.Sc. in Geography program introduces students to the fundamental concepts of hazards, disasters, risk, and vulnerability. It delvesinto the causes, impacts, and distribution of both natural and manmade disasters, with a focus on those prevalent in India. The course emphasizes response strategies, mitigation techniques, and community-based disaster management approaches. Through theoretical learning and practical fieldwork, students gain insights into disaster preparedness, response protocols, and the role of indigenous knowledge in mitigating disasters.

Prerequisites:
There are no specific prerequisites for this course, although a basic understanding of geography, environmental science, or related disciplines would be beneficial.

Course Objectives:

- To familiarize students with the concepts of hazards, disasters, risk, and vulnerability.
- To explore the causes, impacts, and distribution of natural and manmade disasters, with a focus on those affecting India.

- To introduce students to response and mitigation strategies employed in disaster management.
- To emphasize the importance of preparedness, both at individual and community levels, before and after disasters.
- To plant an understanding of the do's and don'ts during and post-disaster situations.
- To engage students in practical fieldwork to apply theoretical knowledge in assessing and addressing various types of disasters.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Define and classify disasters according to their nature and impact.
ILO 1.1: Define hazards, disasters, risk, and vulnerability, distinguishing between various types of disasters.
ILO 1.2: Classify disasters based on their causes and impacts.
ILO 1.3: Identify and categorize different types of disasters encountered globally and within India.
CO2: State the causes, impacts, and distribution of disasters in India.
ILO 2.1: Explain the causes behind prevalent disasters such as floods, landslides, droughts, earthquakes, tsunamis, and cyclones in India.
ILO 2.2: State the socio-economic and environmental impacts of these disasters on affected regions and communities.
ILO 2.3: Evaluate the distribution patterns of disasters across different geographical regions of India.

CO3: Evaluate response and mitigation strategies employed in disaster management.
ILO 3.1: Annalyse the concepts of response and mitigation in disaster management.
ILO 3.2: Critically justify the effectiveness of various response and mitigation strategies employed during and after disasters.
ILO 3.3: Propose mitigation measures for specific disaster scenarios.

CO4: Develop preparedness plans and protocols for disaster situations.
ILO 4.1: Apply their knowledge to develop preparedness plans for different types of disasters.
ILO 4.2: Synthesize information to create comprehensive disaster preparedness protocols.
ILO 4.3: Evaluate the adequacy and effectiveness of preparedness plans in mitigating disaster risks.

CO5: Demonstrate effective communication and leadership skills in disaster scenarios.
ILO 5.1: Demonstrate effective communication skills in disseminating disaster-related information to communities.
ILOP 5.2: Analyse the role of leadership in coordinating disaster response and mitigation efforts.
ILO 5.3: Find strategies for effective communication and leadership during disasters.

CO6: Apply theoretical knowledge in practical fieldwork to assess and address various types of disasters.

ILO 6.1: Application of theoretical concepts learned in class to practical fieldwork scenarios.
ILO 6.2: Analyse real-world disaster scenarios during fieldwork and propose appropriate solutions.
ILO 6.3: Evaluate the effectiveness of their practical interventions in mitigating disaster impacts.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 2ND SEMESTER

COURSE TITLE	**: CLIMATOLOGY**
COURSE CODE	**: GGRC2**
NATURE OF THE COURSE	**: MAJOR**
TOTAL CREDITS	**: 4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**: 60 (End-Sem.) (45T+15P) + 40 (In Sem)**

Course Description:
This course focusing on the scientific study of Earth's climate system and the factors influencing climate change. Through a comprehensive examination of atmospheric phenomena and climatic patterns, students delve into topics such as atmospheric temperature, insolation, pressure systems, wind patterns, moisture, weather, and climate classification. Practical components include interpreting weather symbols, analysing weather maps, and representing climatic data graphically.

Prerequisites:
There are no specific prerequisites for this course.

Course Objectives:

- To develop a scientific understanding of the physical aspects of Earth's climate system and the factors influencing climate change.
- To explore the global balance of energy and transfer of radiation in the atmosphere through in-depth quantitative analysis and the study of general circulation of winds.
- To highlight important atmospheric phenomena and their direct impact on human activities, emphasizing the understanding of weather phenomena and its implications on day-to-day life.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Understand the fundamental concepts and principles of climatology.
ILO 1.1: Identify the components and structure of the atmosphere.
ILO 1.2: Explain the factors influencing atmospheric temperature distribution.
ILO 1.3: Define insolation and its role in the Earth's heat budget.

CO2: Interpret and explain various atmospheric phenomena and climatic patterns.
ILO 2.1: Interpret weather symbols and analyse weather maps effectively.
ILO 2.2: Describe the characteristics of pressure belts and planetary winds.
ILO 2.3: Explain the concept of airmass, fronts, cyclones, and anticyclones.

CO3: Apply climatological knowledge to analyse and interpret real-world climatic data.
ILO 3.1: Utilize Climograph, hythergraphs, and ergographs to represent climatic data.
ILO 3.2: Analyse rainfall distribution maps to identify regional climatic patterns.
ILO 3.3: Apply climatic classification systems to categorize climates.

CO4: Analyse the relationships between atmospheric variables and their impacts.
ILO 4.1: Analyse the relationship between evaporation, humidity, and condensation processes.
ILO 4.2: Evaluate the influence of atmospheric pressure systems and wind patterns.
ILO 4.3: Assess the role of oceanic and atmospheric circulation patterns in regional climate variations.

CO5: Propose solutions for climate-related challenges.
ILO 5.1: Develop strategies to mitigate the impact of extreme weather events.
ILO 5.2: Propose adaptation measures to address the challenges posed by climate change.
ILO 5.3: Synthesize interdisciplinary perspectives to address complex climate-related issues.

CO6: Critically evaluate climatic data and climate change theories.
ILO 6.1: Critically evaluate the reliability and limitations of climatic data sources.
ILO 6.2: Assess the validity of climate change theories and predictions.
ILO 6.3: Formulate well-reasoned arguments and recommendations for addressing climate change challenges in policy and practice.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 2ND SEMESTER

COURSE TITLE	**: CLIMATOLOGY AND BIOGEOGRAPHY**
COURSE CODE	**: MINGGR2**
NATURE OF THE COURSE	**: MINOR**
TOTAL CREDITS	**: 4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**: 60 (End-Sem.) (45T+15P) + 40 (In Sem)**

Course Description:

This course provides a comprehensive understanding of the physical aspects of Earth's climate

system and the intricate relationship between climate and geography. It delves into the mechanisms governing atmospheric phenomena, global energy balance, and climatic patterns across the globe. Additionally, it explores the distribution of organisms and ecosystems on Earth's surface and addresses the significance of biodiversity conservation.

Prerequisites: None

Course Objectives:

- To foster a scientific understanding of the Earth's climate system and the factors influencing climate change.
- To analyze the global energy balance and the transfer of radiation in the atmosphere through quantitative methods, elucidating the general circulation of winds.

- To emphasize the relevance of atmospheric phenomena to human activities, focusing on the impact of weather on daily life.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Analyze the components and dynamics of Earth's climate system.
ILO 1.1: Identify the key elements of Earth's atmosphere and their role in climate regulation.
ILO 1.2: Interpret temperature distribution patterns and the mechanisms driving heat exchange within the atmosphere.
ILO 1.3: Analyze the causes and implications of temperature inversions.

CO2: Evaluate the influence of atmospheric pressure and wind patterns on global climate.
ILO 2.1: Examine the concept of pressure belts and their role in shaping global atmospheric circulation.
ILO 2.2: Evaluate the impact of jet streams and monsoons on regional climate variability.
ILO 2.3: Assess the significance of cyclones, anticyclones, and local wind systems in atmospheric circulation.

CO3: Assess the biogeographical patterns and their significance in biodiversity conservation.
ILO 3.1: Define biogeography and its relevance in understanding the distribution of spacies.
ILO 3.2: Analyze the major zoogeographical and phyto-geographical regions of the world.
ILO 3.3: Evaluate the causes and consequences of biodiversity loss and conservation.

CO4: Apply quantitative methods to interpret weather data and climatic classifications.
ILO 4.1: Interpret weather symbols depicted on maps to analyze atmospheric conditions.
ILO 4.2: Utilize rainfall-temperature graphs, hythergraphs, and Climograph to represent climatic data.
ILO 4.3: Demonstrate proficiency in mapping protected areas and biodiversity hotspots.

CO5: Synthesize information to understand the interactions between climate, geography, and human activities.
ILO 5.1: Analyze climatic patterns and their impact on agriculture, economy, and society.
ILO5.2: Cite examples illustrating the interplay between climate change and human livelihoods.
ILO 5.3: Evaluate strategies for mitigating and adapting to climate change at different levels.

CO6: Demonstrate proficiency in critical thinking and problem-solving related to climatic and biogeographical issues.
ILO 6.1: Critically analyze debates on climate change and biodiversity conservation.
ILO 6.2: Apply theoretical concepts to real-world scenarios to propose sustainable solutions.
ILO 6.3: Interpret biodiversity mapping and address complex environmental challenges.

TITLE OF THE COURSE	**: FUNDAMENTALS OF GEOMORPHOLOGY**
COURSE CODE	**: GECGGR2A**
NATURE OF THE COURSE	**: GENERIC ELECTIVE COURSE (GEC)**
TOTAL CREDITS	**: 3 CREDITS**
DISTRIBUTION OF MARKS	**: 60 (End Sem) + 40 (In-Sem)**

Course Description:

This course, "Fundamentals of Geomorphology," delves into the foundational principles governing the formation and evolution of Earth's surface features. It encompasses an exploration of the dynamic processes shaping landscapes, including the influence of both endogenetic and exogenetic forces. Through a combination of theoretical insights and practical applications, students will gain a comprehensive understanding of geomorphological phenomena and their significance in shaping the Earth's surface.

Prerequisites: None

Course Objectives:

- Introduce the meaning, nature, scope, and fundamental concepts of Geomorphology.
- Understand the growth and evolution of surface relief features on Earth.
- Explore the impact of various geological processes, including the work of running water, underground water, moving ice, wind, and sea waves, as well as weatheringand mass wasting.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Describe the Meaning, Nature, and Scope of Geomorphology
ILO 1.1: Define geomorphology and explain its relevance in physical geography.
ILO 1.2: Discuss the historical development and various branches of geomorphology.
ILO 1.3: Identify key terminologies and concepts in the study of geomorphology.

CO2: Analyse Fundamental Concepts in Geomorphology
ILO 2.1: Illustrate fundamental geomorphological concepts such as landform, erosion, and deposition.
ILO 2.2: Compare and contrast different geomorphological processes and their effects.
ILO 2.3: Apply the principles of geomorphology to real-world geographic scenarios.

CO3: Explain the Internal Structure of the Earth
ILO 3.1: Describe the layers of the Earth based on their physical properties.
ILO 3.2: Explain the chemical composition of the Earth's layers.
ILO 3.3: Correlate the internal structure of the Earth with its geodynamic processes**.**

CO4: Interpret the Nature and Behavior of Seismic Waves and Their Types
ILO 4.1: Differentiate between primary (P) waves, secondary (S) waves, and surface waves.
ILO 4.2: Analyse how seismic waves provide information about the Earth's interior.
ILO 4.3: Utilize seismic wave data to identify and interpret geological features.

CO5: Evaluate the Impact of Endogenetic Forces on Landform Evolution
ILO 5.1: Describe the processes of earth movements, including sudden and slow movements.
ILO 5.2: Explain the formation of folds and faults and their influence on the landscape.
ILO 5.3: Analyse the role of plate tectonics in the formation of mountains and other landforms.

CO6: Assess the Processes and Outcomes of Exogenetic Forces
ILO 6.1: Identify various types of weathering and mass wasting and their effects on landforms.
ILO 6.2: Explain the geomorphic work of running water, underground water, glaciers, and wind.
ILO 6.3: Assess the interaction between exogenetic processes and resulting geomorphicfeatures.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 2ND SEMESTER

TITLE OF THE COURSE : FUNDAMENTALS OF ECONOMIC GEOGRAPHY
COURSE CODE : GECGGR2B
NATURE OF THE COURSE: GENERIC ELECTIVE COURSE (GEC)
TOTAL CREDITS : 3 CREDITS
DISTRIBUTION OF MARKS: 60 (End Sem) + 40 (In-Sem)

Course Description:

This course introduces students to the fundamental concepts of economic geography, focusing on the dynamics of economic activities, resource utilization, and the rationale behind the spatial distribution of industries and agricultural activities. Through systematic and spatial approaches, students explore the relationship between human activities and geographical factors shaping economic landscapes.

Prerequisites: None

Course Objectives:

- To convey an understanding of the fundamental concepts of economic geography.
- To understand the dynamics of economic activities, resource utilization, and population pressure on resource bases.
- To comprehend the rationale for the spatial distribution of industries and agricultural activities through locational theories.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be ableto:

CO1: Demonstrate comprehension of the fundamental concepts of economic geography and its relevance in analysing spatial patterns of economic activities.
ILO 1.1: Define key terms and concepts in economic geography.
ILO1.2: Explain the significance of economic geography in understanding regional development patterns.
ILO 1.3: Interpret spatial data to analyse economic trends and patterns.

CO2: Apply theoretical frameworks to analyse the impact of natural resources on economic activities and assess locational factors influencing industrial and agricultural locations.
ILO 2.1: Utilize theoretical models to analyse resource distribution and its impact on economic development.
ILO 2.2: Evaluate the suitability of locations for different economic activities based on locational theories.
ILO2.3: Apply spatial analysis techniques to understand the spatial distribution of economic activities.

CO3: Analyse the dynamics of economic activities and their relationship with the natural environment, identifying patterns of resource utilization and their implications.
ILO 3.1: Analyse the impact of environmental factors on economic decision-making and resource utilization.
ILO 3.2: Compare and contrast different types of economic activities in terms of their environmental impacts.
ILO 3.3: Evaluate the sustainability of economic activities based on their environmental footprint.

CO4: Evaluate the significance of international trade and examine its role in shaping global economic networks.
ILO 4.1: Assess the role of international trade in influencing regional economic development.
ILO 4.2: Evaluate the impacts of globalization on economic landscapes and spatial patterns.
ILO 4.3: Critically analyse trade policies and their implications for economic geography.

CO5: Synthesize knowledge of locational theories to propose solutions for optimizing industrial and agricultural locations.
ILO 5.1: Design strategies for sustainable industrial and agricultural development.
ILO 5.2: Develop a comparison for spatial models to optimize resource utilization and minimize environmental impacts.
ILO 5.3: Propose policy recommendations for promoting balanced regional development.

CO6: Demonstrate an understanding of the historical development and contemporary theories in economic geography.
ILO 6.1: Trace the historical evolution of locational theories in economic geography.
ILO 6.2: Analyse case studies the application of locational theories in real-world contexts.
ILO 6.3: Evaluate the relevance of traditional and contemporary locational theories.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 2ND SEMESTER

TITLE OF THE COURSE :METHODS AND TECHINQUES OF FIELD STUDY
COURSE CODE :SEC206
NATURE OF THE COURSE :SKILL ENHANCEMENT COURSES (SEC)
TOTAL CREDITS : 3 CREDITS (2+1)
DISTRIBUTION OF MARKS :60 (End Sem) (45T+15P) + 40 (In Sem)

Course Description:

This course, Methods and Techniques of Field Study, equips students with essential skills for conducting geographical field studies. It covers various methods of data collection, including primary and secondary techniques, and emphasizes the preparation and presentation of comprehensive field reports using digital media.

Prerequisites: None.

Course Objectives:

- Enhance understanding of field study concepts, data types, and their significance in geographical research.
- Develop proficiency in techniques for collecting primary data, preparing questionnaires, and processing and analysing data systematically.

- Foster the ability to construct field reports, incorporating quantitative techniques, diagrams, maps, and photographs for effective communication.
- Cultivate practical skills in conducting field studies, collecting data, and preparing comprehensive reports.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Demonstrate field study concepts and data types through analysis and interpretation.
ILO 1.1: Identify different types of geographical data.
ILO 1.2: Explain the significance of field study in geographical research.
ILO 1.3: Classify techniques for collecting primary and secondary data.

CO2: Illustrate data collection techniques and processes through practical application.
ILO 2.1: Apply appropriate techniques for primary data collection.
ILO 2.2: Analyse data tabulation, processing, and analysis methods.
ILO 2.3: Interpret the preparation of questionnaires and schedules for field research.

CO3: Apply theoretical knowledge to design comprehensive field reports.
ILO 3.1: Design field study reports with clear aims, objectives, and methodology.
ILO 3.2: Utilize tables, charts, diagrams, maps, and photographs effectively in field reports.
ILO 3.3: Implement digital media for enhanced presentation and dissemination of findings.

CO4: Analyse the components and structure of field reports.
ILO 4.1: Evaluate the structure of field study reports for coherence and clarity.
ILO 4.2: Critically assess the use of visual aids in data representation.
ILO 4.3: Compare and contrast different methods of field data interpretation.

CO5: Create filed report by synthesizing theoretical knowledge and practical skills.
ILO 5.1: Synthesize theoretical concepts with practical fieldwork experience.
ILO 5.2: Develop innovative approaches to data collection and analysis.
ILO 5.3: Integrate various media formats for impactful report presentation.

CO6: Evaluate the effectiveness of field study methodologies and reporting techniques for geographical research.
ILO 6.1: Critique the strengths and limitations of different data collection methods.
ILO 6.2: Assess the reliability and validity of field study findings.
ILO 6.3: Propose improvements to enhance the quality and rigor of field research practices.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 3RD SEMESTER

TITLE OF THE COURSE	**:**	**ENVIRONMENTAL GEOGRAPHY**
COURSE CODE	**:**	**GGRC3**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem.) (45T+15P) + 40 (In-Sem.)**

Course Description:
This course delves into Environmental Geography, exploring its concepts, principles, and the intricate relationship between humans and their environment. It covers the fundamentals of ecology, ecosystem dynamics, environmental degradation, conservation efforts, and sustainable

development practices.

Prerequisites: Basic understanding of geography and ecological principles.

Course Objectives:

- Understand the fundamental concepts, scope, and developments in environmental geography.
- Analyse the structure, functions, and dynamics of ecosystems, along with their distribution patterns.
- Explore the intricate relationship between human activities and the environment across various biomes.
- Examine the causes, impacts, and measures for mitigating environmental degradation.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs)

CO1: Demonstrate a comprehensive understanding of environmental geography principles and concepts.
ILO 1.1: Identify key concepts in environmental geography.
ILO 1.2: Define the scope and nature of environmental geography.
ILO 1.3: Recall the developments in the field of environmental geography.

CO2: Interpret the principles of ecology and their application in understanding ecosystems.
ILO 2.1: Explain the principles governing ecological systems.
ILO 2.2: Interpret the structure and function of ecosystems.
ILO 2.3: Discuss the significance of ecological dynamics in environmental studies.

CO3: Apply ecological concepts to analyse the relationships between human activities and the environment.
ILO 3.1: Apply ecological principles to analyse human-environment interactions.
ILO 3.2: Evaluate the impact of human activities on different biomes.
ILO 3.3: Propose adaptive strategies for sustainable human-environment coexistence.

CO4: Analyse environmental degradation processes and evaluate conservation strategies.
ILO 4.1: Analyse the causes and consequences of environmental degradation.
ILO 4.2: Evaluate conservation efforts for water, soil, forests, and marine ecosystems.
ILO 4.3: Critically assess environmental policies and their effectiveness.

CO5: Integrate knowledge from field observations to propose solutions for environmental challenges.
ILO 5.1: Synthesize field observations to identify environmental issues.
ILO 5.2: Generate hypotheses for addressing environmental problems.
ILO 5.3: Develop action plans for environmental conservation based on collected data.

CO6: Evaluate the effectiveness of environmental protection policies and practices.
ILO 6.1: Critique environmental protection policies for their efficacy.
ILO 6.2: Assess the impact of environmental impact assessments (EIA).
ILO 6.3: Formulate recommendations for promoting sustainable development practices.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 3RD SEMESTER

TITLE OF THE COURSE	**: REMOTE SENSING AND GIS IN GEOGRAPHY**
COURSE CODE	**: GGRC4**
NATURE OF THE COURSE	**: MAJOR**
TOTAL CREDITS	**: 4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**: 60 (End-Sem.) (45T+15P) + 40 (In-Sem.)**

Course Description:

Remote Sensing and GIS in Geography offers a comprehensive exploration of remote sensing and Geographic Information Systems (GIS) as integral tools in geographic analysis. The course covers fundamental principles of remote sensing, including electromagnetic radiation, sensor technology, and image processing techniques. Students will gain hands-on experience in GIS software for spatial data management, analysis, and visualization, enhancing their capability to apply remote sensing and GIS in addressing real-world geographic problems such as land-use change, resource management, and urban planning. Through critical engagement with current research and practical applications, students will develop proficiency in both technical skills and

the communication of complex geospatial concepts.

Prerequisites

There are no formal prerequisites for this course, but a foundational understanding of geography and basic computer skills is recommended.

Course Objectives

- Understand Remote Sensing Principles: Comprehend the principles of remote sensing, including the properties of electromagnetic radiation, sensors, and platforms.
- Analyze Remote Sensing Data: Utilize image processing techniques to enhance, classify, and interpret remote sensing data.
- Understand GIS Principles: Grasp the fundamentals of GIS, including data management, spatial analysis, and cartography.
- Apply GIS Software: Employ GIS software to manage, analyze, and visualize spatial data, integrating remote sensing information.
- Solve Geographic Problems: Apply remote sensing and GIS techniques to address geographic issues such as land-use change, resource management, and urbanplanning.

Course Outcomes (Cos) and Intended Learning Outcomes (ILOs): Students will be able to

CO1: Describe the fundamental concepts, components and historical development of remote sensing

ILO 1.1: Define remote sensing and explain its significance in geographic studies.

ILO 1.2: Identify key components and platforms used in remote sensing.

ILO 1.3: Outline the historical milestones in the development of remote sensing technology.

CO2: Analyse and interpret remote sensing data using digital image processing techniques.

ILO2.1: Differentiate between types of digital images and their characteristics.

ILO 2.2: Explain the steps involved in digital image processing.

ILO 2.3: Perform image enhancement and classification using appropriate software tools.

CO3: Explain the principles of GIS, including the management and analysis of spatial and non-spatial data.

ILO 3.1: Define GIS and discuss its core components and functions.

ILO 3.2: Differentiate between raster and vector data structures and their applications.

ILO 3.3: Describe methods for collecting and geo-referencing spatial data.

CO4: Utilize GIS software to create, manage, and analyse spatial data, including the integration of remote sensing data.

ILO 4.1: Import and manipulate raster and vector data within a GIS interface,

ILO 4.2: Create and edit shapefiles, and perform spatial analysis such as buffering.

ILO 4.3: Conduct GIS-based data visualization and interpretation.

CO5: Apply remote sensing and GIS techniques to practical geographic problems, such asland-use change detection.

ILO 5.1: Identify appropriate remote sensing and GIS methods for specific geographic problems.

ILO 5.2: Analyse and interpret satellite images for landform and land-use analysis;

ILO 5.3: Develop GIS-based solutions for resource management and urban planning challenges.

CO6: Critically evaluate and communicate remote sensing and GIS research and findings effectively.

ILO 6.1: Review and critique recent literature on remote sensing and GIS methodologies.

ILO 6.2: Prepare and present research findings clearly and concisely.

ILO 6.3: Write comprehensive reports and papers on remote sensing and GIS applications

DETAILED SYLLABUS OF 3rd SEMESTER

TITLE OF THE COURSE :HUMAN, SOCIAL AND CULTURAL GEOGRAPHY
COURSE CODE : MINGGR3
NATURE OF THE COURSE: MINOR
TOTAL CREDITS :4 CREDITS (3+1)
DISTRIBUTION OF MARKS: 60 (End-Sem.) (45T+15P) + 40 (In-Sem.)

Course Description:

This course is designed to explore the diverse and dynamic aspects of human, social, and cultural geography. The course provides an in-depth understanding of the definitions, nature, and scope of human, social, and cultural geography, their major subfields, and contemporary relevance. It delves into various schools of thought like determinism, possibilism, and neo- determinism, examines the Human Development Index across different regions, and addresses social problems such as education, health, gender, housing, and crime, particularly

in India. Furthermore, the course involves practical applications of geographical techniques like age–sex pyramids and disparity maps to analyse human development.

Prerequisites:

a) Fundamental understanding of basic geography concepts.
b) Previous coursework or knowledge in introductory human or physical geography.

Course Objectives:

- To introduce fundamental concepts in Human, Social, and Cultural Geography.
- To explore various approaches and schools of thought in geographical studies and their significance.
- To comprehend spatial distribution and address social issues related to key components of geography.
- To develop practical skills in using statistical and graphical techniques for geographical analysis.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Analyse fundamental concepts and contemporary relevance of human geography to recognize its scope and importance in understanding human-environment interactions.
ILO 1.1: Describe key concepts in human geography.
ILO1.2: Identify the relevance of human geography in modern contexts.
ILO 1.3: Students will be able to relate human geography theories to real-world examples.

CO2: Evaluate the principles and theories of determinism, possibilism, and neo-determinism to distinguish their applications and implications in human geography studies.
ILO 2.1: Differentiate between determinism, possibilism, and neo-determinism.
ILO 2.2: Assess the implications of each school of thought on human geography.
ILO 2.3: Apply these principles to case studies.

CO3: Assess the Human Development Index across various regions to understand development disparities and associated challenges.
ILO 3.1: Calculate and interpret the Human Development Index.
ILO 3.2: Compare the development status of different countries.
ILO 3.3: Discuss the problems and prospects related to development in these regions.

CO4: Examine the scope and types of space in social geography to understand the relationships between society, space, and the environment in addressing social issues.
ILO 4.1: Define the concept of space in social geography.
ILO 4.2: Categorize different types of space and their significance.
ILO 4.3: Analyse social issues within the context of space and environment interactions.

CO5: Explore cultural regions and diffusion to understand cultural dynamics and the factors influencing cultural change and diversity.
ILO 5.1: Identify and map cultural regions of the world.
ILO 5.2: Explain the concept and process of cultural diffusion.
ILO 5.3: Analyse factors that affect cultural diffusion and its outcomes.

CO6: Apply practical skills in creating age–sex pyramids and disparity maps to evaluate demographic and social disparities in developed and developing regions.
ILO 6.1: Construct and interpret age–sex pyramids for different regions.
ILO 6.2: Create sex disparity maps with regional focus.
ILO 6.3: Utilize histograms, line graphs, and pie diagrams to represent human development data effectively.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 3RD SEMESTER

TITLE OF THE COURSE	**: CLIMATOLOGY**
COURSE CODE	**: GECGGR3A**
NATURE OF THE COURSE	**:GENERIC ELECTIVE COURSE (GEC)**
TOTAL CREDITS	**: 3 CREDITS**
DISTRIBUTION OF MARKS	**: 60 (End-Sem) + 40 (In-Sem)**

Course Description:
This course explores the fundamental concepts of the Earth's atmosphere, including its composition, structure, and variations. It examines atmospheric pressure systems, wind patterns, and the dynamics of atmospheric moisture, providing a comprehensive understanding of weather, climate, and their influencing factors. The course delves into the

global climate system with a focus on Köeppen's climate classification and contemporary issues such as climate change, floods, and droughts. It emphasizes the interconnections between atmospheric phenomena and their impact on global and regional climates, aiming to equip students with the skills to analyse climatic processes and their implications.

Prerequisites:

a. Basic knowledge of physical geography and general science.
b. Familiarity with fundamental environmental concepts and processes.
c. Prior coursework or interest in Earth sciences or meteorology is beneficial.

Course Objectives:

- To introduce students to the principles of climatology and the differences between weather and climate.
- To understand the global atmospheric pressure systems and wind patterns.
- To learn about the basics of atmospheric moisture, its processes, and the implications of climate change.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain the composition and structure of the atmosphere and their variations with altitude, latitude, and season.
ILO 1.1: Describe the vertical layers of the atmosphere and their characteristics.
ILO 1.2: Analyse how atmospheric composition varies with altitude and geographical location.
ILO 1.3: Explain the seasonal changes in atmospheric composition and structure.

CO2: Describe the factors influencing atmospheric pressure and the distribution of pressure belts globally.
ILO 2.1: Identify and explain the factors that affect atmospheric pressure.
ILO 2.2: Discuss the horizontal and vertical distribution of atmospheric pressure.
ILO 2.3: Outline the global pattern of pressure belts and their climatic significance.

CO3: Analyse different types of winds and their causes, including planetary, seasonal, and local winds.
ILO 3.1: Differentiate between planetary, seasonal, and local winds.
ILO 3.2: Explain the causes of various wind patterns, including land and sea breezes.
ILO 3.3: Assess the impact of different wind types on regional climates.

CO4: Evaluate the types and characteristics of air masses and their role in the formation of cyclones.
ILO 4.1: Define and classify different types of air masses.
ILO 4.2: Explain the processes involved in the formation of tropical and temperate cyclones.
ILO 4.3: Assess the global distribution and impacts of different cyclone types.

CO5: Interpret the concepts of atmospheric moisture including humidity, hydrological cycle, and precipitation.
ILO 5.1: Describe absolute, relative, and specific humidity and their measurement.
ILO 5.2: Explain the components and processes of the hydrological cycle.

ILO 5.3: Identify and differentiate between various forms and types of precipitation.

CO6: Assess Köeppen's climate classification and analyse the causes and consequences of climate change

ILO 6.1: Outline Köeppen's climate classification system with a focus on Indian climates.

ILO 6.2: Explain the primary causes and effects of contemporary climate change.

ILO 6.3: Discuss the recent issues related to climate change, including floods and droughts.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)

DETAILED SYLLABUS OF 3RD SEMESTER

TITLE OF THE COURSE	**: SETTLEMENT GEOGRAPHY**
COURSE CODE	**: GECGGR3B**
NATURE OF THE COURSE	**:GENERIC ELECTIVE COURSE (GEC)**
TOTAL CREDITS	**: 3 CREDITS**
DISTRIBUTION OF MARKS	**: 60 (End-Sem) + 40 (In-Sem)**

Course Description:

This course provides an in-depth exploration of settlement geography, encompassing rural and urban settlements, their evolution, characteristics, and associated theories. Through

theoretical frameworks and case studies, students will analyse the dynamics of settlement patterns and their implications on socio-economic development.

Prerequisites: None

Course Objectives:

- Introduce settlement geography, its nature, scope, and classification.
- Understand the concept of rural and urban settlements along with their development processes.
- Learn the fundamentals of settlement theory including central place theory and rural-urban continuum.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Analyse settlement patterns and their impact on land use planning.
ILO 1.1: Identify different types of settlements based on their morphology and distribution.
ILO 1.2: Evaluate the factors influencing the growth and spatial organization of settlements.
ILO 1.3: Interpret settlement dynamics within the context of regional development.

CO2: Demonstrate comprehension of rural settlement dynamics and challenges.
ILO 2.1: Describe the historical evolution of rural settlements and their typologies.
ILO 2.1: Assess the socio-economic factors shaping rural settlement patterns.
ILO 2.3: Propose solutions to mitigate rural settlement problems, particularly in the Indian context.

CO3: Evaluate the characteristics and complexities of urban settlements.
ILO 3.1: Examine the factors contributing to the rise and growth of urban settlements.
ILO 3.2: Classify urban settlements based on their functions and hierarchies.
ILO 3.3: Critically analyse urban settlement issues prevalent in India and suggest sustainable urban planning strategies.

CO4: Application of central place theory to understand spatial organization and service provision.
ILO 4.1: Interpret Christaller's central place theory in relation to urban hierarchy.
ILO 4.2: Utilize central place theory to analyse the distribution and accessibility of goods and services.
ILO 4.3: Illustrate the spatial arrangement of central places in various settlement systems.

CO5: Investigate the rural-urban continuum and its implications on settlement dynamics.
ILO 5.1: Describe the interdependencies and interactions between rural and urban areas.
ILO 5.2: Analyse the transitional zones along the rural-urban gradient.
ILO 5.3: Evaluate policies and interventions aimed at managing the rural-urban interface.

CO6: Synthesize theoretical frameworks to propose sustainable settlement planning solutions.
ILO 6.1: Integrate settlement theories with contemporary urban and regional planning approaches.

ILO 6.2: Develop comprehensive strategies for balanced rural and urban development.
ILO 6.3: Advocate for inclusive and environmentally sustainable settlement planning practices.

B.A. /B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 3RD SEMESTER

TITLE OF THE COURSE	**:**	**CARTOGRAPHIC TECHNIQUES**
COURSE CODE	**:**	**SEC306**
NATURE OF THE COURSE	**:**	**SKILL ENHANCEMENT COURSE (SEC)**
TOTAL CREDITS	**:**	**3 CREDITS (2+1=3)**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem) (45T+15P) + 40 (In-Sem)**

Course Description:

This course introduces students to the fundamentals of cartography, emphasizing the significance of various techniques in geographical analysis. It covers topics such as mapscales, map projections, and practical exercises in scale construction and map projection.

Prerequisites: None

Course Objectives:

- Understand the importance of cartographic techniques in geographical analysis.
- Explore different types of map scales and learn their construction methods.
- Examine the principles and classifications of map projection techniques.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Demonstrate comprehension of cartographic principles through the application of various map scales and projections.
ILO 1.1: Identify different types of map scales and their representations.
ILO 1.2: Explain the significance of choosing the appropriate map scale for a given geographical context.
ILO 1.3: Compare and contrast various methods of map scale notation.

CO2: Analyse geographical data effectively by selecting appropriate map scales for representation.
ILO 2.2: Interpret geographical data to determine the most suitable map scale.
ILO 2.2: Justify the selection of a specific map scale based on the characteristics of the geographical area being represented.
ILO 2.3: Utilize map scales to accurately measure distances and areas on maps.

CO3: Apply mathematical skills to accurately construct and manipulate map scales.
ILO 3.1: Apply mathematical techniques to convert between different types of map scales.
ILO 3.2: Demonstrate proficiency in enlarging and reducing map scales using appropriate methods.
ILO 3.3: Utilize mathematical principles to construct representative fractions and graphical notations for map scales
CO4: Evaluate the suitability of different map projection techniques for specific geographical regions.
ILO 4.1: Classify map projection techniques based on their principles of construction.
ILO 4.2: Evaluate the advantages and disadvantages of different map projections for specific geographical regions.
ILO 4.3: Justify the choice of map projection technique for a given mapping project.

CO5: Demonstrate proficiency in constructing map scales and graticules through practical exercises.
ILO 5.1: Demonstrate practical skills in constructing comparative scales and diagonal scales.
ILO 5.2: Apply geometric principles to enlarge and reduce map scales accurately.
ILO 5.3: Utilize appropriate tools and techniques to construct map projections effectively

CO6: Synthesize knowledge of cartographic techniques to create accurate and informative maps for geographical analysis.

ILO 6.1: Integrate knowledge of cartographic techniques to design maps that effectively communicate geographical information.

ILO 6.2: Apply critical thinking skills to analyse and interpret maps created using various cartographic techniques.

ILO 6.3: Demonstrate creativity in map design to enhance visual appeal and usability for geographical analysis.

BA/B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 4TH SEMESTER

TITLE OF THE COURSE: HUMAN, POPULATION AND SETTLEMENT GEOGRAPHY
COURSE CODE : GGRC5
NATURE OF THE COURSE : MAJOR
TOTAL CREDITS : 4 CREDITS (3+1=4)

DISTRIBUTION OF MARKS: 60 (End-Sem.) (45T+15P) + 40 (In-Sem.)

Course Description:
This course explores the interplay between human activities and geographical phenomena, focusing on population dynamics, settlement patterns, and their implications on societal development. Through theoretical frameworks and practical applications, students examine the spatial distribution of human populations, factors influencing settlement patterns, and contemporary issues in human geography.

Prerequisites: None

Course Objectives:

- To elucidate the interdisciplinary nature of Geography, integrating social and natural sciences.
- To introduce fundamental concepts and themes in Human Geography and underscore their contemporary significance.
- To analyse population dynamics including size, composition, growth, and distribution, alongside pertinent issues.
- To classify settlements, elucidating their evolution, characteristics, and functional aspects.
- To foster a deeper understanding and appreciation of geographical methodology and philosophical underpinnings.
- To develop a passion for further exploration and study in Geography through engaging pedagogy and practical applications.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain andevaluate the significance of Human Geography in societal development and identify its interdisciplinary connections.

ILO 1.1: Analyse the contributions of Human Geography to addressing contemporary societal challenges.

ILO 1.2: Assess the impact of human activities on geographical landscapes and ecosystems.

ILO 1.3: Formulate interdisciplinary approaches to complex geographical issues.

CO2: Apply theoretical frameworks to analyse population dynamics and understand their implications on regional development.

ILO 2.1: Interpret demographic data to discern trends in population growth and distribution.

ILO 1.2: Evaluate the impact of socio-economic factors on population dynamics.

ILO 1.3: Propose strategies for sustainable population management at local and global scales.

CO3: Classify settlements based on their characteristics and assess their socio-economic significance.

ILO 3.1: Analyse the factors influencing the location and morphology of rural and urban settlements.

ILO 3.2: Compare and contrast settlement patterns across different geographical regions.

ILO 3.3: Evaluate the role of settlements in fostering economic development and social cohesion.

CO4: Utilize geographical techniques to analyse population data and settlement patterns.
IL0 4.1: Apply mapping techniques to represent population distribution and density.
ILO 4.2: Interpret demographic indicators to assess regional development disparities.
ILO 4.3: Employ spatial analysis tools to identify patterns and trends in settlement geography.

CO5: Critically examine contemporary issues in population dynamics and settlement patterns.
ILO 5.1: Assess the social, economic, and environmental implications of aging populations and declining sex ratios.
ILO 5.2: Evaluate the effectiveness of policies aimed at addressing urbanization challenges.
ILO 5.3: Propose innovative solutions to mitigate the impacts of HIV/AIDS on vulnerable populations.

CO6: Demonstrate proficiency in geographical research methods and techniques through practical applications.
ILO 6.1: Design and conduct spatial analyses to investigate population dynamics and settlement patterns.
ILO 6.2: Present research findings effectively using appropriate visual aids and data visualization techniques.
ILO 6.3: Collaborate with peers to solve real-world geographical problems and communicate findings to diverse audiences.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 4TH SEMESTER

TITLE OF THE COURSE	**:**	**POLITICAL GEOGRAPHY**
COURSE CODE	**:**	**GGRC6**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem.) (45T+15P) + 40 (In-Sem.)**

Course Description:
This course delves into the dynamic interplay between geography and politics, exploring the origins of nations, states, and geopolitical theories. Through an interdisciplinary lens, students examine the spatial dimensions of political phenomena such as boundaries, voting patterns, and resource disputes.

Prerequisites:
Completion of previous coursework in geography or related fields.

Course Objectives:

- To conceptualize the learner in the field of political geography, including the origin of nations, states, and gerrymandering.
- To understand international boundaries, frontiers, and their geopolitical significance.
- To analyse geopolitical theories such as those proposed by Mahan, Mackinder, and Spykman and their relevance in contemporary global affairs.
- To explore electoral geography and factors influencing voting behaviour.
- To examine resource disputes, particularly water-sharing conflicts in South Asia.
- To engage in practical exercises to apply theoretical concepts, including mapping

territorial reorganization and analysing shape indices.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO 1: Understand the foundational concepts and scope of Political Geography.

ILO 1.1: Define the key concepts and scope of Political Geography.

ILO 1.2: Describe various approaches to studying Political Geography.

ILO 1.3: Analyse the nature and significance of Political Geography in contemporary geopolitical contexts.

CO 2: Analyse geopolitical theories and their historical evolution**.**

ILO 2.1: Explain the concept and evolution of Geopolitics.

ILO 2.2: Summarize the geostrategic theories of Mahan, Mackinder, and Spykman.

ILO 2.3: Compare the applications and implications of these theories in moderngeopolitical scenarios.

CO 3: Examine the elements and geographical attributes of states and nation-states**.**

ILO 3.1: Identify the key elements of a state and its geographical attributes (size, shape, location).

ILO 3.2: Analyse factors contributing to nation-building and the formation of nation-states.

ILO 3.3: Assess the implications of these attributes on the political stability and identity of states.

CO 4: Evaluate the concepts of frontiers, boundaries, and their functions in the context of Political Geography.

ILO 4.1: Define the concepts of frontiers and boundaries.
ILO 4.2: Classify different types of boundaries and their functions.
ILO 4.3: Evaluate how boundaries influence political relationships and conflicts.

CO 5: Apply practical knowledge through map analysis and shape index calculations related to political reorganization and territorial disputes.
ILO 5.1: Create and interpret maps showing the reorganization of North East India.
ILO 5.2: Use the Chorley and Haggett method to calculate and analyse shape indices.
ILO 5.3: Map and interpret the territories of major Autonomous Councils in Assam and their political significance.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 4TH SEMESTER

TITLE OF THE COURSE : STATISTICAL METHODS IN GEOGRAPHY
COURSE CODE : GGRC7
NATURE OF THE COURSE :MAJOR
TOTAL CREDITS :4 CREDITS (3+1)
DISTRIBUTION OF MARKS :60 (End-Sem.) (45T+15P) + 40 (In-Sem.)

Course Description:
This course introduces students to the fundamental principles of statistical methods as applied in geography. It covers the significance and limitations of statistical methods in geography, various data collection techniques, measures of central tendency and dispersion, correlation and regression analysis, and practical applications of statistical techniques in geographical data analysis.

Prerequisites: None

Course Objectives:
- Understand the importance of data in Geography.
- Learn methods and techniques of data collection, tabulation, interpretation, and analysis.
- Apply basic statistical measures to geographical data.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:
CO1: Recall and comprehend the significance of statistical methods in Geography.
ILO 1.1: Describe the importance of statistical methods in geographic research.
ILO 1.2: Explain the limitations of statistical techniques in geographical analysis.
ILO 1.3: Identify different types and sources of geographical data.

CO2: Demonstrate understanding of various statistical measures and their applications in geographical data analysis.
ILO 2.1: Summarize the methods and techniques of data collection in Geography.
ILO 2.2: Explain the concept of scale of measurement and its implications in data analysis.
ILO 2.3: Interpret measures of central tendency and dispersion in the context of geographical data.

CO3: Apply statistical methods to analyse geographical data and draw meaningful conclusions.
ILO 3.1: Apply sampling techniques to collect representative geographical data.
ILO 3.2: Utilize correlation and regression analysis to explore relationships between

geographical variables.
ILO 3.3: Apply graphical representation techniques to present geographical data effectively.
CO4: Analyse geographical data using statistical tools to identify patterns and trends.
ILO 4.1: Analyse frequency distributions and histograms to understand data distribution.
ILO 4.2: Evaluate the relationship between variables using correlation coefficients.
ILO 4.3: Interpret residual maps to assess the goodness of fit in regression analysis.

CO5: Integrate statistical methods with geographic principles to solve real-world problems.
ILO 5.1: Design effective sampling strategies for specific geographic research objectives.
ILO 5.2: Synthesize findings from correlation and regression analyses to make informed geographic decisions.
ILO 5.3: Develop variability maps to visualize spatial patterns in geographical data.

CO6: Evaluate the appropriateness and effectiveness of statistical methods in addressing geographic research questions.
ILO 6.1: Critique the strengths and weaknesses of different data collection techniques in Geography.
ILO 6.2: Evaluate the reliability of correlation and regression analyses in different geographic contexts.
ILO 6.3: Assess the utility of statistical measures in supporting evidence-based decision-making in Geography.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 4TH SEMESTER

TITLE OF THE COURSE	**: BIOGEOGRAPHY AND OCEANOGRAPHY**
COURSE CODE	**: GGRC 8**
NATURE OF THE COURSE	**: MAJOR**
TOTAL CREDITS	**: 4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**: 60 (End-Sem.) (45T+15P) + 40 (In-Sem.)**

Course Description:
This course delves into the interdisciplinary study of Biogeography and Oceanography, exploring the distribution patterns of plants and animals in relation to environmental factors,and the dynamic nature of oceanic systems. Through theoretical learning and practical applications, students gain insights into the intricate connections between ecosystems, climate, soil, oceanography, and human activities.

Prerequisites: None

Course Objectives:
- To introduce and enhance the learner's understanding of Biogeography and Oceanography and their fundamental concepts.
- To acquaint undergraduate students with the principles, theories, and applications of Biogeography and Oceanography.
- To equip students with the knowledge and skills to understand the interactions between life distribution and human activities.
- To enable students to comprehend the ocean's dynamics and coastal environments.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:
CO1: State the principles and significance of Biogeography and Oceanography.
ILO 1.1: Identify different biogeographic regions and explain their characteristics.
ILO 1.2: Describe the significance of oceanography in understanding Earth's processes.
ILO 1.3: Explain the relationship between climate, soil, and the distribution of plants and animals.
CO2: Analyse the distribution patterns of plants, animals, and soil types.
ILO 2.1: Analyse world distribution patterns of plants and animals in relation to climate and human activities.

ILO 2.2: Classify and explain the distribution of major soil types, particularly in India and Assam.

ILO 2.3: Interpret the significance of soil erosion and conservation measures.

CO3: Evaluate the ocean floor configurations and oceanographic phenomena.

ILO 3.1: Describe the configuration of the ocean floor and its significance.

ILO 3.2: Analyse the salinity, temperature, and currents of different ocean basins.

ILO 3.3: Evaluate theories explaining the origin of coral reefs and atolls.

CO4: Apply mapping techniques in Biogeography and Oceanography.

ILO 4.1: Map phytogeographic and zoogeographic regions of the world.

ILO 4.2: Create maps depicting protected areas in Assam/North East India/India.

ILO 4.3: Construct hypsometric and bathymetric curves for specific regions.

CO5: Synthesize knowledge of interactions between life distribution and human activities.
ILO 5.1: Analyse the impact of human activities on the distribution of plants and animals.
ILO 5.2: Evaluate the role of conservation efforts in preserving biodiversity.
ILO 5.3: Assess the implications of human-induced changes on coastal and marine environments.

CO6: Demonstrate practical skills in Biogeography and Oceanography.
ILO 6.1: Conduct fieldwork to observe and document biogeographic and oceanographic features.
ILO 6.2: Apply practical techniques in soil analysis and mapping of marine resources.
ILO 6.3: Utilize GIS tools and software for spatial analysis and mapping exercises.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 4TH SEMESTER

TITLE OF THE COURSE :GEOGRAPHY OF RESOURCES AND ECONOMIC DEVELOPMENT
COURSE CODE : MINGGR4
NATURE OF THE COURSE :MINOR
TOTAL CREDITS :4 CREDITS (3+1)
DISTRIBUTION OF MARKS :60 (End-Sem.) (45T+15P) + 40 (In-Sem.)

Course Description:

This course delves into the geographical aspects of resources and their role in economic development. It explores the classification, distribution, and utilization patterns of natural resources worldwide, emphasizing sustainable development practices.

Prerequisites: None

Course Objectives:

- Develop an understanding of resources, their utilization patterns, classification, and distribution on Earth.
- Examine the relationship between resource availability and economic development.
- Explore the significance of resource management for sustainable development.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Define the Concept of Resources and Their Relationship with Economic Development
ILO 1.1: Explain the concept of resources in geographical and economic contexts.
ILO 1.2: Analyse the relationship between resource base and economic development.
ILO 1.3: Categorize and describe various types of resources and their characteristics**.**

CO2: Evaluate the Distribution and Utilization of Natural Resources in the World
ILO 2.1: Identify the global distribution of key natural resources like soil, water, forests, and minerals.
ILO 2.2: Assess how these resources contribute to economic development in different regions.
ILO 2.3: Discuss the concept of development and the rational use of natural resources, including Environmental Impact Assessment (EIA).

CO3: Analyse Patterns of Economic Development and Resource Use
ILO 3.1: Compare the development patterns of developed and developing countries.
ILO 3.2: Evaluate the world energy crisis, its causes, and potential mitigation and management strategies**.**
ILO 3.3: Explore the role of technology in the efficient utilization and management of resources.

CO4: Apply Practical Skills in Assessing Resource and Economic Development
ILO 4.1: Use simple/mean ranking methods to determine levels of development in regions such as India/North-East India/Assam.
ILO 4.2: Create maps showing spatial variations in forest cover categories using appropriate cartographic techniques.
ILO 4.3: Develop thematic maps for regions like Assam/North-East India to illustrate aspects such as wildlife sanctuaries, national parks, and resource distribution.
CO5: Understand and Apply Theories and Models Related to Resource Functionality
ILO 5.1: Explain the functional theory of resources in the context of economic geography.

ILO 5.2: Analyse case studies or scenarios where the functional theory of resources is applied.
ILO 5.3: Evaluate the implications of the functional theory on resource management practices.
CO6: Develop Strategies for the Conservation and Rational Use of Resources
ILO 6.1: Appraise different methods for conserving natural resources.
ILO 6.2: Discuss the principles of rational resource use and how they can be implemented effectively.
ILO 6.3: Propose strategies for the sustainable management of resources, considering economic and environmental factors**.**

B.A./B.SC. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 5TH SEMESTER

TITLE OF THE COURSE	**:**	**REGIONAL GEOGRAPHY OF WORLD**
COURSE CODE	**:**	**GGRC9**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem.) 40 (In-Sem.)**

Course Description:

This course offers a comprehensive exploration of the world's diverse regions, emphasizing the physical and economic characteristics that define each area. The course will help students with a deep understanding of the interconnectedness of global regions, the diversity of human and physical landscapes, uneven distribution of resources, regional issues and challenges faced in different parts of the world. Through comparative analysis, case studies, and thematic discussions, students will gain a global perspective and critical thinking skills necessary to analyse regional differences and similarities**.**

Prerequisites:

- Subject matter of Geography.
- Understanding of the physical and human geography interactions in diverse region.

Course Objectives:

- To develop understanding of the learner about climate, soil and topography in different continents of the world.
- To study the industrialization and population distribution in developed, developing and underdeveloped nations of the world.
- To develop critical thinking and analytical skills through the study of regional case studies and thematic issues.
- To foster an appreciation for global diversity and the complexity of regional issues.

Course Outcomes (Cos) and Intended Learning Outcomes (ILOs): Students will be able to

CO1: Explain the fundamental concepts and methodologies of regional geography.
ILO1.1: Define key concepts in regional geography, including space, area and Region.
ILO1.2: Explain the methodologies used in regional geography, such as regionalization.
ILO1.3: Discover different methodologies to analyse different regions of the world.

CO2: Describe the physical features and climatic variations of different regions.
ILO2.1: Describe the physical features of different regions.
ILO2.2: Identify the characteristics of flora and faunas of regions, distribution and climatic impact.
ILO2.3: Analyse the relationship between physical feature and climatic variations in various regions.

CO3: Contrast the resource base and economic contexts that shape regional identities.
ILO3.1: Discuss the distribution of resources that have influenced the development of regions.
ILO3.2: Analyse the factors of uneven resource distribution in different parts of world.
ILO3.3: Evaluate the resources and industries, predominant in various regions.

CO4: Infer the interactions and interdependencies between different regions.
ILO4.1: Explain the concept of globalization and its impact on regional interdependencies.
ILO4.2: Examine case studies of regional conflicts and cooperation to understand political and economic interactions.
ILO4.3: Assess the role of international organizations and agreements.

CO5: Develop critical thinking and analytical skills.
ILO5.1: Conduct comparative analyses of different regions.
ILO5.2: Critically evaluate regional issues such as climate change and urbanization.
ILO5.3: Propose solutions to regional problems based on geographic analysis and evidence.

CO6: Critically evaluate global regional diversity and the complexity of regional issues.
ILO6.1: Reflect on the diversity of regions around the world.
ILO6.2: Discuss the ethical implications of regional disparities and global inequalities.
ILO6.3: Demonstrate an understanding of the interconnectedness of global regions and issues.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 5TH SEMESTER

TITLE OF THE COURS: CARTOGRAPHIC TECHNIQUES AND MAP PROJECTION
COURSE CODE : GGRC10
NATURE OF THE COURSE : MAJOR
TOTAL CREDITS : 4 CREDITS (3+1=4)
DISTRIBUTION OF MARKS : 60 (End-Sem.) (45T+15P) + 40 (In-Sem.)

Course Description:
This course provides an in-depth understanding of cartographic techniques and map projection methods. It covers the principles of map design, the various types of map projections, and their applications. The course also introduces cartographic methods and techniques, including scales and its types, map projections and their construction methods. Students will gain practical experience in creating and interpreting maps, understanding spatial data, and applying projection techniques to real-world problems**.**

Prerequisites:

- Understanding of the basic concepts of cartography in Geography.

Course Objectives:

- To understand the fundamental concepts of cartography and map projections.
- To Understand the importance of various Cartographic Techniques in the field geographical study.
- To focus on various types of map scale and their construction.
- To learn about principles of Map Projection and techniques of construction.
- To develop skills in using cartographic methods and techniques for map creation and

analysis.

- To analyse different types of map projections and their suitability for various purposes.
- To evaluate the accuracy and effectiveness of different cartographic representations.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Define the basic cartographic principles and map elements.
ILO 1.1: Explain the key components of a map, including scale, legend, and orientation.
ILO 1.2: Describe the principles of map design and layout.
ILO 1.3: Identify different types of scales and their specific uses.

CO2: Utilize cartographic methods and techniques to create accurate and informative maps.
ILO 2.1: Demonstrate proficiency in using traditional cartographic tools.
ILO 2.2: Classify, Conversion and Construction of scales.
ILO 2.3: Incorporate different scales and their uses.

B.A / B. Sc IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 5TH SEMESTER

TITLE OF THE COURSE : ECONOMIC GEOGRAPHY
COURSE CODE : GGRC11
NATURE OF COURSE : MAJOR
TOTAL CREDITS : 4 CREDITS (3+1=4)
DISTRIBUTION OF MARKS :60 (End-Sem) (45T+15P) + 40 (In-Sem)

Course Description:
Economic Geography is the study of the location, distribution, and spatial organization of economic activities across the world. This course explores the dynamics of economic activities, including production, consumption, and trade, as well as the role of natural resources, industries, and technologies. It examines how economic processes are influencedby geographic factors and how spatial patterns of economic activity impact regional development and global economies**.**

Prerequisites:

- Understanding of the man-environmental interactions in diverse region.

Course Objectives

- To understand the fundamental concepts and theories of economic geography.
- To acquire knowledge about primary, secondary and tertiary activities and its spatial-temporal pattern.
- To acquire knowledge about spatial-temporal pattern of distribution of major mineral resources.
- To acquaint with nature manufacturing industries and location model.
- To analyse the spatial distribution of economic activities and their underlying factors.
- To examine the role of natural resources, technology, and infrastructure in economic development.

- To explore the impact of globalization on economic activities and regional development.
- To develop skills in spatial analysis for economic applications.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain the Fundamental Concepts and Theories of economic geography.
ILO1.1: Define key terms and concepts in economic geography.
ILO1.2: Explain the spatial distribution of economic activities.
ILO1.3: Illustrate the historical development of economic geography as a discipline.

CO2: Explain spatial distribution of economic activities with citing examples.
ILO2.1: Identify the factors influencing the location of various industries.
ILO2.2: Analyse locational theories and spatial patterns of agriculture and manufacturing.
ILO2.3: Utilize case studies to demonstrate the spatial distribution of specific economic activities.

CO3: Examine the relationship among Natural Resources, Technology, and Infrastructure.
ILO3.1: Describe the role of natural resources in regional economic development.
ILO3.2: Evaluate the impact of technological advancements on economic activities.
ILO3.3: Assess the significance of infrastructure in the spatial organization of economies.

CO4: Explore the major ocean routes and trade activities.
ILO4.1: Explain the processes and drivers of economic globalization.
ILO4.2: Discuss the development of transport and communication.
ILO4.3: Analyse the role of multinational corporations, Special Economic Zones in the global economy.

CO5: Develop Spatial Analysis and Skills.
ILO5.1: Apply spatial analysis techniques to economic data.
ILO5.2: Use practical methods and techniques to visualize and analyse the spatialdistribution of economic activities such as traffic flow, resource distribution and production map etc.
ILO5.3: Interpret maps and spatial data related to economic geography.

CO6: Critical evaluation of Regional Economic Development
ILO6.1: Critically assess different policies of regional economic development.
ILO6.2: Discuss the challenges and opportunities in regional economic planning.
ILO6.3: Propose policy recommendations based on geographic and economic analysis.

B.A / B. Sc IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 5TH SEMESTER

TITLE OF THE COURSE : POPULATION AND SETTLEMENT GEOGRAPHY
COURSE CODE : MINGGR5
NATURE OF COURSE : MINOR
TOTAL CREDITS : 4 CREDITS(3+1=4)
DISTRIBUTION OF MARKS :60 (End-Sem.) (45T+15P) + 40 (In-Sem.)

Course Description:
Population and Settlement Geography is a sub-discipline of human geography that examines the spatial distribution of populations and settlements across the world. This course provides an in-depth analysis of the demographic patterns, population dynamics, and the factors influencing settlement locations and structures. It explores the interrelationships between population growth, migration, urbanization, and environmental impacts, as well as the socio- economic dimensions, contemporary issues of population and settlement patterns. The course combines theoretical frameworks with practical to understand how and why populations and settlements develop and change over time**.**

Prerequisites:

- Understanding of the physical and human geography interactions in diverse region

Course Objectives:

- To introduce the fundamental concepts and theories related to population and settlement geography, its importance in present days
- To analyze patterns and trends in population size, composition, growth, distribution, and migration and also the contemporary issues related with population
- To develop understanding of the students about the formation, development, and organization of different types of settlements, from rural to urban.
- To assess the environmental, social, and economic impacts of population and settlement changes.
- To enhance students' abilities to develop ideas for geographic research.
- To understand the importance of population and settlement changes for planning and policy-making.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain the key concepts and theories in population and settlement geography.
ILO 1.1: Define and describe key concepts in population and settlement geography.
ILO 1.2: Explain major theories related to population growth, migration, and urbanization.
ILO 1.3: Analyse spatial patterns of population.

CO2: Identify and explain patterns and trends in population distribution and migration.

ILO 2.1: Collect and interpret demographic data to identify population trends.
ILO 2.2: Explain factors influencing population distribution and migration.
ILO 2.3: Apply theoretical frameworks to analyse population and settlement issues.

CO3: Contrast the growth and development of urban and rural settlement.
ILO3.1: Describe different types of settlements and their characteristics.
ILO3.2: Analyse the factors contributing to the growth of urban and rural settlements.
ILO3.3: Compare and contrast settlement patterns in different regions and cultures.

CO4: Evaluate the impacts of population changes on the environment and society.
ILO4.1: Evaluate the environmental impacts of population growth and settlement expansion.
ILO4.2: Assess the social and economic consequences of urbanization and migration.
ILO4.3: Propose sustainable solutions to mitigate negative impacts of population and settlement changes.

CO5: Analyse population and settlement policies and their implications.
ILO 5.1: Analyse population and settlement policies at local, national, and global levels.
ILO 5.2: Critique the effectiveness and implications of these policies.
ILO 5.3: Recommend policy improvements based on geographic research and analysis.

CO6: Conduct practical works related to population and settlements and interpret to understand real-world situation.
ILO 6.1: Create graphs of population growth.
ILO 6.2: Infer Population growth and distribution in developed and developing countries.
ILO 6.3: Interpret population data and provide probable solution to your findings.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 6TH SEMESTER

TITLE OF THE COURSE	:	**GEOGRAPHIC THOUGHT**
COURSE CODE	**:**	**GGRC12**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS**
DISTRIBUTION OF MARKS	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Description:
This course explores the historical development and philosophical underpinnings of geographical thought. It examines the evolution of geographic ideas, theories, and methodologies from ancient to modern times, emphasizing the contributions of key schoolsof thought. The course also considers the contemporary debates and future directions in the field of geography**.**

Prerequisites:

- Basic knowledge of the Geographical concepts and theories.
- Introduction to interdisciplinary nature of geography and its development.

Coures Objectives:

- To enhance the learner's understanding of the development of geographic ideas from ancient times to the present.
- To study the evolution to geographical thought through the course of time.

- To understand the interdisciplinary nature of geography and its connections to other fields of study.
- To examine the contributions of significant geographers and geographic schools of thought.
- To develop skills in critically analysing different geographical theories and methodologies.
- To explore contemporary debates and emerging trends in geographical thought.
- To explore the recent trends and technique of the geographic thought and future direction.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Demonstrate the historical development of geographic thought.
ILO 1.1: Identify and describe major periods in the history of geographic thought.
ILO 1.2: Outline the key developments and shifts in geographic paradigms over time.
ILO 1.3: Contrast the contributions of different schools of thought.

CO2: Explain the key philosophical and theoretical foundations of geography.
ILO 2.1: Explain the basic philosophical bases of geographical inquiry.
ILO 2.2: Discuss the main theoretical frameworks that have shaped geography as a discipline.
ILO 2.3: Illustrate how different concepts and theories have influenced geographical studies.

CO3: Discuss the contributions of geographers of different schools of thought.
ILO 3.1: Identify key figures in the history of geographical thought and their contributions.
ILO 3.2: Describe the major geographic schools of thought and their core principles.
ILO 3.3: Analyse the impact of significant works and ideas on the development of the discipline.

CO4: Critically explain contemporary debates and trends in geographical thought.
ILO 4.1: Identify current trends and emerging debates in geographical thought.
ILO 4.2: Discuss the implications of contemporary issues for the future of geography.
ILO 4.3: Formulate informed opinions on contemporary geographic debates.

CO5: Illustrate the interdisciplinary connections of geographical thought with other fields.
ILO 5.1:Identify connections between geography and other academic disciplines**.**
ILO 5.2: Discuss the importance of modern approaches in Geography.
ILO 5.3: Illustrate interdisciplinary approaches to addressing complex geographic problems.

CO6: Evaluate the impact of Post modernism approaches in Geography.
ILO 6.1: Analyse the dynamics of Geographic concepts in present day context.
ILO 6.2: Identify Recent trends to investigate geographic problems.
ILO 6.3: Design and evaluate the future of Geography and its importance.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 6TH SEMESTER

TITLE OF THE COURSE	**:**	**SURVEYING TECHNIQUES**
COURSE CODE	**:**	**GGRC13**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem.) (45T+15P) + 40(In-Sem)**

Course Description:
This course provides an introduction to the fundamental surveying techniques used in geography. Students will learn the principles and practices of various surveying methods, including fieldwork, data collection, and data analysis. Emphasis is placed on understanding how these techniques are applied in geographic studies and the importance of accuracy and precision in spatial data collection**.**

Prerequisites:

- Introduction to surveying techniques in Geography.
- Understanding of the importance of surveying in geography.

Course Objectives:

- To introduce the basic concepts and principles of surveying
- To study the various types of field survey methods, tools and techniques; principles of different types of ground surveying for the preparation of maps/plans for different

geographical context.

- To develop skills in conducting field surveys and data collection.
- To train students in processing and analysing survey data.
- To understand the concept of using survey tools to enhance knowledge and skills.
- To understand the application of surveying techniques in mapping.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: State the principles and importance of surveying in geography
ILO 1.1: Explain the fundamental concepts and principles of surveying
ILO 1.2: Describe the significance of surveying in geography.
ILO 1.3: Discuss the role of accuracy and precision in surveying.

CO2: Proficiently use various surveying instruments and tools
ILO 2.1: Identify and describe the function of different surveying instruments.
ILO 2.2: Demonstrate the correct use of surveying instruments in the field.
ILO 2.3: Perform calibration and maintenance of surveying equipment.

CO3: Conduct accurate field surveys and collect spatial data
ILO 3.1: Plan and design a field survey, including site selection and layout.
ILO 3.2: Execute field surveys using appropriate techniques and methodologies.
ILO 3.3: Record and manage spatial data accurately during fieldwork.

CO4: Interpret survey data for geographic applications
ILO 4.1: Process raw survey data using relevant software tools such as GPS.
ILO 4.2: Create maps and other visual representations from survey data.
ILO 4.3: Evaluate the accuracy and reliability of survey data and results.

CO5: Apply surveying techniques to real-world geographic problems and mapping projects
ILO 5.1: Integrate surveying data with modern mapping tools for analysis.
ILO 5.2: Solve geographic problems using survey data and techniques.
ILO 5.3: Develop and present a comprehensive mapping project based on survey data.

B.A. /B.Sc. INGEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 6TH SEMESTER

TITLE OF THE COURSE	**: GEOGRAPHY OF INDIA**
COURSE CODE	**: GGRC14**
NATURE OF THE COURSE	**: MAJOR**
TOTAL CREDITS	**: 4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**: 60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
Geography of India is a comprehensive course designed to provide students with an in-depth understanding of the physical, social, economic geography of India. The course covers various aspects including the country's physiographic divisions, climate, vegetation, soils, natural resources, population dynamics, urbanization, and regional development. Students will be able to analyse geographical patterns and processes that shape India's environment and society, and understand the implications of these patterns for sustainable development.

Prerequisites:

- Introduction to basic geographical knowledge of India.

Course Objectives:

- To provide a detailed understanding of the physical geography of India.
- To explore the demographic and socio-economic aspects such as population distribution, growth, migration, and urbanization in India.
- To analyse the regional disparities in terms of economic development, resource distribution,

and infrastructure.

- To study the distribution, utilization, and conservation of natural resources such as minerals, forests, and water.
- To foster critical thinking about environmental issues and sustainable development and management in India**.**

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Outline the physiographic divisions, climate, soils, and natural vegetation of India**.**
ILO1.1: Describe the major physiographic divisions of India and their characteristics**.**
ILO1.2: Interpret climatic data and understand the factors affecting the climate of India**.**

ILO1.3: Apply knowledge of physical geography to analyse regional climatic conditions and their impact on agriculture**.**

CO2: Explain the population dynamics, including distribution, density, growth, and migration patterns**.**
ILO2.1: Describe the theories and patterns of population distribution and growth in India**.**
ILO2.2: Analyse census data to identify trends in population dynamics**.**
ILO2.3: Apply demographic analysis to predict future population trends and their implications for urban planning and resource management**.**

CO3: Identify the socio-economic aspects such as agriculture, industry, and urbanization in India**.**
ILO3.1: Gain insights into the agricultural practices, industrial development, and urbanization processes in India**.**
ILO3.2: Evaluate economic data to understand regional variations in socio-economic development**.**
ILO3.3: Propose strategies for balanced socio-economic development and poverty alleviation**.**

CO4: Evaluate the regional disparities and development policies in different parts of India**.**
ILO4.1: Comprehend the factors leading to regional disparities in India**.**
ILO4.2: Analyse regional development policies and their effectiveness**.**
ILO4.3: Formulate recommendations for reducing regional inequalities and promoting balanced regional development**.**

CO5: Critically analyse the distribution and management of natural resources in India.
ILO5.1: Show the distribution and utilization of natural resources in India.
ILO5.2: Evaluate the impact of resource management policies on sustainable development**.**
ILO5.3: Develop plans for the sustainable management of natural resources, considering ecological and economic factors**.**

CO6: Plan a field-based work to understand the real-life situation.
ILO6.1: Identify the major problems of the study.
ILO6.2: Advocate for sustainable development practices and contribute to environmental conservation initiatives**.**
ILO6.3: Interpret the findings.

B.A./B.SC. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 6TH SEMESTER

TITLE OF THE COURSE : GEOGRAPHY OF NORTH EAST INDIA AND ASSAM
COURSE CODE : GGRC15
NATURE OF THE COURSE : MAJOR
TOTAL CREDITS :4 CREDITS (3+1)
DISTRIBUTION OF MARKS : 60(End-Sem.) (45T+15P) +40 (In-Sem.)

Course Description:
This course explores the physical, cultural, and socio-economic geography of North East India, with a special focus on Assam. It examines the region's diverse landscapes, climate, natural

resources, demographic patterns, and cultural heritage. The course aims to provide students with a comprehensive understanding of the geographical factors that shape the region's unique identity and influence its development.

Prerequisites: None

Course Objectives:

- The give an insight into the regional geography of northeast India.
- The students will learn about the physical, economic and anthropogenic details of northeast India with a particular focus on Assam.
- To make the students familiar with the factors responsible for such diversities.
- To introduce students to the physical geography of North East India, including its topography, climate, and natural resources.
- To analyse the economic activities and development issues specific to North East India and Assam.
- To foster an understanding of the environmental challenges and conservation efforts in the region.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain the Physical and socio-cultural background of North East India.
ILO1.1: Describe the major physical features of North East India.
ILO1.2: Explain the climatic variations within North East India and their impact on the region.

ILO1.3: Identify natural resources in North East India and discuss their geographical distribution and significance.

CO2: Identify and describe the demographic patterns and cultural diversity of North East India, focusing on Assam**.**
ILO2.1: Analyse the population distribution and demographic trends in North East India.
ILO2.2: Explore the cultural and ethnic diversity of Assam and its impact on regional identity.
ILO2.3: Discuss the historical and contemporary migration patterns affecting North East India.

CO3: Analyse the economic activities and development challenges in North East India and Assam**.**
ILO3.1: Assess the major economic sectors in North East India.
ILO3.2: Evaluate the infrastructural development and its role in the economic growth.
ILO3.3: Discuss the challenges and opportunities for sustainable development in the region.

CO4: Evaluate environmental issues and conservation strategies in the region.
ILO4.1: Identify major environmental challenges facing North East India, such as deforestation, soil erosion, and biodiversity loss.
ILO4.2: Assess the impact of human activities on the environment in Assam.
ILO4.3: Critically analyse conservation policies and initiatives aimed at preserving the natural environment of North East India.

CO5: Apply geographical knowledge to real-world scenarios and policy-making in the context of North East India and Assam.
ILO5.1: Use geographical data and tools to analyse regional issues in North East India.
ILO5.2: Evaluate policy recommendations based on geographical analysis for sustainable development in Assam.
ILO5.3: Hands on the application of geographical cartographic techniques on geographical entities in North east India.

BA/B.SC IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 6TH SEMESTER

TITLE OF THE COURSE	: **ENVIRONMENTAL GEOGRAPHY AND SUSTAINABLE DEVELOPMENT**
COURSE CODE	: **MINGGR6**
NATURE OF THE COURSE	**: MINOR**
TOTAL CREDITS	: **4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**:60 (End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
Environmental Geography and Sustainable Development is an interdisciplinary course that explores the interactions between human societies and their environments. It focuses on understanding spatial patterns and processes related to natural and human-induced environmental changes and addresses strategies for achieving sustainable development. The course covers topics such as ecosystem dynamics, environmental degradation, climate change, resource management, environmental policy, and sustainable practices.

Prerequisites:

- Basic concept of sustainable development and its importance.

Course Objectives:

- To provide a foundational understanding of environmental geography and sustainable development concepts, including ecosystem services, biodiversity, and ecological footprints.
- To analyse Human-Environment Interactions.
- To evaluate Environmental Policies at local, national, and international level and their effectiveness in promoting sustainable development.
- To identify Sustainable Practices.
- To enhance students' critical thinking skills through the analysis of case studies, current environmental issues, and sustainable development challenges.

- To assess the interdisciplinary approach to solving environmental problems by integrating perspectives from geography, ecology, economics, and social sciences.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain Environmental Geography Concepts: Demonstrate an understanding of key concepts and theories in environmental geography and sustainable development.
ILO1.1: Describe the basic principles and concepts of environmental geography, including ecosystems, biodiversity, and biogeochemical cycles.
ILO1.2: Explain the concept of sustainable development and its importance in environmental management.
ILO1.3: Discuss various environmental challenges and their implications for human societies and natural systems.

CO2: Analyse Environmental Changes
ILO2.1: Identify and describe the major drivers of environmental change, including climate change, land-use change, and pollution.
ILO2.2: Analyse the spatial and temporal patterns of environmental changes using maps, remote sensing data, and geographic information systems (GIS).
ILO2.3: Evaluate the impacts of environmental changes on ecosystems, human health, and socio-economic systems.

CO3: Evaluate Environmental Policies
ILO3.1: Review and assess key international, national, and local environmental policies and agreements.
ILO3.2: Analyse case studies to understand the successes and failures of different environmental policies and management strategies.
ILO3.3: Propose recommendations for improving the effectiveness of environmental policies and regulations.

CO4: Propose Sustainable Solutions
ILO4.1: Identify sustainable practices and technologies that can address specific environmental problems.
ILO4.2: Develop action plans for implementing sustainable development practices at various scales (local, regional, global).
ILO4.3: Evaluate the potential social, economic, and environmental benefits and trade-offs of proposed sustainable solutions.

CO5: Conduct practical
ILO5.1: Formulate research questions and hypotheses related to environmental geography and sustainable development.
ILO5.2: Select and apply appropriate research methodologies, including qualitative and quantitative techniques.

ILO5.3: Collect, analyse, and interpret data to draw evidence-based conclusions and present findings in written and oral formats.

BA/B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE :**FUNDAMENTALS OF FLUVIAL GEOMORPHOLOGY**
COURSE CODE :**GGRC16A**
NATURE OF THE COURSE : MAJOR
TOTAL CREDITS :**4 CREDITS (3+1)**
DISTRIBUTION OF MARKS :**60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:

Fluvial geomorphology is the study of the interactions between the physical shapes of rivers, their water and sediment transport processes, and the landforms they create. It studies the ways that rivers move and change over time, focusing especially on how the flow of water interacts with the movement of sediment. It also considers how the movement of water, sediment and debris interacts with the fixed, immobile features of the landscape, from bedrock canyons to human-built infrastructure.

Prerequisites:

- Introduction to the branches of Geography.

Course Objectives:

- To understand the basic concept of fluvial geomorphology.
- The student will learn about the different process acting in a channel and about channel dynamics.
- To study about the various modern techniques applied in fluvio-geomorphological study.
- To develop skills on drainage line delineation, Basin area and Stream discharge graph and hydrographs.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:
CO1: Describe the fundamental concepts of fluvial geomorphology.
ILO1.1: Explain key terms and concepts related to fluvial processes and landforms.
ILO1.2: Identify the modern methods and techniques in fluvial geomorphological studies.

CO2: Analyse Drainage basin as a fluvial system
ILO2.1: Assess the geomorphic impact of river dynamics.
ILO2.2: Discuss Runoff estimation in a basin and factors controlling it.

CO3: Evaluate Channel pattern & processes.
ILO3.1: Identify and analyse different channel patterns.
ILO3.2: Discuss the development and mechanisms of different channel processes.
ILO3.3: Justify with example about grade, attainment of grade, channel equilibrium.

CO4: Identify and use various instruments and tools in fluvial geomorphology.
ILO4.1: Design an experiment to study river channel dynamics using GIS.
ILO4.2: Analyse the techniques for preparing hydrographs.
ILO4.3: Interpret data of fluvial geomorphic processes and channel dynamics.

BA/B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE :FUNDAMENTALS OF REGIONAL PLANNING
COURSE CODE :GGRC16B
NATURE OF THE COURSE : MAJOR
TOTAL CREDITS :4 CREDITS (3+1)
DISTRIBUTION OF MARKS :60(End-Sem.) (45T+15P) +40 (In-Sem.)

Course Description:
The course broadly covers the concept of region and regionalization, various methods ofregionalization. It also covers different methods and techniques required to smoothly assess and implement the exercises of regional planning and development.

Prerequisites:

- Introduction to the concept of region.

Course objectives:

- To improve the conceptual parameter of the learners in the field of region, methods of regionalization, regional planning and development.
- To understand the importance of problem region identification.
- To highlights the importance of regional development in the removal of regional disparities in terms of development.
- To apply and interpret different methods and techs in regional planning.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain the Regional Concept in Geography

ILO1.1: Describe the principles of regional planning and its significance.

ILO1.2: Identify methods of socio-economic regionalization and spatial analysis.

CO2: Evaluate theDevelopment of Regional Planning

ILO2.1: Identify different types of planning.

ILO2.2: Compare historical and recent development in planning

ILO2.3: Evaluate the interactions between Geography and Regional Planning

CO3: Identify and analyse Regions for Planning.

ILO3.1 Explain the concept and significance of Town and Country planning.

ILO3.2: Evaluate the Planning regions of India.

CO4: Apply and interpret the methods of Regional Planning.

ILO4.1: Application of GIS in urban mapping: population density, population growth

ILO4.2: Assess regional inequalities using various measurement techniques.

ILO4.3: Design comprehensive regional plans addressing underdeveloped areas.

BA/B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE :**FUNDAMENTALS OF DISASTER MANAGEMENT**
COURSE CODE :**GGRC16C**
NATURE OF THE COURSE : MAJOR
TOTAL CREDITS :**4 CREDITS (3+1)**
DISTRIBUTION OF MARKS :**60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:

This course provides an in-depth understanding of the principles and practices of disaster management. It covers the various types of disasters, the role of disaster management agencies, and the essential strategies and tools used in disaster preparedness, response, recovery, and mitigation. This course aims to equip students with the knowledge and skills required to effectively manage and respond to disasters in various settings

Prerequisites:

- Introduction to hazards and disasters.
- Understanding of the importance of disaster management.

Course Objectives:

- To develop a comprehensive understanding of the nature, types, and impacts of disasters.
- To learn the methods and tools for assessing disaster risks and vulnerabilities.
- To understand the principles of disaster preparedness and planning.
- To gain knowledge about the immediate response actions and coordination during disasters.
- To explore the strategies for effective recovery and rehabilitation post-disaster.
- To study the techniques for reducing the impact of future disasters.
- To understand the national and international policies, laws, and frameworks governing disaster management.
- To highlight the importance of community participation in disaster management.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Describe the types, characteristics, and effects of various disasters.
ILO1.1: Identify and classify different types of disasters.
ILO1.2: Explain the characteristics and causes of each type of disaster.
ILO1.3: Analyse the effects of disasters with examples

CO2: Explain and identify vulnerabilities related to man-made disasters.
ILO2.1: Analyse and interpret the Causes and effects man-made disasters such as fire, war.
ILO2.2: Identify and evaluate the vulnerabilities of populations, infrastructure, and systems.
ILO2.3: Develop risk maps and reports based on assessment data.

CO3: Develop and implement disaster preparedness plans.
ILO3.1: Outline the key components of a disaster preparedness plan.
ILO3.2: Create a comprehensive disaster preparedness plan for a specific scenario.
ILO3.3: Implement training and drills to ensure preparedness at the individual, community, and organizational levels.

CO4: Identify effective emergency response strategies.
ILO4.1: Describe the steps and protocols in emergency response operations.
ILO4.2: Coordinate with various agencies and stakeholders during an emergency response.
ILO4.3: Apply first response techniques and manage emergency situations effectively.

CO5: Apply mitigation techniques to reduce the impact of future disasters.
ILO5.1: Identify structural and non-structural mitigation measures.
ILO5.2: Design and implement mitigation projects tailored to specific risks.
ILO5.3: Evaluate the effectiveness of mitigation strategies.

CO6: Conduct field works, design a plan and interpret the findings.
ILO6.1: Identify the problems
ILO6.2: Data collection on disaster**.**
ILO6.3: Prepare a report and interpret the findings.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE	**:**	**GEOGRAPHY OF TOURISM**
COURSE CODE	**:**	**GGRC17**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**:**	**60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
The course explores the relationship between geography and tourism. It examines how geographical features, cultural landscapes, and environmental factors influence tourism patterns and destinations. The course provides an understanding of the spatial dynamics of

tourism, including the distribution and flow of tourists, the development of tourist regions, and the impacts of tourism on physical and human environments**.**

Prerequisites:

- Subject matter of Geography.
- Understanding of the importance of Tourism.

Course Objectives:

- To provide a general understanding of the field of tourism from geographical perspective.
- Understand the role of geography in facilitating tourism and allied activities.
- Have an insight into the role of tourism in economy, society and environment in global, national and regional level.
- To analyse the spatial patterns of tourism and the factors that influence the development and growth of tourism destinations.
- To examine the cultural and environmental impacts of tourism and how they are managed in different geographical contexts.
- To evaluate different models and strategies of tourism development and planning.
- To develop critical thinking and problem-solving skills related to geographical issues in tourism.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Define and explain key geographical concepts and their relevance to tourism.
ILO1.1: Understand and describe the basic principles of geography.
ILO1.2: Explain the role of geographical location in shaping tourism activities.

CO2: Identify and analyse the spatial distribution and flows of tourists at various scales.
ILO2.1: Map and interpret the global and regional patterns of tourist flows.
ILO2.2: Analyse the factors contributing to the spatial distribution of tourism.

CO3: Evaluate the geographical factors that influence the development of tourism destinations.
ILO3.1: Identify physical, cultural, and economic factors that attract tourists to specific destinations.
ILO3.2: Assess how geographical features and climate influence tourism seasonality and patterns.

CO4: Assess the impacts of tourism on cultural and environmental landscapes.
ILO4.1: Evaluate the positive and negative impacts of tourism on local cultures and communities.
ILO4.2: Analyse the environmental impacts of tourism and approaches to mitigate negative effects.

CO5: Apply geographical methods and tools to study tourism patterns and propose sustainable tourism development strategies.

ILO5.1: Utilize GPS and other geographical tools to analyse tourism data.
ILO5.2: Mapping Tourism areas
ILO5.3: Develop and propose strategies for sustainable tourism development based on geographical analysis.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE	**:**	**POPULATION GEOGRAPHY**
COURSE CODE	**:**	**GGRC18**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:

Population Geography is a branch of human geography that studies the spatial distribution, patterns, and processes related to human populations. This course explores demographic concepts, population dynamics, migration patterns, population policies, and the implications of population changes on social, economic, and environmental systems. Through a combination of theoretical frameworks and empirical case studies, students will gain a comprehensive understanding of how populations shape and are shaped by geographical spaces.

Prerequisites:

- Understanding of the physical and human geography interactions in diverse region

Course Objectives:

- Introduce the students to the basic concepts of population geography.
- Highlights on the different characteristics of population and their influence on development process of a region.
- To explore the factors influencing population growth, distribution, and structure at different spatial scales.
- To study the causes and consequences of migration, including internal and international migration.
- To assess the impact of various population policies and programs on demographic trends and patterns with special reference to India and North east India.
- To understand the relationship between population changes and socio-economic development.
- To critically examine contemporary issues related to population such as aging, urbanization, and environmental sustainability.
- To develop skills in analysing and interpreting population data using various statistical and geographical tools.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to

CO1: Define the Demographic Concepts and Theories
ILO1.1: Explain the fundamental concept, nature and scope of population geography.
ILO1.2: Define population factors fertility, mortality, and migration theories.

CO2: Analyse Population Data.
ILO2.1: Identify population data sources.
ILO2.2: Interpret demographic data.

CO3: Evaluate Population Dynamics and Distribution
ILO3.1 Explain the spatial distribution of populations
ILO3.2: Identify the factors affecting population dynamics, including birth rates, death rates, and migration.
ILO3.3 Analyse migration patterns and processes, including the causes of migration and its consequences.

CO4: Population Policy Evaluation and Development
ILO 4.1: Critically evaluate population policies and their impacts on demographic trends, including family planning, immigration policies, and aging population strategies.
ILO 4.2: Understand the relationship between population changes and socio-economic development.

ILO 4.3: Identify and critically analyse contemporary population issues, such as urbanization, aging populations, and environmental challenges, and propose informedsolutions.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE	**:**	**POLITICAL GEOGRAPHY**
COURSE CODE	**:**	**MINGGRC7**
NATURE OF THE COURSE	**:**	**MINOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:

Political Geography examines the spatial aspects of political processes and structures. It explores how geographical space influences political behaviour and how political processes impact spatial configurations. The course covers key topics such as the state and its boundaries, geopolitics, electoral geography, territorial disputes, nationalism, and globalization.

Prerequisite: Basic concept of the relationship Geography and Polity of a country.

Course Objectives:

- To conceptualize the learner in the field of political geography, origin of nations, states and gerrymandering.
- To learn about international boundary, frontiers, ecumene, capitals.
- To understand Geopolitics, Global strategic views of Heartland, Rimland etc and their relevance in present day situation.
- To know about the Electoral Geography and voting pattern.
- Understand the fundamental concepts of political geography.
- Analyse the role of the state, boundaries, and territory in political organization.
- Evaluate the impact of geopolitical theories and practices.
- Assess the significance of nationalism and identity in political geography.
- Examine the influence of globalization on political geography.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to

CO1: Introduction to the fundamental concepts of political geography
ILO1.1: Define and describe basic concepts such as territory, state, sovereignty, and power.
ILO1.2: Illustrate how political geography differs from other subfields of geography.
ILO1.3: Discuss historical and contemporary examples of political geographic issues.

CO 2: Analyse the role of the state, boundaries, and territory in political organization
ILO2.1: Explain the concept of the state and the significance of political boundaries.
ILO2.2: Analyse the processes of boundary creation and the implications of boundary disputes.
ILO2.3: Evaluate the role of territory in the formation and maintenance of states.

CO 3: Evaluate the impact of geopolitical theories and practices
ILO3.1: Summarize key geopolitical theories, such as Heartland Theory, Rimland Theory etc.
ILO3.2: Apply geopolitical theories to analyse contemporary international conflicts and alliances.
ILO3.3: Critique the relevance of classical geopolitical theories in the context of modern global politics.

CO 4: Assess the significance of nationalism and identity in political geography
ILO4.1: Define nationalism and discuss its historical roots and contemporary manifestations.
ILO4.2: Analyse case studies of nationalist movements and their impact on political geography.
ILO4.3: Explore the role of identity politics in shaping national and regional political landscapes.

CO 5: Examine the influence of globalization on political geography

ILO5.1: Describe the processes of globalization and their political implications.

ILO5.2: Discuss the impact of global economic and cultural exchanges on national sovereignty.

ILO5.3: Analyse the challenges and opportunities globalization presents to political structures and processes.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 7TH SEMESTER

TITLE OF THE COURSE : RESEARCH ETHICS AND METHODOLOGY
COURSE CODE : ……..
NATURE OF THE COURSE : …….

TOTAL CREDITS : 4 CREDITS
DISTRIBUTION OF MARKS : 60 (End Sem) + 40 (In-Sem)

Course Description:

This course aims to provide students with a comprehensive understanding of the ethical principles and methodological approaches essential to conducting high-quality research. The course covers the fundamental concepts of research design, data collection, data analysis, and ethical considerations in research. Through theoretical lessons and practical exercises, students will learn to navigate the complexities of ethical dilemmas and develop robust research methodologies.

Prerequisites: Importance of Research.

Coures Objectives:

- General understanding of the concept of research and identification of overall process of designing a research work.
- To have a deeper understanding of complete designing of research from statement of research problem to final thesis writing.
- Critical assessment of research methods pertinent to technology innovation research in the field of earth science.
- To introduce the basics of philosophy of science and ethics.
- To inculcate research integrity.
- To introduce various plagiarism tools.
- Develop skills to design and conduct research studies.
- Learn various methodologies for data collection and analysis.
- Enhance critical thinking and problem-solving skills in research contexts.
- Understand the ethical implications of research practices and how to address them.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students should be able to:

CO1: Demonstrate knowledge of research processes
ILO1.1: Define principles in research.
ILO1.2: Identify common issues and challenges in research.
ILO1.3: Explain the importance of informed consent and confidentiality in research.

CO2: Learn various methodologies for data collection and analysis
ILO 2.1: Differentiate between qualitative and quantitative research methods.
ILO2.2: Apply various data collection techniques such as surveys, interviews etc.
ILO 2.3: Utilize statistical tools and software for data analysis

CO3: Develop skills to design and conduct research studies
ILO3.1: Formulate research questions and hypotheses.
ILO3.2: Design a research study including the selection of appropriate methodologies.
ILO3.3: Develop a research proposal outlining the objectives, methods, and possible outcomes.

CO4: Enhance critical thinking and problem-solving skills in research contexts
ILO 4.1: Critically analyse and interpret research findings.
ILO 4.2: Identify potential biases and limitations in research studies.
ILO 4.3: Develop strategies to address and mitigate research challenges.

CO5: Interpret the ethical implications of research practices and how to address them
ILO 5.1: Discuss case studies of ethical dilemmas in research and propose solutions.
ILO 5.2: Implement ethical guidelines and protocols in research practice.
ILO 5.3: Assess the ethical considerations related to publishing and disseminating research findings.

BA/B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF THE COURSE : **ADVANCED FLUVIAL GEOMORPHOLOGY**

COURSE CODE : **GGRC19A**
NATURE OF THE COURSE : **MAJOR**
TOTAL CREDITS : **4 CREDITS (3+1)**
DISTRIBUTION OF MARKS :**60 (End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
Fluvial geomorphology is the study of the interactions between the physical shapes of rivers, their water and sediment transport processes, and the landforms they create. It studies the ways that rivers move and change over time, focusing especially on how the flow of water interacts with the movement of sediment. It also considers how the movement of water, sediment and debris interacts with the fixed, immobile features of the landscape, from bedrock canyons to human-built infrastructure.

Prerequisites: Introduction to fundamental concepts of fluvial geomorphology.

Course Objectives:

- To know about the anthropogenic impact on river basin and also about the various fluvio-geomorphic hazards.
- To make the students acquire knowledge about the fluvial geomorphology of the Brahmaputra valley and about its flood geomorphology.
- To understand the fluvio-geomorphic hazards.
- To understand and evaluate the channel migration and flood patterns.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Explain the fundamental concepts and principles offluvial geomorphology.
ILO1.1: Justify different geomorphic agents.
ILO1.2: Analyse of historical phenomena of flood and climate.

CO2: Analyse the Human impact on fluvial geomorphology of a region.
ILO2.1: Critically evaluateeffects of basin changes and dam construction.
ILO2.2: Explain the impact of human activities on rivers.
ILO2.3: Identify the factors of uneven distribution of water body in India and its consequences.

CO3: Identify and analyseFluvio-geomorphic hazards.
ILO3.1: Critically evaluate the Flood hazard, bank erosion, and consequences.
ILO3.2: identify and explain geomorphic hazards of North-East India.

CO4: Create and justify different methods influvial geomorphology.
ILO4.1: Evaluate and analyse Bank line migration using GIS.
ILO4.2: Classify statistical methods and apply them.

CO3: Select appropriate map projections for different geographical contexts and interpret.
ILO 3.1: Explain the concept of map projection and its importance in cartography.
ILO 3.2: Compare different types of map projections (e.g., Gnomonic, cylindrical, conical) and their characteristics.
ILO 3.3: Incorporate spatial data and thematic elements into map projections.

CO4: Critically evaluate Cartographic methods and techniques and analysis of maps.
ILO 4.1: Analyse basic proficiency in using Map projections for map creation.
ILO 4.2: Analyse locations of areas using Map projections.
ILO 4.3: Select suitable map projections for specific mapping needs and justify the choice

CO5: Assess the accuracy, limitations of various cartographic techniques and projections.
ILO 5.1: Evaluate the accuracy of different map projections and their impact.
ILO 5.2: Critically analyse the effectiveness of Map Projections, scale and its types.
ILO 5.3: Propose improvements or alternative methods for cartographic representations.

BA/B. Sc IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF THE COURSE	: **ADVANCED REGIONAL PLANNING**
COURSE CODE	: **GGRC19B**
NATURE OF THE COURSE	**: MAJOR**
TOTAL CREDITS	: **4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	: **60 (End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
The course focuses on the regional divisions of India based on physical, social and economic criteria. The course also deals with problems and prospects of specific areas: Special purpose and problem regions. It broadly covers the spatial and temporal pattern of planning processes and its role of development at local, regional and national level.

Prerequisite: Basic concepts of Regional Planning.

Course Objectives:

- To enhance the learner in the field of different planning process for the development of problem region and special purpose region.
- To conceptualize with the hierarchical order of different planning activity and its role of regional development.
- Enhance students to develop strategies for regional development.
- To understand the importance of application of modern methods and techniques in regional planning.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Analyse the principles, methods and techniques of regional planning.
ILO1.1: Describe key principles, methods and techniques of regional planning.
ILO1.2: Explain various regional planning theories.
ILO1.3: Compare and contrast different regional planning approaches.

CO2: Evaluate different dimensions of planning.
ILO2.1: Identify various problems regions.
ILO2.2: Assess the strengths and weaknesses of sectoral, spatial and temporal planning.

ILO2.3: Illustrate real-world applications of planning dimensions for regional development.

CO3: Critically assess the impact of regional policies on local communities.
ILO3.1: Investigate the socio-economic impacts of regional policies.
ILO3.2: Evaluate case studies of regional policy impacts.
ILO3.3: Propose improvements to existing regional policies based on analysis.

CO4: Design sustainable regional development plans.
ILO4.1: Develop criteria for sustainable regional development.
ILO4.2: Create a comprehensive regional development plan.
ILO4.3: Integrate environmental, economic, and social factors in planning.

CO5: Apply spatial analysis techniques to regional planning problems.
ILO5.1: Use Geographic Information Systems (GIS) for spatial analysis.
ILO5.2: Interpret spatial data on findings.
ILO5.3: Solve regional planning problems using spatial analysis tools.

BA/B.Sc IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF THE COURSE : **ADVANCED DISASTER MANAGEMENT**
COURSE CODE : **GGRC19C**
NATURE OF THE COURSE : **MAJOR**
TOTAL CREDITS : **4 CREDITS (3+1)**
DISTRIBUTION OF MARKS :**60 (End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
This course delves into the intricate and multifaceted aspects of disaster management. It encompasses advanced strategies, planning, and operational approaches to mitigate, prepare for, respond to, and recover from disasters. The course integrates theoretical frameworks with practical applications, emphasizing risk assessment, resilience building, and the use of technology in disaster management. Participants will engage with case studies, simulations, and current research to develop a comprehensive understanding of contemporary challengesand solutions in disaster management.

Prerequisite: Basic concept of hazards and disasters.

Course Objectives:

- To provide an understanding of the nature, causes, and impacts of various types of disasters.
- To equip students with advanced skills in risk assessment and hazard mapping.
- To develop strategic disaster management plans incorporating mitigation, preparedness, response, and recovery phases.
- To explore the role of emerging technologies in disaster management.
- To analyse international, national, and local policies and legal frameworks governing disaster management.
- To promote community resilience through participatory approaches and capacity building.
- To encourage interdisciplinary collaboration and integration in disaster management practices.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): students will be able to:

CO1: Explain the fundamental concepts of Preparedness for Hazards and Disaster
ILO 1.1: Define Concept, Nature and Plan of disaster Preparedness.

ILO 1.2: Identify Prediction methods such as Early Warnings of Disaster. (FLEWS)
ILO1.3: Analyse the Safety Measures.

CO2: Describe the Role of different organisations in Disaster management.
ILO2.1: Explain the role of Higher Education, Government, International Bodies and NGOs.
ILO2.2: Analyse the Role of ICT in Disaster Preparedness

CO3: Assess the impact of disasters on communities and infrastructure.
ILO3.1: Evaluate the short-term and long-term impacts
ILO3.2: Analyse Search, Rescue, Evacuation and Logistics in disaster management.
ILO3.3: Interpret Psychological Response and Management (Trauma, Stress, Rumour and Panic).

CO4: Develop Management Plans
ILO 4.1: Formulate disaster mitigation and preparedness strategies.
ILO 4.2: Design effective response and recovery plans.
ILO 4.3: Integrate community input and local knowledge into management plans.

CO5: Evaluate Policies
ILO 5.1: Analyse international, national, and local disaster management policies.
ILO 5.2: Design community-based disaster risk reduction (DRR) programs.
ILO 5.3: Measure and evaluate the effectiveness of community resilience initiatives.

CO6: Utilize Technology
ILO 6.1: Apply GIS and remote sensing techniques for disaster management.
ILO 6.2: Utilize early warning systems and communication technologies.
ILO 6.3: Evaluate the effectiveness of technological applications in past disaster scenarios.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF THE COURSE	**:**	**SOCIAL AND CULTURAL GEOGRAPHY**
COURSE CODE	**:**	**GGRC 20**
NATURE OF THE COURSE	**:**	**MAJOR**
TOTAL CREDITS	**:**	**4 CREDITS (3+1=4)**
DISTRIBUTION OF MARKS	**:**	**60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
This course explores the intricate relationships between society, culture, and space. The course delves into how cultural practices, social structures, and spatial dynamics influenceeach other. It examines various themes such as identity, ethnicity, gender, class, and power in geographical contexts, highlighting the role of space and place in shaping human experiences and societal developments**.**

Prerequisite: Introduction to Geography of society and culture.

Course Objectives:

- To introduce the students to the nature and concepts related to the two aspects with a geographical outlook.

- To develop the understanding of core concepts and current debates in social and cultural geography.
- To create keen interest among students for pursuing it in higher studies.
- To explore how social and cultural processes shape and are shaped by spatial dynamics.
- To develop critical thinking skills by examining the ways in which geography influences cultural and social phenomena.
- To equip students with the skills to conduct social and cultural geographical research.
- To apply theoretical knowledge to contemporary social and cultural issues.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: Demonstrate a thorough understanding of the key concepts in social and cultural Geography.
ILO1.1: Explain the fundamental theories and concepts in social and cultural geography.
ILO1.2: Identify key thinkers and their contributions to the field.

ILO1.3: Describe the evolution of social and cultural geography as a sub-discipline.

CO2: Analysing Social and Cultural Processes
ILO2.1: Analyse the interaction between social processes and spatial dynamics.
ILO2.2: Discuss the impact of cultural practices on spatial organization and vice versa.
ILO2.3: Evaluate different social structures through a geographical lens and their contemporary issues with special reference to India.

CO3: Critical evaluation of Space and Place
ILO3.1: Critically assess how space and place influence social identities and interactions.
ILO3.2: Debate the significance of place in cultural and social power dynamics.
ILO3.3: Reflect on personal and collective experiences of place and their social implications.

CO4: Application of Geographical Knowledge
ILO4.1: Identify contemporary social and cultural issues that have geographical dimensions
ILO4.2: Propose interventions or solutions informed by geographical theories and research.
ILO4.3: Collaborate with peers to develop projects addressing real-world problems from a geographical perspective

CO5: Conducting practical to represent socio-cultural data.
ILO5.1: Collect socio-economic data from different sources to measure socio-economic status.
ILO5.2: Apply qualitative and quantitative research methods appropriately.
ILO5.3: Analyse data and present findings in a coherent and scholarly manner.

BA/BSc. IN GEOGRAPHY PROGRAM (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF COURSE CODE	**: URBAN GEOGRAPHY**
COURSE CODE	**: DSE 1**
NATURE OF THE COURSE	**: DISCIPLINE SPECIFIC ELECTIVE**
TOTAL CREDITS	**: 4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**: 60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
Urban Geography explores the spatial aspects of cities and urban processes. It investigates the patterns and processes that shape urban areas, examining their structure, function, and development. This course covers themes such as urbanization, urban planning, social and economic dynamics, and the challenges and opportunities facing contemporary cities. Through theoretical frameworks and case studies, students gain insights into the complexitiesof urban environments and the interplay between human activities and urban spaces

Prerequisite: Basic Concept of Urbanisation**.**

Course Objectives:

- To acquaint the students with the foundational concepts nature and scope of Urban Geography.
- Understanding the characteristics, morphology and hierarchy of urban systems.
- To understand the Theories and models in urban studies.
- To analyse the processes of urbanization and the factors influencing urban growth.

- To examine the spatial structure and organization of cities.
- To assess the social, economic, and environmental challenges in urban areas.
- To evaluate urban planning and policy responses to urban issues.
- To develop critical thinking and research skills through urban geography case studies.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to:

CO1: State the foundational theories and concepts in urban geography.

ILO 1.1: Explain the evolution of urban geography as a sub-discipline within geography.
ILO 1.2: Describe the key theories and models related to urban form and function.
ILO 1.3: Discuss the significance of urban geography in understanding contemporary urban issues.

CO2: Analyse the processes of urbanization and the factors influencing urban growth.
ILO 2.1: Identify the stages of urbanization and their characteristics.
ILO 2.2: Examine the demographic, economic, and social factors driving urbanization.
ILO 2.3: Analyse the impacts of urbanization on rural and urban areas.

CO3: Examine the spatial structure and organization of cities.
ILO 3.1: Describe different urban spatial structures and land use patterns.
ILO 3.2: Analyse the factors influencing the distribution of urban activities.
ILO 3.3: Compare and contrast the spatial organization of cities in different regions.

CO4: Assess the social, economic, and environmental challenges in urban areas.
ILO 4.1: Identify major social issues such as segregation, inequality, and housing in urban contexts.
ILO 4.2: Evaluate the economic challenges including employment, infrastructure, and urban economy.
ILO 4.3: Assess environmental issues such as pollution, waste management, and sustainable development in cities.

CO5: Evaluate urban planning and policy responses to urban issues.
ILO 5.1: Explain the principles and practices of urban planning.
ILO 5.2: Analyse different policy approaches to managing urban growth and development.
ILO 5.3: Evaluate the effectiveness of various urban policies in addressing urban challenges.

CO6: Develop critical thinking and research skills through urban geography case studies.
ILO 6.1: Conduct case studies on specific urban issues or cities.
ILO 6.2: Utilize geographic methods and tools to analyse urban phenomena.
ILO 6.3: Present research findings in written and oral formats, demonstrating critical analysis and synthesis of urban geography concepts.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF THE COURSE	**: GEOGRAPHY OF RURAL DEVELOPMENT**
COURSE CODE	**: DSE 2**
NATURE OF THE COURSE	**:DISCIPLINE SPECIFIC ELECTIVE**
TOTAL CREDITS	**:4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**:60(End-Sem.) (45T+15P) +40 (In-Sem.)**

Course Description:
This course explores the spatial aspects of rural development processes and the multifaceted interactions between rural areas and their socio-economic environments. It examines the theories, policies, and practices of rural development, focusing on the geographical distribution of rural resources, population dynamics, land use, and rural livelihoods. The course aims to provide students with a comprehensive understanding of rural development issues and equip them with

analytical tools to address these challenges effectively.

Prerequisite: Introduction to basic concept and needs of rural development.

Course Objectives:

- To introduce the students to the concept of rural development.
- To apprise the students of the approaches to its study.
- To develop an understanding of the rural resource and economic base.
- To examine the various schemes and status of rural development in India.
- Examine the geographical distribution of rural resources and population.
- Study the spatial patterns and processes affecting rural areas.
- Evaluate rural development policies at local, national, and international levels.
- Understand the challenges and opportunities in improving rural livelihoods.
- Explore the concepts and practices of sustainable rural development.
- Assess the environmental impacts of rural development projects and initiatives.
- To equip the students with skills of data collection and analysis.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will be able to

CO1: Describe Rural Development Concepts and Approaches.
ILO1.1: Define key terms related to rural development.
ILO1.2: Summarize major Approaches of rural development.
ILO1.3: Discuss the historical evolution of rural development concepts.

CO2: Analysing Rural Development Policies and Programs
ILO2.1: Identify major rural development policies at national and international levels.
ILO2.2: Compare different rural development programs and their impacts.
ILO2.3: Analyse the role of government and non-government organizations in rural development.

CO3: Evaluating Rural Development Projects
ILO3.1: Assess the goals and objectives of rural development projects.
ILO3.2: Critique the methodology and implementation of specific projects.
ILO3.3: Measure the outcomes and impacts of rural development projects on local communities.

CO4: Applying Geographic Tools and Techniques in Rural Development through field work.
ILO4.1: Examine the rural development needs.
ILO4.2: Conduct field surveys and data collection for rural development research.
ILO4.3: Apply spatial analysis techniques to interpret rural development data.

CO5: Developing Strategies for Sustainable Rural Development
ILO5.1: Design a rural development plan addressing local needs and resources.
ILO5.2: Integrate sustainable practices into rural development strategies.
ILO5.3: Propose innovative solutions for common rural development challenges.

B.A./B.Sc. IN GEOGRAPHY PROGRAMME (FYUGP)
DETAILED SYLLABUS OF 8TH SEMESTER

TITLE OF THE COURSE	**:**	**SOIL GEOGRAPHY**
COURSE CODE	**:**	**DSE 3**
NATURE OF THE COURSE	**:**	**DISCIPLINE SPECIFIC ELECTIVE**
TOTAL CREDITS	**:**	**4 CREDITS (3+1)**
DISTRIBUTION OF MARKS	**:**	**60 (End-Sem.) (45T+15P) + 40 (In-Sem.)**

Course Description:
This course provides an in-depth understanding of the distribution, formation, and classification of soils. It examines the physical, chemical, and biological properties of soilsand their relationships with environmental factors such as climate, vegetation, and topography. The course also explores the human impact on soils, including soil management practices and the implications for sustainable land use and environmental conservation.

Prerequisite: Basic concept of soil and its importance.

Course Objectives:
- To provide students with a comprehensive understanding of the concepts and principles of soil geography.
- To make students learn about development of soil and soil forming processes.

- To teach students about the processes involved in soil formation and the various classification systems used in soil science.
- To study the physical, chemical, and biological properties of soils and their interactions with environmental factors.
- To explore the impact of human activities on soil properties and the implications for land use and management.
- To emphasize the importance of sustainable soil management and conservation practices.

Course Outcomes (COs) and Intended Learning Outcomes (ILOs): Students will able to:

CO1: Explain the fundamental concepts, nature and scope of soil geography.

ILO1.1: Define key terms and concepts in soil geography.

ILO1.2: Understand the significance of soil geography as a field of study.
ILO1.3: Recognize the relationship between soil geography and other geographical andenvironmental disciplines.

CO2: Describe the processes of soil formation and the various classification systems usedin soil science.
ILO2.1: Identify the main processes of soil formation (weathering, organic matteraccumulation, leaching, etc.).
ILO2.2: Explain the factors influencing soil formation (climate, organisms, relief, parentmaterial, and time).
ILO2.3: Analyse the soil profile and soil horizons.

CO3: Analyse the physical, chemical, and biological properties of soils.
ILO3.1: Measure and interpret soil physical properties (texture, structure, porosity,density, colour).
ILO3.2: Assess soil chemical properties (pH, cation exchange capacity, nutrient content). **ILO3.3**: Evaluate soil biological properties (microbial activity, organic matter content). **ILO3.4**: Analyse the interactions between soil properties and environmental factors suchas climate and vegetation.

CO4: Evaluate the impact of human activities on soil properties and land use.
ILO4.1: Identify the main human activities that affect soil properties (agriculture,urbanization, deforestation).
ILO4.2: Assess the effects of these activities on soil health and productivity.
ILO4.3: Understand the implications of soil degradation for land use and environmentalsustainability.

CO5: Develop strategies for sustainable soil management and conservation.
ILO5.1: Recognize the principles of sustainable soil management.
ILO5.2: Formulate soil conservation practices.
ILO5.3: Design land use plans that incorporate sustainable soil management principles.

GRADUATE ATTRIBUTES OF THE FYUGP IN COMMUNITY SCIENCE

Graduates in Community Science are expected to possess a range of attributes that will enable them to succeed in their chosen careers. The NEP 2020 recognizes the importance of these attributes and aims to equip students with the necessary knowledge and skills to excel in their chosen careers. Some of such attributes connected to FYUGP are:

1. Disciplinary knowledge and skills: Graduates in Community Science should possess a strong foundation as well as the ability to apply this knowledge for self-employment.

2. Skilled communication: Community Science graduates should be able to effectively communicate their ideas and findings to the community.

3. Critical thinking and problem-solving capacity: Community Science graduates should be able to analyze and evaluate information, develop and implement solutions, and make accurate decisions.

4. Team player/worker: Community Science graduates should be able to collaborate effectively with others, including peers, colleagues, and interdisciplinary teams, to achieve common goals.

5. Project management skills: Community Science graduates should have the ability to plan, organize, and manage projects, including research projects, from conception to completion.

6. Digital and ICT efficiency: Community Science graduates should be proficient in the use of digital tools and information and communication technologies.

7. Ethical awareness/reasoning: Community Science graduates should have a strong ethical awareness and the ability to apply ethical reasoning in decision-making, including consideration of social, cultural, and environmental impacts.

8. National and international perspective: Community Science graduates should be aware of the global and national issues related to community, as well as their roles and responsibilities as global citizens.

9. Computational and problem-solving skills: Community Science graduates should have strong computational skills and the ability for problem-solving.

PROGRAMME OUTCOMES (POs)

The graduates should be able to:

PO1: Develop a comprehensive understanding of the principles and theories underlying various aspects of Community Science.

PO2: Demonstrate proficiency in applying scientific methods to analyze and solve problems related to home management and family welfare.

PO3: Acquire practical skills in food preparation, nutrition assessment, and meal planning for individuals and families.

PO4: Understand the significance of nutrition and its impact on human health across different life stages.

PO5: Apply knowledge of textile science and clothing construction techniques for designing and creating functional and aesthetically pleasing garments.

PO6: Demonstrate competence in managing household resources efficiently, including budgeting, financial planning, and resource allocation.

PO7: Exhibit awareness of sustainable practices in home management, including waste management, energy conservation, and environmental stewardship.

PO8: Develop effective communication skills for conveying information related to Community Science concepts, practices, and recommendations to diverse audiences.

PO9: Appreciate the cultural and societal influences on home and family dynamics and incorporate cultural sensitivity in Community Science practices.

PO10: Analyze and address issues related to child development, family dynamics, and interpersonal relationships.

PO11: Demonstrate competence in conducting research related to Community Science topics, including data collection, analysis, and interpretation.

PO12: Engage in community outreach and extension activities to promote health, nutrition, and well-being within local communities.

PO13: Foster leadership skills for initiating and managing projects aimed at enhancing home and family welfare.

PO14: Cultivate an understanding of the role of technology in modern home management practices, including the use of digital tools for meal planning, budgeting, and organization.

PO15: Demonstrate ethical behavior and professionalism in all aspects of Community Science practice, including respecting confidentiality and maintaining integrity.

PO16: Foster a commitment to lifelong learning and professional development to stay abreast of emerging trends and advancements in the field of Community Science.

Programme Specific Outcomes (PSOs)

1. Demonstrate advanced knowledge and practical skills in food science and nutrition, including food analysis, dietary assessment, and meal planning tailored to specific dietary needs and preferences.

2. Apply principles of human development and family studies to assess and address the diverse needs of individuals and families across the lifespan, including child development, family dynamics, and aging.

3. Utilize textile science principles and techniques to design and create innovative textile products that meet the functional, aesthetic, and cultural needs of individuals and communities.

4. Implement effective management strategies for household resources, including time, finances, and environmental resources, to promote sustainable and healthy home environments.

5. Engage in interdisciplinary research and collaborative projects that integrate knowledge and practices from diverse fields such as nutrition, textiles, psychology, sociology, and environmental science to address complex issues related to home and family welfare.

B.A. / B.Sc. 1st Semester
Course Title: FUNDAMENTALS OF COMMUNITY SCIENCE
Course Code: CMSCC-1
Nature of Course: Core
Total Credit: 4 credits
Distribution of Marks: End-Semester: 60
In-Semester Course Outcomes:

After completion of this course, the students will be able to

CO1: Concept of Community Science
CO2: Areas of Community Science

CO3: Career Avenues in Community Science
CO4: Information and Communication Technology in Community Science

B.A. / B.Sc. 1st Semester
Course Title: HUMAN NUTRITION
Course Code: GEC: 1
Nature of Course: GE
Total Credit: 3credit
Distribution of Marks: End-Semester: 60
In-Semester : 40

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

CO1: Understand the relationship between food and health
CO2: Gain knowledge on various food groups and its role in balanced diet
CO3: Explain the nutrients present in food.
CO4: Assess the nutritional requirements during different stages of life cycle.

B.A. / B.Sc. 2ndSemester
Course Title: HUMAN DEVELOPMENT-I THE CHILDHOOD YEARS
Course Code: CMSCC-2
Nature of Course: Core
Total Credit: 4 credit (Theory3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

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

CO1: Understand the history and scope of human development.
CO2: Analyze or identify the basic maternal and child health care.
CO3: Identify typical developmental characteristics (behaviours and skill development) of children in all developmental domains
CO4: Develop practical knowledge on childhood activities and development.

B.A. / B.Sc. 2ndSemester
Course Title: :FUNDAMENTALS OF TEXTILES
Course Code: Minor 2
Nature of Course: Minor
Total Credit: 4 credit (Theory3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical

In-Semester : 30 Theory+10 Practical

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

CO1: Understand of fibre production, chemistry, properties, and applications
CO2: Grasp the concepts of yarn and fabric production processes and their properties
CO3: Describe the fundamentals of wet processing
CO4: Engage in fiber identification exercises and product development practices

B.A. / B.Sc. 2nd Semester

Course Title: GENDER AND SOCIAL JUSTICE
Course Code: GEC: 2
Nature of Course: GENERIC ELECTIVE COURSE
Total Credit: 3 credit
Distribution of Marks: End-Semester: 60
In-Semester : 40

Course Outcome:
After the completion of this course, the learner will be able to:

CO1: Understand the concept of gender, its complexities, and its implications for individuals and societies
CO2: Understanding of the social construction of gender and its implications for individuals and societies
CO3: Understanding the status of girl child and Women in India
CO4: Understand the legal frameworks related to gender equality, women's rights and case law.

Title of the course: HUMAN DEVELOPMENT-II: DEVELOPMENT IN ADOLESCENCE AND ADULTHOOD
Course Code: CMSCC-3
Nature of the course: Core
Total Credit-4(Theory3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

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

CO1: Gain basic knowledge about the physical, psychological and physiological changes that take place during the period of puberty and adolescence
CO2: Understand the meaning, sub-divisions and characteristics of early to late adulthood
CO3: Describe the changes in interests that are common in adulthood and the responsible for these changes.
CO4: Practical knowledge on psychological test and institutional living for elderly people

B.A. / B.Sc. 3rd Semester
Title of the course: FOOD SCIENCE AND NUTRITION
Course Code: CMSCC 4
Nature of the course: Core
Total Credit-4(Theory3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

Course Outcome:
After completion of this course the students will be able to

CO1: Understand the basic concept of food and nutrients present in food
CO2: Gain knowledge regarding retention of nutrients during cooking.
CO3: Students will be able to assess the methods used for enhancing nutritional quality of food.
CO4: Apply knowledge in preparing food by retaining the nutrient the nutrient content

B.A. / B.Sc. 3rd Semester
Title of the course: COMMUNITY SCIENCE EXTENSION EDUCATION
Course Code: Minor 3
Nature of the course: Minor
Total Credit-3(Theory2, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

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

CO1: Describe Community science extension education as a discipline with various perspectives in community development
CO2: Making education a reality for the community people to understand and grasp knowledge quickly
CO3: Develop ability to influence community people to make changes in their way of life and making a better living
CO 4: Application of knowledge in extension programme planning

B.A. / B.Sc. 3rd Semester
Course title: Care and Well Being in Human Development
Course Code: GEC:3
Nature of Course: Generic Elective Course
Total Credits: 3
Distribution of Marks: End Semester-60
In Semester-40

Course Outcome:
After completion of this course, the students will be able to
CO1: Understand relevance of care, its principles and vulnerable periods that require care.
CO2: Describe concept of life crisis, its significance in human development, andstrategies for navigating these challenging periods
CO3: Gain knowledge regarding care and well-being at different stages of life
CO4: Understand about policies, services and programs for well-being of human life

B.A. / B.Sc. 4thSemester
Title of the course: RESOURCE MANAGEMENT
Course Code: CMSCC5
Nature of the course: Core
Total Credit-4(Theory 3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

Course Outcome:
After completion of this course the students will be able to

CO1: Understand the concept and analyze the use of different types of resources
CO2: Understand the significance of management process in efficient use of resources
CO3: Acquire knowledge about money management process
CO4: Understand the importance of time and energy management in daily living.
CO5: Engage in project work

B.A. / B.Sc. 4thSemester
Title of the course: FUNDAMENTALSOFTEXTILES
Course Code: CMSCC 6
Nature of the course: Core

Total Credit- 4 (Theory 3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

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

CO1: Understand of fiber production, chemistry, properties, and applications
CO2: Grasp the concepts of yarn and fabric production processes and their properties.
CO3: Describe the fundamentals of wet processing.
CO4: Engage in fiber identification exercises and product development practices

B.A. / B.Sc. 4thSemester

Title of the course: COMMUNITY SCIENCE EXTENSION EDUCATIONCourse Code: CMSCC 7
Nature of the course: Core
Total Credit- 4 (Theory 3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester : 30 Theory+10 Practical

Course Objective:
After completion of this course, the students will be able to

CO1: Describe Community science extension education as a discipline with various perspectives in community development
CO2: Making education a reality for the community people to understand and grasp knowledge quickly
CO3: Develop ability to influence community people to make changes in their way of life and making a better living
CO 4: Application of knowledge in extension programme planning

B.A/B.Sc.4th semester

Course title: DEVELOPMENTAL CHALLENGES AND DIFFERENTLY ABLED CHILDREN
Course Code: CMSCC8
Nature of Course: Core
Total Credits: 4 (Theory3, Practical 1)
Distribution of Marks: End-Semester: 45 Theory+15 Practical
In-Semester: 30 Theory+10 Practical

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

CO1: Explain the need and importance of studying children with different disabilities

CO2: Identify the common developmental disorders and disabilities prevalent in childhood.
CO3: Describe the coping strategies adopted by parents and family while dealing with differently able children.
CO4: Knowledge on program, policies and laws related to differently abled children

B.A/B.Sc.4th semester

Course title: FOOD AND NUTRITION

Course Code: Minor 4

Nature of Course: Minor

Total Credits: 3 (Theory 2, Practical 1)

Distribution of Marks: End-Semester: 45 Theory+15 Practical

In-Semester: 30 Theory+10 Practical

Course Outcome:
After completion of this course the students will be able to

CO1: Understand the basic concept of food and nutrients present in food
CO2: Gain knowledge regarding retention of nutrients during cooking
CO3: Students will be able to assess the methods used for enhancing nutritional quality of food.
CO4: Apply knowledge in preparing food by retaining the nutrient the nutrient content.

DEPARTMENT OF MATHEMATICS
M.D.K.G. COLLEGE, DIBRUGARH

Email: mathmdkg17@gmail.com

COURSE OUTCOMES

Major

MM101: To infuse the classical idea of algebraic and analytic stricture. The student can have a deeper insight of the development of the generalize notion of trigonometry. The student will have an orientation towards the vectorial notation of multivariable calculi.

MM201:Student will be able to used matrix method for solving linear question, have idea on the basis of different question and also about the numerical method of obtaining result where complexity of obtaining analytical solution insufficiently high.

MM301: Students will be able to identify the analytical accept of mathematical concepts.

MM302: The student will be having a deeper understanding of co-ordinate geometry and brother insight towards the analytical aspect of mathematics.

MM401: Student will be able to formulate simple program for numerical evaluation of computational programs. By computer laboratory, they will be exposed to a hand on experience various mathematical software.

MM402: Student will be able to determine the mathematical knowledge of linier programming problem of Operation Research and also to solve them using LPP techniques. Student will be exposed to further mathematical concept.

MM501: Student will be identifying the basis of Mathematical Logic and that of the counting principles. Student will be allowed to have insights to more generalize analytical aspects.

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MM502: Student will be able to use algebraic stricture for explaining geometric concepts. Student will be exposed to the fundamentals of number and their properties.

MM503: Student will be introduced to the fundamental concept of Fluid Mechanics and its various applications in physical science.

MM504: Students will be introduced to the Mathematical background of mechanics and the corresponding problem solving technique.

MM601: Student will be exposed to the Topological Structures and the generalization concepts arising out of Real Analysis.

MM602: The student will be able to identify the relation between Mathematics and Theoretical Computer Science. Student will be introduced to the fundamentals of Graph Theory and different representation of a Graph for practical application.

MM603: Student will be able to identify the characteristics of Abstract Algebraic Strictures and also can have idea on the basis of partial differential equation.

MM604: Student will be introduced to the application of mathematical principles of financial mathematics and Operation Research.

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M.D.K.G. COLLEGE, DIBRUGARH

Email: mathmdkg17@gmail.com

COURSE OUTCOMES

Non Major

NM101: To infuse the classical idea of algebraic and analytic structures. The student can have a deeper insight of the development of the generalized niobium of trigonometry. The student ill have an orientation towards the vactorial notation of multivariable calculi.

NM201: student will be able to use matrix method for solving linear equation, have idea on the basis of differential equation and also about the numerical method to obtaining result where complexity of obtaining analytical solutions is sufficiently high.

NM301: The student will be having a deeper understanding of co-ordinate geometry and a broader insight towards the analytical aspects of Mathematics.

NM401: The student will be able to formulate and solve various practical models using Linear Programming technique and also by using Computer Laboratory in dealing with Mathematical Software

NM501: The student will be able to understanding the analytical prospective of the complex number system. The student will be able to identify the applicable domain of Mathematics in Physical Science.

NM601 (A): Student will be able to identify the characteristics of Abstract Algebraic Structures and also can obtain insights of statistical tools solving various practical problems.

NM601(B): Student will be able to identify the relation between mathematics and Theoretical Computer Science and also have a detailed idea on Matrix Space as a prelude to the Topological Concepts.

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PROGRAMME OUTCOMES

1. Student will be able to solve problem in the advance areas of (a) mathematical analysis, (b) linear algebra, (c) real analysis and (d) statistics.
2. Student will be able to read analysis and write logical argument to prove mathematical concept.
3. Student will be able to communicate mathematics idea with clarity and coherence, both written and verbally.
4. Student will be able to perform research in conjunction with other as well as individually.
5. Student will be able to apply critical thinking skills to solve problems that can be modeled mathematically.
6. Student will be able to perform and model basic operations on real numbers.
7. Student will be able to critically interpret numerical and graphical data.
8. Student will be able to read and construct mathematical arguments and proofs.
9. Student will be able to used computer technology appropriately to solve problem and to promote understanding.
10. Student will be able to communicate a depth and breadth of mathematical knowledge, both orally and written.

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Email: mathmdkg17@gmail.com

PROGRAMME SPECIFIC OUTCOMES

Student who will successfully complete the mathematics majors will:-

1. Understand the foundation of mathematics.
2. Will be able to perform basic computation in higher mathematics.
3. Will be able to read and understand middle level proofs.
4. Will be able to write and understand basic proofs.
5. Developed and maintain problem solving skills.
6. Will be able to communicate mathematical idea.
7. Recognize real-world problems that are amenable to mathematical analysis, and formulate mathematical models of such problems.
8. Apply mathematical methodologies to open ended real problems.
9. Will be able to distinguish a coherent argument from a fallacious one, both in mathematical reasoning and in everyday life.
10. Will be able to apply mathematical Knowledge to a carrier related to mathematical services or in post baccalaureate studies.

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COURSE OUTCOMES

B.A/B.Sc. in Mathematics (Honours)

C1.1 Calculus: The students will be able to apply Calculus in real life problem. Also the students will be able to formulate mathematical models.

C1.2 Algebra: Student will be able to describe various algebraic structures on sets and also identify the algebraic structures present in different branches of Sciences.

C2.1 Real Analysis: Students will be able to identify the properties of the number system. The students will also be able to describe various analytical properties of the real number system.

C2.2 Differential Equations: The student will be able to use the techniques to solve differential equations. They also able to apply these techniques in various mathematical models used in real life problems.

C3.1 Theory of Real Functions: The students will be able to discuss limit, continuity and differentiability of real valued functions and also they will be able to expand functions in series and different form remainders.

C3.2 Group Theory I: The students will be able to describe various group structures on sets and also able to identify the group structures present in different branches of sciences.

C3.3 PDE and Systems of ODE: The students will be able to make mathematical formulations and their solutions of various physical problems. They also will be able to design mathematical models used in heat, wave. Also they will be able to describe the Laplace equation and their solutions.

C4.1 Numerical Methods: The students will be able to discuss various numerical methods and interpolation formulae and apply numerical techniques for solving differential equation.

C4.2 Riemann Integration and Series of Functions: The students will be able to understand about Riemann integration, improper integrals, differentiation and integration of power series.

C4.3 Ring Theory and Linear Algebra I: The students will be able to describe various ring structures on sets and able to solve the system of linear equations.

C5.1 Multivariate Calculus: The students will be able to extend the concepts from one variable calculus to function of several variables. They will also be able to demonstrate the ability to think critically and solving application of real world problems involving double or triple integrals.

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C5.2 Group Theory II: The students will be able to apply the results from preliminary concept of group theory to solve contemporary problems. Also they will be able to apply the results in communication theory, electrical engineering, computer science and cryptography.

C6.1 Metric Spaces and Complex analysis: The students will be able to describe various properties of metric spaces, complex number system, its differentiation and integration.

C6.2 Ring Theory and Linear Algebra II: The students will be able to apply theorems proof or solution techniques to solve real world problems. They will also be able to find the matrix associated with a linear transformation w. r. t. given bases and can understand the relationship between operations of linear transformations and corresponding matrices.

DSE-1.1 Analytical Geometry: Students will be able to sketch parabola, ellipse and hyperbola. They will also be able to solve various geometrical problems analytically.

DSE1.2 Portfolio Optimization: Students will be able to define portfolio optimization and apply them to real world problems.

DSE1.3 Financial mathematics: The students will be able to build quantitative models of financial mathematics or industries. They will also be to apply models to obtain information of practical value in the financial mathematics.

DSE2.1 Mathematical Modeling: The students will be able to solve differential equations and linear programming problems used in mathematical modeling.

DSE2.2 Mechanics: The students will be able to describe moment of a force and couple, general equation of equilibrium and also able to solve problems of translation and rotation of rigid bodies.

DSE2.3 Number Theory: The students will be able to define number theoretic functions.

DSE2.4 Bio-Mathematics: The students will be able to discuss various models and techniques to study Bio-Mathematics real life problems.

DSE2.5 Industrial Mathematics: The students will be able to use various types of numerical methods to model problems and use simulation to solve problem.

DSE3.1 Hydro-Mechanics: The students will be able to describe the basic properties of Fluid Mechanics.

DSE3.2 Linear Programming: The students will be able to describe various optimization techniques pertaining to linear programming and also able to apply it to problems arising out of real life problems.

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DSE3.3 Discrete Mathematics: The students will be able to design graph theoretic models of real life problems.

DSE3.4 Theory of Equations: The students will be able to discuss various properties of algebraic equations, symmetric properties of roots and determination of roots.

DSE3.5 Dynamical Systems: The students will be able to discuss the qualitative properties of difference/ differential equations.

DSE4.1 Mathematical methods: The students will be able to construct mathematical models or real world problems.

DSE4.2 Boolean Algebra and Automata Theory: The students will be able to identify various lattice properties and apply them to describe switching circuits.

DSE4.3 Probability and Statistics: The students will be able to characterize the statistical techniques, define various statistical distributions and describe the mathematical theory of probability.

DSE4.4 Differential Geometry: The students will be able to describe various properties of space cures, surfaces and geodesics.

GE-1.1 Differential Calculus: Students will be able to differentiate functions, find tangent, normal, curvature, asymptotes etc.

GE1.2Object Oriented Programming in C++: Students will be able to C-programmes to solve Mathematical problems and design algorithms to solve problems.

GE1.3 Finite Element methods: Students will be able to describe finite element methods and differential equations using finite element methods.

GE2.1 Differential Equation: Students will be able to describe various methods for solving differential equations.

GE2.2 Econometrics: Students will be able to design models and solve problems related to Economic issues.

GE3.1 Real Analysis: Students will be able to describe various analytical properties of the real number system.

GE3.2 Cryptography and Network Security: Students will be able to discuss principles of Cryptography, explain the structure and organization of the complex network.

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GE3.3 Information Security: Students will be able to describe security issues and data integrity.

GE4.1 Algebra: Students will be able to describe various algebraic structures on sets and identify the algebraic structures present in different branches of sciences.

GE4.2 Application of Algebra: Students will be able to explain various algebraic structure and solve system of linear equations.

GE4.3 Combinatorial Mathematics: Students will be able to use combinatorial approach in solving algebraic problems.

PROGRAMME OUTCOMES

1. Student will be able to apply Mathematics as a tool to solve problems of other disciplines viz, Science and Technology, Commerce and Management, Humanities, Soft-computing etc.
2. Student will be able to develop new techniques or methods for solving the unsolved problems of the other disciplines.
3. Student will be able to solve problem in the advance areas of (a) mathematical analysis, (b) linear algebra, (c) real analysis and (d) statistics.
4. Student will be able to read analysis and write logical argument to prove mathematical concept.
5. Student will be able to communicate mathematics idea with clarity and coherence, both written and verbally.
6. Student will be able to perform research in conjunction with other as well as individually.
7. Student will be able to apply critical thinking skills to solve problems that can be modeled mathematically.
8. Student will be able to perform and model basic operations on real numbers.
9. Student will be able to critically interpret numerical and graphical data.
10. Student will be able to read and construct mathematical arguments and proofs.
11. Student will be able to used computer technology appropriately to solve problem and to promote understanding.
12. Student will be able to communicate a depth and breadth of mathematical knowledge, both orally and written.

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PROGRAMME SPECIFIC OUTCOMES

Students who will successfully complete the programme:-

1. Understand the foundation of mathematics.
2. Will be able to perform basic computation in higher mathematics.
3. Will be able to read and understand middle level proofs.
4. Will be able to write and understand basic proofs.
5. Developed and maintain problem solving skills.
6. Will be able to communicate mathematical idea.
7. Recognize real-world problems that are amenable to mathematical analysis, and formulate mathematical models of such problems.
8. Apply mathematical methodologies to open ended real problems.
9. Will be able to distinguish a coherent argument from a fallacious one, both in mathematical reasoning and in everyday life.
10. Will be able to apply mathematical Knowledge to a carrier related to mathematical services or in post baccalaureate studies.

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PROGRAMME LEARNING OUTCOMES

(FYUGP)

After completing the programme the students will be able to

i. Apply Mathematics as a tool to solve problems of other disciplines viz., Science and Technology, Commerce and Management, Humanities, Soft-computing etc.

ii. Pursue higher studies in the subject to take part in the academic upliftment of the subject and society as a whole.

iii. Develop new techniques/methods for solving the unsolved problems of the other disciplines.

iv. Construct Mathematical models to mimic real life problems and make their predictions, estimations, and regression.

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COURSE OUTCOMES

(FYUGP)

MTHC1: After the completion of this course, the learner will be able to apply Calculus in real life problem, formulate mathematical models, and identify the algebraic aspects present in different branches of sciences.

MINMTH1: After the completion of this course, the learner will be able to differentiate functions find tangent, normal, curvature, asymptotes etc., of a given curve, address the criteria of changing functions.

GECMH1A: After the completion of this course, the learner will be able to Use the critical and rational approach for the solution of a problem, Identify the Mathematical objects to describe social and physical systems, Describe various algebraic structures onsets, Apply Calculus in real life problems.

GECMTH1B: After the completion of this course, the learner will be able to explain how mathematics has evolved in India, Analyze and critically reflect on ancient and modern mathematical issues, Conduct historical research on ancient Indian mathematical ideas with the texts of classical mathematics and their historical interpretation, explain some of the mathematical concepts developed in ancient time and evaluate the relevance in modern mathematics and sciences.

SEC115: After the completion of this course, the learner will be able to the basic knowledge about MATLAB or Mathematica through command window or creating programing files.

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Email: mathmdkg17@gmail.com

MTHC2: After the completion of this course, the learner will be able to identify the properties of the number system, describe various analytical properties of the real number system, Use the techniques to solve differential equations, Apply these techniques in various mathematical models used in real life problems.

MINMTH2: After the completion of this course, the learner will be able to analyze the properties of the number line, describe various analytical properties of the real number system.

GECMTH2A: After the completion of this course, the learner will be able to build up a strong foundation of the basic Mathematical tools, identify the Mathematical objects to describe social and physical systems.

GECMTH2B: After the completion of this course, the learner will be able to familiarize students with the applications of mathematics in business decision-making.

SEC214: After the completion of this course, the learner will be able to use MATLAB or Mathematica software through command window or creating programing files for various mathematical modeling problems.

MTHC3: After the completion of this course, the learner will be able to discuss limit, continuity and differentiability of real valued functions, Expand functions in series and different form of remainders

MTHC4: After the completion of this course, the learner will be able to describe various group structures onsets, Identify the group structures present in different branches of sciences.

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MINMTH3: After the completion of this course, the learner will be able to describe various methods for solving differential equations.

GECMTH3A: After the completion of this course, the learner will be able to apply models to financial mathematics/industries ability to use mathematical tools to market economy.

GECMTH3B: After the completion of this course, the learner will be able to Use combinatorial approach in solving algebraic problems, Explain counting principles.

AECMTH3: After the completion of this course, the learner will be able to solve the problem based on critical thinking with logic and reasoning, use basic mathematics as a tool to understand and solve the real-life problems, use basic mathematics for competitive examinations.

SEC315: After the completion of this course, the learner will be able to analyze the truth and falsity of a logical statement, Differentiate between a logical statement and an ordinary statement, Define and describe various properties of sets.

Course Objectives and Course Outcomes

SUBJECT: PHYSICS (FYUGP)

CORE COURSES

Programme Learning Outcomes

PO1: Disciplinary knowledge: Students will **develop** an adequate foundation of theoretical concepts and experimental techniques in physics.

PO2: Problem solving capacity: Students will be able to **apply** the knowledge of physics to **solve** problems using mathematical tools, experimental methods and computational techniques in relevant areas.

PO3: Communication and presentation skills: Students will be able to communicate effectively about their understanding, ideas and findings to **explain** natural phenomena.

PO4: Analytical and critical thinking: Students will be able to **evaluate** the validity of information and evidence as well as to **assess** different methodologies & tools. They will be able to critically **analyze** the existing knowledge and diverse situations.

PO5: Digital and ICT efficiency: Students will be able to **use** modern ICT tools in a variety of learning environments for knowledge gain, and work situations to broaden the capability and improve efficiency.

PO6: Teamwork and leadership: Students will be able to **develop** teamwork and leadership abilities to work effectively in a co-operative and coordinated manner within diverse teams and peer groups.

PO7: Research and inquiry: The students will **develop** the skills of observation and inquiries, and the ability to identify and articulate problems/issues.

PO8: Multidisciplinary learning: Students will be able to **analyze** a problem through a multidisciplinary approach.

PO9: Ethics and Values: Students will **comply with** ethical conduct and adhere to professional standards in learning.

PO10: Employability and entrepreneurial skills: Students will **acquire** adequate skills and knowledge to become employable and/or entrepreneur.

Semester-I

Course title: Mechanics and Properties of Matter

Course Objectives: The course aims to impart knowledge of Newtonian mechanics, the properties of matter, oscillations, and rotating frames, as well as their role in relevant areas of physics. It will help the students develop the concepts of the special theory of relativity and help them understand space and time more.

Course Outcomes (COs): After the completion of the course, a student will be able to

CO1: Understand the basic concepts of mechanics, reference frames, and conservation laws.

LO1.1: Define key terms related to mechanics.

LO1.2: Explain linear dynamics and rotational dynamics.

LO1.3: Interpret relative transformations and the invariance of laws of physics.

CO2: Analyze simple harmonic oscillators in detail.

LO2.1: Explain simple harmonic motion in an oscillatory system.

LO2.2: Solve the differential equation of simple harmonic motion.

CO3: Correlate the consequences of non-inertial frame to our real world.

LO3.1: Identify the nature of fictitious forces and their effect on the real world.

LO3.2: Classify these forces arising due to non-inertial frames.

LO3.3: Solve problems related to non-inertial frames and fictitious forces.

CO4: Compare special relativity with Newtonian relativity.

LO4.1: Define key terms related to special theory of relativity.

LO4.2: Contrast the changes in motion occurred due to relativistic speed and non-relativistic speed.

LO4.3: Interpret equivalence of mass and energy, relativistic transformation of momentum and energy and relativistic effects such as relativistic doppler effect**.**

SEMESTER II

Course title: Waves and Optics

Course Description: This course provides an introduction to the basic concepts of waves, oscillation, and optics. It aims to provide knowledge about superposition principles, give comprehensive ideas about simple harmonic oscillations, and introduce wave concepts, including group velocities and phase velocities. It depicts the electromagnetic nature of light and enters the domain of optics by providing in depth knowledge of optical phenomena and optical instruments based on these phenomena to undergraduate students**.**

Course Objectives: This course aims to develop theoretical knowledge of waves, oscillations, and the superposition principle. The course provides fundamental concepts in the study of wave phenomena and the behavior of light, especially in thin films. To acquaint the learner with the principles behind various optical instruments and to build a theoretical knowledge of them.

Course Outcomes (COs): At the completion of the course, a student will be able to

CO1: Analyze the principle of linearity and superposition, concepts of wave motion and standing waves.

LO1.1: Define superposition, plane and spherical waves, and stationary waves.

LO1.2: Explain the superposition of waves, the velocity of longitudinal and transverse waves in different media, and the role of standing waves in different physical systems.

LO1.3: Construct Lissajous figures and develop the differential equation of a wave.

CO2: Connect the knowledge obtained from the wave with the behavior of light.

LO2.1: Explain the phenomenon of interference in thin films.

LO2.2: Develop theoretical knowledge of various optical instruments.

LO2.3: Illustrate key concepts of diffraction.

CO3: Understand the basic concept of holography.

LO3.1: Define key terms related to holography.

LO3.2: Demonstrate the construction of holography.

SEMESTER III

Course title: Mathematical Physics – I

Course Objectives: The aim of this course is to

1. Introduce a learner to a number of mathematical tools and methods.

2. Develop a basic understanding of these mathematical tools and methods.

3. Acquaint a learner with application of these mathematical tools and methods in physics.

4. Develop an adequate amount of mathematical skill among the learners to navigate through different areas in physics.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Understand a few mathematical concepts and their importance in physics.

LO1.1: Define key terms and operations in calculus, vector calculus, curvilinear coordinates, Dirac delta function and matrices.

LO1.2: Explain the properties and rules of calculus, vector calculus, curvilinear coordinates, Dirac delta function and matrices.

LO1.3: Describe a problem in physics in terms of calculus, vector calculus, curvilinear coordinates, Dirac delta function and matrices.

CO2: Apply the above mathematical concepts to solve problems.

LO2.1: Solve advanced level mathematical problems based on the key concepts in calculus, vector calculus, curvilinear coordinates, Dirac delta function and matrices.

LO2.2: Use calculus, vector calculus, curvilinear coordinates, Dirac delta function and matrices to solve problems in elementary branches of physics like mechanics, electromagnetic theory, thermal physics etc.

Course title: Physics Lab I (Major)

Course Objectives: The aims of the course are to

1. Develop experimental skills of a learner in mechanics as well as in waves and optics.

2. Develop the ability of a student to expertise oneself in the field of basic physics enabling him/her to get a better knowledge of the theory.

3. To learn error propagation and its role in making conclusions.

Course Outcomes (COs): At the completion of the course, the students will be able to

CO1: Understand the idea of different phenomena in mechanics and wave optic.

LO1.1: Explain the working of bar and Kater's pendulum and formation of Lissajous figures.

LO1.2: Classify between spring constant and elastic constant like Young's Modulus and modulus of rigidity.

LO1.3: Interpret the working of Michelson Interferometer, Fresnel biprism and Newton rings.

CO2: Apply theoretical knowledge of mechanics and wave optics in practical applications.

LO2.1: Develop principles of elasticity to analyze mechanical systems.

LO2.2 Experiment with methods and techniques to conduct measurements, analyze data related to wavelength, diffraction and interference, dispersive and resolving power.

LO2.3: Relate the experimental findings with the corresponding theory.

SEMESTER IV

Course title: Electricity and Magnetism

Course Objectives: The basic objective of this course is to

1. Introduce learners to the fundamental principles of electromagnetism.
2. Develop a basic understanding of electrostatics, magnetostatics, and electromagnetic induction.
3. Introduce learners to the dielectric properties of matter and the magnetic properties of materials.
4. Acquaint learners with key topics including network theorems, AC and DC circuits, and their potential applications in real-world problems.

Course Outcomes (COs): After completion of the course the students will be able to

CO1: Understand the fundamental laws of electromagnetism and their importance in Physics.

LO1.1: Define the key concepts of electric and magnetic fields.

LO1.2: Explain the basic laws of electrostatics, magnetostatics and electromagnetic induction.

LO1.3: Describe the behavior of electric fields in matter and explain polarization phenomena.

LO1.4: Discuss magnetic properties of materials, including hysteresis, using B-H curves and magnetization concepts.

CO2: Apply fundamental laws to solve practical problems.

LO2.1: Use Gauss's law to solve problems involving symmetrical charge distributions.

LO2.2: Solve different problems based on Laplace's, Poisson's equations and method of images.

CO3: Evaluate the behavior of electrical circuits and networks using different approaches

LO3.1: Apply Thevenin's and Norton's Theorems to simplify complex circuits.

LO3.2: Analyze AC circuits using Kirchhoff's laws and solve for complex impedances and reactance.

Course title: Thermal Physics

Course Objectives: Thermal physics is essential as it provides foundational knowledge of energy transformation and conservation principles crucial for various scientific and engineering disciplines. Understanding thermodynamics is crucial for designing and optimizing engineering systems like engines, refrigerators, and power plants. The course is equipped to provide students with analytical and problem-solving skills, enabling them to apply thermodynamic laws to real-world situations. Additionally, thermodynamics intersects with fields like chemistry, biology, and materials science, making it highly relevant for interdisciplinary applications. This course prepares students for advanced studies and careers in science and engineering by equipping them with essential theoretical and practical skills.

Course Outcomes (COs): After the completion of this course the students will be able to

CO1: Understand the fundamental principles of thermodynamics.

LO1.1: Define extensive and intensive thermodynamic variables and their significance.

LO1.2: Explain the Zeroth Law of Thermodynamics and its role in defining temperature.

LO1.3: Interpret the First Law of Thermodynamics to analyze processes and calculate energy changes.

CO2: Experiment with apparatus for practical thermodynamic applications.

LO2.1: Develop explanations for entropy changes in reversible and irreversible processes.

LO2.2: Illustrate the implications of entropy in the context of the Second Law of Thermodynamics.

CO3: Apply thermodynamic potentials and their applications.

LO3.1: Apply thermodynamic potentials such as internal energy, enthalpy, and Gibbs free energy to solve problems.

LO3.2: Construct equations and relations using Clausius-Clapeyron and Ehrenfest equations.

LO3.3: Summarize the performance of various thermodynamic cycles.

CO4: Analyze the behavior of gases and related phenomena.

LO4.1: Describe the Maxwell-Boltzmann distribution and its significance.

LO4.2: Analyze the behavior of real gases using the Van der Waals equation.

LO4.3: Apply the Joule-Thomson effect to analyze gas cooling processes.

LO4.4: Distinguish between reversible and irreversible processes and their implications.

LO4.5: Identify the efficiency of heat engines and refrigerators using the Second Law of Thermodynamics.

LO4.6: Explain the concept of entropy and its role in energy transformations.

Course title: Elements of Modern Physics

Course Objectives:

1. To acquaint the learner with the theoretical developments of modern physics.

2. To deliver the key concepts of modern physics.

3. To impart the knowledge of nuclear physics.

4. To introduce the basics of laser physics.

Course Outcomes (COs): After the completion of this course the students will be able to

CO1: Analyze and apply concepts of both thermal radiation and quantum mechanics.

LO1.1: Explain and apply fundamental laws and principles such as blackbody Radiation, Kirchhoff's law, Stefan-Boltzmann law, and Planck's Quantum Hypothesis.

LO1.2: Analyze the wave properties such as probability, amplitude, and functions.

CO2: Apply quantum mechanics principles.

LO2.1: Explain and apply the concept of wave-particle duality.

LO2.2: Use the uncertainty principle to estimate the minimum energy of confined particles.

CO3: Analyze of the fundamental properties of atomic nuclei.

LO3:1: Examine the theoretical nuclear models like the Liquid Drop Model and the Nuclear Shell Model.

LO3.2: Explain the nuclear stability, isotopic trends (N-Z graph), and the role of nuclear forces in atomic nuclei.

LO3.3: State advanced concepts such as mass defect, binding energy, nuclear spin, and magnetic moment.

CO4: Assess the principles of laser physics.

LO4.1: State basic lasing elements and concepts such as population inversion, optical pumping, and their role in achieving and maintaining laser operation.

LO4.2: Describe the operational principles of three-level and four-level lasers.

LO4.3: Distinguish the design considerations for different types of lasers and evaluate their suitability for various applications in technology.

Course title: Physics Lab II (Major)

Course Objectives: This course will enable the students to

1. Understand and appreciate the theory of modern physics as well as thermal physics and optics.
2. Develop the ability to relate the theories into everyday applications.

Course Outcomes (COs): At the completion of the course, the students will be able to

CO1: Understand the basic concepts in hands-on mode through the basic electricity and

magnetism. Thermal physics and modern physics experiments

LO1.1: Recall the concepts of series and Parallel LCR circuits

LO1.2: Explain the characteristics of RC circuit, Thevenin and Norton theorem

LO1.3: Recall the basics of thermal conductivity and thermos emf.

LO1.4: Explain the basics of lasers.

CO2: Experiment with various electrical circuits and electronic instruments.

LO2.1: Execute the experiment to measure the wavelength of He-Ne laser light.

LO2.2: Conduct the experiment to study photoelectric effect

LO2.3 Perform the experiment to determine Plank's constant

CO3: Analyze different electronic components and circuits to understand its functioning and apply

LO3.1: Analyze Q factor and bandwidth

LO3.2: Analyze the frequency response curve to determine impedance and resonance

SEMESTER V

Course title: Mathematical Physics – II

Course Objectives: The aim of this course is to

1. Introduce a learner to a number of mathematical tools and methods.

2. Develop a basic understanding of these mathematical tools and methods.

3. Acquaint a learner with application of these mathematical tools and methods in physics.

4. Develop an adequate amount of mathematical skill among the learners to navigate through different areas in physics.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Understand a few mathematical concepts and their importance in physics.

LO1.1: Define key terms and operations in Fourier series, second order differential equations and special functions such as Legendre, Bessel, Hermite and Laguerre polynomials, some special integrals such as beta and gamma functions and partial differential equations.

LO1.2: Explain the properties and rules of Fourier series, second order differential equations

and special functions such as Legendre, Bessel, Hermite and Laguerre polynomials, some special integrals such as beta and gamma functions and partial differential equations.

LO1.3: Describe a problem in physics in terms of Fourier series, second order differential equations and special functions such as Legendre, Bessel, Hermite and Laguerre polynomials, some special integrals such as beta and gamma functions and partial differential equations.

CO2: Apply the above mathematical concepts to solve problems.

LO2.1: Solve advanced level mathematical problems based on the key concepts in Fourier series, second order differential equation and special functions such as Legendre, Bessel, Hermite and Laguerre polynomials, some special integrals such as beta and gamma functions and partial differential equations.

LO2.2: Use Fourier series, second order differential equation and special functions such as Legendre, Bessel, Hermite and Laguerre polynomials, some special integrals such as beta and gamma functions and partial differential equations to solve problems in branches of physics like quantum mechanics, electromagnetic theory, thermal physics, electronics etc.

Course title: Quantum Mechanics - I

Course Objectives: The aim of this course is to

1. Introduce a learner to elementary quantum mechanics.
2. Develop understanding of basic quantum mechanical framework among the learners.
3. Acquaint a learner with application of quantum mechanics.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Understand the key concepts in quantum mechanics and their importance in physics.

LO1.1: Define key terms and concepts associated with time dependent Schrodinger's equation, time independent Schrodinger's equation and bound states in arbitrary potentials.

LO1.2: Explain the formalism of quantum mechanics in particular those associated with time dependent Schrodinger's equation, time independent Schrodinger's equation and bound states in arbitrary potentials.

LO1.3: Describe a quantum mechanical problem in terms of time dependent Schrodinger's equation, time independent Schrodinger's equation and bound states in arbitrary potentials.

CO2: Apply the above quantum mechanical concepts to solve problems.

LO2.1: Describe the application of quantum mechanics in the contexts of hydrogen atoms, atom in electric and magnetic field and many electron atoms.

LO2.2: Solve quantum mechanical problems based on the key concepts learnt.

Course title: Statistical Mechanics – I

Course Objectives: Objectives of the course is to

1. Illustrate the purpose of statistical mechanics.
2. Build up a strong foundation in the methods of statistical mechanics.
3. Illustrate the role of statistical mechanics in other areas such as solid-state physics, modern physics, astrophysics etc. which involve the studies of statistical systems.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Explain the connection between thermodynamics and statistical mechanics.

LO1.1: Explain the concepts of basic ingredients such as macro state, microstate, phase space, Gibbsian ensemble etc. that builds up the foundation of statistical mechanics.

LO1.2: Explain Boltzmann's entropy formula.

CO2: Explain the concepts of key elements of statistical mechanics.

LO2.1: Explain the concept of three ensemble theories- micro-canonical, canonical and grandcanonical.

LO2.2: Illustrate the concept of partition function.

LO2.3: Summarize the basic features of each ensemble theory.

LO2.4: Explain the concept of three types of statistics- Maxwell-Boltzmann (MB), Bose

Einstein (BE) and Fermi-Dirac (FD).

CO3: Apply the theories of statistical mechanics to explain physical properties of statistical system.

LO3.1: Construct (canonical/ grand-canonical) partition function for a given physical system.

LO3.2: Calculate physical quantities such as average energy, average entropy, average number of particles, free energy etc. from partition function.

LO3.3: Apply ensemble theory and partition function to derive entropy of an ideal gas.

LO3.4: Apply BE statistics to explain physical properties of a BE gas (such as properties of blackbody radiation, BE condensation etc.).

LO3.5: Apply FD statistics to explain physical properties of a FD gas (such as properties of the electron gas in a metal and in a white dwarf star etc.).

CO4: Analyze the use of different ensemble theories and different types of statistics in relevant physical situations.

LO4.1: Distinguish between different ensemble theories.

LO4.2: Distinguish between different types of statistics.

SEMESTER VI

Course Title: Electromagnetic Theory

Course Objectives: The aim of the course is to

1. Familiarize a learner with Maxwell's equations to describe the behavior of electromagnetic waves in vacuum as well as medium.
2. Impart knowledge on the concepts of electromagnetic waves and transmission lines.
3. Introduce a learner to waveguides and optical fibers.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Understand the basic concepts associated with Maxwell's equations, propagation of electromagnetic waves in different media, polarization of electromagnetic waves, waveguides and optical fiber

LO1.1: Define key terms and operations in electromagnetic theory.

LO1.2: Explain the laws governing electromagnetic theory.

LO1.3: Describe the interaction of electromagnetic radiation with matter.

LO1.4: Illustrate the working of optical fiber and waveguide.

LO1.5: Explain the polarization of Electromagnetic Waves.

CO2: Apply the basic concepts in electrodynamics to solve problems.

LO2.1: Use electromagnetic wave theory to explain wave propagation in different media, including reflection, refraction, and transmission characteristics.

LO2.2: Use Maxwell's equations to solve problems related to transmission lines and uniform plane wave propagation.

Course title: Condensed Matter Physics I

Course Objectives: The objective of the course is to:

1. Equip students with a comprehensive understanding of the essential principles and concepts that dictate the physical properties of solid materials.
2. Introduce students to the theoretical frameworks and experimental techniques essential for studying condensed matter systems.
3. Enable students to learn the application of quantum mechanical concepts to solve problems specific to condensed matter physics and utilize experimental tools for investigating these systems.
4. To cultivate within themselves the interest in pursuing advanced studies in condensed matter physics, armed with both the theoretical knowledge and practical skills necessary for success in the field.

Course Outcomes (COs): After the completion of this course, a learner will be able to

CO1: Understand a few basic topics in condensed matter physics.

LO1.1: Define the key concepts and phenomena linked to crystallography, electron theory, elementary lattice dynamics, magnetic and dielectric characteristics of materials.

LO1.2: Explain crystallographic physics, electron theory, elementary lattice dynamics, magnetic materials, and dielectric materials.

LO1.3: Describe the physical phenomena associated with crystallography, electron theory,

elementary lattice dynamics, magnetic characteristics of materials, and dielectric properties.

CO2: Apply the fundamental concepts learned to tackle condensed matter challenges.

LO2.1: Solve physics issues using the key principles learned.

LO2.2: Use the basic condensed matter concepts to interpret the related experimental observations.

Course title: Electronics I

Course Objectives: This course aims to

1. Impart the context of electronic science in perspective of modern instruments and measurement techniques.
2. Provide the fundamental and working principles of semiconductor devices.
3. Introduce the concepts and working of analog electronics systems.
4. Introduce the concepts digital electronics and microprocessors.
5. To allow students to apply their knowledge for designing small electronic systems.

Course Outcomes (CO)s: At the completion of this course, a student will be able to

CO1: Understand the basic components of analog and digital electronics.

LO1.1: Define the basic components.

LO1.2: Explain the basic principle of semiconductors and semiconductor devices.

LO1.3: Classify the different components according to their applications.

LO1.4: Explain the basic computer organization.

LO1.5: Explain the basic features of microprocessors.

CO2: Apply the concepts of analog and digital analysis.

LO2.1: Use of semiconductor devices like diode, transistors in building simple electronic circuits.

LO 2.2: Construct different types of analog and digital circuits and to experiment with them.

LO 2.3: Identify the basic components of a computer.

CO3: Analyze electronic circuits to understand its functioning.

LO3.1: Distinguish between analog and digital circuit.

LO3.2: Simplify electronic circuits to its equivalent form.

Course title: Physics Lab III (Major)

Course Objectives: This course is essential for developing practical skills and foundational knowledge in electronics and material science. By engaging in hands-on experiments, students will understand the characteristics and behavior of electronic components and materials. They will learn to design and implement various circuits, enhancing their problem-solving and critical-thinking abilities. Additionally, the course provides experience in microprocessor programming and the analysis of material properties, which are crucial for advanced studies and professional work in electronics, physics, and engineering fields. This comprehensive lab experience prepares students for careers in technology, research, and development.

Course Outcomes (COs): After the completion of this course, the student will be able to

CO1: Understand the characteristics of electronic components.

LO1.1: Demonstrate and plot the V-I characteristics of a PN junction diode, Light Emitting Diode, and Zener diode, including its use as a voltage regulator.

LO1.2: Explain the characteristics of a Bipolar Junction Transistor in CE configuration.

CO2: Build amplifier and logic circuits.

LO2.1: Sketch logic gates and inverting and non-inverting amplifiers using Op-amps for DC voltage of a given gain.

LO2.2: Construct and test Half Adder/Subtractor, Full Adder/Subtractor, 4-bit binary Adder circuits, and various Flip-Flop circuits.

CO3: Analyze the magnetic, dielectric, optical, and semiconductor properties of materials.

LO3.1: Inspect the susceptibility of paramagnetic solutions and solids using Quinck's Tube Method and other techniques.

LO3.2: Examine the band gap and resistivity of semiconductors.

LO3.3: Test the Hall coefficient of a semiconductor sample.

SEMESTER VII

Course title: Mathematical Physics III

Course Objectives: The aim of this course is to

1. Develop a basic understanding of these mathematical tools and methods.

2. Acquaint a learner with application of these mathematical tools and methods in physics.

3. Develop an adequate amount of mathematical skill among the learners to navigate through quantum mechanics, statistical mechanics, quantum field theory, general relativity, condensed matter physics, electrodynamics and a number of other areas in physics.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Understand a few mathematical concepts and their importance in physics.

LO1.1: Define key terms and operations in integral transforms, linear vector spaces, complex analysis, group theory and tensor analysis.

LO1.2: Explain the rules governing integral transforms, linear vector spaces, complex analysis, group theory and tensor analysis.

LO1.3: Describe a problem in physics in terms of integral transforms, linear vector spaces, complex analysis, group theory and tensor analysis.

CO2: Apply the above mathematical concepts to solve problems.

LO2.1: Solve advanced level mathematical problems based on the key concepts in integral transforms, linear vector spaces, complex analysis, group theory and tensor analysis.

LO2.2: Use the concepts in integral transforms, linear vector spaces, complex analysis, group theory and tensor analysis to solve problems in quantum mechanics, general relativity and electrodynamics.

CO3: Analyze a problem in physics by relating it with the above mathematical concepts.

LO3.1: Relate the learnt mathematical concepts with problems in physics.

Course title: Classical Mechanics

Course Objectives: Objectives of the course is to

1. Acquaint the learners with the subject of classical mechanics in the context of the language and methods of modern nonlinear dynamics.

2. Enable the learners to make a smooth transition from classical mechanics to quantum mechanics and nonlinear dynamics.

Course Outcomes (COs): The students will able to

CO1: Explain the integrable and nonintegrable systems in classical mechanics.

LO1.1: Understand the basic principles of Newtonian Dynamics.

LO1.2: Apply the concept of symmetry to understand conservations laws in physics.

LO1.3: Understand the concepts of Flows in phase space, solvable vs integrable, equilibria and linear stability theory, and bifurcations in Hamiltonian systems.

CO2: Apply Lagrangian and Hamiltonian Formulations of Classical Mechanics.

LO2.1: Understand the difference between the Lagrangian and Hamiltonian approach to classical mechanics.

LO2.2: Understand the transition from classical to quantum mechanics.

CO3: Develop the understanding of the dynamics of non-canonical systems.

LO3.1: Understand the various aspects of non-linear dynamics.

LO3.2: Apply the method of dynamical systems to outstanding problems in physics.

Course title: Quantum Mechanics II

Course Objectives: The objectives of this course are to

1. Introduce the learners with the formalism of Quantum Mechanics.

2. Acquaint the learners with Dirac notation.

3. Enable the learners to solve simple quantum mechanical problems.

4. Introduce the learners with symmetry and conservation laws.

5. Introduce the learners with angular momentum algebra.

6. Acquaint the learners with approximation methods in quantum mechanics.

Course Outcomes (COs): At the completion of this course, a learner will be able to

CO1: Understand the key concepts in quantum mechanics and their importance in physics.

LO1.1: Explain the formalism, the role of symmetry and approximation methods in quantum mechanics.

LO1.2: Recognize the approximation method suitable for a quantum mechanical problem.

CO2: Apply the above quantum mechanical concepts.

LO2.1: Solve quantum mechanical problems based on the key concepts learnt.

LO2.2: Use approximation methods to solve real world physics problems like fine structure of hydrogen atom, Stark effect, Zeeman effect etc.

SEMESTER VIII

Course title: Condensed Matter Physics II

Course Objectives: The primary objective of the course is to equip a student with basic concepts of Condensed Matter Physics so that the knowledge can be applied for further development of the subject, enable a student to work in both theoretical and experimental aspects of Condensed Matter Physics and help the students in thorough learning of the concepts associated with the course through numerical problems.

Course Outcomes (COs): After completion of the course, the students will able to

CO1: Understand the electronic phenomena, importance of diffraction techniques, electrical and magnetic behavior of solids and superconductivity.

LO 1.1: Summarize different types of defects in crystals.

LO 1.2: Compare X-ray diffraction, Electron diffraction and Neutron Diffraction techniques.

LO 1.3: Illustrate the effect of crystal periodic potential on electronic behavior.

CO2: Apply basic quantum mechanics to explain the formation of electronic energy bands, magnetic behavior and basic reason of superconductivity.

LO 2.1: Identify the primary reason of energy band formation.

LO 2.2: Make use of the concepts of paramagnetism for gases and conduction electrons in explaining the paramagnetic behavior in appropriate situations.

CO3: Analyze the difference among various defects with their importance, application domain of

various diffraction techniques, importance of potential on crystal behavior, various magnetic theories, electric behavior, London and BCS approach of superconductivity.

LO 3.1: Inspect the differences and importance among diverge defects in crystals.

LO 3.2: Distinguish among different diffraction techniques.

LO 3.3: Examine the importance of potential on crystal behavior.

LO 3.4: Classify materials according to their electrical behavior.

LO 3.5: Analyze the London and BCS approach in the explanation of superconductivity.

Course title: Electronics II

Course Objectives: Objectives of this course is to

1. Disseminate working knowledge of electronic principle using semiconductor devices.
2. Allow students to learn the fundamentals of both analog and digital electronic devices.
3. Allow students to apply their knowledge for designing small electronic systems.
4. Introduce students to advanced digital systems like microprocessor and microcontroller.
5. Imbibe the spirit of application-oriented learning.

Course Outcomes (COs): The students will able to

CO1: Explain the operation and application of Transistor, OPAMP and microprocessor.

LO1.1: Understand the basic principle of FET, OPAMP, Microprocessors.

LO1.2: Discuss the use of FET and OPAMP in different circuits.

CO2: Apply electronics to design circuit for different applications.

LO2.1: Understand circuit analysis techniques.

LO2.2: Build electronic circuits.

LO2.3 Develop circuit for specific applications.

CO3: Analyze electronic circuits to understand its functioning.

LO3.1: Explain the working of electronic components.

LO3.2: Apply OPAMP to design various circuits.

LO3.3: Apply microprocessor to perform various operation.

DISCIPLINE SPECIFIC ELECTIVE

SEMESTER VIII

Course title: Nuclear and Particle Physics

Course Objectives:

1. To impart basic knowledge of the nuclear force and its properties
2. To acquaint the learners with the nature of interaction of nucleons inside deuteron nucleus as well as in general nucleon-nucleon scattering
3. To familiarize the learners about different theoretical models regarding nucleus as well as to apply those in determining nuclear properties
4. To transmit knowledge about nuclear reactions and their various mechanisms along with an wide understanding of the decay process
5. To make understand the basic forces in nature and classification of particles and study in detail conservations laws and quark models in detail
6. To introduce the basic working principles of various nuclear detectors and apply them in practical working situations.

Course Outcomes (COs): After successful completion of the course, the student will be able to

CO1: Explain characteristics of nuclear force.

LO1.1: Define nuclear properties.

LO1.2: Classify different characteristics of nuclear force.

CO2: Categorize nuclear properties.

LO2.1: Analyze the spin dependent nature of nuclear force.

LO2.2: Utilize the evidences in support of non-central nature of nuclear force.

LO2.3: Apply nuclear models in determination of various nuclear properties.

CO3: Distinguish nuclear reaction mechanisms.

LO3.1: Define different types of nuclear reactions.

LO3.2: Interpret the theory of beta decay process.

LO3.3: Solve problems related to beta decay.

CO4: Classify elementary particles and nuclear detectors.

LO4.1: Label elementary particles, their properties, nature of interaction.

LO4.2: Compare the working principles of nuclear detectors

Course title: Astronomy and Astrophysics

Course Objectives: Recognizing the importance of astronomy and astrophysics as the emerging areas of academic and research activities at the current time, this basic course has been introduced with the following two prime objectives:

1. Introduce the fundamental concepts of astronomy and astrophysics to the interested students.
2. Motivate students to pursue further study in the future in these challenging, fascinating and important fields of physics.

Course Outcomes (COs): The students will able to

CO1: Explain the basic requisites of astronomy and astrophysics.

LO1.1: Define the astronomical scales, stellar parameters, celestial geometry and physical principles.

LO1.2: Describe astronomical techniques used in astronomical observations.

CO2: Understand the basics of stellar structures (including the Sun), galaxies and their classifications as well as the structure of the Universe and its evolution.

LO2.1: Describe our galaxy, the Milky Way.

LO2.2: Explain the structure of the Sun, stars, galaxies and the Universe.

LO2.3: Interpret the structure of the Universe and its expansion.

CO3: Apply the concepts of this course for further study in these and related areas.

LO3.1: Use the ideas for the advanced-level studies of astronomy and astrophysics.

LO3.2: Develop the basis for the study of cosmology.

Course title: Physics Lab V

Course Objectives: At the completion of this course, a student will be able to

1. Understand the basic techniques of design and analysis of simple transistors and OP-AMP circuits.

2. Apply the knowledge to design and study different electronic circuits.

Course Outcomes (COs): At the completion of the course, the students will be able to

CO1: Understand the basics of different analog and digital electronics components.

LO1.1: Explain the basics of 555 IC, OP-AMP and RC coupled amplifier.

LO1.2: Classify R-S, J-K AND J-K Master slave flip flop.

LO1.3: Illustrate the concepts of SISO, SIPO, PIPO etc.

CO2: Apply the basics to real life stimulation problems.

LO2.1: Make use of 555 IC as multivibrator.

LO2.2: Conduct study of flip-flops as memory devices.

LO2.3: Make use of shift register in various configuration.

CO3: Analyze different electronic components and circuits to understand its functioning.

LO3.1: Analyze the frequency response curve of an RC coupled amplifier and compare the bandwidth.

LO3.2: Analyze the characteristic curves of JFET and MOSFET.

SKILL ENHANCEMENT COURSES

SEMESTER I

Course title: Electrical Circuits and Network Skills

Course Objectives:

1. Enable the students to design and troubleshoot the electrical circuits, networks and appliances through hands on mode.

2. Build the basic foundation for learning electrical wiring and repairing other household equipment.

3. Study of various devices.

Course Outcomes (COs): The students will be able to

CO1: Demonstrate proficiency in circuit analysis and apply fundamental concepts of electrical circuits.

LO1.1: Identify basic circuit elements.

LO1.2: Explain the effects of electric current.

LO1.3: Solve DC circuits using Ohm's law and Kirchhoff's laws.

LO1.4: Explain the working and principles of generators and motors.

CO2: Develop and Implement Electrical circuits.

LO2.1: Build dc circuits using elements.

LO2.2: Utilize breadboarding techniques to construct and troubleshoot simple electrical circuits.

CO3: Develop Proficiency in Electrical Safety and Protection.

LO3.1 Explain the concept and purpose of earthing, along with different types of earthing methods and their procedures.

LO3.2 Draw earthing system and build safety protocols and precautions for electrical installations.

SEMESTER II

Course Title: Basic Instrumentation Skills

Course Objectives: This course aims to

1. Provide exposure to various aspects of instruments.

2. Provide hands-on experience of handling instruments.

3. Teach various debugging techniques for the instruments**.**

Course Outcomes (COs): The students will able to

CO1: Understand the basic principle and techniques required to carry out laboratory measurements

LO1.1: Define terms related to measurement such as accuracy, precision, sensitivity, and resolution.

LO1.2: Explain the construction and operation principles of CRT, including electron gun and electrostatic focusing.

LO1.3: Explain the block diagram and working principle of digital voltmeters.

CO2: Explain the working of multimeter, CRO, etc.

LO2.1: Explain the block diagram and working principle of digital voltmeters.

LO2.2: Explain the time base operation and synchronization in CROs.

CO3: Apply CRO, Multimeters, Bridges for different measurements.

LO3.1: Make use of CRO to measure voltage (DC and AC), frequency, and time period.

LO3.2: Utilize signal generators and frequency counters in practical measurement scenarios.

SEMESTER III

Course title: Renewable Energy and Energy Harvesting

Course Objectives: The aim of this course is

1. Examine the limitations and environmental impacts of fossil fuels and nuclear energy as well as the necessity of renewable energy and their practical applications.

2. Gain knowledge of solar, wind, ocean, geothermal, and hydro energy sources, including their applications and environmental benefits.

3. Study advanced energy harvesting methods, such as piezoelectric and electromagnetic energy, and their sustainable applications

4. Understand the integration of both conventional and innovative energy sources for a comprehensive approach to energy sustainability.

Course Outcomes (COs):

CO1: Core knowledge of Renewable Energy Technologies.

LO1.1: Describe the characteristics, advantages, and limitations of fossil fuels and nuclear energy.

LO1.2: State the need for and benefits of transitioning to renewable energy sources.

LO1.3: Explain the fundamental principles and applications of various renewable energy technologies, including solar, wind, ocean, geothermal, and hydro energy.

CO2: Understanding practical Skills in Designing and Implementing Renewable Energy Systems.

LO2.1: Design and implement solar energy systems, such as solar water heaters, photovoltaic systems, and solar greenhouses.

LO2.2: Assess and evaluate wind energy systems, including wind turbines and their power electronic interfaces.

LO2.3: Analyze the efficiency and practical applications of solar and wind energy technologies in real-world scenarios.

CO3: Discuss Advanced Energy Harvesting and Sustainability Practices.

LO3.1: Explain the principles and applications of piezoelectric and electromagnetic energy harvesting technologies.

LO3.2: State the environmental impact and sustainability of various energy sources and harvesting techniques.

LO3.3: Assess knowledge of renewable energy systems to propose sustainable solutions for reducing carbon footprint and enhancing energy efficiency.

MINOR COURSES

Semester-I

Course title: Mechanics

Course Objectives: The course aims to impart knowledge of Newtonian mechanics, the properties of matter, oscillations, and rotating frames, as well as their role in relevant areas of physics. It will help the students develop the concepts of the special theory of relativity and help them understand space and time more**.**

Course Outcomes (COs): After the completion of the course, a student will be able to

CO1: Understand the basic concepts of mechanics, reference frames, and conservation laws.

LO1.1: Define key terms related to mechanics.

LO1.2: Explain linear dynamics and rotational dynamics.

LO1.3: Interpret relative transformations and the invariance of laws of physics.

CO2: Analyze simple harmonic oscillators in detail.

LO2.1: Explain simple harmonic motion in an oscillatory system.

LO2.2: Solve the differential equation of simple harmonic motion.

CO3: Compare special relativity with Newtonian relativity.

LO3.1: Define key terms related to the special theory of relativity.

LO3.2: Contrast the changes in motion that occurred due to relativistic speed and non-relativistic speed.

LO3.3: Interpret equivalence of mass and energy, relativistic transformation of momentum and energy and relativistic effects such as relativistic doppler effect.

SEMESTER II

Course title: Waves and Optics

Course Objectives: This course aims to develop theoretical knowledge of waves, oscillations, and the superposition principle. The course provides fundamental concepts in the study of wave phenomena and the behavior of light, especially in thin films. To acquaint the learner with the principles behind various optical instruments and to build a theoretical knowledge of them.

Course Outcomes (COs): At the completion of the course, a student will be able to

CO1: Analyze the principle of linearity and superposition, concepts of wave motion and standing waves.

LO1.1: Define superposition, plane and spherical waves, and stationary waves.

LO1.2: Explain the superposition of waves, the velocity of longitudinal and transverse waves in different media, and the role of standing waves in different physical systems.

LO1.3: Construct Lissajous figures and develop the differential equation of a wave.

CO2: Connect the knowledge obtained from the wave with the behaviour of light.

LO2.1: Explain the phenomenon of interference in thin films.

LO2.2: Develop theoretical knowledge of various optical instruments.

LO2.3: Illustrate key concepts of diffraction.

SEMESTER III

Course title: Physics Lab 1 (Minor)

Course Objectives: This course is essential for developing practical skills in experimental physics, vital for understanding fundamental principles and verifying theoretical concepts through hands-on learning. It equips students with the ability to perform precise measurements, analyze data, and apply scientific methods in real-world scenarios. These skills are crucial for future scientists, engineers, and researchers who require a solid foundation in experimental techniques and scientific inquiry**.**

Course Outcomes (CO): After completion of this course the students will be able to

CO1: Understand and apply measurement techniques.

LO1.1: Explain the sources of errors in measurements and methods to minimize them.

LO1.2: Apply measurement techniques to determine physical quantities like length, diameter, and thickness accurately using vernier calipers and screw gauges.

CO2: Analyze Physical Phenomena.

LO2.1: Demonstrate experiments to investigate properties such as viscosity, elasticity, and optical dispersion.

LO2.2: Examine the accuracy of experimental results and compare them with theoretical predictions.

LO2.3: Analyze experimental data to calculate spring constants, modulus of rigidity, and moments of inertia.

CO3: Use Optical and Interferometric Techniques.

LO3.1: Apply optical techniques to measure refractive indices, wavelength using diffraction grating, and spectral characteristics of light sources.

LO3.2: Utilize interference patterns to determine parameters like dispersive power and resolving power of optical elements.

LO3.3: Construct experiments using interferometric techniques to verify physical laws like the $\lambda 2$ –T law and study coupled oscillators.

SEMESTER IV

Course title: Electricity and Magnetism

Course Objectives: The basic objective of this course is to

1. Introduce learners to the fundamental principles of electromagnetism.
2. Develop a basic understanding of electrostatics, magnetostatics, and electromagnetic induction.
3. Introduce learners to the dielectric properties of matter and the magnetic properties of materials.
4. Develop problem-solving skills and analytical techniques that will be useful in advanced studies.

Course Outcomes (COs): After the completion of the course the students will be able to

CO1: Understand the fundamental laws of electromagnetism and their importance in Physics.

LO1.1: Define the key concepts of electric and magnetic fields.

LO1.2: Explain the basic laws of electrostatics, magnetostatics and electromagnetic induction.

LO1.3: Describe the concept of electromagnetic induction and Maxwell's equations.

CO2: Apply fundamental laws to solve practical problems.

LO2.1: Use Gauss's law to solve problems involving symmetrical charge distributions.

LO2.2: Solve problems involving magnetic fields in different geometries using Maxwell's equations.

SEMESTER V

Course title: Thermal Physics

Course Objectives: Thermal physics is essential as it provides foundational knowledge of energy transformation and conservation principles crucial for various scientific and engineering disciplines. Understanding thermodynamics is crucial for designing and optimizing engineering systems like engines, refrigerators, and power plants. The course is equipped to provide students with analytical and problem-solving skills, enabling them to apply thermodynamic laws to real-world situations. Additionally, thermodynamics intersects with fields like chemistry, biology, and materials science, making it highly relevant for interdisciplinary applications. This course prepares students for advanced studies and careers in science and engineering by equipping them with essential theoretical and practical skills.

Course Outcomes (COs): After the completion of this course the students will be able to

CO1: Understand the fundamental principles of thermodynamics.

LO1.1: Define extensive and intensive thermodynamic variables and their significance.

LO1.2: Explain the Zeroth Law of Thermodynamics and its role in defining temperature.

LO1.3: Interpret the First Law of Thermodynamics to analyze processes and calculate energy changes.

CO2: Experiment with apparatus for practical thermodynamic applications.

LO2.1: Develop explanations for entropy changes in reversible and irreversible processes.

LO2.2: Illustrate the implications of entropy in the context of the Second Law of Thermodynamics.

CO3: Apply thermodynamic potentials and their applications.

LO3.1: Apply thermodynamic potentials such as internal energy, enthalpy, and Gibbs free energy to solve problems.

LO3.2: Construct equations and relations using Clausius-Clapeyron and Ehrenfest equations.

LO3.3: Summarize the performance of various thermodynamic cycles.

CO4: Analyze the behavior of gases and related phenomena.

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LO4.1: Describe the Maxwell-Boltzmann distribution and its significance.

LO4.2: Analyze the behavior of real gases using the Van der Waals equation.

LO4.3: Apply the Joule-Thomson effect to analyze gas cooling processes.

LO4.4: Distinguish between reversible and irreversible processes and their implications.

LO4.5: Identify the efficiency of heat engines and refrigerators using the Second Law of Thermodynamics.

LO4.6: Explain the concept of entropy and its role in energy transformations.

SEMESTER VI

Course Title: Physics Lab II (Minor)

Course Objectives: This course will enable the students to

1. Understand and appreciate the theory of electricity and magnetism and thermal physics.

2. Develop the ability to relate the theories into everyday applications.

Course Outcomes (COs): At the completion of this course a student will be able to

CO1: Understand the basic concepts in hands-on mode through the basic electricity, magnetism and

thermal physics experiments.

LO1.1: Recall the concepts of series and Parallel LCR circuits.

LO1.2: Explain the characteristics of RC circuit, Thevenin and Norton theorem.

LO1.3: Recall the basics of thermal conductivity and thermos emf.

LO1.4: Explain the basics of ballistic galvanometer.

CO2: Experiment with various electrical circuits and thermal apparatus.

LO2.1: Execute the experiment to measure the thermal conductivity.

LO2.2: Conduct the experiment to study series and parallel LCR circuit.

CO3: Analyze different electronic components and circuits to understand its functioning.

LO3.1: Analyze Q factor and bandwidth.

LO3.2: Analyze the frequency response curve to determine impedance and resonance

SEMESTER VII

Course Title: Elements of Modern Physics

Course Objectives:

1. To acquaint the learner with the theoretical developments of modern physics.

2. To deliver the key concepts of modern physics.

3. To impart the knowledge of nuclear physics.

4. To introduce the basics of laser physics**.**

Course Outcomes (COs): At the completion of this course a student will be able to

CO1: Analyze and apply concepts of both thermal radiation and quantum mechanics.

LO1.1: Explain and apply fundamental laws and principles in physics such as Blackbody Radiation, Kirchhoff's law, Stefan-Boltzmann law, and Planck's Quantum Hypothesis.

LO1.2: Analysis of wave properties such as probability, amplitude, and functions.

CO2: Understanding of quantum mechanics principles.

LO2.1: Explain and apply the concept of wave-particle duality.

LO2.2: Apply the uncertainty principle to calculate and estimate the minimum energy of confined particles.

CO3: Knowledge of the fundamental properties of atomic nuclei.

LO3:1: Analyze theoretical models such as the Liquid Drop Model (Semi-empirical Mass Formula) and the Nuclear Shell Model.

LO3.2: Explain the nuclear stability, isotopic trends (N-Z graph), and the role of nuclear forces in atomic nuclei.

LO3.3: State advanced concepts such as mass defect, binding energy, nuclear spin, and

magnetic moment.

CO4: Discuss the principles of laser physics.

LO4.1: State concepts such as optical pumping, population inversion, and their role in achieving and maintaining laser operation.

LO4.2: Describe the operational principles of three-level and four-level lasers.

LO4.3: Analyze the design considerations for different types of lasers and evaluate their suitability for various applications in technology.

SEMESTER VIII

Course Title: Solid State Physics

Course Objectives: The objective of the course is to:

1. Acquire knowledge of crystal structures, electronic band theory, phonons, magnetic properties, superconductivity, dielectric properties, and optical properties.

2. Develop skills to engage with both theoretical and experimental aspects of condensed matter physics.

3. Enhance understanding of theoretical concepts by applying them in practical laboratory settings.

Course Outcomes (COs): After the completion of the course, a learner will be able to

CO1: Understand a few basic topics in condensed matter physics.

LO1.1: Define key terms and phenomena related to crystallography, electron theory elementary lattice dynamics, magnetic properties of materials and dielectric properties of materials.

LO1.2: Explain the physics of crystallography, electron theory elementary lattice dynamics, magnetic properties of materials and dielectric properties of materials.

LO1.3: Describe the physical phenomena related to crystallography, electron theory elementary lattice dynamics, magnetic properties of materials and dielectric properties of materials.

CO2: Apply the basic concepts learnt to solve condensed matter based problems.

LO2.1: Solve physics problems based on the key concepts learnt.

LO2.2: Use the basic condensed matter concepts to interpret the related experimental

observations.

FOUR YEAR UNDER-GRADUATE PROGRAMME (FYUGP) IN SOCIOLOGY, DIBRUGARH UNIVERSITY

- **THE PREAMBLE**

Sociology studies the evolution of human society as well as social relationships, interactions and cultures around the world. It also includes a detailed examination of how human beings communicate with each other as well as with society and nature as a whole. Moreover, it tries to analyse social problems and paradoxes that permeate human society. As a subject, it has been researched widely in connection with Psychology, History, Political Science, Law, amongst others. Keeping this view in mind, as a discipline the subject has been developing across the world by ensuring inclusion, dignity, showing sensitivity to gender, cultural and religious differences.

Sociology as a discipline always encourages, students to develop reasons for social differences, including differences in social behavior. They will grow as a citizen who will understand the reasons for the differentials in group opportunities and outcomes. Sociology will also teach them the relevance of social hierarchies and social power in everyday life. Keeping in view the dynamic nature of society, Sociology as a discipline has immense importance to develop competencies and skills required for keeping oneself professionally engaged and personally well informed to participate in the social learning process to update knowledge and practice.

Change is the unchangeable law of nature and therefore, society is not a static entity. With the continuous changes taking place in the society, the nature and scope of Sociology also changes and enlarges. The scope of Sociology, especially in terms of career opportunities has widened due to the development of fields such as industrial sociology, medical sociology, rural and urban sociology, sociology of development, visual sociology and much more. There are plentiful scope of doing research in Sociology after generate ideas about how man encounters the social processes and social institutions as a member of the society. Thus Sociology is deemed to be a solution for all social problems as it is the subject that talks about the interrelationship between individual and society, the types of societies and the various social processes that

contribute to sustain the society over a period of time. Social scientists, policy makers, reformers cannot contribute towards the development of a better-off society without having deeper understanding of Sociology.

The main purpose of the Undergraduate Programme in Sociology is to develop and disseminate knowledge, skills and values through teaching, field-based training, internship and research projects in order to promote, maintain and improve the functioning of individuals, families, groups, organizations and communities existing in the society.

The curriculum for Sociology at undergraduate level therefore, has incorporated certain new components of learning in order to make it relevant to the contemporary society and modern practices. It is expected that the prepared LOCF for Sociology at undergraduate level and FYUGP will be of immense relevance to the prospective graduates having interest in understanding Society and how it works, doing research and finding out practical solutions to the existing social problems. It will be very advantageous to make students of Sociology more dynamic and adaptable by enhancing their skills leading to their increased employability. The discipline will also help in shaping the students' overall personalities to take on the challenges of an emerging competitive society by helping them to understand the importance of soft skills in overall personality development. It has incremental learning experiences that will enhance the abilities of students who come from diverse backgrounds. It will also provide opportunities to develop individual potentialities and to produce a pool of better professionals in every forthcoming year.

- **INTRODUCTION:**

Higher Education in India is considered as a critical core in the development and growth strategy of the nation. According to NEP 2020, Higher Education should put an emphasis on recognising, identifying, and fostering each student's unique strengths by educating teachers and parents about the need of encouraging each student's holistic development in both curricular and co-curricular areas. It must be flexible enough to allow students to select their learning paths and programmes and in turn, pick their own life choices based on their talents and interests. For a pluralistic world, there should be a focus on multidisciplinary and a comprehensive way of

teaching and learning in the sciences, social sciences, arts, humanities, and sports to ensure the unity and integrity of all knowledge.

Sociology as a discipline is has its widening boundaries which are extensive and encompasses our entire lives. In the process of evolution of the discipline, it has gone through different stages, and is continuously advancing, accelerating and developing. It addresses philosophical, psychological, technological as well as societal issues, which will help a person to understand some universal societal processes. Further, Sociology as a discipline is taught at Bachelor's and Master's Levels at different colleges and universities in India that enhances teaching learning in Sociology as a Social Science discipline.

The Bachelor of Arts in Sociology degree of Dibrugarh University adapted as per the recommendations of NEP 2020 will also be of either three or four year duration, with multiple exit options within the period with appropriate certification. After completion of one year a UG certificate, after completion of two years a UG diploma, after completion of three years a Bachelor's degree in the programme will be provided to the students. The four year undergraduate programme in Sociology will allow the student an opportunity to experience the full range of holistic and multidisciplinary learning, along with the chosen Major and Minor choices of the students.

- **AIMS OF FOUR YEAR UNDER-GRADUATE PROGRAMME (FYUGP) IN SOCIOLOGY:**

The aims of Four Year Under-Graduate Programme (FYUGP) in Sociology are:

1. To enhance the student's learning capacity to understand society, clarify and broaden their notion about the subject, the basic concepts used and some universal societal processes. It will aim at providing students a rigorous and challenging way of sociological thinking by developing sound theoretical background in the subject.
2. To enable the students to understand the foundations of Sociology.
3. To develop capabilities of the students to critically evaluate issues and the emerging trends influencing the field of Sociology.
4. To equip students with soft skills and inculcate values through value education for personal development.

5. To familiarize students with Sociological way of imagining Society, develop research interest in the subject and train them in the use of ICT in Sociology.
6. To help the students to examine the organization, structure, and change of social groups and institutions. This course combines rigorous methods of inquiry and analysis in various areas of research, such as: mass media, the environment, racism, gender issues, class, and deviance and social control, where our students can generate their interest in later research work.

- **GRADUATE ATTRIBUTES OF THE FYUGP IN SOCIOLOGY**

Graduate attributes include both disciplinary knowledge related to the particular discipline and generic attributes that the graduates of all the disciplines of study should acquire and demonstrate. Graduate attributes of the FYUGP in Sociology are:

Disciplinary Knowledge: The graduates should have the ability to demonstrate the attribute of comprehensive knowledge and understanding of the discipline of Sociology.

They should be able to demonstrate the attribute of understanding the foundations of philosophical, sociological, psychological and historical foundations and the inter links among them. Moreover, they should also be able to demonstrate the attributes of social systems and large bureaucracies; the ability to devise and carry out research projects to assess whether a program or policy is working; the ability to collect, read, and analyze statistical information from polls or surveys; to generate a critical understanding on society and social issues, issues in contemporary field of sociological research, value education, positive psychology, social psychology, social engineering, inclusive sociology, social management, sociology of education, guidance and counseling, etc.

They should have the ability to demonstrate the attribute of understanding about personal development and soft skills, ICT in education, methods and techniques of teaching, etc.

Critical Thinking: The graduates in Sociology are expected to apply analytic and critical thinking to a body of knowledge of Sociology, so as to evaluate the issues and problems related to Society, critically evaluate social policies, societal norms and values, practices, and sociological theories.

Information/Digital Literacy: The graduates should develop the ability to use information and communication technology in different learning situations and in general. Through the use of ICT they should be able to access, use and analyse data collected from relevant information sources. The graduates should be able to interact and communicate through virtual mode effectively on any issues, particularly issues related to Sociology.

Research related Skills: The graduates should have the ability to demonstrate the attribute of scientific enquiry for research in Sociology so as to find solutions to some issues related to Sociology. They should have the basic skills to conduct research by identifying the research problem, formulating research design, developing relevant tools and techniques for collection of data, analysing the data by using appropriate techniques and reporting the results- while at the same time keeping ethical considerations in mind.

Moral and Ethical Awareness: The students will be able to exhibit value based, moral and ethical practices in their day to day life. They should be able to identify ethical issues related to any work, particularly work related to Sociology; avoid unethical behaviour, adopt objective, unbiased and honest actions in all aspects of work.

Reflective Thinking and Problem Solving: The graduates should develop the ability to understand and use their own experiences and skills to meet challenges in the field of Sociology and in day to day life. After completion of graduation in Sociology the students will be able to understand the nature of Sociological problems and deal with them in a right manner. Moreover they should be able to solve different problems of day to day life in various situations.

Communication Skills: The graduates in sociology should have the ability to present and express information, thoughts, views clearly and concisely so as to communicate effectively on any issues, particularly issues related to Sociology and Society at large. Moreover, they should also be able to demonstrate effective communication skills in dealing with classroom practices also.

Co-operation and Multicultural Competence: The students should be able to work collaboratively in dealing with the Sociological affairs in particular and any kind of tasks in general. They should also be able to work effectively in a diverse team, respecting each other while working in the interest of a common cause. By doing so the graduates will appreciate the

beliefs, values of multiple cultures across the globe and demonstrate respect for inclusivity in society while engaging in a multicultural society.

- **PROGRAMME EDUCATIONAL OBJECTIVES**

PEO 1. Develop the capability to demonstrate and understanding of the fundamental concepts, theoretical perspectives and latest trends in the field of Sociology.

PEO 2. Develop the capability to recognize, evaluate, interpret and understand issues and opportunities related to the domain of Sociology, specifically in teaching, learning and doing research.

PEO 3. Develop the capability to possess the fundamental skills associated with the application of multidisciplinary approaches to meet the various issues and challenges in the field of Sociology.

PEO 4. Apply knowledge, skills and theories of Sociology to solve societal problems both in familiar and non-familiar contexts and apply the sociological learning to real life situations.

PEO 5. Demonstrate professional competencies that are required to develop, select and use informal and formal, diagnostic, continuous and comprehensive evaluation to estimate pupils' achievement and provide timely, effective and appropriate feedback to students about their achievement along the line of their predetermined learning goals and participate effectively in the construction procedure of evaluation tools.

PEO 6. Promote ethical values, integrity and professionalism in sociological practice, emphasing social responsibility, respect for diversity and adherence to ethical principles in research and practice.

PEO 7. Foster a culture of lifelong learning and personal development, empowering students to adapt to evolving societal challenges, pursue continuous professional growth and make meaningful contributions to society throughout their lives.

Teaching Learning Process

The programme allows to use varied pedagogical methods and techniques both within classroom and beyond.

- Lecture
- Tutorial
- Power point presentation
- Documentary film on related topic
- Project Work/Dissertation
- Group Discussion, Quiz and Debate
- Seminars/workshops/conferences
- Field visits and Report/Excursions
- Mentor/Mentee

Teaching Leaning Tools

- Chalk and Talk Method
- White/Green/Black Board
- Projector
- LMS
- Smart Television
- LCD Monitor
- WLAN

Assessment

- Home assignment
- Project Report
- Seminar: Oral/Poster/Power point
- Group Discussions
- Viva
- Peer Assessment
- In semester examinations
- End Semester examinations

DIBRUGARH UNIVERSITY, RAJABHETA, DIBRUGARH – 786004

FYUGP Structure as per UGC Credit Framework of 2024

Year	Semester	Course	Title of the Course	Total Credit
Year 01	1st Semester	C–1	Introduction to Sociology I	4
		Minor-1	Sociological Perspectives	4
		GEC–1	Introduction to Sociology	3
		AEC-1	Modern Indian Language	4
		VAC-1 /VAC-2	Understanding India Health and Wellness	2
		SEC-1	Techniques of Social Research	3
				20
	2nd Semester	C–2	Introduction to Sociology II	4
		Minor-2	Sociology of India	4
		GEC-2	Indian Society: Images and Realities	3
		AEC-2	English language and Communication Skills	4
		VAC-3 /VAC-4	Environmental Science Yoga Education	2
		SEC-2	Soft Skill and Personality Development	3
				20

The students on exit shall be awarded Undergraduate Certificate (in the Field of Study/Discipline) after securing the requisite 44 Credits in Semester 1 and 2 provided they secure 4 credits in work based vocational courses offered during summer term or internship / Apprenticeship in addition to 6 credits from skill-based courses earned during 1st and 2nd Semester

Year 02	3rd Semester	C – 3	Sociology of India I	4
		C – 4	Sociological Thinkers I	4
		Minor-3	Methods of Sociological Enquiry	4
		GEC –3	Marriage, Family and Kinship	3
		VAC-3	Digital and Technological Solutions / Digital Fluency	2
		SEC –3	Human Behaviour at Work	3
				20
	4th Semester	C – 5	Sociology of India II	4
		C – 6	Sociological Thinkers II	4
		C – 7	Sociological Research Methods I	4
		C – 8	Social Stratification	4
		Minor-4	Economy and Society	4
				20
Grand Total (Semester I, II, III and IV)				80
The students on exit shall be awarded Undergraduate Diploma (in the Field of Study/Discipline) after securing the requisite 88 Credits on completion of Semester IV provided they secure additional 4 credit in skill based vocational courses offered during First Year or Second Year summer term				
	5th Semester	C – 9	Sociology of Kinship	4
		C – 10	Political Sociology	4
		C – 12	Sociological Research Methods II	4

Year 03		**Minor-5**	**Polity and Society in India**	**4**
			Internship The Department can send the students to engage in Internship Programme to work on community engaged research, policy analysis and to learn practical work-related experiences from the field. The students can gain the valuable research experience, practical knowledge by working and engaging themselves at different Government Administrative and Non-Government setup, at community level, with different wings of local politics, at economic and finance sectors, at different tribal organizations to learn how they function. Thereby students can integrate their knowledge/theory into practical application. They can develop relevant skills required in a professional setting. And overall their experiences will be supervised, mentored and guided. Certain recommended Sectors/Fields/Industries where students can find internships (to name a few) • Arts and Culture • Business • Criminal Justice • Education • Entertainment • Environment • Government • Healthcare • International NGOs • Law/Legal Professions • Law Enforcement • Marketing • Non-profits • Research • Philanthropy • Politics • Social Services • Sports • Technology • Tourism	**2**
			Community Engagement Under community engagement students can engage themselves with different communities with a specific purpose to work with identified groups of people, either connected by geographic location, special interest, or affiliation to a particular social identity and address issues affecting their well-being. The students are required to submit field-based report based on their work on issues related to Sociological importance that may cater the community's need and aspiration also. Their engagement with the community may take place at the following levels: ➢ **Community Building**: Under this model, students conduct research to assess or meet community needs. ➢ **Community Education**: They can educate or generate awareness in the community regarding any important social issues. ➢ **Community Organizing**: With the aim of bringing positive	**2**

			change, they can engage community people into a process where people are brought together to address the issues that affect their communities. This can occur in geographically, psychosocially, culturally, spiritually, and digitally bounded communities. **Deliberative Dialogue**: This is a guided conversation on a political, cultural or social topic initiated by students. This model of conversation will be initiated by students by simply asking the community participants to investigate specific solutions to an issue through the help of an issue guide and facilitator. This group process will help the students to integrate and interpret scientific and contextual data for the purpose of informing several developmental related issues to the community. ➢ **Direct Service (People)**: This may include volunteering or cleaning up a community park, public space etc. Service may also take place in the form of fundraising or collections for the fulfilment of a particular community need. ➢ **Direct Service (Product)**: This may include giving personal time and energy to address immediate community needs. Examples include tutoring, serving food at a shelter, refugee camp, building or repairing homes, and donating cloths, food items to the flood affected people etc. ➢ **Economic Development**: Students can go into a community and can try to understand issues such as unemployment, lack of affordable housing, or the lack of sufficient retail and other services, through projects that are planned and implemented by institutions either at governmental or non-governmental level with community involvement. Or they can spread awareness and engage themselves in the process of: • Find Ways to Generate Local Revenue. • Create Jobs and Entrepreneurship Opportunities. • Support Local Events, Artists and Tourism. • Helping the community leaders to Build Stronger Management Systems. ➢ **Community Engaged Research**: Community engaged research is a process where students can derive input from people who will be impacted by the research outcomes and involve such people or groups as equal partners throughout the research process. ➢ **Community Engaged Learning**: Students can adopt this teaching and learning strategy that integrates meaningful community partnerships with instruction and critical reflection to their learning experience. This process will teach them civic and social responsibility, and indirectly it will strengthen communities also.	

			➢ **Level and type of engagement** ➢ Sharing information ➢ Consultation ➢ Planning together ➢ Acting together ➢ At the end, Students can take feedback from communities which may focus on certain existing policies and regulations and its societal impact at institutional, organizational, structural levels. They have to submit a report on their entire community engagement work / process which will be followed by a viva-voce. ➢ **NB: 2+2 (Internship + Community Engagement)** **OR** ➢ **4 (Internship)/4(Community Engagement)**	

				20
	6th Semester	**C – 13**	**Environmental Sociology**	**4**
		C – 14	**Sociology of Religion**	**4**
		C – 15	**Urban Sociology**	**4**
		C – 16	**Rural Sociology**	**4**
		Minor – 6	**Gender and Sexuality**	**4**
			Total	**20**
Grand Total (Semester I, II, III and IV, V and VI)				**120**
The students on exit shall be awarded Bachelor of (in the Field of Study/Discipline) Honours (3 years) after securing the requisite 132 Credits on completion of Semester 6				
Year 04	**7th Semester**	**C – 17**	**Indian Sociological Tradition**	**4**
		C – 18	**Sociology of North East India**	**4**
		C – 19	**Sociology of Gender**	**4**
		Minor – 7	**Research Ethics and Methodology in Sociology**	**4**
			Research Methodology (RM) (Development of Project Proposal/ Research Proposal and Review of Related literature)	**4**
				20
	8th Semester	**C – 20**	**Economic Sociology**	**4**
		C – 21	**Sociology of Education**	**4**
		Minor– 8	**Sociology of Work**	**4**
			Dissertation (Collection of Data, Analysis and Preparation of Report) / 2 DSE Courses of 4 credits each in lieu of Dissertation from the basket of courses given below. ➢ **Sociology of Development** ➢ **Sociology of Health and Medicine** ➢ **Sociology of Social Movement** ➢ **Sociology of Media Studies** ➢ **Gender and Violence**	**8**
				20
Grand Total (Semester I, II, III and IV, V, VI, VII and VIII)				**160**
The students on exit shall be awarded Bachelor of (in the Field of Study/Discipline) (Honours with Research)(4 years) after securing the requisite 160 Credits on completion of Semester 8				

Abbreviations Used:

- **C = Major**
- **GEC = Generic Elective Course / Multi Disciplinary Course**
- **AEC = Ability Enhancement Course**
- **SEC = Skill Enhancement Course**
- **VAC = Value Added Course**

PROGRAMME OUTCOMES(POs)

The graduates should be able to :

PO1: Apply their understanding to real life situations to solve problems in familiar and non-familiar contexts.

PO2 : Nurture critical thinking skills to interpret and synthesize information taken from various sources of society to draw valid conclusions with evidence and examples.

PO3 : Create inclusive, tolerant, amicable social environment as conscious citizen.

PO4 : Construct and express thoughts and ideas effectively in a clear, sensitive and respectful manner for different groups and audiences related to field of learning and professional practice.

PO5 : Identify, analyze and draw inferences on real life situations and apply that knowledge for practical problem solving.

PO6 : Demonstrate a keen sense of observation, inquiry and capability for doing research in contemporary and relevant issues.

PO7 : Collaborate effectively and respectfully with diverse communities of society.

PO8 : Construct vision and build a team that can help achieve the vision of the concerned institution.

PO9 : Inculcate a healthy attitude to be a lifelong learner for self improvement.

PO10: Make optimum utilization of digital technology in teaching and learning process.

PO11: Demonstrate the capability to work in a multicultural and diversified work environment to develop a holistic and inclusive society.

PO12 : Practice constitutional, humanistic, ethical and moral values in life.

PO13 : Demonstrate the ability to comprehend the perspectives and experiences of another person or group as well as to recognize and comprehend the emotions of others.

PO14 : Develop environmental awareness and take necessary measures to mitigate environmental concerns.

PO15 : Apply the acquired knowledge and skills in work and learning contexts appropriate for the level of qualification with accountability and responsibility.

PO16 : Able to work collaboratively with and through groups of people affiliated to different geographic proximity, specific interests, and differential or similar situations.

Programme Specific Outcomes (PSOs)

1. To gain in depth knowledge of the fundamentals of sociological concepts.
2. To enable students to develop process of interaction in everyday life and connect with society.
3. To equip students with the skills and expertise of designing and conducting social research.
4. They will learn to apply sociological imagination to analyze social phenomena, considering historical contexts, contemporary relevance and power dynamics.
5. They will become able to analyze local and global social issues within interconnected systems by recognizing the impact of social, economic and political forces on different populations

Curriculum Structure of FYUGP

Semester I

Title of the Course	**:**	**INTRODUCTION TO SOCIOLOGY - I**
Course Code	**:**	**SOCC1**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME:
After completion of this course, the students will be able to

CO1:
Describe Sociology as a discipline by connecting it with various perspectives and its relation with Social Anthropology.

ILO:
- They will learn how to think Sociologically
- They will understand how different perspectives define and describe society differently.
- They can explain the factors responsible for emergence of Sociology
- They can identify the underlying factors linking emergence of sociology with the field of social Anthropology
- They can recognize the common factors which led to the emergence of sociology and social Anthropology
- They can recognize also how the field of study and methodology is different in Sociology and Social Anthropology

CO2:
Comprehend Sociology and its relations with Other Social Sciences

ILO:
- They can classify the common factors which trace relation between Sociology and Social Anthropology
- They can distinguish the differences of the beginning of Sociology and Social Anthropology
- They can associate the relationship between History and Sociology by emphasizing on both common and uncommon factors related to the nature and scope of the disciplines.
- They can explain the nature and scope of Sociology, Social Anthropology and History.
- They can defend the fact that Sociology depends on History in order to study the historical development of Society.
- They can interrelate human societies and their development over time by linking it with past events, people, and societies focusing on the specific time periods and their impact on the present.

CO3:
They can apply their knowledge to understand some of the Basic concepts

related to Sociology.

ILO:

- They can analyze the relationship between Individual and Group.
- They can categorize the factors which helps humans to become associated with groups.
- They can classify different types of groups.
- They can compare the forming, norming and structuring processes of different groups.
- They can examine how groups are different from each others based on size and structure and its formation process.
- They can illustrate the idea that how group dynamics play a significant role in human lives for their survival in society.
- They can utilize this knowledge to further understand how intra and inter group conflict arises in society based on the structuring processes of group dynamics.
- They can distinguish between Associations and Institutions.
- They can relate and separate the norms, ideas and established rules and procedures related to the creation and formation of Institution and Association

CO4:

They will be able to evaluate and assess the importance, meaning and role of Social Change as a process in Society by highlighting its Direction and Dimensions

ILO:

- They can explain the meaning of Social Change
- They can assess the idea that social change is a process that is related with culture, economy, technology and other societal forces.
- They can contrast and compare the different dimensions of social change.
- They can determine the various directions to the process of Social Change
- They can develop a critique based on their understanding on how the alteration of mechanisms within the social structure is characterized by changes in the cultural symbols and rules of behaviours.

UNITS	CONTENTS	L	T	P	Total Hours
1 (15 Marks)	**Sociology: Discipline and Perspectives** • Thinking Sociologically • Emergence of Sociology and Social Anthropology	12	03	0	15
2 (15 Marks)	**Sociology and Other Social Sciences** • Sociology and Social Anthropology • Sociology & History	17	02	0	19
3 (15 Marks)	**Basic Concepts I** • Individual and Group: Primary, Secondary,In Group, Out Group, and Reference Group.	13	01	0	14
4 (15 marks)	**Basic Concepts II** • Associations and Institutions • Social Change: Meaning, Direction and Dimensions	11	01	0	12

	Total	53	07	0	60

Where, ***L: Lectures*** ***T: Tutorials*** ***P: Practicals***

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1					
Conceptual Knowledge	CO1, CO2	CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Procedural Knowledge		CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Meta cognitive Knowledge						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
CO2	M	M	M	M	S	S	**S**	M	M	M	M	M	M	M	M	M
CO3	M	M	M	M	M	S	S	S	S	S	S	S	S	S	S	S
CO4	M	M	M	S	M	S	S	S	S	S	M	M	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	03 Marks

SUGGESTED READINGS:

Sociology: Discipline and PerspectiveThinking Sociologically

- Johnson, Allan G. 2008, *The Forest and the Trees: Sociology as Life Practice and Promise*, Philadelphia: Temple University Press, Introduction and Chapter 1,_The Forest,the Trees and One Thing', Pp. 1-36
- Beteille, Andre, 2009, *Sociology: Essays in Approach and Method,* Delhi: Oxford University Press, Chapter 1, _Sociology and Common Sense', Pp. 13-27
- Garner, James Finn, 1994, *Politically Correct Bedtime Stories: Modern Tales for Our Life and Times*, New Jersey: John Wiley & Sons Inc., Chapters, _Little Red Riding Hood' & _Rumpelstiltskin'
- General Sociology , Saikia, Dr. J.P & H. Borgohain, Bidya Bhaban, Jorhat

Emergence of Sociology

- Ritzer, George, 1996, *Classical Sociological Theory,* New York: McGraw Hill, Chapter1, _A Historical Sketch of Sociological Theory- The Early Years', Pp. 13-46
- General Sociology , Saikia, Dr. J.P & H. Borgohain, Bidya Bhaban, Jorhat

Sociology and Other Social SciencesSociology and Social Anthropology

- Béteille, André, 1985, *Six Essays in Comparative Sociology*, New Delhi: Oxford University Press, Chapter 1, _Sociology and Social Anthropology‘, Pp. 1- 20
- Beteille, André, 2002, *Sociology: Essays in Approach & Method*, Oxford University Press, Chapter 2, _Sociology and Social Anthropology‘, Pp. 28-54General Sociology , Saikia, Dr. J.P & H. Borgohain, Bidya Bhaban, Jorhat **Sociology & History**
- Burke, Peter, 1980, *Sociology and History*, George Allen and Unwin, Chapter 1,
- _Sociologists and Historians‘, Pp. 13-30

Basic Concepts Individual and Group

- MacIver, Robert M, and Charles Hunt Page. 1949. *Society*, New York: Rinehart. Chapter10, _Types of Social Groups‘, Pp. 213-237
- Horton, Paul B., Chester L. Hunt. 2004, *Sociology*. New Delhi: Tata McGraw-Hill,Chapter 8, Pp. 185-209

Associations and Institutions

- Horton, Paul B., Chester L. Hunt. 2004, *Sociology*. New Delhi: Tata McGraw Hill.Chapter 9, Pp. 210- 229
- Firth, Raymond, 1956, *Human Types*, Thomas Nelson & Sons, Chapter 3,_Work andWealth of Primitive Communities‘, Pp. 71-97

Social Change

- Bierstedt, Robert 1974, *The Social Order*, McGraw Hill, Chapter 20, _The Problem ofSocial Change‘ Pp. 527-567
- Ritzer, George, 2004, The *McDonaldisation of Society*, Pine Forge Press, Chapter 1, _AnIntroduction to McDonaldisation‘, Pp. 1-20, Chapter 2,
- McDonaldisation and Its Precursors‘ Pp. 21-39, Chapter 9, _McDonaldisation In aChanging World‘, Pp. 167-199

Title of the Course	**:**	**SOCIOLOGICAL PERSPECTIVES**
Course Code	**:**	**MINSOC1**
Nature of the Course	**:**	**MINOR**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME:
After completion of this course, the students will be able to

CO1:
Understand Functionalism as a theoretical perspective to describe society
ILO:
- Learn Redcliff Brown's structural functional approach.
- Understand Emile Durkheim's views on Functionalism and how he describes society by applying this perspective.

CO2:
Comprehend the idea of Interpretive Sociology.
ILO:
- Understand Interpretive Sociological Approach
- Explain Max Weber's concept of Interpretive Sociology.

CO3:
Analyse Conflict Perspective to understand society
ILO:
- Understand Karl Marx's views on conflict and its role in Society
- Explain Ralf Dahrendorf's views on class, labour and conflict in society

CO4:
Explain symbolic interactionism as a sociological perspective to understand society
ILO:
- Understand how Herbert Blumer describes society through the lens of Symbolic interactionism
- Explain George Herbert Mead's understanding and identify his contributions in the development of Symbolic interactionism as a theoretical perspective.

UNITS	CONTENTS	L	T	P	Total Hours
1 (15 Marks)	**Sociological Perspective** Functionalism: • Redcliff Brown, • Durkheim	18	2	0	20
2 (15 Marks)	**Interpretive Sociology** • Max Weber	09	1	0	10
3 (15 Marks)	**Conflict Perspective** • Karl Marx, • Ralf Dahrendorf	13	2	0	15
4 (15 Marks)	**Interactionism** • Herbert Blumer, • George Herbert Mead	13	2	0	15

	Total	53	07	0	60

Where, ***L: Lectures*** ***T: Tutorials*** ***P: Practicals***

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1	CO1	CO1	CO1		
Conceptual Knowledge	CO1, CO2	CO3, CO4	CO3, CO4	CO3, CO4	CO3, CO4	
Procedural Knowledge	CO3	CO3, CO4	CO3, CO4	CO3, CO4	CO3, CO4	
Meta cognitive Knowledge						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	M	M	S	M	M	M	M	M	M	M	M	M	M	M
CO2	M	M	M	M	S	S	**S**	M	M	S	M	M	M	S	S	S
CO3	M	M	M	M	M	S	S	S	S	S	S	S	S	S	S	S
CO4	M	M	M	S	M	S	S	S	S	S	M	M	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

On the Plurality of Sociological Perspective

- Bottomore, T. B. 1971. *Sociology: A Guide to Problems and Literature,*
- London: Allen and Unwin, Chapter 2, Pp. 29-47
- Gouldner, Alvin, 1977, _Sociology's Basic Assumptions' in Thompson, Kenneth and Jeremy Tunstall, *Sociological Perspectives,* New York: Penguin Books Ltd, Pp. 13-17

Functionalism

- Radcliffe Brown, A.R., 1976, *Structure and Function in Primitive Society,* Free Press Chapter 9 & 10, Pp. 178-204
- Durkheim, mile, 1984, The Division of Labour in Society, Basingstoke: Macmillan. Pp. 149-174

Interpretive Sociology

- Weber, Max, 1978, *Economy & Society: An outline of Interpretive Sociology*, Vol 1, University of California Press, Basic Concepts, Pages 4-26

Conflict Perspective

- Marx, Karl, 1990, *Selected writings in Sociology and Social Philosophy,*

- Penguin Books Limited, Pp. 88-101
- Dahrendorf, Ralf, 1968, Essays in the Theory of Society, Stanford: Stanford University Press, Chapters 4 & 5, Pp. 107-150 5.

Interactionism

- Magill, Frank N., 1996, *International Encyclopedia of Sociology*, Volume 1, Routledge, Pp. 690-693
- Giddens, Anthony, 2010, *Sociology*, 6th edition, Polity, Chapter 7, _Social Interaction inEveryday Life‘, Pp. 247-280

Title of the Course	**:**	**INTRODUCTION TO SOCIOLOGY**
Course Code	**:**	**GECSOC1**
Nature of the Course	**:**	**GENERIC ELECTIVE COURSE (GEC)**
Total Credits	**:**	**03**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:
After the completion of this course, the learner will be able:

CO-1:
To comprehend the development process of the discipline and its relation to others
ILO:

- To describe the process behind the development of sociology in west.
- To illustrate the scope and nature of the discipline.
- To interrelate to the essence of the discipline with other social sciences.

CO-2:
To apply a sociological way of thinking relating to different concepts
ILO:

- To define sociological concepts.
- To identify the nature and function of social elements exist in the social structure.
- To explain the process of socialization and its necessity for social life.
- To interpret social control and the processes of social change.

CO-3
To analyse the importance of social stratification and social mobility to explain social behaviour and human relation in society
ILO:

- To define the meaning of social stratification and social mobility.
- To examine caste, class and gender as different forms of social stratification and social mobility.

UNITS	CONTENTS	L	T	P	Total Hours
1 (20 Marks)	**Nature and Scope of Sociology** • History of Sociology • Relationship of Sociology with other social sciencesAnthropology • History	13	2	0	15
2 (10 Marks)	**Sociological Concepts -I** • Status and Role • GroupsCulture • Structure and function	8	2	0	10
3 (10 Marks)	• **Sociological Concepts -II** • Socialization	8	2	0	10

	• Social control and Change				
4 (20 Marks)	**Social Stratification and Mobility** • Meaning, Nature • Forms- Caste, Class and Gender	8	2	0	10
	Total	37	8	0	45

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual knowledge						
Conceptual knowledge		CO1	CO2			
Procedural knowledge				CO3		
Metacognitive knowledge						

Mapping of Course Outcomes to Program Outcomes

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	PO15	PO16
CO1	M	M	M	S	S	M	M	S	S	M	S	M	S	M	S	S
CO2	S	S	S	S	S	M	M	S	S	M	S	S	M	M	S	S
CO3	S	S	S	S	S	S	S	M	S	M	S	S	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

Nature and Scope of SociologyHistory of Sociology

- Giddens, A., 2006 (5th ed.), Sociology, London: Oxford University Press, Chapter 1, pp.2-29. Relationship of Sociology with other Social Sciences: Anthropology, Psychology and History. Beattie, J., 1951, Other Cultures, New York: The Free Press, Chapter 2, pp.16-34.

Sociological ConceptsStatus and Role

- Bierstedt, R., 1974, The Social Order, New York: Mc Graw Hill, Chapter 9, pp. 250-179.
- Linton, R., 1936, The Study of Man, New York: Appleton Century Crofts, Chapter 8, pp.113-131.

Groups

- Bierstedt, R., 1974, The Social Order, New York: Mc Graw Hill, Chapter10, pp. 280-309.

Culture

- Bierstedt, R., 1974, The Social Order, New York: Mc Graw Hill, Chapter 5 & 6, pp. 125-187.

Socialization

- Horton, P.B. and C.L.Hunt, 1985, Sociology, New York: Mc Graw Hill, Chapter 4, pp 79-103.

Structure and Function

- Radcliffe-Brown, A.R., 1976, Structure and Function in Primitive Society, London: Cohen andWest, Chapter 9 & 10, pp. 178-204.

Social Control and Change

- Horton, P.B. and C.L.Hunt, 1985, Sociology, New York: Mc Graw Hill, Chapter 7 & 20, pp.154-181, 509-540.

Social Stratification and Mobility

- Gupta, Dipankar. 1991.*Social Stratification.* New Delhi. Oxford University Press.
- Tumin, Melvin. 1984. *Social Stratification* the forms and function of inequality, prentice.

Title of the Course	**:**	**TECHNIQUES OF SOCIAL RESEARCH**
Course Code	**:**	**SEC109**
Nature of the Course	**:**	**SKILL ENHANCEMENT COURSETotal**
Credits	**:**	**03**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:

CO.1:

The students will be able to formulate research design for conducting both quantitative and qualitative research.

ILO: The students will be

- Able to describe the concept "research design".
- Able to distinguish between different types of research design.
- Able to assess the research design formulated by other scholars.
- Able to formulate research design on different topics.

CO2:

The students will be able to analyze the quantitative and qualitative approach of social research.

ILO: The students will be

- Able to define quantitative and qualitative approach of social research.
- Able to draw the distinctions between quantitative and qualitative research.
- Able to illustrate the different steps of ethnographic research.

CO3:

The students will be able to construct for date collection in quantitative and qualitative research.

ILO: The students will be

- Able to identify the primary and Secondary sources of data.
- Able to describe different methods and tools of data collection .
- Able to distinguish between quantitative and qualitative methods of data collection.
- Able to construct questionnaire and interview schedule for data collection.

CO 4.

The students will be able to supply different quantitative and qualitative methods of data analysis.

ILO: The students will be

- Able to identify different methods of data analysis.
- Able to apply content analysis in analysis data.
- Able to apply statistical methods in analysis of data in social research.

UNITS	CONTENTS	L	T	P	Total Hours

1 (15 Marks)	**Research Design** • Concepts, • Framing of research questions & Hypotheses • Sampling Frameworks	10	2	0	12
2 (10 marks)	Quantitative & Qualitative Methods • Surveys &Ethnographies	8	2	0	10
3 (15 Marks)	**Data Collection** • Primary Sources • Secondary Sources/ Techniques of data Collection	8	2	0	10
4 (20 Marks)	**Data Analysis** • Content Analysis • Statistical Analysis: frequencydistribution, cross tabulation, • Measures of central tendency	11	2	0	13
	Total	37	8	0	45

Where, L: Lectures T: Tutorials P: Practicals

Cognitive map of course outcomes with blooms taxonomy

Knowledge Dimension/Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual						
Procedural			CO4	CO2		C03
Meta-cognitive						CO1

Mapping of Course Outcome to Programme Outcome:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO 1	M	S	S	S	M	S	M	S	M	S	M	M	M	M	S	M
CO 2	S	S	S	M	S	M	S	M	S	M	S	S	S	M	S	S
CO 3	S	M	M	S	S	S	M	S	M	S	S	M	S	S	S	M
CO 4	S	S	S	S	M	S	M	S	M	S	M	S	M	S	S	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination - 20Marks -
Group Discussion 07 Marks
Seminar presentation on any of the relevant topic 10 Marks
Viva-Voce 3 Marks

SUGGESTED READINGS:

Research Design

- Bryman, A. 2008, *Social Research Methods*, Oxford: OxfordUniversity Press, Chapter 2, 3, 4 & 5, pp. 29-136
- Amir B. Marvasti, 2004, *Qualitative Research in Sociology*, London: Sage, Chapter 2, 3, 4, 5, 6 & 7, pp. 14-144

Suggested Assignments:

- Design a survey on factors effecting marriage choices of young people.
- Visit a shopping mall and observe the interaction between employees and customers/visitors. Identify themes based on your observation and prepare a questionnaire based on this experience.
- Visit the college canteen/ administrative office/a bus stop/ area outside the metro station and observe all that happens for an hour or more and write a descriptive note on it. Discussions on these notes to follow.
- Visit a police station/ hospital/court and spend a few hours observing the scene. Write a short essay on issues of access to the field, rapport building and your role as an ethnographer.

Data Collection

- Lofland J. and Lofland L. 1984, *Analysing Social Settings: A Guide to Qualitative Observation and Experiment*, California: Wadsworth
- Morgan, David L. 1996, "Focus Groups", *Annual Review of Sociology 22,*
- pp. 29-52

Suggested Assignments:

- Conduct a structured Interview with close ended options and a relatively unstructured interview on the same topic (of your choice) with similar sets of people. Observe and note the differences.
- Look at NSS/NFHS/Census Data and write notes on the themes of how you can interpret the data.
- Look at a set of published letters of Gandhi, Nehru, C.F. Andrews, Tagore etc.and identify key social issues that are discussed in the contents of the letters.
- Collect 3 oral testimonies/ life histories of people who have witnessed and experienced any traumatic event in their lives.

Data Analysis

(Students will be introduced to the use of Statistical Software Packages)

Suggested Assignments/Exercise:

- Choose a theme of your interest- for e.g., crime, technology environmental concerns or any other and look through the Sunday editorials of any national daily of the last 3 months to locate related articles.
- Do a content analysis of advertisements of any one consumer product/service, which haveappeared over one year in a leading national daily.
- Analyse the oral testimonies you have collected in Exercise 2(d). Discuss the issues andchallenges in using testimony as evidence.
- Students will be provided with data sets to run them in a software program.

Title of the Course	**:**	**INTRODUCTION TO SOCIOLOGY – II**
Course Code	**:**	**SOCC2**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME:
After completion of this course, the students will be able to

CO1:
Analyze the meaning of Sociological Perspective and how they are related to the explanation of Society

ILO:
- Explain Functionalism as a sociological perspective
- Illustrate the contribution of Redcliff Brown to Functionalism
- Distinguish between Redcliff Brown and Emile Durkheim's contribution to functionalism

CO2:
Students will be able to assess social interaction from the perspective of Weberian interpretative Sociology

ILO:
- Explain the core ideas of Interpretative Sociology
- Illustrate Max Weber's contribution to Sociology and its methodology

CO3:
Students will be able to examine the core ideas in conflict perspective for understanding social reality

ILO:
- Explain the core ideas in Marxian conflict theory
- Compare Ralf Dahrendorf conflict theory with the conflict theory of Marx

CO4:
Examine the importance of interactionism as a theoretical perspective in understanding social reality

ILO:
- Interpret the core ideas in Interactionism
- Illustrate George Herbert Mead's ideas on the underlying process of human interaction in the society
- Compare the ideas of Herbert Blumer with Mead on human interaction in society

UNITS	CONTENTS	L	T	P	Total Hours
1 (15Marks)	Sociological Perspective • Functionalism: • Redcliff Brown, Durkheim	18	2	0	20
2 (15 Marks)	Interpretive Sociology • Max Weber	09	1	0	10

3 (15 Marks)	Conflict Perspective • Karl Marx, • Ralf Dahrendorf	13	2	0	15
4 (15 Marks)	Interactionism: • Herbert Blumer, • George Herbert Mead	13	2	0	15
	Total	53	07	0	60

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension/Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual						
Procedural			CO1	CO2, C03, C04		
Meta-cognitive						

Mapping of Course Outcome to Programme Outcome:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO 1	S	M	M	,M	M	S	M	S	M	S	M	S	M	S	M	M
CO 2	M	S	S	M	S	M	S	M	S	M	S	S	S	M	S	S
CO 3	M	S	M	S	M	M	S	S	M	S	S	M	S	S	S	M
CO 4	S	S	S	S	M	S	M	S	M	S	M	S	M	S	M	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

On the Plurality of Sociological Perspective

- Bottomore, T. B. 1971. *Sociology: A Guide to Problems and Literature,*London: Allen and Unwin, Chapter 2, Pp. 29-47

- Gouldner, Alvin, 1977, _Sociology‘s Basic Assumptions‘ in Thompson, Kenneth and Jeremy Tunstall,*Sociological Perspectives*, New York: Penguin Books Ltd, Pp. 13-17

Functionalism

- Radcliffe Brown, A.R., 1976, *Structure and Function in Primitive Society*, Free Press Chapter 9 & 10, Pp. 178-204
- Durkheim, mile, 1984, The Division of Labour in Society, Basingstoke: Macmillan. Pp.149-174

Interpretive Sociology

- Weber, Max, 1978, *Economy & Society: An outline of Interpretive Sociology*, Vol 1, University of California Press, Basic Concepts, Pages 4-26

Conflict Perspective

- Marx, Karl, 1990, *Selected writings in Sociology and Social Philosophy*, Penguin Books Limited, Pp. 88-101
- Dahrendorf, Ralf, 1968, Essays in the Theory of Society, Stanford: Stanford UniversityPress, Chapters 4 & 5, Pp. 107-150 5. Structuralism (8-9 Weeks)

Interactionism

- Magill, Frank N., 1996, *International Encyclopedia of Sociology*, Volume 1,Routledge, Pp. 690-693
- Giddens, Anthony, 2010, *Sociology*, 6th edition, Polity, Chapter 7, _Social Interaction in Everyday Life‘, Pp. 247-280

Title of the Course	**:**	**SOCIOLOGY OF INDIA**
Course Code	**:**	**MINSOC2**
Nature of the Course	**:**	**MINOR**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME:

After completion of this course, the students will be able to

CO1:

Evaluate the institutions and processes of Indian society.

ILO:

- Comprehend Indian society as a plural society and classify the emergent trends of pluralism
- Categorize the different social institutions of India and its changing trends, nature and characteristics.

CO2:

Apply sociological lens to view Indian realities.

ILO:

- Explain the process of social formation of identities and changes in Indian society.
- Interpret the challenges and contradictions faced by Indian society in recent times.

CO3:

Analyse different social movements and recognize that these movements have been a response to the historical discrimination, marginalization, and neglect faced by different ethnic and linguistic groups in India

ILO:

- Understand the concept of ethnicity and Identity
- Explain what is the meaning of "Dalit" and the concept of Dalit movement
- Describe different stages and forms of Dalit movements in India;
- Identify the Dalit leaders and their contribution.
- Explain the structural and cultural reasons for Dalit uprising.
- Describe women's movement as an important variant of social movement
- Explain how women's issues are raised in the reform movements of nineteenth and early twentieth centuries.
- State and describe the basic aspects of women's organisations, issues and their role in the movement.
- Describe the changing facets of women's movement in the Post-Independence period.

CO4:

Analyze the evolution and contemporary challenges of state institutions and the role of the state in addressing the challenges of growth, modernization and globalization.

ILO:

- Understand the stages of communalism
- Distinguish between communalism and secularism

- Comprehend that communalism, regionalism, and secularism are political ideologies with different belief systems.
- Recognize regionalism as a political philosophy, which has its roots in the regional and cultural diversity of India.

UNITS	CONTENTS	L	T	P	Total Hours
1 15 Marks)	**India as a Plural Society** • Meaning of plural society, • Emerging trends of pluralism- political, economic and culture.	13	2	0	15
2 (15 Marks)	**Social Institutions and Practices** • Meaning anddefinition • Meaning, definition, characteristics and changing trends –Caste, Tribe, Class.	13	2	0	15
3 (15 Marks)	**Identities and Change** • Ethnic Movement • Dalits' Movement Women's Movement	13	2	0	15
4 (15 Marks)	**Challenges to State and Society** • Communalism • Secularism • Regionalism	13	2	0	15
	Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcome with Bloom's Taxonomy

Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge		CO1				
Conceptual Knowledge			CO2		CO1	
Procedural Knowledge				CO2 CO3 CO4	CO1 CO2	
Metacognitive Knowledge						

Mapping Of Course Outcome To Program Outcome

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	S	S	S	S	S	S	S	S	S	M	M	M	M	M	S	M
CO2	S	S	S	S	S	S	S	S	S	M	S	S	S	M	S	M

CO3	S	S	S	M	S	S	S	S	S	M	S	S	S	M	S	M
CO4	S	S	S	S	S	S	M	S	S	M	S	S	S	M	S	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

India as a Plural Society

- Mason, Philip 1967. "Unity and Diversity : An Introductory Review" in Philip Mason(ed.) India and Ceylon: Unity and Diversity. London: Oxford University Press

Introduction Social Institutions and PracticesCaste

- Srinivas, M.N., 1969, "The Caste System in India", in A. Beteille
- Srinivas, M.N., 1956, "A Note on Sanskritizationand Westernization", *The Far Eastern Quarterly*, Volume 15, No. 4, pp 481-496.
- Alavi, Hamaza and John Harriss (eds.) 1989. *Sociology of Developing Societies': South Asia*. London: Macmillan. John Harriss, "The Formation of Indian society: Ideology and Power". pp. 126 – 133.

Class

- Thorner, Daniel, 1992."Agrarian Structure" in Dipankar Gupta (ed.), Social Stratification in India, New Delhi: Oxford University Press, pp. 261-270.
- Deshpande, Satish, 2003, Contemporary India : A Sociological View. New Delhi; Viking, pp. 125-150.

Identities and Change

- Shah, Ghanshyam. 2001, *Dalit identity and politics.* Delhi: SagePublications, Chapter 1 and 7.
- Kumar, Radha. 1999, „From Chipko to sati: The Contemporary women"s movement", inNivedita Menon (ed.) *Gender and Politics in India*. Delhi: Oxford University Press, pp. 342-369.
- Kumar, Radha.1993 "The history of doing :An illustrated account of Movements for Women's
- Right and Feminsm in India 1800-1900" Kali for women

Challenges to State and Society

- Madan, T.N., 1997, *Modern Myths and Locked Minds*. Delhi: Oxford University Press,Chapter 8.
- Dumont, L. 1997, *Religion, Politics and History in India.* Paris: Mouton, Chapter 5.
- Pakem B. 1990, "Nationality, Ethnicity and Cultural Identity"OMSONS Piblications, New Delhi.

Title of the Course	**:**	**INDIAN SOCIETY: IMAGES AND REALITIES**
Course Code	**:**	**GECSOC2**
Nature of the Course	**:**	**GENERIC ELECTIVE COURSE (GEC)**
Total Credits	**:**	**03**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course outcomes:
After the completion of this course, the learner will be able:
CO-1:
To describe the sociological explanation about Indian society and its ideas

ILO:

- To locate India as nation.
- To locate India as civilization.

CO-2:
To explain the major social institutions of Indian society and the processes of functioning of these institutions.

ILO:

- To distinguish the features of village and town.
- To discuss about caste and religion in creating values in Indian society and politics.
- To analyse the understanding of variability and changes relating to family.
- To critique the construction of gender in Indian society.

CO-3:
To critically analyse the concepts of civilization, colony and nation in Indian context

ILO:

- To illustrate the ideas of civilization, colony and nation critically.
- To outline the ideas of recasting of family, gender, caste etc. in contemporary Indian context.

UNITS	CONTENTS	L	T	P	Total Hours
1 (20 Marks)	**Sociological understanding of Ideas of India:** Civilization • Colony • Nation and • Society	11	2	0	13
2 (15 Marks)	Institutions and Processes • Village, • Town • Caste, • Religion,	10	2	0	12

3 (10 Marks)	Family and Gender • Social Construction of Gender • Form and Formation of Family	7	1	0	8
4 (15 Marks)	Critical understanding of : • Civilization,colony, • Nation and society	10	2	0	12
	Total	38	7	0	45

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual knowledge						
Conceptual knowledge	CO1		CO2			
Procedural knowledge				CO3		
Metacognitive knowledge						

Mapping of Course Outcomes to Program Outcomes

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	PO15	PO16
CO1	M	S	S	S	S	M	S	M	S	M	M	M	S	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S	S	M	S	S
CO3	S	S	S	S	S	S	S	M	S	M	S	S	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

Ideas of India : Civilization, Colony, Nation and Society

- Embree, Ainslie Thomas,. *Imagining India*. Delhi: Oxford University Press, 1989. Chapter1- Brahmanical Ideology and Regional Identities. Pp. 9 – 27
- Cohn, Bernard. *India: Social Anthropology of a Civilization*, Delhi: OUP. Chapters 1, 3, 5& 8 (1-7, 24-31, 51-59, 79-97)

Institutions and ProcessesVillage, Town and Region

- Breman, Jan. ‗The Village in Focus' from the Village Asia Revisited, Delhi: OUP 1997.Pp. 15-64
- Cohn, Bernard, *An Anthropologist Among Historians and Other Essays*, Delhi: OUP, 1987,Chapters. 4 and 6. Pp.78-85 & 100 – 135

Caste, Religion and Ethnicity

- Mines, Diane P. *Caste in India*. Ann Arbor, Mich.: Association for Asian Studies,

2009.Pp. 1-35

- Fuller, C. J. *The Camphor Flame: Popular Hinduism and Society in India.* Delhi: Viking,1992. Chapter 1. Pp. 3 – 28.
- Ahmad, Imtiaz et.al (eds). *Pluralism and Equality: Values in Indian Society and Politics*, Sage : New Delhi, 2000. Chapter: ‗Basic Conflict of ‗we' and ‗they'' Between religious traditions, between Hindus, Muslims and Christians'. Pp.

Family and Gender

- Dube, Leela. ‗On the Construction of Gender: Hindu Girls in Patrilineal India', *Economicand Political Weekly*, Vol. 23, No. 18 (Apr. 30, 1988), pp. WS11 WS19
- Gray, John N. & David J. Mearns. *Society from the Inside Out: Anthropological Perspectives on the South Asian Household.* New Delhi: Sage,
- 1989. Chapter 3. (Sylvia Vatuk) Household Form and Formation: Variability and SocialChange among South Indian Muslims. Pp. 107-137

Critiques

- Omvedt, Gail. *Understanding Caste*. New Delhi: Orient Black Swan, 2011.
- Chapters. 5, 9, 11 and Conclusion. Pp. 30-38, 67 – 73, 83 – 90, 97 – 105 Sangari, Kumkum and Sudesh Vaid. *Recasting Women: Essays in Indian Colonial History.* New Brunswick: Rutgers University Press. Introduction, Pp. 1 – 25

Title of the Course	**:**	**SOFT SKILL AND PERSONALITY DEVELOPMENT**
Course Code	**:**	**SEC209**
Nature of the Course	**:**	**SKILL ENHANCEMENT COURSE**
Total Credits	**:**	**03**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME

After completion of this course, the students will be able to

CO1:

Understand Soft skill and its relation with the process of personality development

ILO:

- Classify Soft skills
- Understand the role of Self in social interaction,
- Define and explain Emotional Intelligence and Critical thinking

CO2:

Comprehend and apply the practical and theoretical part of soft skill training which is essential for effective communication.

ILO:

- Define Interpersonal skills,
- Distinguish between interpersonal and social skill effective in communication
- Understand interview skill and explain it as an important component of soft skill
- Understand and apply public speaking skill in their future endeavours,
- Develop presentation skill as an important component of soft skill.

CO3:

Engage in activity based learning such as how to face interview, public speaking, group discussion etc.

ILO:

- Participate in Mock Interview sessions
- Prepare themselves to participate in group discussions
- Develop group dynamics
- Distinguish between verbal and non verbal communication
- Recognize the different components of positive thinking and its relation with problem solving skills.

CO4:

Analyse the relationship between Stress, Health and Coping.

ILO:

- Define Social stress
- Understand the social determinants of stress and its outcomes.
- Explain the difference between problem focused and emotion focused strategies of coping.

UNITS	CONTENTS	L	T	P	Total Hours
1 (10 Marks)	**Soft skill and personality development- I** • Soft skill and its classification • Self in social interaction, Emotional Intelligence andCritical thinking	10	2	0	12
2 (10 Marks)	**Soft skill and personality development- II** • Interpersonal skills, • Interview skill • Public speakingskill, • Presentation skill	9	1	0	10
3 (20 Marks)	**Social Psychology of stress, health and coping** • Social stress, • coping and adaptation- • Conceptualizing stress as stimulus, response and transactional process	9	1	0	10
4 (20 Marks)	**Understanding Stress & Health** • Stress and Health, • Coping with stress, emotion-focused and problem focused strategies • Understanding the relationships and interactions • between health, stress and coping.	11	2	0	13
	Total	39	6	0	45

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1	CO1	CO1			
Conceptual Knowledge	CO1, CO2	CO3,CO4	CO3,CO4	CO3,CO4	CO4	CO4
Procedural Knowledge	CO3, CO4	CO3,CO4	CO3,CO4	CO3,CO4	CO4	CO1
Meta cognitive Knowledge			CO3,CO4	CO3,CO4	CO3,CO4	CO3,CO4

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	M	M	M	M	M	S	M	M	M	S	S	S	S	S
CO2	M	M	S	S	S	S	**S**	S	M	M	S	S	S	S	S	S
CO3	M	M	S	S	S	S	S	S	S	S	S	S	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT:	**(40Marks)**
Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

Essential Readings

- Dorch, Patricia. *What Are Soft Skills*? New York: Execute Dress Publisher, 2013.
- Klaus, Peggy, Jane Rohman & Molly Hamaker. *The Hard Truth about Soft Skills*. London:HarperCollins E-books, 2007.
- Petes S. J., Francis. *Soft Skills and Professional Communication*. New Delhi: Tata McGraw-HillEducation, 2011.
- Stein, Steven J. & Howard E. Book. *The EQ Edge: Emotional Intelligence and Your Success*.Canada: Wiley & Sons, 2006
- Ghosh ,B.N (2012): Managing Soft Skill for personality development, Tata McGraw-HillEducation, New Delhi
- Pestonjee, D M. Stress and Copin,g: The Indian Experience. SAGE Publications Pvt. Ltd;Second edition (15 December 1998)

Essential Articles

- Moksnes, Unni K. and Espnes, Geira. Stress, sense of coherence and subjective health in adolescents aged 13–18 years. Scandinavian Journal of Public Health, June 2017, Vol. 45, No. 4 (June 2017), pp. 397-403
- Weiss, Peter E. Using Public-Speaking Skills to Improve Classroom Instruction Sage Publications
- Grubaugh, Steven. Public Speaking: Reducing Student Apprehension and Improving Oral Skills.The Clearing House, Feb., 1990, Vol. 63, No. 6 (Feb., 1990), pp. 255-258, Published by: Taylor & Francis, Ltd.
- The OCR Guide to Presentation Skills, www.ocr.org.uk
- Hanna, Jennie L. Reducing Fear with Recitations.The English Journal, May 2018, Vol. 107, No. 5 (May 2018), pp. 39-43 Published by: National Council of Teachers of English
- Gerich, Joachim. Effects of Social Networks on Health from a Stress Theoretical Perspective. Social Indicators Research , August 2014, Vol. 118, No. 1 (August 2014), pp. 349- 364 Published by: Springer
- Thoits, Peggy A. Stress and Health: Major Findings and Policy Implications. Journal of Health and Social Behavior , 2010, Vol. 51, Extra Issue: What Do We Know? Key Findings from 50 Years of Medical Sociology (2010), pp. S41-S53 Published by: American Sociological Association
- Pearlin, Leonard I. , Menaghan, Elizabeth G. Morton A. Mullan, Lieberman and Joseph T. TheStress Process. Journal of Health and Social Behavior , Dec., 1981, Vol. 22, No. 4 (Dec., 1981), pp. 337-356 Published by: American Sociological Association
- Walter, Nan Lin M. and Ensel . Life Stress and Health: Stressors and Resources. American Sociological Review , Jun., 1989, Vol. 54, No. 3 (Jun., 1989), pp. 382- 399 Published by: American Sociological Association
- Aneshensel, Carol S. Social Stress: Theory and Research .Annual Review of Sociology , 1992, Vol. 18 (1992), pp. 15-38 Published by: Annual Reviews

Exercises and Practices at the classroom

- The teacher can arrange mock Group Discussion among the students by using audio visualtechniques

- Mock public speaking forum can be created within the classroom by providing them varioustopics.
- Mock interview can be conducted among the students in the classroom
- The teachers can engage the students in preparing power point presentation on various topicsand ask them to present it in the classroom.

Suggested Readings

- R. Baron & D. Byrne : Social Psychology: Understanding Human Interaction, 1993, PrenticeHall of India Pvt. Ltd., Delhi,1993 (6th Edn)
- T.M Newcomb et al. : Social Psychology: A Study of Human Interaction, Tavistock Publication Ltd., London, 1961 (Revised Edn).
- Hook. D, Franks.B &Bauer W. Martin (2011):The Social Psychology ofCommunication,(6th edition), AIAA.
- **E- resource:**
-
- https://openpress.usask.ca/introductiontopsychology/chapter/stress-and-coping/

- https://mspace.lib.umanitoba.ca/server/api/core/bitstreams/b8d9c38e-e6fa-4c1e-af34-2d7938679d89/content
- https://davidscottsociology.tripod.com/sitebuildercontent/sitebuilderfiles/socialstress.pdf

- **https://sites.bu.edu/deborahcarr/files/2020/09/Carr-Umberson_HSP-2013.pdf**

- **http://aristeiainmed.aegean.gr/ext-files/koinoniko-oikonomikes/social-stress.pdf**

- **https://www.researchgate.net/publication/234838398_Social_Stress_Theory_and_Research**
- **https://mspace.lib.umanitoba.ca/items/5770b1bc-11f4-4d9f-9bb4-2e9ddb42c294**

Title of the Course	**:**	**SOCIOLOGY OF INDIA - I**
Course Code	**:**	**SOCC3**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcome (CO):

After completion of this course, the students will be able to

CO1:

To assess the processes and modes of construction of knowledge of India

ILO:

- Analyze the construction of sociological knowledge in the Indian Social Context
- Examine the processes of the social construction of knowledge

CO2:

Evaluate key concepts and institutions which are useful for them understanding of the Indian society.

ILO:

- To apply sociological imagination related to different institutions of Indian society.
- To analyze the relationship between castes, tribes and village studies with major social institutions of Indian society
- To evaluate Kinship principles and patterns of Indian social life and how it is related to sociological understanding.

CO3: Analyze the model of Agrarian classes and Industrial classes in India

ILO:

- Describe agrarian classes and its characteristics
- Define Industrial classes and its characteristics
- Understand the concept of Labour and how it is related to Industrial Society
- Understand how Work, Industry and Society are related to each other

CO4 Evaluate Kinship principles and patterns of Indian social life

ILO:

- Understand Principle and Pattern of Kinship
- Examine the relationship between religion, kinship and Society
- Outline how religion , society and kinship are related to each othet

UNITS	CONTENTS	L	T	P	Total Hours
1 (14Marks)	**India: An Object of Knowledge** • The Colonial Discourse • The Nationalist Discourse • The Subaltern	13	2	0	15

	Critique				
2 (12 Marks)	**Indian Society: Concepts and Institutions** • Caste: Concept and Critique • Tribe: Profile and Location	10	2	0	12
3 (10 Marks)	**Industry and Labour** • Industry: Meaning, Characteristics • Labour: Meaning and Characteristics • Industry and labour in Post Colonial India	08	1	0	09
4 (12 Marks)	**Village: Structure and Change** • Dominant Castes • Agrarian Classes	11	1	0	12
5 (12 Marks)	**Kinship** • Principle and Pattern • Religion and Society	11	1	0	12
	Total	53	07	0	60

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcome with Bloom's Taxonomy

Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge						
Conceptual Knowledge				CO1 CO2 CO3	CO2 CO4	
Procedural Knowledge			CO2	CO1	CO2	
Metacognitive Knowledge						

Mapping Of Course Outcome To Program Outcome

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	S	S	S	S	S	S	S	S	S	M	M	M	M	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S	S	M	S	M
CO3	S	S	S	M	S	S	S	S	S	M	S	M	S	M	S	M
CO4	S	S	S	M	S	S	S	S	S	M	S	M	S	M	S	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 **Marks**
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

The Colonial Discourse

- Cohn, B.S., 1990, *An Anthropologist among the Historians and Other Essay*s, Delhi:Oxford University Press, Pp.136-171

The Nationalist Discourse

- Kaviraj, S., 2010, *The Imaginary Institution of India*, Ranikhet: Permanent Black, Pp.85-126

The Subaltern Critique

- Guha, R., 1982, *Subaltern Studies, Volume I*. Delhi: Oxford University Press, Pp.1-8

Caste: Concept and Critique

- Srinivas, M.N., 1969, „The Caste System in India", in A. Béteille (ed.) *Social Inequality: Selected Readings*, Harmondsworth: Penguin Books, Pp.265- 272
- Mencher, J., 1991, „The Caste System Upside Down", in D. Gupta (ed.), *Social Stratification*, Delhi: Oxford University Press, Pp.93-109

Agrarian Classes

- Dhanagare, D.N., 1991, ―The Model of Agrarian Classes in India‖, in D. Gupta (ed.), *Social Stratification*, Delhi: Oxford University Press, Pp. 271-275

Industry and Labour

- Breman, J., 1999, ―The Study of Industrial Labour in Post Colonial India: The FormalSector ,*Contributions to Indian Sociology*, 33(1&2), Pp.1-41

Tribe: Profile and Location

- Haimendorf, C. V. F., 1967, „The Position of Tribal Population in India", in P. Mason *India and Ceylon: Unity and Diversity*, New York: Oxford University Press, Chapter 9

Village: Structure and Change

- Srinvas, M. N., 1987, *The Dominant Caste and Other Essays*, Delhi: Oxford University Press, Pp.20-59

Kinship: Principle and Pattern

- Karve, I., 1994, „The Kinship Map of India", in P. Uberoi (ed.) *Family, Kinship and Marriage in India*. Delhi: Oxford University Press, Pp.50-73

Religion and Society

- Srinivas, M.N. and A. M. Shah, 1968, „Hinduism", in D. L. Sills (ed.) *The International Encyclopaedia of Social Sciences*, Volume 6, New York: Macmillan, Pp.358-366
- Momin, A.R., 1977, „The Indo Islamic Tradition", *Sociological Bulletin*, 26, Pp.242-258Uberoi, J.P.S., 1997, „The Five Symbols of Sikhism", in T.N. Madan (ed.)
- *Religion in India*, Delhi: Oxford University Press, Pp. 320-332

Note:

The students are required to explore the contemporary sources on social institutions. With the aid of visual, oral and other kinds of narratives/representations students, advised and guided by teachers, are expected to arrange discussion sessions, work on assignments, undertake projects and fieldwork, and make presentations week-wise from the onset to the end of the semester.

Title of the Course	**:**	**SOCIOLOGICAL THINKERS - I**
Course Code	**:**	**SOCC4**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcome (CO):

After completion of this course, the students will be able to

CO 1:

Appraise the contribution of August Comte in formulating Sociology as a social science

ILO:

- Outline Comte's idea of social evolution
- Recognise Comte's contribution to the use of positive philosophy in understanding social phenomenon
- Discuss the scope of sociology as a science as per Comte's ideas

CO 2:

Evaluate the significance of the work of Karl Marx in understanding social dialectics

ILO:

- Infer Karl Marx ideas on the concept of dialectical materialism
- Recognise class struggle as a process of social change and evolution
- Interpret mode of production as an idea of social organization

CO 3:

Analyse Max Weber's contribution to the interpretation of social phenomenon

ILO:

- Define social action as the core element of society as per Weberian understanding
- Identify ideal type as a method of understanding social phenomenon
- Illustrate Weber's interpretation of religion and economy as social phenomenon

CO 4:

Examine Emile Durkheim's understanding of social phenomenon as social facts

ILO:

- Define social facts and its types
- Draw the relationship between society and individuals as per Durkheim's ideas
- Illustrate Durkheim's idea of suicide as a social fact

UNITS	CONTENTS	L	T	P	Total Hours
1 (15Marks)	**August Comte** • Law of Human Progress • Hierarchy of Sciences	10	2	0	12

2 (15Marks)	**Karl Marx** • Materialist Conception of History • Class and Class struggle	14	2	0	16
3 (15Marks)	**Max Weber** • Social Action and Ideal Types • Religion and Economy	14	2	0	16
4 (15 Marks)	**Emile Durkheim** • Social Fact • Individual and Society • Suicide as a social fact	15	1	0	16
	Total	53	07	0	60

Where, L: Lectures T: Tutorials P: Practicals

Cognitive map of course outcomes with blooms taxonomy

Knowledge dimension/ process dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual	CO1					
Conceptual		CO4		CO2		
Procedural					CO3	
Metacognitive						

Mapping of course outcomes to programme outcomes

CO/ OP	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	S	S	S	S	S	S	M	M	S	M	S	S	S	M	S	S
CO 2	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
CO 3	S	S	M	S	S	S	S	M	S	M	S	S	S	M	S	S
CO 4	S	S	S	S	S	S	M	S	S	M	S	S	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

August Comte

- Coser, Lewis, A: Masters of Sociological Thought, New York , Harcourt Brace Jovanovich 1977

Karl Marx

- Intro : McLellan, David. 1975. *Marx*. London: Fontana Press. Pages: 7-23 (16) Marx, K. and F. Engels. 1969. *Selected Works Vol. 1*. Moscow: Progress Publishers. pp. 13-15, 16- 80, 98-106, 142-174, 502-506

Max Weber

- Poggi, Gianfranco. 2006. *Weber*. Cambridge, UK: Polity. Pages: 1-16 (16)
- Weber, Max. 1947. *The Theory of Social and Economic Organization*. New York: The Free Press, pp. 87-123
- Weber, Max. 2002. *The Protestant Ethic and the Spirit of Capitalism* (translated by Stephen Kalberg). London: Blackwell Publishers, pp. 3-54, 103-126, Chapters I, II, III,IV & V

Emile Durkheim

- Durkheim, E. 1958. *The Rules of Sociological Method*. New York: The Free Press. pp.48-107, 119-144
- Durkheim, E. 1951. *Suicide: A Study in Sociology*. New York: The Free Press, pp. 41-56,145-276

SUGGESTED READINGS

- Ritzer, G. 1996. *Sociological Theory*. New York: McGraw Hill Companies. Giddens, A. 1971. *Capitalism and Modern Social Theory: An Analysis of the Writings of Marx, Durkheim and Max Weber*. Cambridge: Cambridge University Press.

Title of the Course	**:**	**METHODS OF SOCIOLOGICAL ENQUIRY**
Course Code	**:**	**MINSOC3**
Nature of the Course	**:**	**MINOR**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:
After the completion of this course, the learner will be able:
CO-1:
To explain the complexity and philosophical underpinnings of social research
ILO:

- To outline Sociology as a science
- To define objectivity in social research
- To discuss scientific methods in social research

CO-2:
To apply methodological perspectives through different modes of enquiry to do sociological research
ILO:

- To discuss comparative method used in the works of different social thinkers
- To interpret cultures through the lens of ethnographic method
- To draw the relation between theory and research

CO-3:
To assess the dynamics of quantitative and qualitative research methods
ILO:

- To distinguish the qualitative and quantitative research methods
- To apply different types of research methods based on the nature of study
- To justify the role of a fieldworker in doing social research
- Distinguish and compare between Inductive and Deductive Logic applied in research
- Distinguish and compare between qualitative and quantitative methods of data collection and data analysis.

UNITS	CONTENTS	L	T	P	Total Hours
1 (15 Marks)	**The Logic of Social Research** • Sociological Research: Meaning • Science and Sociology Scientific Method: Positivist and Constructionist interpretation of Science • Sociological Imagination: C. W. Mills. **Objectivity in the Social Sciences** • Objectivity as explained by EmileDurkheim • Objectivity as explained Max Weber	16	2	0	18
2 (15 Marks)	**Methodological Perspectives** **C**omparative Method • Comparative method in the works of Emile Durkheim, Max Weber and Radcliffe Brown. • The Ethnographic Method	16	2	0	18
3 (15 Marks)	**Modes of Enquiry** • Theory and Research • Inductive and Deductive Logic	10	2	0	12
4 (15 Marks)	**Quantitative and Qualitative Research :** • Characteristics • Purposes • Types.	10	2	0	12
	Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual knowledge						
Conceptual knowledge		CO1				
Procedural knowledge			CO2		CO3	
Metacognitive knowledge						

Mapping of Course Outcomes to Program Outcomes

CO/PO	PO 1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	S	M	M	S	S	M	S	S	M	S	M	M	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	M	S	M	S	S

CO3	S	S	S	S	S	S	S	S	S	S	S	M	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination	-	20Marks -
Group Discussion		07 Marks
Seminar presentation on any of the relevant topic		10 Marks
Viva-Voce		3 Marks

SUGGESTED READINGS:

The Logic of Social Research What is Sociological Research?

- Mills, C. W. 1959, *The Sociological Imagination,* London: Oxford University Press, Chapter 1, pp. 3-24.
- Gluckman, M. 1978, 'Introduction', in A. L. Epstein (ed.), *The Craft of Social Anthropology,* Delhi: Hindustan Publishing Corporation, pp. xv-xxiv.

Objectivity in the Social Sciences

- Durkheim, E. 1958, *The Rules of Sociological Method,* New York: The Free Press, Chapter 1& 2, pp. 1-46.
- Weber, Max. 1949, *The Methodology of the Social Sciences,* New York: The Free Press, Foreword, pp. iii- x.

Reflexivity

- Gouldner, Alvin. 1970, *The Coming Crisis of Western Sociology,* New York: Basic Books, Chapter 13, pp. 481-511.

Methodological PerspectivesThe Comparative Method

- Radcliffe-Brown, A. R. 1958, *Methods in Social Anthropology,* Delhi: Asia Publishing Corporation, Chapter 5, pp. 91-108.
- Béteille, A. 2002, *Sociology: Essays on Approach and Method,* New Delhi: Oxford University Press, Chapter 4, pp. 72-94.

The Ethnographic Method

- Geertz, Clifford. 1973. *Interpretation of Cultures,* New York: Basic Books. Chapter 1, pp. 3-30.

Modes of Enquiry Theory and Research

- Merton, R. K. 1972, *Social Theory and Social Structure,* Delhi: Arvind Publishing House, Chapters 4 & 5, pp. 139-171.
- Bryman, Alan. 2004, *Quantity and Quality in Social Research,* New York: Routledge, Chapter 2 & 3, pp. 11-70.

Quantitative and Qualitative Research

- Srinivas, M.N. et. al. 2002(reprint), *The Fieldworker and the Field: Problems and Challenges in Sociological Investigation,* New Delhi: OUP, Introduction, pp. 1-14.

Title of the Course	**:**	**MARRIAGE, FAMILY AND KINSHIP**
Course Code	**:**	**GECSOC3**
Nature of the Course	**:**	**GENERIC ELECTIVE COURSE (GEC)**
Total Credits	**:**	**03**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:

CO 1:

Apply sociological perspectives in understanding kinship

ILO:

- Distinguish between the biological reality and social definition of kinship
- Define kinship as a cultural construction
- Describe residence and inheritance as elements of kinship

CO 2:

Appraise the determinants and components of kinship

ILO:

- Discuss descent and filiation as determinants of kinship groups
- Illustrate marriage as a social institution and describe its types
- Interpret the characteristics and functions of dowry and bride price

CO 3:

Examine the nature and changes in family as a social institution

ILO:

- Define family and its social functions
- Distinguish the types of family and household
- Illustrate the forces of change in the nature of family
- Draw the specificities of gay and lesbian families

CO 4:

Critically examine the contemporary issues in the field of marriage, family and kinship

ILO:

- Recognise the important contemporary issues related to marriage
- Interpret family as a locus of power and discrimination
- Locate the changes in kinship due to the intervention of new reproductive technologies
- Outline the relationship between marriage and migration

UNITS	CONTENTS	L	T	P	Total Hours
1 (20 Marks)	**Introduction: Kinship, Critique and the Reformulation** • Biological and Social Kinship • Cultural Kinship- residence, inheritance, social and • Cultural construction.	9	1	0	10
2 (15 Marks)	**Descent, Alliance** • Descent, Filiation, ComplementaryFiliation	9	1	0	10

	• Marriage, Alliance, bride-price and dowry, monogamy and polygamy.				
3 (10 Marks)	**Family and Household** • Nature and types of family, family and household,forces of change • Reimagining Families- gay and lesbian perspective	9	1	0	10
4 (15 Marks)	**Contemporary Issues in Marriage, Family and Kinship** • Choice and Regulation in Marriage-honour, shame and violence • Power and Discrimination in the Family • New Reproductive Technologies; Marriage Migration – meaning, prospect and challenges	13	2	0	15
	Total	40	5	0	45

Where, L: Lectures T: Tutorials P: Practicals

Cognitive map of course outcomes with blooms taxonomy

Knowledge dimension/ process dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual	CO1					
Conceptual				CO2		
Procedural				CO4	CO3	
Metacognitive						

Mapping of course outcomes to programme outcomes

CO/ OP	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	S	S	M	S	S	S	S	M	S	M	S	S	S	M	S	S
CO 2	S	S	S	S	S	S	M	M	S	M	S	M	S	M	S	S
CO 3	S	S	M	S	S	S	S	S	S	S	S	S	S	M	S	S
CO 4	S	S	S	S	S	S	S	M	S	S	S	S	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**
Two Internal Examination 20Marks -

Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

Introduction: Kinship, Critique and the Reformulation

Biological and Social Kinship

- Parkin, R. and L. Stone, 2004, 'General Introduction', in R. Parkin and L. Stone (eds), Kinship and Family: An Anthropological Reader, U.S.A. : Blackwell, pp. 1-23.

Cultural Kinship

- Schneider, D.M., 2004 (1972), ' What is Kinship All About?', in R. Parkin and L. Stone (eds.), Kinship and Family: An Anthropological Reader, U.S.A. : Blackwell, pp. 257-274.
- Carsten, J., 2004, ' Introduction, in After Kinship, Cambridge: Cambridge University Press, pp. 1-30.

Descent and Alliance :

Descent, Filiation, Complementary Filiation

- Radcliffe-Brown, A.R. and D. Forde (eds.), 1950, African Systems of Kinship and Marriage, London: Oxford University Press, Introduction, pp. 1-39.
- Fortes, M., 1970, ' The Structure of Unilineal Descent Groups', in M. Fortes, Time and Social Structure and Other Essays, University of London: The Athlone Press, pp 67-95

Marrigae, Alliance, Prestations

- Leach, E.R., 1961, 'Polyandry, Inheritance and the Definition of Marriage with Particular Reference to Sinhalese Customary Law', in E.R. Leach (eds.), Rethinking Anthropology, London: The Athlone Press, pp. 105-113.
- Dumont, L., 1968, 'Marriage Alliance', in D. Shills (ed.), International Encyclopedia of the Social Sciences, U.S.A.: Macmillan and Free Press, pp. 19-23.
- Sharma, U., 1993, 'Dowry in North India: Its Consequences for Women', in Patricia Uberoi (ed.), Family, Kinship and Marriage in India. Delhi : Oxford University Press, pp. 341-356.

Family and Household:

- Shah, A.M., 1998, 'Changes in the Indian Family: An Examination of Some Assumptions', in A.M. Shah, The Family in India: Critical Essays, New Delhi: Orient Longman, pp. 52-63
- Simpson, B., 2004, 'Gays, Paternity and Polyandry: Making Sense of New Family Forms inContemporary Sri Lanka', in R. Chopra, C. Osella and F. Osella (eds.), South Asian Masculinities: Context of Change, Sites of Continuity, Delhi: Kali for Women, pp. 160-174.

Contemporary Issues in Marriage, Family and Kinship :

Choice and Regulation in Marriage

- Chowdhry, P.,1998, 'Enforcing Cultural Codes: Gender and Violence in Northern India,, in
- M.E. John and J. Nair (eds), A Question of Silence: The Sexual Economies of Modern India,New Delhi: Kali for Women, pp. 332-67.

Power Discrimination in the Family

- John, M.E. te.al., 2008, 'Structural Contexts of Adverse Sex Ration' in M.E. John et. Al., Planning Families, Planning Gender: The Adverse Child Sex Ratio in Selected Districts of Madhya Pradesh, Rajasthan, Himachal Pradesh, Haryana and Punjab, New Delhi: Action Aid, pp. 68-78.

New Reproductive Technologies

- Carsten, J., 2004, 'Assisted Reproduction' in After Kinship, Cambridge: Cambridge University Press, pp. 163-183.

Marriage Migration

- Charsley, K., 2005, 'Unhappy Husbands: Masculinity and Migration in Transnational Pakistani Marriages', Journal of the Royal Anthropological Institute, (N.S.)11,pp.85-105.

Title of the Course	**:**	**HUMAN BEHAVIOUR AT WORK**
Course Code	**:**	**SEC309**
Nature of the Course	**:**	**SKILL ENHANCEMENT COURSE**
Total Credits	**:**	**03**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:
After the completion of this course, the learner will be able:
CO-1:
To explain the basic principle of organizational behaviour and how it is related to society
ILO:

- To describe the meaning of organizational behaviour and its process of evolution
- To identify the nature and scope of organizational behaviour
- To infer the significance of organizational behaviour

CO-2:
To examine the contemporary trends and changes found in organization and how it is influencing human behaviour
ILO:

- To locate challenges and opportunities for organizational behaviour
- To recognize the forces of organizational change
- To apply adaptive managing mechanism for the resistance to organizational change

CO-3:
To analyse different approaches and models of studying organizational behaviour and the contemporary challenges faced by organisations.
ILO:

- To illustrate Lewin's Three-Step Model and Kotter's Eight-Step Plan in understanding organizational change and development
- To apply action research in solving contemporary issues of organizational change
- To utilize the knowledge in improving human behaviour at work and organizational development

UNITS	CONTENTS	L	T	P	Total Hours
1 (15 Marks)	• **Introduction to Organizational Behaviour (OB):** Definition, • Key Elements of OB, • Nature and Scope, • Significance of OB, • Contributing Disciplines	9	1	0	10
2 (15 Marks)	**Evolution of OB** • Goals of OB, • Models of OB • Challenges and Opportunities for OB.	9	1	0	10

2 (15 Marks)	**Organizational Change and Development** Forces for Change, • Managing Planned Change, • Resistance to Change, • Overcoming Resistance to Change, • Approaches to Managing Organizational Change.	10	2	0	12
3 (15 Marks)	**Approaches to understand the model of Organizational Change and development** • Lewin's Three-Step Model , • Kotter's Eight-Step Plan, • Action Research and Organizational Development, Contemporary Issues in Organizational Change	11	2	0	13
	Total	39	6	0	45

Where, L: Lectures T: Tutorials P: Practicals

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual knowledge						
Conceptual knowledge		CO1				
Procedural knowledge				CO2,CO3		
Metacognitive knowledge						

Mapping of Course Outcomes to Program Outcomes

CO/ PO	PO 1	P O2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	S	S	S	M	M	S	S	M	S	S	M	M	S	S
CO2	S	S	S	S	S	S	S	S	S	M	S	S	S	M	S	S
CO3	S	S	S	S	S	M	S	S	S	M	S	M	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination - 20Marks -
Group Discussion 07 Marks
Seminar presentation on any of the relevant topic 10 Marks
Viva-Voce 3 Marks

Essential Readings:

- Amitai Etzioni, Modern organizations Prentice Hall of India Private Limited, New Delhi,1964.
- Fred Luthaus, Organizational Behaviour, McGraw Hill, New York, 1995.
- J.W Newstrom and Keith Davis, Organizational Behaviour: Human Behaviour at work, TataMcGraw Hill Publishing Company Limited, New Delhi, 1995.
- K. Aswathappa, Organizational Behaviour, Himalaya Publishing House, Bombay, 1996. Khanka S.S, Organizational Behaviour, S. Chand & Company Ltd, New Delhi, 2007 Robbins Stephen P, Essentials of Organizational Behaviour, Prentice Hall,1994
- Robbins Stephens P, Timothy A. Judge and Seema Sanghi, Organizational Behaviour,Pearson Prentice Hall, Delhi, 2008.

Exercises and Practices at the classroom

- The students may be taken to the nearby industrial units to observe the organizationalstructure and behaviour.
- The teachers can organize role play of organizational setting among the students in theclassroom.
- The teachers can engage the students in preparing proposals to do action research in organizational set up on contemporary issues in the classroom.

Case Studies for Students

- Case-1- Maharashtra Association of resident Doctors (MARD) source: V.P, Michael Organisational Behaviour and Managevial Effectiveness, S. Chand and company Limited, New Delhi, 1989.
- Case-2 GE's work-out, Source: Based on D. Ulrich, S.Kerr, and R. Ashkenas, the GE work-out (New York: Mc Graw-Hill, 2002); and A. Kleiner, "GE's next workout", strategy + business, winter 2004, pp 1-5

Title of the Course	**:**	**Sociology of India II**
Course Code	**:**	**SOCC5**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Corse Outcome:

CO1:

Critically analyze the multiple socio -political forces and ideologies which shape the terrain of the nation.

ILO:

- Examine the historical trajectories of India
- Analyze the facets of Pluralism and Unity in India

CO2:

Evaluate the history of the country and the plurality of culture, diversities of caste, tribe, region, religion and ethnicity of the people of India.

ILO:

- Examine the Assimilative, Liberal, Cultural and Nationalist Imagination of India.
- Compare Gandhi and Ambedkar's perspectives of India
- Critique of the colonial description of Indian society

CO3:

Analyze different social movements in contemporary India and focus on specific political or social issues relevant to these movements.

ILO:

- Understand nature and concepts of various contemporary social movements
- Identify the nature of Peasant Movements before and after Independence
- Understand the concept of ethnicity and identity
- Analyse the identity politics behind Bodo and Karbi movement
- Describe women's movement as an important variant of social movement
- State and describe the basic aspects of women's organisations, issues and their participation in the movement
- Describe the changing facets of women's movement in the post-Independence period

CO4:

Analyze the evolution and contemporary challenges faced by civilization, state and society due to several societal forces such as modernization, globalization and development.

ILO:

- Understand the nature of communalism and its interaction with religion and politics in India
- Identify and recognize the nature of secularism in India
- Analyze how Indian politics has experienced secularism and the contradictions and challenges faced by the country while promoting secular outlook
- Recognize the various types of nationalism
- Identify the difference between nation and nationalism
- Understand the concept of nationalism and sub nationalism and the related issues in India
- Analyze nationalism and the sub-nationalism of regionalism and caste in Indian politics

	Contents		L	T	P	Total
UNIT 1 (15 Marks)	**1. Ideas of India**		13	2	0	15
	1.1	• Gandhi : Swaraj, Ambedkar: Annihilationof Caste				
	1.2	• Indological: G.S.Ghurey , Louis Dumont Ethnographic Approaches: M.N. Sriniwas, S.C. Dube				
Unit 2 (15 Marks)	**2.Resistance, Mobilization, Change**		13	2	0	15
	2.1	• Dalit Politics: Dalit Identity, Dalit Politics • : Caste System and Economics, Inequality				
	2.2	• Mobility and Change: Sanskritization and Westernization				
	2.3	• Middle Class Phenomenon: The Historyof Assamese Middle Class				
UNIT 3 (15 Marks)	**3. Movements in Contemporary India**					
	3.1	• Peasant Movements: Peasant Movements before • and after Independence	13	2	0	15
	3.2	• Ethnic Movements: Identity Politics –Bodo, Karbi				
	3.3	• Women‘s Movement: Women andPatriarchy				
UNIT 4 (15 Marks)	**4.Challenges to Civilization, State and Society**		13	2	0	15
	4.1	• Communalism: Religion and Politics inIndia				
	4.2	• Secularism: Secular Experiences in India				
	4.3	• Nationalism: Nation , Nationalism and sub • nationalism				
		Total	**52**	**8**	**0**	**60**

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcome with Bloom's Taxonomy

Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge					CO2	
Conceptual Knowledge				CO1 CO3 CO4	CO2	
Procedural Knowledge		CO1		CO1	CO2	
Metacognitive Knowledge						

Mapping Of Course Outcome To Program Outcome

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	S	S	S	S	S	S	S	S	S	M	M	M	M	M	S	M
CO2	S	S	S	S	S	S	S	S	S	M	S	S	S	M	S	M
CO3	S	S	S	S	S	S	S	S	S	S	M	S	S	M	S	M
CO4	S	S	S	S	S	S	S	S	S	S	M	S	S	M	S	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

Gandhi and Ambedkar

- M. K. Gandhi : Hind Swaraj, Navajibon Publishing House , Ahmedabad 380014, India
- Ambedkar, B. R., 1971 [1936], Annihilation of Caste, Jullunder: Bheem Patrika

Indological and Ethnographic Approaches

- Uberoi, P. et al., 2007, _Introduction: The Professionalization of Indian Anthropology and Sociology: Peoples, Places and Institutions‘ in P. Uberoi et al (eds.) Anthropology in the East: Founders of Indian Sociology and Anthropology, New Delhi: Permanent Black, Pp. 1-63
- Dumont, L. and D. Pocock, 1957, _For a Sociology of India‘,
- Contributions to Indian Sociology, 1, Pp.7-22

Dalit Politics

- Shah, G., 2001, *Dalit Identity and Politics*, New Delhi: SagePublications, Pp.17-43
- *Mobility and Change*
- Srinivas, M.N., 1956, _A Note on Sanskritization and Westernization‘,
- *The Far Eastern Quarterly*, 15(4), Pp. 481-496

Middle Class Phenomenon

- Deshpande, S., 2003, *Contemporary India: A Sociological View*, New Delhi:Penguin Books, Pp.125-150
- Axomiya Modya Brita Sreneer Itihaxh- Dr. Profulla Mahanta
- Karna, M. N.; 1999; Language, Region and National Identity in *Sociological Bulletin*; Vol48; No 1 & 2; pp 75-96

Women’s Movement

- Menon, N., (ed.) 1999, *Gender and Politics in India*, Delhi: OxfordUniversity Press, pp.342-369.

Peasant Movements

- Pouchepadass, J., 1980, _Peasant Classes in Twentieth Century Agrarian

Movements in India', in E. Hobsbawm (ed.) *Peasants in History*, Delhi: Oxford UniversityPress, Pp.136-155

Ethnic Movements

- Baruah, S., 2010, _The Assam Movement' in T.K. Oommen (ed.) *Social Movements I: Issues of Identity*. Delhi: Oxford University Press, Pp.191-208

Communalism

- Dumont, L., 1997, *Religion, Politics and History in India*, Paris: Mouton, Pp.89-110

Secularism

- Kumar, R., 1986, _The Varieties of Secular Experience', in *Essays in the Social History of Modern India*, Calcutta: Oxford University Press, Pp.31-46
- Madan, T.N., 1997, *Modern Myths, Locked Minds,* Delhi: Oxford University Press, Pp.233-265

Nationalism

- Oommen, T. K., 1997, *Citizenship and National identity: From Colonialism to Globalism*. New Delhi: Sage Publications, pp.143-172.
- Desai , A. R. (1979): Social Background of Indian Nationalism

Additional Instruction:

The students are required to explore the contemporary sources on social institutions. With the aid of visual, oral and other kinds of narratives/representations, students are advised and guided by teachers, and expected to arrange discussion sessions, work on assignments, undertake projects and fieldwork, and make presentations week-wise from the onset to the end of the semester.

Additional Reading*:*

- Ray, N. R., 1973, *Nationalism in India: A Historical Analysis of its Stresses and Strains*, Aligarh: Aligarh Muslim University Press

Title of the Course	**:**	**Sociological Thinkers II**
Course Code	**:**	**SOCC6**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOMES:

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

CO1 :

Evaluate the ideas of Talcott Parsons and Claude Levi Strauss.

ILO:

- Explain Radcliffe-Brown's understands of social structure.
- Describe Parsons' view of social system
- Outline Parson's AGIL scheme and Pattern Variables
- Interpret Parson's theory of action
- Analyze Levi-Strauss's Structuralism

CO2 :

Evaluate the ideas of G. H. Mead, Peter L. Berger and Thomas Luckmann.

ILO:

- Describe Symbolic Interactionist Perspective
- Distinguish between the "I" and the "Me" component of self
- Explain how the individual mind and self-arises out of the social process of interaction.
- Explain the theoretical underpinnings of social construction of reality

CO3 :

Evaluate the ideas of Max Horkheimer and T.W. Adorno.

ILO:

- Describe Frankfurt School of Critical Theory
- Explain Adorno and Horkheimer's ideas on culture industry
- Analyze Adorno and Horkheimer work 'Dialectics of Enlightenment'

CO4 :

Evaluate the ideas of Pierre Bourdieu.

ILO:

- Explain the concepts of Field and Habitus and its sociological significance
- Explain how Pierre Bourdieu theorizes the new practice of Sociology
- Identify different forms of Capital
- Analyze the interrelation between Bourdieu's concept of Capital, social status and power.

	Contents	L	T	P	Total
UNIT 1 (15 Marks)	**1. Talcott Parsons & Claude Levi-Strauss**	13	2	0	15
	Systems & Structures • Social System and Social Structure • Structural Anthropology				

UNIT 2 (15 Marks)	**2. G. H. Mead, Peter L. Berger and Thomas Luckmann**	13	2	0	15
	• G. H. Mead: Mind, Self and Society				
	• Social Construction of Reality				
UNIT 3 (15 Marks)	**3. Max Horkheimer, T.W. Adorno**	13	2	0	15
	• Dialectic of Enlightenment				
UNIT 4 (15 Marks)	**4.Pierre Bourdieu**	13	2	0	15
	• Theory of Practice				
	Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge Dimension/ Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual					CO1 CO2 CO3 CO4	
Procedural						
Metacognitive						

Mapping of Course Outcomes to Program Outcomes

CO/ PO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO 1	S	S	M	S	M	S	S	M	M	M	M	M	S	M	M	S
CO 2	S	S	M	S	M	S	S	M	M	M	M	M	S	M	M	S
CO 3	S	S	M	S	M	S	S	M	M	M	M	M	S	M	M	S
CO 4	S	S	M	S	M	S	S	M	M	M	M	M	S	M	M	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READINGS:

Talcott Parsons

- Parsons, T. and E. Shils (eds). 1951. *Towards a General Theory of Action*. New York: Harperand Row Publishers, pp. 3-29

Levi-Strauss

- Levi Stauss, C. 1993. ―Structure and Dialectics‖, in *Structural Anthropology Volume I*. Harmondsworth: Penguin, pp. 232-242

G. H. Mead

- Mead, G.H. 1934 (Fourteenth Impression 1967) Mind Self and Society. Chicago:University of Chicago Press. Part III, pp 135-226
- Goffman, E. 1956. *The Presentation of Self in Everyday Life*. Edinburgh: University of Edinburgh (Monograph No. 2), pp. 1-9, 132-151, 152-162

Peter L. Berger and Thomas Luckmann

- Berger, P. L. and T. Luckmann. 1991. *The Social Construction of Reality*. London: Penguin Books, pp. 31-62

Max Horkheimar, T.W. Adorno

- Horkheimar**.** M and Adorno. T.W. *The Dialectic of Enlightenment*. 2002. Stanford University Press. Stanford: California. pp 1-34. Chapter 1, The Concept of Enlightenment

Pierre Bourdieu

- Bourdieu, P. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press,pp. 72-95

ADDITIONAL READING:

- Ritzer, G. 1996. *Sociological Theory*. New York: McGraw Hill Companies.
- Saikia ,J.P. Adunik Samajtattik Bishleson (in Assamese)2012, Bidya Bhaban Jorhat Assam.

Title of the Course	**:**	**Sociological Research Methods I**
Course Code	**:**	**SOCC7**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcome:

CO1:
Students will be able to analyse the logic of social research
ILO: The students will be

- Able to describe social research
- Able to draw the relationship between research science and sociology.
- Able to illustrate scientific method.
- Able to distinguish between positivists and constructionist view on science.
- Able to analyse the trend of sociological research.

CO2:
Students will be able to debate on the question of objectivity in social research.
ILO: The students will be

- Able to explain objectivity and its role in social research.
- Able to distinguish between 'objectivity' explained by Emile Durkheim and Max Weber.

CO3:
Students will be able to assess 'reflexivity' as a critique to conventional sociology.
ILO: The students will be

- Able to illustrate methodological approach of conventional sociology.
- Able to analyse how 'Reflexivity' critiques positivism.

CO4:
The students will be able to examine different methodological perspective in social research .
ILO: The students will be

- Able to define methodological perspectives.
- Able to analyse 'comparative method' in the works of Emile Durkheim, Max Weber and Radcliffe Brown.
- Able to analyse feminist method
- Able to formulate design for research from feminist perspective.

CO 5:
The students will be able to Illustrate the importance of theory in social research.
ILO: The students will be

- Able to draw the relationship between theory and research.
- Able to distinguish between deduction and induction logic of social inquiry.

CO 6:
Able to distinguish quantitative and qualitative research.
ILO: The students will be

- Able to explain quantitative research.
- Able to describe qualitative research.

- Able to illustrate the types of quantitative and qualitative research.

	Contents		L	T	P	Total
UNIT 1 (15 Marks)	**1. The Logic of Social Research**		18	2	0	20
	1.1	What is Sociological Research? • Research , Science and Sociology. • Scientific Method : Positivist and Constructionist Interpretation of Science • Trend of Sociological Research ,Sociological Imagination				
	1.2	Objectivity in the Social Sciences • Objectivity as explained by EmileDurkheim • Objectivity as explained by MaxWeber				
	1.3	Reflexivity • The coming Crisis in Western Sociology – Methodological Approach • A Critique to Conventional Sociology : Reflexivity (Harold Garfinkle)				
UNIT 2 (15 Marks)	**2. Methodological Perspectives**		18	2	0	20
	2.1	Comparative Method • Comparative Method in the works of • Emile Durkheim, Max Weber and Redcliff Brown				
	2.2	• Feminist Method: Approach and Design				
UNIT 3 (15 Marks)	**3.Modes of Enquiry**		8	2	0	10
		• Theory and Research				
		• Inductive and Deductive Logic				
Unit 4. (15 Marks)	**4. Quantitative and Qualitative Research**		8	2	0	10
		• Characteristics, Purpose and Types				
		Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge Dimension/Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual						
Procedural			CO5	CO1,CO4, CO6	CO2, CO3	
Meta-cognitive						

Mapping of Course Outcome to Programme Outcome:

CO/ PO	P O1	P O2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	S	M	S	M	M	S	M	S	M	S	M	M	M	M	S	M
CO2	S	S	M	M	S	S	S	M	M	M	S	S	M	M	S	S
CO3	M	M	M	S	M	S	M	S	M	M	M	M	M	M	S	M
CO4	S	S	M	S	M	S	M	S	M	M	M	S	M	M	S	M
CO5	M	S	S	S	M	M	M	S	S	M	M	M	S	S	M	M
CO6	S	M	M	M	M	M	M	M	S	S	M	M	S	S	M	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

The Logic of Social Research

- Mills, C. W. 1959, *The Sociological Imagination*, London: OUP Chapter 1 Pp. 3-24 Gluckman, M. 1978, 'Introduction', in A. L. Epstein (ed.), *The Craft of Social*
- *Anthropology,* Delhi: Hindustan Publishing Corporation, Pp. xv-xxiv

Objectivity in the Social Sciences

- Durkheim, E. 1958, *The Rules of Sociological Method*, New York: The Free Press, Chapter 1, 2 & 6 Pp. 1-46, 125-140
- 37
- Weber, Max. 1949, *The Methodology of the Social Sciences,* New York: The Free Press, Foreward and Chapter 2 Pp. 49-112

Reflexivity

- Gouldner, Alvin. 1970, *The Coming Crisis of Western Sociology*, New York: Basic Books,Chapter 13 Pp. 481-511

Methodological Perspectives

Comparative Method

- Radcliffe ,Brown, A.R. 1958, *Methods in Social Anthropology,* Delhi: AsiaPublishing Corporation, Chapter 5 Pp. 91108
- Beiteille, A. 2002, *Sociology: Essays on Approach and Method,* New Delhi: OUP, Chapter 4 Pp. 72-94

Feminist Method

- Harding, Sandra 1987, ―Introduction: Is there a Feminist Method?‖ in Sandra Harding (ed.) *Feminism & Methodology: Social Science Issues,* Bloomington: Indiana University Press, Pp. 1-14

Modes of Enquiry

Theory and Research

- Merton, R.K. 1972, *Social Theory & Social Structure,* Delhi: Arvind Publishing

House,Chapters 4 & 5 Pp. 139-171

Analyzing Data: Quantitative and Qualitative

- Bryman, Alan. 2004, *Quantity and Quality in Social Research,*New York:Routledge, Chapter 2 & 3 Pp. 11-70

Title of the Course	**:**	**Social Stratification**
Course Code	**:**	**SOCC8**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOMES :

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

CO 1:

Interpret the idea of social inequality from sociological perspective

ILO:

- Define social stratification from sociological understanding
- Distinguish between the concepts of inequality, difference, hierarchy and equality
- Describe closed and open patterns of social stratification and their implications on the social order

CO2:

Apply sociological perspectives to understand social inequality

ILO:

- Reproduce the ideas on social stratification by pioneer sociologist
- Distinguish between the ideas of Karl Marx and Max Weber on class
- Interpret social stratification from the functionalist perspective

CO 3:

Appraise the sources and causes of different types of social inequality

ILO:

- Identify caste, race and ethnicity as forms of social stratification
- Draw the relationship between caste, race and ethnicity as intersectional determinants of social inequality
- Extrapolate gender as a basis of social stratification

CO 4:

Appraise the social factors of social mobility and its challenges

ILO:

- Define social mobility and its types
- Explain the function of social mobility in societies
- Describe class and occupational categories as socially reproduced one.

			L	**T**	**P**	**Total**
Unit 1 (15 Marks)	**1.Introducing Stratification**		13	2	0	15
	1.1	• Definition of Social stratification				
	1.2	• Idea of Inequality, Equality, Difference • and hierarchy				
	1.3	• Patterns of Social Stratification- Closedand Open				
Unit 2 (15 Marks)	**2.Theories of Stratification**		13	2	0	15
	2.1	• Marx, Weber and Class				
	2.2	• Functionalism				

Unit 3 (15 Marks)	**3.Identities and Inequalities**		13	2	0	15
	3.1	• Caste, Race and Ethnicity				
	3.2	• Feminism and Gendered Stratification				
Unit 4 (15 Marks)	**4.Mobility and Reproduction**		13	2	0	15
	4.1	• Definition and types of social mobility				
	4.2	• Social Reproduction - class and occupational categories				
		Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive map of course outcomes with blooms taxonomy

Knowledge dimension/ process dimension	Remember	Understand	Apply	Analyse	Evaluate	create
Factual						
Conceptual		CO1	CO1 CO2		CO4	
Procedural				CO3		
Metacognitive						

Mapping of course outcomes to programme outcomes

CO/ OP	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO 1	S	S	M	S	S	S	S	M	S	M	S	S	S	S	S	S
CO 2	S	M	M	S	S	S	M	M	S	M	S	S	S	M	S	S
CO 3	S	S	S	S	S	S	S	S	S	S	S	S	S	M	S	S
CO 4	S	S	M	S	S	S	M	M	M	S	S	S	S	M	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

Introducing Stratification

- Worsley, Peter. *Introducing Sociology*.2nd ed. Harmondsworth: Penguin Books,
- 1970. Chapter 8, Social Stratification: Class, Status and Power, pp. 395 – 408
- Beteille Andre *Inequality among Men.* London: Blackwell, 1977. Chapter 1. The Two

Sources ofInequality. Pp. 1-22

- Tawney, R. H. *Equality*. London: Unwin Books, 1964. Chapter 1. The Religion of Inequality, Pp.33-56

Theories of StratificationMarx, Weber and Class

McLellan, David. *The Thought of Karl Marx*. London: Papermac, 1995. Part 2. Chapter 6. Class, pp. 182-194

- Weber, Max, Hans Heinrich Gerth, and C. Wright Mills. *From Max Weber*. New York: OxfordUniversity Press, 1946. Chapter VII, Class, Status, Party. Pp. 180– 195
- Bendix Reinhard _Inequality and Social Structure: Comparison of Marx and Weber' *American Sociological Review*, Vol. 39, No. 2 (Apr., 1974), pp. 149-161
- Bottomore, T. B. *Classes in Modern Society*. New York: Pantheon Books, 1966. Chapters. 2 & 3The Nature of Social Class & Classes in Industrial Societies. 9-75

Functionalism

- Davis, Kingsley, and Wilbert E. Moore. 'Some Principles of Stratification'. *American Sociological Review* 10.2 (1945): pp. 242-249
- Tumin, Melvin M. 'Some Principles of Stratification: A Critical Analysis'. *American Sociological Review* 18.4 (1953): 387-394
- Davis Kingsley and Wilbert E Moore _Some Principles of Stratification : Critical Analysis: Reply'. *American Sociological Review* Vol. 18, No. 4 (Aug., 1953),pp-394-397
- Wrong Dennis H. The Functional Theory of Stratification: Some Neglected Consideratio s' American Sociological Review, Vol. 24, No. 6 (Dec., 1959), pp. 772-782
- Stinchcombe Arthur L. Some Empirical Consequences of the Davis-Moore Theory of Stratification". *American Sociological Review* 28.5 (1963), pp. 805-808

Identities and Inequalities

Caste, Race and Ethnicity

- BaiLey F G _Closed Socia Stratification in India', *European Journal ofSociology* Vol. 4, No. 1 (1963) pp. 107-124
- Jain, Ravindra K. _Hierarchy, Hegemony and Dominance: Politics of Ethnicity in UttarPradesh, 1995' *Economic and Political Weekly*, Vol. 31, No. 4 (Jan. 27, 1996), pp. 215-223
- Omi, Michael, and Howard Winant. *Racial Formation in the United States*. New York:Routledge & Kegan Paul, 1986. Chapters 1 & 4 , pp. 14-24 and 57-69
- Pitt-Rivers Julia _Race Color and Class in Central America and thedes'*Daedalus*, Vol. 96, No. 2, Color and Race (Spring, 1967), pp. 542-559

Feminism and Gendered Stratification

- Mitchell, Juliet. *Woman's Estate*. Harmondsworth: Penguin, 1971. Chapter 5, Position ofWomen 1. Pp. 99-122
- Acker, Joan. 'Women and Social Stratification: A Case of Intellectual Sexism'.
- *American Journal of Sociology* 78.4, 1973. Pp. 936-944
- Collin Patricia Hill. _Towards a New Vision : Race, Claa and Gender as Categories of Analysis and Connection' *Race, Sex and Class,* Vol.1,No.1 (Fall 1993),Pp.25-45.

Mobility and Reproduction

- Bottero, Wendy. *Stratification*. London: Routledge, 2005. Chapters 12 & 14 pp.205-223 & 246-258
- Bourdieu Pierre _Cu tura Reproductio a d Socia Reproductio ‘ *In The Structure of Schooling:*
- *Readings in the Sociology of Education*. Richard Arum and Irenee Beattie, Editors. NY: McGrawHill. 1973: 56-68.

ADDITIONAL READING *:*

1. Gupta, Dipankar. 1991.*Social Stratification.* New Delhi. Oxford University Press.

2. Pakem, B. 1990. *Nationality, ethnicity and Cultural Identity.* New Delhi. Omsons Publications . pp. 1-21

3. Ghurye, G.S. 1932. *Caste and Race in India.* London. Kegan Paul.

4. Dumont, Louis . 1972. *Homo Hierarchicus: An Essay on the Caste System.* Chicago. University of Chicago Press.

5. Mohanty, Chandra Talpade.2003. ―Under Western Eyes: Feminist Scholarship and Colonial discourses‖ in *Feminism Without Borders: Decolonizing Theory, Practicing Solidarity"* by Chandra Talpade Mohanty. 2003. Durham. Duke University Press.

6. Sorokin, Pitrim.1927. *Social Mobility*. New York. Harper and Brothers.

Title of the Course	**:**	**Economy and Society**
Course Code	**:**	**MINSOC4**
Nature of the Course	**:**	**MINOR**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:

CO1:

Understand the complex ways in which economic activity is embedded in social relations from a sociological view point.

ILO:

- Define Economic Sociology
- Understand the relationship between Economy and Society
- Conceptualise economic institutions, firms and markets as social systems
- Understand and identify the sociological aspects of economic process
- Identify the features of economic institutions in Sociology

CO2: Describe and identify the two major school of thoughts in Economic Sociology

ILO:

- Explain the meaning of two different schools of thought of Formalism and Substantivism
- Focus on the core ideas of formal modern economy and its proponents
- Discuss the core ideas of the substantivist scholars, such as Karl Polanyi
- Provide a critique to the theory of "gift exchange" given by Marcel Mauss

CO3:

Explain how different Modes of Production are related to social life and shapes our identity throughout the history of mankind.

ILO:

- Define mode of production
- Understand the meaning of economic mode of production
- Understand the meaning of domestic mode of production in Sociology
- Understand the meaning of peasant mode of production
- Explain the concept of mode of economy in peasant societies
- Explain the meaning and nature of capitalist mode of production
- Understand the meaning of the capitalist system in Sociology
- Discuss what role is played by capitalist production in society as envisaged by Karl Marx
- Discuss the meaning of socialist model of production in sociology
- Understand the meaning of socialized production
- Conceptualize the meaning of Socialist Economy in sociology

CO4: Analyse the contemporary issues related to the field of changing economic environment in Indian Economy

ILO

- Define Globalisation
- Understand the meaning of Global Homogenisation and its paradigm
- Define cross culture consumption
- Understand who is a cross-cultural consumer
- Analyse the cultural implications of the globalization of a consumer society
- Understand the relationship between globalization and transnationalism.
- Define 'development' and understand 'development theory' to outline how the approaches to development have changed over time.
- Discuss and analyse differing explanations of inequalities in development, both spatially and socially, and the reasoning behind different development policies.

UNITS	CONTENTS	L	T	P	Total Hours
1 (15 Marks)	**Sociological Aspects of EconomicPhenomenon (5 Weeks)** • Features of economic institutions in Sociology • Understand the relationship between Economy and Society • Conceptualise economic institutions, firms and markets as social systems • Sociological Aspect of Economic Processes	13	2	0	15
2 (15Marks)	**Approaches in economic sociology** • Formalism and substantivism • Ideas of Karl Polanyi	13	2	0	15
3 (15Marks)	**Modes of Production (6 weeks)** • Domestic Mode of Production • Peasants • Capitalism • Socialism	13	2	0	15
4 (15 Marks)	**Contemporary Issues (3 Weeks)** • Globalisation • Development	13	2	0	15
	Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1					
Conceptual Knowledge	CO2	CO2, CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Procedural Knowledge		CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Meta cognitive Knowledge						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO 1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
CO2	M	M	M	M	S	S	**S**	M	M	M	M	M	M	M	M	M
CO3	M	M	M	M	M	M	S	S	M	S	S	M	S	M	S	S
CO4	M	M	M	S	M	S	S	S	S	S	M	M	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT	**:**	**(40Marks)**
Two Internal Examination -	:	20Marks -
Group Discussion	:	07 Marks
Seminar presentation on any of the relevant topic:	:	10 Marks
Viva-Voce	:	3 Marks

Suggested Reading:

1. Sociological Aspects of Economic Phenomenon (5 Weeks)

1.1 Approaches: Formalism and Substantivism

- Wilk, R. and L. Cliggett. 2007. *'Economies and Cultures: Foundations of Economic Anthropology*. Chapter 1 pp. 1-14

- Polanyi, K. 1958. " Economy as an Instituted Process" in M. Grammotter and R. Swedberg (eds.) 1992 *The Sociology of EconomicLife* Boulder Colarado, West View Press. pp. 27-50

1.2 Sociological Aspect of Economic Processes

2. Smelser, Neil 2013 *The Sociology of Economic Life* Quid Pro Books

3. (2nd Edition). New Orleans, Louisiana University Press

4. Modes of Production (6 weeks)

4.1 Domestic Mode of Production

- Sahlins, M-1974 *Stone Age Economics*. London, Tavistock,Chapter 2-3

4.2 Peasants

- Wolf, Eric 1966 *Peasants.* New Jersey Prentice Hall, Chapter-1

4.3 Capitalism

- Swedberg, R 2003 *The Economic Sociology of Capitalism: AnIntroduction and An Agenda,* Cornell University

4.4 Socialism

- Verdery, Kathrine 1996 „*What was Socialism, And what Comes Next?"* Princeton N.J. Princeton University. Press. Chapter-1, pp. 19-38

5. Contemporary Issues (3 Weeks)

5.1 Globalization

- Ritzer 2004 *The McDonaldisation of Society*. Pine Forge pressChapter-Introduction, 1,2.

- Howes, David (ed) 1996 *Cross Cultural Consumption: globalMarkets and Local Realities.* London: Routledge, pp. 1-16

5.2 Development

- Hulme, David and mark M. Turner *Sociology and Development: Theories, Policies and Practices,* Prentice Hall Chapter-3 pp. 33-67

Title of the Course	**:**	**Sociology of Kinship**
Course Code	**:**	**SOCC9**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOMES

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

CO1 :

Apply the understanding of kinship terminologies, kinship usage and behaviour, in studying the kinship organization of different societies.

ILO:

- Define kinship from sociological understanding
- List consanguineal and affinal Kin
- State the difference between real and fictive kinship
- Explain the basic concepts such as clan, lineage, descent, incest taboo
- Describe the regional variations of kinship system

CO2 :

Interpret the approaches associated with the study of kinship.

ILO:

- Explain descent approach to the study of kinship system
- Explain alliance approach to the study of kinship system
- Explain cultural approach to the study of kinship system
- Outline David Schneider's contributions to the understanding of kinship

CO3 :

Analyze the perspectives on family, household and marriage.

ILO:

- Describe family and its types
- Describe marriage and its types
- Distinguish between family and household
- Identify the changes in the institution of family and marriage in contemporary times

CO4 :

Analyze the changing nature of kinship systems.

ILO:

- Explain Janet Carsten's concept of relatedness as a new direction in kinship studies
- Discuss New Reproductive Technologies or NRT from the perspective of kinship studies
- Examine how NRT is transforming prior definitions of kinship
- Interpret the gender dimension in kinship
- Demonstrate how the meaning of family has changed historically and has significant implications on kinship studies

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1.Introduction:**		8	2	0	10
	1.1	**Key Terms**: Descent, Consanguinity, Filiation, Incest Taboo, Affinity, Family, Residence				
Unit 2 (15 Marks)	**2.**	***Approaches***:	18	2	0	20
	2.1	Descent				
	2.2	Alliance				
	2.3	Cultural				
Unit 3 (15 Marks)	**3. Family, Household and Marriage**		08	2	0	10
	3.1	Nature, Types and Changes				
Unit 4 (15 Marks)	**4.Re-casting Kinship**		18	2	0	20
	4.1	Relatedness- Concept and Type				
	4.2	Kinship and Gender				
	4.3	Re-imagining Families				
	4.4	New Reproductive Technologies				
		Total	52	8	0	60

Where : L: Lectures, T: Tutorials, P: Practical

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge Dimension/ Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual		CO2	CO1			
Procedural				CO3 CO4		
Metacognitive						

Mapping of Course Outcomes to Program Outcomes

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	S	M	S	S	S	S	M	M	M	S	S	M	M	S	S
CO2	M	S	M	M	S	S	M	M	M	M	M	M	M	M	M	S
CO3	M	S	M	S	S	S	M	M	M	M	M	M	M	M	M	S
CO4	S	S	M	S	S	S	M	M	M	M	S	M	S	M	M	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

Key terms and Approaches

- Radcliffe-Brown, A. R. and D. Forde (eds.), 1950, *African Systems of Kinship and Marriage*, London:Oxford University Press, Introduction, Pp.1-39
- Evans-Pritchard, E.E., 2004 (1940), _The Nuer of Southern Sudan‘, in R. Parkin and L. Stone (eds.),
- *Kinship and Family: An Anthropological Reader*, U.S.A.: Blackwell, Pp. 64-78
- Fortes, M., 1970, *Time and Social Structure and Other Essays*, University of London: The AthlonePress, Chapter 3, Pp. 67-95
- Leach, Edmund, 1962, _On Certain Unconsidered Aspects of Double Descent Systems‘,
- *Man*, Vol. 62, Pp. 130-134
- Lévi-Strauss, Claude, 1969, *The Elementary Structures of Kinship*, London: Eyre and Spottiswoode,Chapters 1 & 2, Pp. 3-25
- Dumont, L., 1968, _Marriage Alliance‘, in D. Shills (ed.), *International Encyclopedia of the SocialSciences*, U.S.A.: Macmillan and Free Press, Pp. 19-23
- Schneider, D., 2004, _What is Kinship All About?‘, in R. Parkin and L. Stone (eds.) *Kinship andFamily: An Anthropological Reader*, U.S.A.: Blackwell, Pp. 257-274
- Das, V., 1994, _Masks and Faces: An Essay on Punjabi Kinship‘, in Patricia Uberoi (ed.), *Family,Kinship and Marriage in India*, Delhi: Oxford University Press, Pp.198-222
- Shah, A.M., 1998, _Changes in the Indian Family: An Examination of Some Assumptions‘, in *TheFamily in India: Critical Essays*, New Delhi: Orient Longman, Pp.52-63
- Freeman, J. D., 1958, _The Family Systems of the Iban of Borneo‘, in
- J. Goody (ed.), *The Developmental Cycle in Domestic Groups*, Cambridge:
    - Cambridge University Press, Pp. 15-52 [Readings marked * are repeated in Section 2]

Family, Household and Marriage

- Shah, A.M., 1998, _Changes in the Indian Family: An Examination of Some Assumptions‘, in *TheFamily in India: Critical Essays*, New Delhi: Orient Longman, Pp.52-63
- Freeman, J. D., 1958, _The Family Systems of the Iban of Borneo‘, in J. Goody (ed.), *TheDevelopmental Cycle in Domestic Groups*, Cambridge: Cambridge University Press, Pp. 15-52
- Leach, E.R., 1961, _Polyandry, Inheritance and the Definition of Marriage with Particular Reference toSinhalese Customary Law‘, in E. R. Leach (ed.),
- *Rethinking Anthropology*, London: The Athlone Press, Pp. 105-113
- Gough, Kathleen E., 1959, _The Nayars and the Definition of Marriage‘, in
- *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 89: 23-34

- Uberoi, Patricia, 1995, _When is a Marriage not a Marriage? Sex, Sacrament and Contract in Hindu Marriage‘, *Contributions to Indian Sociology*, n.s. 29, 1&2: 319-45
- *Re-casting Kinship*

Relatedness

- Carsten, Janet, 1995, _The Substance of Kinship and the Heat of the Hearth: Feeding, Personhood,and Relatedness among Malays in Pulau Langkawi‘
- *American Ethnologist*, 22 (2): 223-24.1
- *Kinship and Gender*
- Gold, Ann Grodzins, 1994, _Sexuality, Fertility, and Erotic Imagination in Rajasthani Women‘s Songs _, in *Listen to the Heron's Words: Re-imagining Gender and Kinship in North India* by Gloria Goodwin Raheja and Ann Grodzins Gold, Delhi: OUP, Pp 30-72

Re-imagining Families

- Weston, Kath, 1991, *Families We Choose: Lesbians, Gays, Kinship*, New York: Columbia UniversityPress, Pp. 103-136
- *New Reproductive Technologies*
- Kahn, Susan Martha, 2004, _Eggs and Wombs: The Origins of Jewishness‘, in
- R. Parkin and L. Stone (eds.), *Kinship and Family: An Anthropological Reader*, U.S.A.:Blackwell, Pp. 362-77

ADDITIONAL READING :

1. Revathi, A.; V. Geetha. 2010. *The Truth About Me: A Hijra Life Story.* Bangalore. Penguin Global.

2. Agnes, Flavia. 1990. *My Story…. Our Story of Rebuilding broken lives.* Mumbai. Majlis

Title of the Course	**:**	**Political Sociology**
Course Code	**:**	**SOCC10**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME

After completion of this course, the students will be able to

CO1:

Understand some major theoretical debates and concepts in Political Sociology

ILO:

- Define political Sociology
- Explain Nature and Scope of political Sociology
- Discuss the emergence and development of political Sociology in the West

CO2:

Comprehend and identify various concepts of Political Sociology related to contemporary political issues.

ILO:

- Define Power and Authority
- Distinguish between state, governance and citizenship
- Explain the perspectives of Pareto, Bottomore and C. Wright Mills on Elites and Ruling Classes,

CO3:

Analyse Political Systems from historical roots to present day status.

ILO:

- Define different types of political systems
- Distinguish between different types of political systems in terms of similarities and dissimilarities.
- Explain the historical roots of these systems
- Critically discuss its current status and contemporary challenges.

CO4:

Understand the local power structure and can articulate among the complexities between global, national, and local events.

ILO:

- Define Local Structures of Power
- Identify the various forms of local power structures
- Explain the functions and contemporary changes in local power structures by relating it with Global governance.

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1. Contextualising the study of Political Sociology**		13	2	0	15
	1.1	• Nature , Scope and Development of political Sociology				
Unit 2 (15 Marks)	**2. Basic Concepts**		13	2	0	15
	2.1	Power and Authority • Max Weber and				

		• AnthonyGiddens				
	2.2	• State, Governance and Citizenship				
	2.3	• Elites and the Ruling Classes (Pareto, Bottomore and C.W. Mills				
Unit 3 (15 Marks)	**3. Political Systems :**		13	2	0	15
	3.1	• Segmentary				
	3.2	• Totalitarian				
	3.3	• Democratic				
Unit 4 (15 Marks)	**4. Everyday State, Local Structures of Power:**		13	2	0	15
	4.1	• Panchayati Raj				
	4.2	• Autonomous Council				
	4.3	• Development Council				
		Total	52	8	0	60

Where : L: Lectures, T: Tutorials, P: Practical

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1					
Conceptual Knowledge	CO1, CO2	CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Procedural Knowledge	CO3	CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Meta cognitive Knowledge						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	M	M	M	M	S	M	M	M	S	M	S	M	M	M
CO2	M	S	S	M	S	S	**S**	M	M	M	S	S	M	M	M	M
CO3	M	M	S	M	M	S	S	S	S	S	S	S	S	S	S	S
CO4	M	M	M	S	M	S	S	S	S	S	M	M	S	S	S	S

S=STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT **(40Marks)**

Two Internal Examination - 20Marks -
Group Discussion 07 Marks
Seminar presentation on any of the relevant topic 10 Marks
Viva-Voce 3 Marks

SUGGESTED READING:

1. **Contextualising the study of Politics**

- Eisenstadt, S. N. _1971, _General Introduction : The Scope and Development of Political Sociology' in *Political Sociology: A Reader* BasicBooks, New Your Publication, pp 3-24.
- Lewellen, Ted. 2003, _The Development of Political Anthropology'in *Political Anthropology: An Introduction (ThirdEdition),* Praeger, pp. 1- 14.

2. Basic Concepts

2.1 Power and Authority

- Weber, Max. 1978, *Economy and Society: An Outline of Interpretative Sociology*, Berkeley: University of California Press,pp. 53-54; 941-54; 212-30; 241-54.
- Lukes, Steven. 2005, Power: A Radical View, 2nd Ed., Hampshire :Palgrave, pp. 14-49.

2.2 State, Governance and Citizenship

- Mitchell, Timothy. _Society, Economy, and the State Effect‘, in A. Sharma and A. Gupta (Ed.), *The Anthropology of the State: AReader*, Oxford: Blackwell, 2006, pp. 169-85
- Burchell, Graham et al (Eds),1991, *The Foucault Effect: Studies in Governmentality*, The University of Chicago Press, Chapter 1, pp.1-51
- Marshall, T.H. 1950, *Citizenship and Social Class and Other Essays*,Cambridge University Press, pp. 10-27
- Tilly, Charles. 1999, _Where Do Rights Come From?‘ in Theda Skocpol (Ed) *Democracy, Revolution and History*, Cornell University Press,pp 55-72

2.3 Elites and the Ruling Classes

- Mills, C. Wright, 1956. *The Power Elite, New Edition*, OUP, pp. 269-297.
- Bottomore, T.B. 1993, *Elites and Society, 2nd Edition*, Routledge,pp. 15-34
- Finner ,S.E (selected and I introduced) translated by Derick Mirfin (1966) Vilfredo Pareto, Sociological Writings , London , Pall Mall Press Ltd. Pp 15 -80.

3. Political Systems : Segmentary, Totalitarian and Democratic

- Fortes, M. and E.E. Evans Pritchard (Eds), 1940. *African Political Systems.* London: Oxford University Press, Chapter 8.
- Tapper, Richard, 1990. _Anthropologists, Historians, and Tribespeople‘ in Philip Shukry and Joseph Kostiner (Ed) *Tribes* 15
- *and State Formation in the Middle East*, University of California Press, pp.48-71
- Schapiro, L. 1972. *Totalitarianism*, The Pall Mall Press, Chaps 2,3
- Macpherson, C. B. 1966. *The Real World of Democracy*, Oxford Clarendon Press, pp. 1-45
- Chomsky, N. 1999. *Profit over People: Neoliberlaism and Global Order.*
- Severn Stories Press, pp. 7-18, 43-64

4. Everyday State and Local Structures of Power: State and Politics in India

- Fuller, C.J. and V. Benei (Eds.), 2000. *The Everyday State and Society in Modern India.* Social Science Press, pp. 1-30
- Tarlo, Emma, 2003 *Unsettling Memories: Narratives of the*
- *Emergency in Delhi,* University of California Press, pp. 62-93
- Swartz, M.J (Ed), 1968. *Local Level Politics: Social and Cultural Perspectives,* University of London Press, pp. 281-94

Title of the Course	**:**	**Sociological Research Methods II**
Course Code	**:**	**SOCC12**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

COURSE OUTCOME

After completion of this course, the students will be able to

CO1:

Develop a foundational understanding of the key components and processes involved in social research.

ILO:

- Define and outline the steps involved in social research
- Describe the significance of research design in guiding the overall research process and ensuring the validity and reliability of findings.
- Understand fundamental concepts such as hypothesis and research questions, and their role in shaping research inquiries.
- Identify various field issues and contextual factors that influence the design and implementation of social research projects.
- Explain different sampling techniques and their applicability in social research settings.

CO2:

Develop proficiency in employing various data collection methods used in social research.

ILO:

- Interpret the rationale behind using survey methods, including focused group discussions, questionnaires, and interviews.
- Apply observation techniques in various social settings to gather relevant data
- Conduct interviews and focus group discussions to collect data effectively.
- Critically assess the ethical implications of data collection methods, including issues of privacy, confidentiality, and informed consent.
- Design surveys and questionnaires for research purposes

CO3:

Develop competency in analyzing and interpreting both quantitative and qualitative data

ILO:

- Outline the purpose and significance of qualitative and quantitative data analysis in social research
- Understand the principles and guidelines for selecting appropriate graphical representations based on the nature of the data and research objectives.
- State the underlying principles and approaches to content analysis and case study research
- Comprehend the concept and interpretation of measures of central tendency and

dispersion in describing the distribution and variability of data.

- Apply statistical methods to calculate measures of central tendency and dispersion for given datasets.
- Apply knowledge of content analysis techniques to analyze qualitative data from various sources, such as text, images, and videos.
- Use case study research designs to explore complex social phenomena and derive meaningful insights.
- Prepare effective report writing to organize and present both qualitative and quantitative research findings clearly and cohesively.

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1.Doing Social Research**		18	2	0	20
	1.1	The Process of Social Research (a) Steps of Social Research (b) Research Design				
	1.2	Concepts, Hypothesis, Research Questions				
	1.3	Field (Issues and Context)				
	1.4	Sampling				
Unit 2 (15 Marks)	**2.Methods of Data Collection**		8	2	0	10
	2.1	Survey Methods: Focused Group Discussion, Questionnaire and Interview				
	2.2	Observation: Participant and Non-Participant				
Unit 3 (15 Marks)	**3.Quantitative Data Analysis**		18	2	0	20
	3.1	**Statistical Methods:** Graphical and Diagrammatic Presentation of Data (Bar diagrams, Pie-diagram, Histogram, Frequency Polygon,Smoothed frequency curve and Ogives).				
	3.2	Measures of Central Tendency (Simple Arithmetic Mean, Median and Mode).				
	3.3	Measures of Dispersion (Standard Deviation, Variance and Covariance)				
	3.4	Report Writing				
Unit 4 (15 Marks)	**4.**	**Qualitative Data Analysis**	8	2	0	10
	4.1	Content Analysis				
	4.2	Case Study				
	4.3	Report Writing				
		Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1					
Conceptual Knowledge		CO1,CO2,CO3				
Procedural Knowledge			CO2,CO3			CO3
Metacognitive Knowledge						

Mapping of Course outcomes to Program Outcomes

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	PO15	PO16
CO1	S	S	M	S	S	S	M	M	M	M	M	M	M	M	S	M
CO2	M	S	M	S	S	S	M	M	M	M	M	M	M	M	S	M
CO3	M	S	M	S	S	S	M	M	M	M	M	M	M	M	S	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

Doing Social Research

- Bailey, K. (1994). The Research Process in *Methods of social research*. Simon andSchuster, 4th ed. The Free Press, New York NY 10020. Pp.3-19.

Concepts and Hypothesis

- Goode, W. E. and P. K. Hatt. 1952. *Methods in Social Research*. New York: McGraw Hill. Chapters 5 and 6. Pp. 41-73.
- *Field (Issues and Contexts)*
- Gupta, Akhil and James Ferguson. 1997. *Anthropological Locations.*
- Berkeley: University of California Press. Pp.1-46.
- Srinivas, M.N. et al 2002(reprint), *The Fieldworker and the Field: Problems and Challenges in Sociological Investigation*, New Delhi: OUP, Introduction Pp. 1-14.

Methods of Data Collection

- Bailey, K. (1994). Survey Sampling in *Methods of social research*. Simon and

Schuster,4th ed. The Free Press, New York NY 10020. Ch-5. Pp. 81-

- 104.
- Bailey, K. (1994). Questionnaire Construction and The Mailed Questionnaire in *Methods of social research*. Simon and Schuster, 4th ed. The Free Press, New York NY 10020. Chs-6 and 7. Pp. 105-172.
- Bailey, K. (1994). Interview Studies in *Methods of social research*. Simon and Schuster, 4th ed. The Free Press, New York NY 10020. Ch8. Pp.173-213.

Observation: Participant and non-Participant

- Bailey, K. (1994). Observation in *Methods of social research*. Simon and Schuster, 4th ed.The Free Press, New York NY10020. Ch 10. Pp.241-273.
- Whyte, W. F. 1955. *Street Corner Society*. Chicago: University of Chicago Press. Appendix.

Statistical Methods

Graphical and Diagrammatic presentation of data

- Gupta, S. P. (2007). Elementary Statistical Methods. Sultan Chand & Sons. Pp.101-108, 115-118, 131-137.

Measures of Central Tendency

- Gupta, S. P. (2007). Elementary Statistical Methods. Sultan Chand & Sons. Pp. 155-168, 173-180, 187-197.

Measures of Dispersion

- Gupta, S. P. (2007). Elementary Statistical Methods. Sultan Chand & Sons. Pp. 263-277.Note: Numericals to be taught for individual, discrete and continuous series for the topicsmentioned above. No specific method for calculating the same be specified.

Title of the Course	**:**	**Polity and Society in India**
Course Code	**:**	**MINSOC5**
Nature of the Course	**:**	**MINOR**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:

CO1:

Understand the study of Indian politics from a sociological Perspective.

ILO:

- Describe the relationship between Politics and Society
- Explain the role of state and governance
- Discuss how Politics in Independent India grow and encounter with numerous challenges
- Summarize how democracy in India grow through several democratic Processes and social Problems
- Explore the role of Caste and Class Structure in Indian Politics

CO2:

Interpret and identify the theories, categories and conceptual tools to understand politics in relation to society in general.

ILO

- Identify the Social Character of the Indian State
- Explain how evolution of state is related to Politics of Ideology in India,
- Interpret specific social and political phenomenon in the light of the different political ideologies in Politics in India.
- Understand the concept of Para-Political Systems

CO3:

Understand the concepts of different Political Identities and how these are related to Political Institutions and Democratic Process

ILO

- Define Nation and its characteristics
- Define Caste, Religion and Ethnicity and analyse how they are related to politics
- Understand how different political processes are related to several social factors that shapes the nature of Indian Democracy
- Explain how different Political Institutions are associated with the growth and development of Indian Democracy as a process.
- Understand the roots of Local government and its role in contemporary Indian politics
- Explain how Local level Politics is deep rooted in Social and Cultural Perspectives of Indian Society
- Understand the growth and development of party system in India

CO4:

Analyse why and how Protest and Resistance in Indian Politics bring massive mobilization in Indian Society

ILO

- Understand the concept of Political Mobilization
- Understand the relationship among political culture, political socialisation and political mobilization.
- Explain the causes and consequence of Grassroots Mobilizations in Indian Politics
- Understand what is the resistance in politics
- Comprehend What is a protest in politics
- Explain the role of resistance movement in India
- Discuss the Recent Change in Indian Politics due to resistance and protest

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1 On Studying Politics and Society in India**		13	2	0	15
	1.1	• Politics and Society • State and governance • Politics in Independent India				
Unit 2 (15 Marks)	**2. Politics in Independent India**		13	2	0	15
	2.1	• **Recent Change in Indian Politics**				
	2.2	• **Caste and Class Structure** and Its influence in Politics				
	2.3	• State and Politics of Ideology in India				
Unit 3 (15 Marks)	**3. Political Economy and Political Processes**		13	2	0	15
	3.1	• Political Machine				
	3.2	• Political Identities: Nation, Caste,Religion and Ethnicity				
	3.3	• Political Institutions and Democratic Process				
Unit 4 (15 Marks)	**4. Protest and Resistance in IndianPolitics**		13	2	0	15
	4.1	• Political Mobilization				
	4.2	• Resistance in politics				
	4.3	• Recent Change in Indian Politics				
		Total	52	8	0	60

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1					
Conceptual Knowledge	CO2	CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Procedural Knowledge		CO3,CO4	CO3,CO4	CO3,CO4	CO4	
Meta cognitive Knowledge						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
CO2	M	M	M	M	S	S	**S**	M	M	M	M	M	M	M	M	M
CO3	M	M	M	M	M	M	M	S	S	S	S	S	S	S	S	S
CO4	M	M	M	S	M	S	S	S	M	M	M	M	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

Suggested Reading:

On Studying Politics and Society in India (4 Weeks)

- Chatterjee, Partha, 1997. *State and Politics in India*. Delhi: Oxford University Press, Introduction: A Political History of Independent India. pp. 1-39
- Brass, Paul R, 1998. 'India: Democratic Progress and Problems' in Slig S.Harrison et al (ed.) *India and Pakistan: The First Fifty Years*. Woodrow Wilson Center Press, pp. 23-44
- Spencer, Jonathan, 2007. *Anthropology, Politics and the State: Democracy and Politics in South Asia*. Cambridge: Cambridge University Press, Chapter 2.Locating the Political. pp. 19-47
- Kaviraj, Sudipta. 1991. 'On State, Society and Discourse in India', in
- James Manor (ed.) *Rethinking Third World Politics,* London: Longman. pp.72-99

Themes in Politics and Society in India: (9 Weeks)

Political Economy

- Rudolph, Lloyd I, and Susanne Hoeber Rudolph, 1987. *In Pursuit Of Lakshmi*. Chicago: University of Chicago Press. Introduction, Chapter 1 & 7.pp. 1-59, 211-219
- Vanaik, A. 2000, 'The Social Character of the Indian State', in Z. Hasan(ed.), *Politics and the State in India,* New Delhi: Sage, pp.89-107

Political Machine

- Bailey, F.G. 1968, 'Para-Political Systems', in M. J. Schwartz (ed.), *Local level*

Politics: Social and Cultural Perspectives, London: University of LondonPress, pp.281-94

- Gould, H. A. 1971, 'Local government roots of contemporary Indianpolitics', *Economic and Political Weekly*, vol.6 (7), pp.457-64

1.1 Political Identities: Nation, Caste, Religion and Ethnicity

- Sathyamurthy, T.V. 1997, 'Indian Nationalism: State of the Debate', in *Economic and Political Weekly*, vol.32 (14), p.715-721
- Weiner, Myron. 2001, 'The Struggle for Equality: Caste in Indian Politics', in A. Kohli (ed.), *The Success of India's Democracy*, Cambridge:Cambridge University Press, pp.193-225
- Baruah, Sanjib. 'Politics of Subnationalism: Society versus State in Assam', From Partha Chatterjee (ed.) State and Politics in India, Delhi:OUP.pp. 496 – 520

1.2 Political Institutions and Democratic Processes

- Manor, James. 1988, 'Parties and the Party System', in A. Kohli (ed.), *India's Democracy*, Princeton: Princeton University Press, pp. 62-98
- Michelutti, Lucia. 2007, 'The Vernacularization of Democracy: PoliticalParticipation and Popular Politics in North India', *The Journal of the Royal Anthropological Institute*, vol.13 (3), pp. 639-656

2. Protest and Resistance in Indian Politics (1 Week)

- Shah, Ghanshyam. 'Grassroots Mobilizations in Indian Politics', in A. Kohli (ed.), *India's Democracy*, Princeton: Princeton University Press, pp. 262-304

Title of the Course	**:**	**Environmental Sociology**
Course Code	**:**	**SOCC13**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

CO1:
Critically examine the core debates of environmental sociology.
ILO:
- Explain the Realist-Constructionist Debate
- Examine the environmental history of India.

CO2.
Analyze the various approaches to study environment in relation to society.
ILO:
- Explain Treadmill of Production
- Examine Risk theory
- Distinguish Ecofeminism and Feminist Environmentalism
- Classify Ecological Modernization and Political Ecology

CO3:
Evaluate the several environmental movements in India
ILO:
- Critique Chipko movement
- Evaluate Narmada Bachao Andolan
- Assess the Anti-Big Dam Movements in North East India

CO4:
Evaluate various environmental conventions at global level.
ILO:
- Examine the significance of Stockholm Convention 1972
- Outline the concept of Sustainable development
- Outline the main points of Rio Summit 1992
- Evaluate Rio declaration on Environment and development.

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1.Envisioning Environmental Sociology**		8	2	0	10
	1.1	Meaning, Definition, Nature and Scope				
	1.2	Realist-Constructionist Debate				
Unit 2 (15 Marks)	**2.Environmental Approaches**		18	2	0	20
	2.1	Treadmill of Production				
	2.2	Ecological Modernization				
	2.3	Environmental Risk				
	2.4	Ecofeminism and Feminist Environmentalism				
	2.5	Political Ecology				
Unit 3 (15 Marks)	**3.Environmental Movements in India**		18	2	0	20
	3.1	Forest based movement – Chipko				
	3.2	Water based movement – Narmada				

	3.3	Land based movements – Anti-mining andSeed				
	3.4	Anti Big Dam Movements in North EastIndia				
Unit 4 (15 Marks)	**4.Environmental Conventions**		8	2	0	10
	4.1	Stockholm Convention 1972				
	4.2	Rio Summit 1992				
		Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcome with Bloom's Taxonomy

Knowledge Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual Knowledge		CO3		CO3	CO3 CO4	
Conceptual Knowledge		CO2	CO1	CO2		
Procedural Knowledge		CO1	CO2	CO1 CO2	CO4	
Metacognitive Knowledge						

MAPPING OF COURSE OUTCOME TO PROGRAM OUTCOME

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	S	S	M	M	S	M	S	S	M	M	M	M	S	M	M
CO2	S	S	M	S	S	S	M	S	S	M	M	M	M	S	S	M
CO3	M	S	S	S	S	S	S	S	S	M	S	M	S	S	S	S
CO4	M	M	S	M	M	S	M	S	S	M	S	S	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

Envisioning Environmental Sociology

- Bell, MM. (2008). *An Invitation to Environmental Sociology*. Thousand Oaks, CA:Sage 3rd ed. Ch 1.(pp. 1-5).
- Hannigan, J. A. (1995). Environmental Sociology. Routledge, London and
- New York, 2nd ed. Ch1 and 2. (pp. 10-15,16 - 35).

- Leahy, T. (2007). Sociology and the Environment. Public Sociology: An Introduction to Australian Society. Eds. Germov, John and Marilyn, Poole. NSW: Allen & Unwin, Ch 21 (pp. 431-442).
- Evanoff, R. J. (2005). Reconciling realism and constructivism in environmental ethics. *Environmental Values*, 61-81.

Approaches

- Gould, K. A., Pellow, D. N., & Schnaiberg, A. (2004). Interrogating the Treadmill of Production: Everything You Wanted to Know about the Treadmill but Were Afraid to Ask.Organization & Environment, 17(3), 296-316.
- Wright, E. O. (2004). Interrogating the Treadmill of Production: Some Questions I Still Want to Know about and Am Not Afraid to Ask. Organization & Environment, 17(3), 317-322.
- Mol, A. P. (2002). Ecological modernization and the global economy. Global Environmental Politics, 2(2), 92-115.
- Buttel, F. H. (2000). Ecological modernization as social theory. Geoforum,31(1), 57-65.
- O'Connor, J. (1994). Is sustainable capitalism possible. Is capitalism sustainable? *PoliticalEconomy and the Politics of Ecology*. The Guilford Press. Ch (pp.152-175).54
- Beck, U. (2006). Living in the world risk society: A Hobhouse Memorial Public Lecture given on Wednesday 15 February 2006 at the London School of Economics. *Economy and Society*, 35(3), 329- 345.
- Shiva, V. (1988). Women in Nature. In *Staying Alive: Women, Ecology and Development.*Zed Books. Ch 3.(pp.38-54).
- Agarwal, Bina, 2007. The Gender and Environment Debate: Lessons from India. In Mahesh Rangarajan. (ed.) 2007. *Environmental Issues in I n d i a : A Reader.* New Delhi:Pearson, Longman, Ch 19.(pp. 316-324, 342-352).
- Robbins, P. (2011). *Political Ecology: A Critical Introduction* (Vol. 16). Wiley and Sonsltd. East Sussex, U.K. Ch 1 (pp.10-25).

Environmental Movements in India

- Guha, R. Chipko : Social history of an environmental movement. In GhanshyamShah ed.(2002). *Social Movements and the State* (Vol. 4). Sage Publications Pvt.Ltd., Ch. 16 (pp.423-454).
- Khagram, S., Riker, J. V., & Sikkink, K. (2002).Restructuring the global politics of development: The Case of India's Narmada Valley Dams. *Restructuring World Politics: Transnational Social Movements, Networks, and Norms* (Vol. 14). U of Minnesota Press.(pp.206-30).
- Padel, F., & Das, S. (2008). Orissa's highland clearances: The reality gap in R & R. *SocialChange*, 38(4), 576-608.
- Scoones, I. (2008). Mobilizing against GM crops in India, South Africa and Brazil. *Journal of Agrarian Change*, 8(2-3), 315-344. 3
- Baviskar, Amita: In the belly of the river : Tribal Conflicts over
- Developmemtment in the Narmada Valley, 1995, delhi, Oxfrod University Press (IntrodutionChapter.
- Omvedt's , Gail : An Open Letter to Arundhati Roy, Outlook December 19, 2008(e-source)narmada.org/debates/gmail.open.letter.html.

- [Projects, feature films and documentary screenings and field visits will be will be undertaken bystudents through the course]

ADDITIONAL READING:

- Students will not be examined on the suggested readings but may use them for projects, and presentations that will be woven into the course.
- Guha, R., & Alier, J. M. (1998). The environmentalism of the poor. In *Varieties ofenvironmentalism: Essays North and South.* New Delhi: Oxford University Press.
- Osofsky, H. M. (2003). Defining Sustainable Development after Earth Summit 2002. *Loy. LAInt'l & Comp. L. Rev.*, *26*, 111.
- Baviskar, A. (1999). In the Belly of the River: Tribal Conflicts over Development in theNarmada Valley. Oxford University Press.

Title of the Course	**:**	**Sociology of Religion**
Course Code	**:**	**SOCC14**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

CO:
After completion of this course, the students will be able to :
CO1:
Analyze the social context of religion.
ILO:

- Define religion from sociological understanding
- Explain the basic concepts such as Totemism, Animism, Asceticism, Mysticism, Theodicy and Eschatology
- Explain the interconnection between religion and economy
- Show the interrelation between magic, religion and science
- Interpret the linkages between Religion, Community and State

CO2 :
Analyze the social significance of religion
ILO:

- Describe the domain of sacred and profane
- Interpret the myths and life-cycle rituals practiced in different communities
- Outline the functions of religion in society
- Assess the relationship between religion and rationality

CO3 :
Analyze the linkages between religion and society at various level
ILO:

- Define prayer as a technique of religious practice
- Describe the various components of prayer
- Examine the concept of body in the context of religious studies
- Apply theoretical perspective to understand the relationship between religion and society
- Interpret ethnographic texts on various aspects of religious practices and phenomena.

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1. Social and Religious**		13	2	0	15
	1.1. Formulating Religious					
	1.1.1	Social definitions of religion				
	1.1.2	Social functions of religion				
	1.2Asceticism and Accumulation					
	1.2.1	Relationship between religion and socio-economic action				
	1.2.2	Contradiction between asceticism and accumulation				
	1.3Theodicy and Eschatology					

	1.3.1	Social implications of the idea of divine justice				
	1.3.2	Social implications of the idea of death and salvation				
Unit 2 (15 Marks)	**2.Religion, Community and State**		13	2	0	15
	2.1	State, Religion and Emancipation				
	2.1.1	Religion and state				
	2.1.2.	Religion and community				
	2.2 Religious and Solitude					
	2.2.1	The isolation of the sacred				
	2.2.2	The sacred community and exclusion				
Unit 3 (15 Marks)	**3. Elements of Religious**		13	2	0	15
	3.1. Sacred, Myth, Ritual (meaning and significance)(Mythology from North East India can be used as reference for seminars and presentations as directed by the course teacher)					
	3.2. Time-Space					
	3.2.1	Transcendence and time				
	3.2.2	Sacred marking of space				
	3.3. Rationality					
	3.3.1	Concept of rationality (Max Weber)				
	3.3.2	Rationality in religion				
Unit 4 (15 Marks)	**4. Techniques of Religious**		13	2	0	15
	4.1. Prayer					
	4.1.1	Techniques of Prayer				
	4.1.2	Prayer as a ritual				
	4.2Craft					
	4.2.1	Types of crafts				
	4.2.2	Functions of crafts				
	4.3 Body					
	4.3.1	Gestures				
	4.3.2	Performance				
	Total		52	8	0	60

Where, L: Lectures T: Tutorials P: Practical's

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge Dimension/ Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual				CO1		

Procedural				CO2 CO3		
Metacognitive						

Mapping of Course Outcomes to Program Outcomes

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	S	M	S	M	S	S	M	M	M	S	S	S	M	M	S
CO2	M	S	M	S	S	S	S	M	M	M	S	M	S	M	M	S
CO3	M	S	M	S	M	S	S	M	M	M	M	M	S	M	M	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

Social and Religious

Formulating Religious

Emile Durkheim. 1995. *The elementary forms of religious life*. Translated by Karen E. Fields. NewYork: The Free Press. Book one and Conclusion, pp. 21-39, 418-440.

Asceticism and Accumulation

Max Weber. 2001. *The Protestant ethic and the spirit of capitalism*. Translated by StephenKalberg. England: Roxbury Publishing Press, pp. 103-126.

Theodicy and Eschatology

Max Weber.1978. *Economy and society*. Edited by Guenther Roth and Claus Wittich. California: University of California Press. Volume Two, pp.518-521.

State, Religion and Emancipation

Marx, Karl. 2008/9 [1843] . ―On the Jewish Question‖ in *Deutsch- Französische Jahrbücher*. Proofed and Corrected: by Andy Blunden, Matthew Grant and Matthew Carmody. www. marxists. org

Religious and Solitude

Malinowski, Bronislaw. 1948. *Magic, science and religion and other essays*. Selected, and with an introduction by Robert Redfield. Boston: The Free Press, pp. 37-50.

Elements of religious

Emile Durkheim. 1995. *The elementary forms of religious life*. Translated by Karen E. Fields. New York: The Free Press, Book one, pp. 27-33.

Srinivas, M. N. 1952. *Religion and society among the Coorgs of south India*. Clarendon : Oxford,pp100-122.

Malinowski, Bronislaw. 1948. *Magic, science and religion and other essays.* Selected, and with anintroduction by Robert Redfield. Boston: The Free Press, pp. 119-124.

Emile Durkheim. 1995. *The elementary forms of religious life*. Translated by Karen E.

Fields. New York: The Free Press. Book three, pp. 303-412.

Time-Space

E. E. Evans-Pritchard. 1963 (1940). "Time and Space." In *The Nuer*. Oxford: Clarendon Press, pp. 94-98, 100-108.

Rationality

Tambiah, Stanley Jeyaraja. 1990. *Magic, science, religion and the scope of ra-tionality*. Cambridge: Cambridge University Press, pp. 1-41.

Techniques of religious

Prayer

Mauss, Marcel.2008 (2003). *On prayer*. USA: Berghahn Books, pp. 19-58.

Craft

Ginzburg, Carlo.1991. *Ecstasies*. Translated by Raymond Rosenthal. New York: PantheonPress, pp. 1-32.

Body

Robert, Hertz. 1973 (1909). "The Pre-eminence of the Right Hand." In *Right and Left: Essays on Dual Symbolic Classification*, edited by R. Needham. Chicago: University of Chicago Press, pp. 3-10, 13-14, 16-17, 19-21.

Suggested Readings:

- Weber, Max. 1993. *Sociology of Religion*. Boston. The Beacon Press.
- Sen, Soumen. 1993. *Religion in North–East India*. New Delhi. UppalPublishing House

Title of the Course	**:**	**Urban Sociology**
Course Code	**:**	**SOCC15**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

CO1:

Explain basic concepts related to the sociological study of urban Societies

ILO:

- Define urban societies and their characteristics from the sociological perspective
- Describe urbanism and urbanisation as sociological processes
- Identify city and its types through sociological understanding

CO2:

Apply the key theoretical perspectives for understanding urban life in historical and contemporary context

ILO:

- Outline the contribution of Chicago school in defining urban social process through the ecological perspective
- Discuss the new political economy if cities through the sociological lense
- Illustrate Manual Castells idea of cities as network society
- Identify cities as a cultural process

CO3:

Analyse the social processes and groups that compose urban societies

ILO:

- Describe the nature of urban communities
- Illustrate the forms of migration and its consequences on urban societies
- Recognise neighbourhood as a form of urban community

CO 4:

Assess the major concerns and issues related to urban living

ILO:

- Interpret leisure as a significant dimension of urban living
- Demonstrate caste, class and gender as part of the dynamics of urban politics
- Outline social movements and contestation of space in urban society

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1. Introducing Urban Sociology: Urban, Urbanism and the City**		13	2	0	15
	1.1	• Urban : Definition and types				
	1.2	• Urbanism: concept of urbanism in contemporarysocieties				
	1.3	• City: concept and types				
Unit 2 (15 Marks)	**2.Perspectives in Urban Sociology**		13	2	0	15
	2.1	• Ecological: (Chicago school)				

	2.2	• Political Economy				
	2.3	• Network (Manuel Castells)				
	2.4	• City as Culture				
Unit 3 (15 Marks)	**3.Movements and Settlements**		13	2	0	15
	3.1	• Migration : Forms and Consequenceson urban life				
	3.2	• Community: nature of urban community and neighborhood • (case studies of Indian Urban Society can be used as references as per the discretion of thecourse teacher)				
Unit 4 (15 Marks)	**4.Politics of Urban Space**		13	2	0	15
	4.1	• Culture and Leisure:				
	4.1.1	• Leisure activities in urban societies				
	4.1.2	• Leisure and use of urban space				
	4.2	• Caste, Class and Gender:				
	4.2.1	• Youth Politics in urban context				
	4.2.2	• Politics of gendered urban space				
	4.2.3	• Social movements in urban societies				
	4.2.4	• Contestation of space (riots and conflicts)				
	Total		52	8	0	60

Where : L: Lectures, T: Tutorials, P: Practical

Cognitive map of course outcomes with blooms taxonomy

Knowledge dimension/ process dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual		CO1				
Conceptual			CO 2			
Procedural				CO3		
Metacognitive					CO4	

Mapping of course outcomes to programme outcomes

CO/ OP	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO 1	S	S	M	S	S	S	S	M	S	M	S	S	S	S	S	S
CO 2	S	S	S	M	S	S	M	M	M	S	S	S	S	S	S	S
CO 3	S	S	M	S	S	S	M	M	S	S	M	S	S	M	S	M
CO	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S

4																

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: (40Marks)

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

1. **Introducing Urban Sociology: Urban, Urbanism and the City**

1.1 Mumford, Lewis 1961. *The City in History: its origins and transformations and its prospects.* Mariner Books: Pp 3-29, 94-118

1.2 Holton, R. J. *Cities, Capitalism and Civilization*, London: Allan and Unwin, Chapters. 1& 2. Pp. 1 – 32

1.3 Parker, Simon. Urban Theory and Urban Experience: Encountering the City, London: Routledge. Chapter 2. Foundations of Urban Theory Pp. 8 - 26

2.1. **Perspectives in Urban Sociology:** Hannerz, Ulf 1980. *Exploring the City: Toward an Urban Anthropology*, NY: Columbia University Press. Chapter 2. Pp 19-58

2.2 Lewis, Wirth 1938 ―Urbanism as a way of Life‖ in *American Journal ofSociology*, Vol. 44, No.1 (July), Pp. 1-24

2.3 Harvey, David 1985 *The Urban Experience*, Baltimore: Johns Hopkins University Press, Chapter 1. Money, Time, Space and the City. Pp. 1-35

2.4 Manuel, Castells 2002, ―Conceptualising the city in the information age‖, in

I.Susser (ed.) *The Castells Reader on Cities and Social Theory*, Blackwell Publishers, Malden, Ma, Pp. 1-13

2.5 Weber, Max 1978. *The City*. The Free Press: New York. Pp 65-89

2.6 Simmel, George, 1903, ―Metropolis and the Mental Life‖ in Gary

2.7 Bridge and Sophie Watson, eds. *The Blackwell City Reader*. Oxford and Malden, MA: Wiley Blackwell, 2002.

2. **Movements and Settlements:**

2.1 Rao, M.S.A, 1981, ―Some aspects of the sociology of migration‖, *Sociological Bulletin*,Vol. 30, 1. Pp21-38

3.2. Anand, Inbanathan. 2003, ―Migration and Adaptation: Lower Caste Tamils in a Delhi Resettlement Colony‖ in Ranvinder Singh Sandhu (ed.) *Urbanization in India*. Sage: New Delhi. Pp. 232-246

3.1. Benjamin S, 2004, ―Urban Land Transformation for Pro-Poor Economies‖, *Geoforum*, Volume 35, Issue 2, March 2004, Pp. 177-197

3. **Politics of Urban Space**

3.1 Katznelson, Ira, 1981, *City Trenches: Urban Politics and Patterning of Class in United States*, Chicago: University of Chicago Press. Chapter 8. Social Theory, Urban Movements and Social Change. Pp. 193 - 215

3.2 Ayyar, Varsha ,2013. ―Caste and Gender in a Mumbai resettlement site‖, *Economic &Political Weekly*, May 4,Vol. XLVIII, No 18, Pp 44-55

4.1. Kamath, Lalitha and Vijayabaskar, M, 2009 ―Limits and possibilities of Middle Class Associations as Urban collective actors‖, *Economic & Political Weekly*, June 27, 2009 vol XLIV No. 26 & 27, Pp 368 -376

4.2. Grazian, David, 2009, ―Urban Nightlife, Social Capital, and the Public Life of Cities‖
Sociological Forum, Vol. 24, No. 4 (Dec., 2009), pp. 908-917
4.5 Manuel Castells, 1983, ―Cultural Identity, Sexual -iberation and Urban Structure: The Gay Community‖ in *San Francisco in City and the Grassroots*, Pp. 138-170
4.6 Crawford, Margaret. „The World is a Shopping Mall", From Malcom Miles and Tim Hall (Eds.) *City Cultures Reader*, London: Routledge. Pp. 125-139

ADDITIONAL READING:

1. Kumar, Nita, 1988. *The Artisans of Banaras. Popular Culture and Identity, 1880—1986*, Princeton: Princeton University Press.
2. Eck, Diana, 1983. *Banaras: City of light,* London: Routledge and Kegan Paul. Naidu, Ratna. 1990. *Old cities and New predicaments: A Study of Hyderabad*. New Delhi: Sage
3. Ganguly, J.B. 1995. *Urbanization and Development in North East – India: Trends and Policy Implications.*New Delhi. Deep and Deep Publications
4. Varshney, Ashutosh. 2002. *Ethnic Conflict and Civic Life: Hindus and Muslims in India.*London. Yale University Press.
5. Sarma, Pranjal. 2016. *Urbanization and Development.* Guwahati.E. B.H. Publications.

Title of the Course	**:**	**Rural Sociology**
Course Code	**:**	**SOCC16**
Nature of the Course	**:**	**CORE (MAJOR)**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcome:

CO1:

Students will be able to analyse the salient features of agrarian and peasant society.

ILO: Students will be able to-

- define agrarian and peasant society.
- Explain the salient features of peasant society and its sub-culture.
- Review the literature on agrarian studies in India.
- Apply the Marxian approach in studying agrarian society.

CO2:

Students will be able to deduce the key issues in agrarian society.

ILO: Students will be able to-

- explain the agrarian questions raised by Marx.
- Illustrate the moral economy of the peasantry class.
- Debate on Indian agriculture planning since independence.

CO3:

Students will be able to assess the major themes of agrarian sociology in India.

ILO: Students will be able to-

- Identify the different classes in Indian agrarian structure.
- Describe the problems of agricultural labour in India.
- Interpret the land tenure and land reform policies in India.
- Analyse the green revolution and its consequences on the socio-economic life of the farmers in India.
- Assess the major forces of farmers movement in India.
- Debate on the role of caste, class and gender in India agrarian structure.

CO4:

The students will be able to appraise agrarian crisis and its future in global context.

ILO: Students will be able to-

- Analyze the role of World Bank on addressing the agrarian crisis in Third World Countries.
- Examine the political economy in the late 20th century in maintaining global agrarian order.

	Contents		**L**	**T**	**P**	**Total**
Unit 1 (15 Marks)	**1.Agrarian Societies and Agrarian Studies**		13	2	0	15
	1.1	• Agrarian Societies: Agrarian Society and its features, Peasant Society, Subculture of Peasantry				
	1.2	• Agrarian Studies: Marxian approach of studying agrarian society				

Unit 2 (15 Marks)	**2.Key Issues in Agrarian Sociology**		13	2	0	15
	2.1	• The Agrarian Question(Marx)				
	2.2	• The Moral Economy: Subsistence ethicsand peasant economy, Rational Peasant				
	2.3	• Agrarian Commodity Systems: • Agriculture in a developing economy – Indianexperience				
Unit 3 (15 Marks)	**3.Themes in Agrarian Sociology of India**		13	2	0	15
	3.1	• Labor and Agrarian Class Structure: • Agrarian class structure, problems of agriculturallabour				
	3.2	• Markets, Land Reforms and Green Revolution: Peasant and Capitalist Economy, Land Tenureand Land Reform • , Understanding Green Revolution				
	3.3	• Agrarian Movements: Peasant uprisings in Indiain colonial period The New Farmer‘s Movement in India				
	3.4	• Caste, Gender and Agrarian Realities: Gender Analysis of Land , Dalit Agriculture Labour.				
Unit 4 (15 Marks)	**4.Agrarian Futures**		13	2	0	15
	4.1	• Agrarian Crisis: World Bank and ThirdWorld Peasant				
	4.2	• The Global Agrarian Order :, Political Economy in the late twentieth Century				
		Total	52	8	0	60

Where, L: Lectures T: Tutorials P: Practical’s

Cognitive Map of Course Outcomes with Bloom's Taxonomy

Knowledge Dimension/Process Dimension	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual					CO2	
Procedural				CO1	CO3, CO4	
Meta-cognitive						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	S	M	S	M	S	M	M	M	M	S	M	M	M	S	M
CO2	M	S	S	M	S	S	S	M	M	M	S	S	M	M	S	S
CO3	M	M	M	S	M	S	M	S	M	M	M	M	M	M	S	M
CO4	S	M	M	S	M	S	M	S	M	M	M	S	M	M	S	M

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

1. Agrarian Societies and Agrarian Studies

1.1 Agrarian Societies

- Dumont, Rene. 'Agriculture as Man's Transformation of the Rural Environment', in Teodor Shanin (ed.) *Peasants and Peasant Societies*, Hamondsworth: Penguin. 1971. Pp. 141-149

- Ludden, David. (1999), 'Agriculture' from, *An Agrarian History of South Asia*, Cambridge: Cambridge University Press. 1999, Pp . 6-35

1.2 Agrarian Studies

- Beteille, Andre. 'The Study of Agrarian Systems: An Anthropological Approach', from *Marxism and Class Analysis*, New Delhi: Oxford. 2007. Pp.84-93
- Thorner, Daniel and Alice Thorner. 'The Agrarian Problem in India Today',from, *Land and Labour in India*, Bombay: Asia Publishing House. 1962. Pp. 3-13

2. Key Issues in Agrarian Sociology

2.1 The Agrarian Question

- Haroon Akram-Lodhi, A. and Cristobal Kay. 'Surveying the Agrarian Question: Part 1, Unearthing Foundations, Exploring Diversity; Part 2, Current Debates and Beyond'. *The Journal of Peasant Studies*, Vol. 37, No. 1 &2, January/April 2010, 177– 199 & 255–280

2.2 The Moral Economy

- Scott, James C. 'The Economic and Sociology of Subsistence Ethic', From, *The Moral Economy of the Peasant: Rebellion and Subsistence in South East Asia*, New Haven: Yale University Press. 1976. Pp 13-34
- Popkin, Samuel L. 'The Rational Peasant', from, *The Rational Peasant: The Political Economy of Rural Society in Vietnam*, Berkley: University of California Press. 1979. Pp. 1-31

2.3 Agrarian Commodity Systems

- Friedland, William. 1984. ―Commodity Systems Analysis: An Approach to the Sociology of Agriculture‖. *Research in Rural Sociology and Development* 1: 221–235

3. Themes in Agrarian Sociology of India

3.1 Labour and Agrarian Class Structure

- Patel, S. J. 'Agricultural Laborers in Modern India and Pakistan' from Gyan Prakash (ed.) *Worlds of Rural Labourer in Colonial India*, Dehi: Oxford University Press. 1992. Pp. 47-74
- Thorner, Alice. 'Semi-Feudalism or Capitalism? Contemporary Debate on Classes and Modes of Production in India', Parts: 1-3, *Economic and Political Weekly*, Vol. 17, No. 49 (Dec. 4, 1982), pp. 1961-1968; No. 50 (Dec. 11, 1982),

  pp. 1993-1999; No. 51 (Dec. 18, 1982), pp. 2061-2064
- Mencher, Joan P. 'Problems in Analyzing Rural Class Structure', *Economic and Political Weekly*, Vol. 9, No. 35 (Aug. 31, 1974), pp. 1495+1497+1499-1503

3.2 Markets, Land Reforms and Green Revolution

- Amin, Shahid. 'Unequal Antagonists: Peasants and Capitalists in Eastern UP in 1930s', *Economic and Political Weekly*, Vol. 16, No. 42/43 (Oct. 17-24, 1981), pp. PE 19-25, 28, 29
- Bandopadhyay, D. 'Reflections on Land Reform in India since Independence' from T. V. Satyamurthy (Ed.) *Industry and Agriculture in India Since Independence*, Delhi: Oxford University Press. Pp. 301-327
- Baker, Christopher J. 'Frogs and Farmers: The Green Revolution in India, and its Murky Past' from, Tim P. Bayliss-Smith and Sudhir Wanmali (Ed.) *Understanding Green Revolutions: Agrarian Change and Development Planning in South Asia*, Cambridge: Cambridge University Press. 1984. Pp. 37-51
- Dhanagare, D. N. 'Green Revolution and Social Inequalities in Rural India' from, *Economic and Political Weekly*, Vol. 22, No. 19/21, Annual Number (May, 1987), pp. AN: 137-139, 141-144.

3.3 Agrarian Movements

- Gough, Kathleen. 'Indian Peasant Uprisings' *Economic and Political Weekly*, Vol. 9, No. 32/34, Special Number (Aug., 1974), 1391-1393+1395- 1397+1399+1401-1403+1405-1406
- Brass, Tom. 'The New Farmer's Movements in India', from, Tom Brass (ed.), *The New farmer's Movemnts in India*, Essex: Frank Cass. (1995). Pp.1-20

3.4 Caste, Gender and Agrarian Realities

- Jackson, Cecile. 'Gender Analysis of Land: Beyond Land Rights for Women?', *Journal of Agrarian Change*, Volume 3 (4) (October, 2003) Pp. 453-478.
- Omvedt, Gail. 'The Downtrodden among the Downtrodden: An Interview with a Dalit Agricultural Laborer' *Signs*, Vol. 4, No. 4, The Labor of Women: Work and Family (Summer, 1979), pp. 763-774

4. Agrarian Futures

4.1. Agrarian Crisis (16)

- Feder, Ernest. 'The New World Bank Programme for the Self-Liquidation of the Third World Peasantry', Journal *of Peasant Studies*, Volume 3, Issue 3, 1976. Pp. 343-352
- Vasavi. A. R. 'Agrarian Distress in Bidar: Market, State and Suicides', *Economic and Political Weekly*, Volume 34, Number 32. (1999). Pp. 2263-2268

4.2. The Global Agrarian Order (32)

- Buttel, Frederick H. Some Reflections on Late Twentieth Century Agrarian Political Economy. Cadernos de Ciência & Tecnologia, Brasília, v.18, n.2, p.11-36, maio/ago. 2001

Note:

A. The suggested readings may be used for student presentations.

B. Students may be encouraged to review and make presentations of significant body of literary work depicting agrarian realities that has emerged from world literature as well as *Bhasha* literatures of India.

ADDITIONAL READING:

- Dalton, George. *'Modern Transformation of European Peasantrie*s' in R. P. Mishra and Nguyen Dung (Ed.) *Third World Peasantry: A continuing Saga of Deprivation, Volume II*, New Delhi: Sterling. 1986, Pp.25-46
- Patnaik, Utsa. (ed.) *The Agrarian Question in Marx and His Successor*s *Volume I*, New Delhi: Left Word, 2007.

- Breman, Jan. (1974), Patronage and Exploitation: Changing Agrarian Relations in South Gujarat, India, Berkley: University of California Press. Pp. 36-80.
- Gough, Kathleen. ' Rural Change in Southeast India, 1950s to 1980s. Delhi: Oxford University Press. 1989.
- Harriss, John. Capitalism and Peasant Farming: Agrarian Structure and Ideology in North Tamil Nadu, Delhi: Oxford University Press, 1982. Byres, T. J. 'The New Technology, Class Formation, and Class Action in the Indian Countryside', Journal of Peasant studies, Volume 8, Issue 4, 1981, Pp 405-454.
- Hobsbawm, E. J. 'Peasants and Politics', *The Journal of Peasant Studies*, Vol. 1, No. 1, October 1973, 3–20
- Zamosc, Leon. *The Agrarian Question and Peasant Movement in Columbia: Struggles of National Peasant Association, 1967-81*, Cambridge: Cambridge University Press, 1986.
- Agarwal, Beena. A Field of One's Own: Gender and Land Rights In south Asia, Cambridge: Cambridge University Press, 1996.
- Bernstein, Henry. Class Dynamics of Agrarian Change. Halifax: Fernwood Publishing, 2010.

Title of the Course	**:**	**Gender and Sexuality**
Course Code	**:**	**MINSOC6**
Nature of the Course	**:**	**MINOR**
Total Credits	**:**	**04**
Distribution of Marks	**:**	**60 (End Sem) + 40 (In-Sem)**

Course Outcomes:

CO1:
Understand the basic tenets of gender by interrogating the categories of gender, sex and sexuality.

ILO:

- Understand what is Sociology of Gender and why it is important to study
- Define and distinguish between Gender, Sex and Sexuality
- Understand different components of gender and sexuality
- Understand the concept of Masculinity and Femininity

CO2:
Comprehend and analyse the complexity of gender relations in contemporary societies

ILO:

- Understand why Gender is a Social Construct
- Explain how and why Gender, Sex and Sexuality is deeply connected with the Human behaviour through socialisation
- Analyse how the production and reproduction of gender and sexuality takes place in society

CO3:
Understand how differences and inequalities are created in society based on Gender and sexuality

ILO

- Understand how biological differences create social inequalities in society
- Explain how sex differences are related to inequalities in work and how this difference is responsible for creating gendered division of labour
- Analyse gender inequqality by connecting it with the division of labour in family
- Analyse how class and caste intersect with gender and sexual identification in society

CO4:
Understand the politics of Gender in terms of movement, protest and resistance

ILO:

- Understand what is the politics of identity and Gender
- Analyse the role of gender in politics
- Analyse the Contemporary Indian Women's Movement and the gendered politics hidden here.
- Understand how and why these movements are to a large extent a fight and bargaining with Patriarchy.

	Contents		L	T	P	Total
Unit 1 (15 Marks)	**1. Gendering Sociology**		13	2	0	15
	1.1	• Sociology of Gender: An Introduction • Gender, Sex, Sexuality				
	1.2	• Concept of Masculinity and Femininity				
Unit 2 (15 Marks)	**2. Gender as a Social Construct**		13	2	0	15
	2.1	• Gender, Sex, Sexuality				
	2.2	• Production of gender and sexuality				
	2.3	• Gendered Socialisation				
Unit 3 (15 Marks)	**3. Gender: Differences and Inequalities**		13	2	0	15
	3.1	• Class, • Caste				
	3.2	• Family • Work				
	3.3	• Gender inequality and division of labour in family				
	3.4	• Gender and sexual identification in society Labour.				
Unit 4 (15 Marks)	**4. Politics of Gender**		13	2	0	15
	4.1	• Role of gender in politics				
	4.2	• Contemporary Indian Women's Movement and the gendered politics				
		Total	52	8	0	60

Cognitive Map of Course Outcomes with Bloom's Taxonomy Knowledge

Knowledge Dimension	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual Knowledge	CO1					
Conceptual Knowledge	CO1, CO2	CO3,CO4	CO3,CO 4	CO3,CO 4	CO4	
Procedural Knowledge		CO3,CO4	CO3,CO 4	CO3,CO 4	CO4	
Meta cognitive Knowledge						

Mapping of Course Outcomes to Program Outcomes:

CO/ PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13	PO 14	PO 15	PO 16
CO1	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
CO2	M	M	M	M	S	S	**S**	M	M	M	M	M	M	M	M	M
CO3	M	M	M	M	M	S	S	S	S	S	S	S	S	S	S	S
CO4	M	M	M	S	M	S	S	S	S	S	M	M	S	S	S	S

S= STRONGLY CORRELATED
M=MODERATELY CORRELATED

MODES OF IN-SEMESTER ASSESSMENT: **(40Marks)**

Two Internal Examination -	20Marks -
Group Discussion	07 Marks
Seminar presentation on any of the relevant topic	10 Marks
Viva-Voce	3 Marks

SUGGESTED READING:

1. Gendering Sociology: (1 Week)

1. 1 S. Jackson and S. Scott (eds.) 2002 *Gender: A Sociological Reader*, London: Routledge, pp.1-26.

1.2 Liz Stanley. 2002. "Should Sex Really be Gender or Gender Really be Sex" in S. Jacksonand S. Scott (eds.) *Gender: A Sociological Reader*, London: Routledge, pp. 31-41.

2. Gender as a Social Construct (6 Weeks)

2.1 Gender, Sex, Sexuality

2.1.1 Oakley, Ann, 1972. *Sex, Gender and Society*. London: Temple Smith, pp 99-127, 158-172.

2.1.2 Ortner, Sherry. 1974. "Is male to female as nature is to culture?" M.Z.

Rosaldo and L. Lamphere (eds.) *Women, Culture and Society*. Stanford: Stanford UniversityPress, pp. 67- 87.

2.1.3 Newton, Esther. 2000. "Of Yams, Grinders and Gays: The Anthropology of Homosexuality" in *Margaret Mead Made Me Gay: Personal Essays, Public Ideas.* London: Duke University Press, pp 229- 237.

2.2 Production of Gender and Sexuality

2.2.1 Alter, Joseph. 1992. *The Wrestler's Body: Identity and Ideology in North India*. California: University of California Press, pp 163-194.

2.2.2 Nanda, Serena. 1999. *Neither Man nor Woman*. Belmont CA: Wadsworth, pp 1-23 &128-149.

3. Differences and Inequalities (4 Weeks)

3.1 Class, Caste

3.1.1 Walby, Sylvia. 2002. "Gender, Class and Stratification: Towards a new approach" in S. Jackson and S. Scott (eds.) *Gender: A Sociological reader*. London: Routledge, pp 93-96.

3.1.2 Bernard, Jessie. 2002. "The Husband's marriage and the wife's marriage" in S. Jackson and S. Scott (eds.) *Gender: A Sociological Reader*. London: Routledge, pp 207- 210.

3.1.3 Dube, Leela 1996 "Caste and Women" in M.N.Srinivas (ed.) *Caste: Its Twentieth CenturyAvatar*, New Delhi: Penguin, pp 1-27.

3.1.4 Rege, S. 1998. "Dalit Women Talk Differently: A Critique of 'Difference' and Towards a Dalit Feminist Standpoint Position." *Economic and Political Weekly, Vol. 33, No. 44,(*Oct.31-Nov. 6, 1998), pp 39-48.

3.2 Family, Work

3.2.1 Papanek, Hanna. 1979. Family Status production: the work and non-work of women *Signs*

Volume 4 No. 4, pp 775-81.

3.2.2. Pineda, Javier, 2001. "Partners in Women Headed Households: Emerging Masculinities?" in Cecile Jackson (ed.) *Men at Work: Labour, Masculinities, Development*. London: Frank Cass, pp. 72-92.

3.2.3 Agarwal, Bina. 1988. Who Sows, who reaps? Women and land rights in India *Journal of Peasant Studies 15(4),* pp 531-81.

4. Politics of Gender (3 Weeks)

4.1. Resistance and Movements

4.1.1 Candace West and Don H. Zimmerman. 2002. "Doing Gender" in S.Jackson and S. Scott (eds.) *Gender: A Sociological Reader*. London: Routledge, pp 42-47.

4.1.2 Davis, Angela Y. 1981. *Women, Race and Class*. London:Women's Press. pp 30-42.

4.1.3 Kandiyoti, Deniz. 1991 "Bargaining with Patriarchy" in Judith Lorber and Susan A. Farrell (eds.) *The Social Construction of Gender*, New Delhi: Sage Publications, pp.104-118.

4.1.4 Kumar, Radha. 1999. "From Chipko to Sati: The Contemporary Indian Women's Movement" In Nivedita Menon (ed.) *Gender and Politics in India*. New Delhi: Oxford University Press, pp342-369.

DEPARTMENT OF ZOOLOGY

Manohari Devi Kanoi Girls' College, Dibrugarh

PROGRAMME SPECIFIC OUTCOMES OF B.Sc. IN ZOOLOGY (FYUGP)

- Knowledge about Animal kingdom, Bio-diversity and Wildlife conservation.
- Learn about Genes, Genetic disorders and causes.
- Understand the Environment and related problems.
- Become aware of Bacterial, Viral, Parasitic and Venereal diseases and their control.
- Learn methodology of basic research.
- Knowledge on diversity animals, their importance and strategies for conservation.
- Scientific approach to address problems in biology and sustainable use of resources for human welfare.
- Application of knowledge and scales in entrepreneurship.
- Develop new techniques/methods for solving the problems of the allied disciplines.

"The graduates of Zoology should be competent for critical analysis of problems related to biology, sustainable uses of biological resources and their conservation strategies"

CRITICAL THINKING -The graduates of Zoology should be competent for critical analysis of problems related to biology, sustainable uses of biological resources and their conservation strategies.

PROGRAMME LEARNING OUTCOME

P.O.1: Knowledge on diversity animals, their importance and strategies for conservation.

P.O.2: Scientific approach to address problems in biology and sustainable use of resources for human welfare.

P.O.3: Application of knowledge and scales in entrepreneurship.

P.O.4: Develop new techniques/methods for solving the problems of the allied disciplines.

COURSE SPECIFIC AND LEARNING OUTCOMES OF B.Sc. IN ZOOLOGY (FYUGP)

CORE COURSE

1st semester
ANIMAL DIVERSITY-I

1) Describe different phyla in animal kingdom
2) Organize the organisms in different categories based on morphological characteristics
3) Analyze the interrelationship among different species and genera within each group of animals

Learning Outcomes:

1) Understand the various phyla in Animal Kingdom
2) Compare various organisms based on morphology
3) Classify different groups of animals

2nd Semester
ANIMAL DIVERSITY-II

COs:

1. describe different phyla in animal kingdom
2. organize the organisms in different categories based on morphological characteristics
3. analyze the interrelationship among different species and genera within each group of animals

Learning Outcomes:

1) understand the various phyla in Animal Kingdom
2) compare various organisms based on morphology
3) classify different groups of animals

3rd semester
CELL BIOLOGY

COs:

1) differentiate the structure and functions of cellular components
2) evaluate the cell division mechanism and cell cycle.
3) analyze cell signalling mechanism.

Learning Outcomes:

1) understand the cell structure and functions of cell organelles.
2) analyze cell division and cell cycle mechanisms.

3) interpret the cell signalling mechanisms

COMPARATIVE ANATOMY OF VERTEBRATES

Course Outcomes:

1. Discuss the anatomy of different systems in Vertebrates
2. Analyse the structural modifications in anatomy of different groups

Learning Outcomes:

- Describe the anatomy of different systems in Vertebrates
- Compare the structural modifications in anatomy of different groups

4th semester

Biochemistry and Molecular Biology

COs:

1. differentiate the biomolecules of living organisms, their interactions for perpetuation of life
2. analyze structure-function relationships of nucleic acids and protein
3. distinguish between replication, transcription and translation in prokaryotes and eukaryotes
4. interpret the gene expression mechanisms

Learner Outcome:

1) identify the various biomolecules and understand their function
2) differentiate the cellular processes such as replication, transcription and translation
3) understand gene expression mechanism

Animal Physiology

COs:

1. Describe the different systems of vertebrates
2. Distinguish between the mechanisms of various physiological systems
3. Examine the body parameters based on the knowledge

Learning outcomes:

- Compare the various physiological systems
- Analyze the mechanisms involved in the systems
- Apply the knowledge to correlate various parameters of the body

Genetics and Evolutionary Biology

COs:

1) Interpret the basic patterns of inheritance
2) Evaluate genetic disorders and mutations
3) Relate evolutionary forces leading to the variations and diversification of species
4) Examine evidences ranging from fossil records to molecular data and to establish phylogenetic relationships of species.

Learning Outcome:

1) Understand the concept of inheritance
2) Analyse mutations and genetic disorders
3) Examine forces of evolution
4) Interpret evidences of evolution

Lab Course on C-V,VI,VII

COs:

1. Analyse biochemical solutions
2. Estimation of DNA
3. Examine the principles of gene interactions
4. Differentiate between various fossils, homologous and analogous organs
5. Distinguish between blood groups and analyze blood parameters

Learning Outcome:

• Compare biochemical solutions
• Analyse DNA
• Discuss the principles of gene interactions
• Compare between various fossils, homologous and analogous organs
• Understand the blood groups and test blood parameters

5th Semester

DEVELOPMENTAL BIOLOGY

COs:

1. Examine the basic principles and concepts the developmental processes from a single cell system to a multi-cellular system
2. Distinguish the embryonic and post embryonic developmental processes
3. Analyze the development of a single fertilized egg to mature into a fully developed complex organism

Learning Outcome:

• Describe developmental processes of biological system
• Compare various embryonic developmental processes

Animal Behaviour and chronobiology

Course outcomes:

1. Analyze behaviour patterns to the brain, genes, and hormones, as well as the surrounding ecological and social environments
2. Interpret the concept of chronobiology.
3. Evaluate the phenomena of seasonal migration and hibernation

Learning Outcomes:

• Distinguish various behaviour patterns of animals
• Understand chronobiology concept
• Analyze different behaviours such as migration and hibernation

Animal Biotechnology and techniques in Biology

COs:

• Describe the principle, practices and application of biotechnology.
• Explain the basic concept of genetic engineering.
• Improve the students in the field of biotechnology for application in every field of science like engineering, research, commercialization and academics.

Learning Outcomes:

• Discuss the principle, practices and application of biotechnology.
• Discuss the basic concept of genetic engineering.

• Make the students aware about the field of biotechnology for application in every field of science like engineering, research, commercialization and academics.

6th Semester

Animal Physiology : Controlling and Co-ordinating Physiology

COs:

1. Examine the internal working of organs and organ systems.
2. Evaluate the functioning of various organ systems such as muscular, nervous, and blood in vertebrates.
3. Explain endocrine system and its role in integration.

Learning Outcomes:

• Discuss the working of organ and organ systems
• Analyse the functioning of the various systems
• Describe the role of endocrine system

Animal Ecology and Wildlife Management

COs:

1. Describe an understanding of ecological principles and processes.
2. Evaluation of the essential elements, concepts and skills related to wildlife conservation and management.

Learning Outcomes:

• Discuss ecological principles and processes.
• Examine the essential elements, concepts and skills related to wildlife conservation and management.

Bioinformatics and Biostatistics

COs:

1. Analyze computational tools and databases that facilitate investigation of molecular biology and evolution-related concepts
2. Evaluate computational approach for critical analysis and interpret the results of their study.
3. Examine the fundamental concepts of biostatistics.
4. Apply the various statistical methods and software tools for understanding data analysis in biological sciences.

Learning Outcomes:

1. Compare computational tools and databases that facilitate investigation of molecular biology and evolution-related concepts
2. Analyze computational approach for critical analysis and interpret the results of their study.
3. Understand the fundamental concepts of biostatistics.
4. Apply the various statistical methods and software tools for understanding data analysis in biological sciences.

Lab Course on C-XII, XIII, XIV

COs:

1. Distinguish between haemin crystals of different species
2. Evaluate muscle twitch and reflex action
3. Examine sections of neurons and glands
4. Differentiate between various fauna
5. Critically Analyze ecosystem parameters and different behaviours in an ecosystem

Learning Outcome:

• Compare haemin crystals of different species
• Analyze muscle twitch and reflex action
• Discuss various neuron structure and glands
• Compare between different fauna
• Understand the components of an ecosystem

MINOR COURSE

1st Semester

Animal Diversity I Minor

COs:

1. Describe different phyla in animal kingdom
2. Organize the organisms in different categories based on morphological characteristics
3. Analyse the interrelationship among different species and genera within each group of animals

Learning Outcomes:

1. Understand the various phyla in Animal Kingdom
2. Compare various organisms based on morphology
3. Classify different groups of animals

2nd Semester

Animal Diversity II Minor

COs:

1) describe different phyla in animal kingdom
2) organize the organisms in different categories based on morphological characteristics
3) analyse the interrelationship among different species and genera within each group of animals

Learning Outcomes:

1. understand the various phyla in Animal Kingdom
2. compare various organisms based on morphology
3. classify different groups of animals

3rd Semester

Comparative Anatomy of Vertebrates

COs:

1. Discuss the anatomy of different systems in Vertebrates
2. Analyze the structural modifications in anatomy of different groups

Learning Outcomes:

• Describe the anatomy of different systems in Vertebrates
• Compare the structural modifications in anatomy of different groups

4th Semester

Fundamentals of Animal Physiology

COs:

1. Describe the different systems of vertebrates
2. Distinguish between the mechanisms of various physiological systems

3. Examine the body parameters based on the knowledge

Learning outcomes:

• Compare the various physiological systems

• Analyze the mechanisms involved in the systems

• Apply the knowledge to correlate various parameters of the body

5th Semester

Animal Biotechnology and techniques in Biology- Minor

COs:

• Describe the principle, practices and application of biotechnology.

• Explain the basic concept of genetic engineering.

• Improve the students in the field of biotechnology for application in every field of science like engineering, research, commercialization and academics.

Learning Outcomes:

• Discuss the principle, practices and application of biotechnology.

• Discuss the basic concept of genetic engineering.

• Make the students aware about the field of biotechnology for application in every field of science like engineering, research, commercialization and academics.

6th Semester

Animal Physiology: Controlling and Co-ordinating Physiology -Minor

COs:

1. Examine the internal working of organs and organ systems.
2. Evaluate the functioning of various organ systems such as muscular, nervous, and blood in vertebrates.
3. Explain endocrine system and its role in integration.

Learning Outcomes:

• Discuss the working of organ and organ systems

• Analyse the functioning of the various systems

• Describe the role of endocrine system

SEC

1st Semester- FRESHWATER AQUACULTURE

Cos:

1. Analyze concept of freshwater aquaculture.
2. Evaluate the technique of fish rearing, transportation and the technique of induced breeding.
3. Discuss the maintenance of fish health.

Learning Outcomes:

- Understand the freshwater aquaculture concept.
- Analyze fishing gears and induced breeding techniques.
- Identify fish diseases.

2nd semester- AQUARIUM FISH KEEPING

COs:

1. Analyze the concept of aquarium fish keeping.
2. Discuss ornamental fishes and their importance.
3. Evaluate the technique of fish feed preparation.

Learning Outcomes:

• Explain the concept of fish keeping in aquariums
• Discuss about ornamental fishes
• Formulation of fish feeds

3rd Semester- VERMICOMPOSTING

COs:

1) describe the biology of some important species of earth worms used in vermiculture
2) demonstrate skills on production of vermicompost.
3) analyse benefits and problems with vermiculture and vermicompost

Learning Outcome:

1) identify the earthworm species used in vermiculture
2) understand the benefit of vermiculture
3) display the skill of vermicompost production
4) interpret the problems associated with the vermicomposting technique

GEC

1st semester - Natural resource management

COs:

1. Distinguish between renewable and non-renewable resources
2. Analyse threats to natural and biological resources of NE India
3. Examine management strategies for sustainable utilization of resources

Learning outcomes:

1. Differentiate natural and biological resources of NE India
2. Identify the threats and issues related to the natural resources
3. Execute conservation and management strategies for natural resources

2nd semester- Wildlife Conservation and Management

COs-

- Understand concept wildlife and its management
- Analyse the importance of wildlife and its conservation
- Understand conservation tools and methods

Learning outcomes

Have a clear understanding of wildlife, habitats, threats and conservation measures.

3rd Semester- INSECT VECTORS AND DISEASES

Course Outcomes:

1. Analyze the concept of insects as vectors of diseases
2. Evaluate the general features of insects
3. Examine the role of different insects in transmission of diseases

Learning Outcomes:

- Explain the concept of insects as vectors of diseases
- Analyze insect features and their role in disease transmission