

ASANSOL GIRLS' COLLEGE

Department of Geography

Programme Specific Outcome (PSO) and Course Outcome (CO)

Programme Specific Outcome (PSO):

The Programme enables the students

PSO1: To become familiar with the different branches of geography like physical, human, social, economic, regional, environmental, population, urban, agricultural, settlement, resource, political and cultural geography.

PSO2: To get theoretical and practical knowledge about qualitative and quantitative geographical data which make them able to synthesize and analyze the different spatial characteristics of earth surface.

PSO3: To acquire basic knowledge on remote sensing and GIS.

PSO4: Finally, the students will become true geographers in areal differentiation of things and phenomena over space, equipped with spatial analysis tools and techniques, expert in land and socioeconomic surveys with great geographic intellect.

Course Outcome (CO)

Semester	Module and Topic	Module specific CO
Semester – I Introduction to Physical Geography:	Module: I The Earth and its Physical Environment	Students learn about CO1: Earth as a Planet CO2: Continental drift and seafloor spreading CO3: Earth's atmosphere CO4: Earth's hydrosphere CO5: Earth's biosphere CO6: Earth's pedosphere
	Module: II Earth Surface Dynamics and Processes	CO1: Basic concepts of geomorphology CO2: Plate tectonics and associated landforms CO3: Degradational processes CO4: Model of landscape evolution CO5: Surface processes and landforms
Semester – I Elementary Practicals in Physical Geography:	Module: I Scale, Minerals and Rocks	CO1: Students will learn about the application of scale in geographic studies.
	Module: II Basic Geological and geomorphological Exercises	CO2: Students will be able to interpret landform structures with the help of geological maps and learn to identify minerals and rocks, the fundamental element of landforms.
	Module: III Topographical Maps	CO3: Upon completing this course, students will understand the interpretation techniques of topographical maps and their application.
Semester – I Disaster Management:	Module: I Basic Concepts and Management	CO1: Students will have in-depth knowledge about the different parameters during any disaster, which are critical to all life forms, especially humans, in a sustainable way.

	<p>Module: II Disaster Specific Case Studies</p>	<p>CO2: Students will familiarize about the mitigation measures to prevent and mitigate different disasters.</p>
<p>Semester – II Fundamentals of Human Geography:</p>	<p>Module: I Nature and Principles of Human Geography</p>	<p>Students learn about CO1: Nature, scope and recent trends; Development and branches of human geography CO2: Approaches to Human Geography CO3: Evolution of Man-Nature interaction CO4: Human adaptation to environment CO5: Space and Society CO6: Race and ethnic groups CO7: Language and religion CO8: Cultural realms of the world and their characteristics CO9: At the end of this course, it is expected that students will be able to understand the social environment from local to global perspectives.</p>
	<p>Module: II Population, Settlement and Development</p>	<p>CO10: Population geography and demography; Population growth and distribution; Population composition (Age-Sex composition) CO11: Theories of population CO12: Population and environment relations with special reference to development-environment conflict (Multi-purpose river valley projects) CO13: Origin and growth of rural settlements CO14: Origin and growth of urban settlements CO15: Poverty and inequality CO16: Students will be able to describe and evaluate relevant issues to the needs of the contemporary world.</p>
<p>Semester – II : Elementary Practicals in Human Geography</p>	<p>Module: I Data Collection and Representation</p>	<p>Students learn about CO1:: Sources of demographic and socio-economic data CO2: Students shall be able to identify the socio-environmental problems of a locality through field experience in future.</p>
	<p>Module: II Data Analysis and Interpretation</p>	<p>CO3: The students will efficiently extract, represent, analyse and interpret demographic and socio-economic data.</p>

	<p>Module: III</p> <p>Topographical Maps</p>	<p>CO4: Study of correlation between physical and cultural features from Survey of India 1:50k topographical maps using transect chart and scatter plots</p> <p>CO5: Analysis of transport and settlements.</p>
<p>Semester III</p> <p>Course Name: Climatology and Oceanography</p> <p>Course Code: BSCHGEOC301</p>	<p>Module 1: Atmospheric Composition and Structure</p>	<p>Students get a clear idea on</p> <p>CO1: students will explore the structural layers of the atmosphere</p> <p>CO2: the gaseous compositional make-up of Earth's atmosphere.</p>
	<p>Module 2: Atmospheric Pressure and Winds</p>	<p>CO1: Understand the elements of weather and climate</p> <p>CO2: different factors which affecting the elements of weather and climate</p> <p>CO3: Comprehend the climatic aspects and its bearing on planet earth</p>
	<p>Module 3: Cyclones</p>	<p>CO1: different types of cyclones, their origin and mechanism</p> <p>CO2: and its impacts at different scales</p>
	<p>Module 4: Ocean Floor Topography</p>	<p>CO1: different types of ocean floor topography</p> <p>CO2: theories of origin of waves</p>
	<p>Module 5: Ocean Salinity and Temperature</p>	<p>CO1: Understand the oceanic process</p> <p>CO2: and availability of oceanic resources</p>
<p>Semester – IV</p> <p>Introduction to Global Economic System (BSCHGEOC401):</p>	<p>Module: I</p> <p>Introduction to Global Economic System; Concept and Classification of Economic Activities</p>	<p>Students learn about</p> <p>CO1: Different types of economic activities globally and their implications.</p>
	<p>Module: II</p> <p>Theories: Agricultural location theory (von Thunen); Theory of Industrial location (Weber's and Losch theory)</p>	<p>CO2: The locational theories of economic activities that are relevant to the contemporary world.</p>
	<p>Module: III</p> <p>Primary Activities: Types of Agriculture, Forestry, Fishing and Mining activities</p>	<p>CO3: Global scenario of primary activities and Red colour Workers.</p>

<p>Module: IV</p> <p>Secondary Activities: Global distribution of manufacturing activities (Cotton Textile, Iron and steel), Concept of manufacturing Regions; Special Economic Zones and Technology Parks</p>	<p>CO4: Global distribution and problems of two most important industries. CO5: Contemporary economic initiatives that are crucial to economic development.</p>
<p>Module: V</p> <p>Tertiary Activities: Role of Transport, Trade and Service in Economic development</p>	<p>CO6: Service sectors of economic activities and their importance on development.</p>
<p>Module: I</p> <p>Concept of Environment and Natural Resource Management, Human-environment Relationships</p>	<p>Students learn about CO1: The basic concept of environment and resource management. CO2: The relationship between man and environment.</p>
<p>Module:II</p> <p>Ecosystem: Concept, Structure and functions; Environmental Issues in tropical, Temperate and Polar ecosystems</p>	<p>CO3: The basics of ecosystem-both terrestrial and aquatic. CO4: The environmental issues such as pollution, deforestation, biodiversity loss, climate change etc. In different ecosystem.</p>
<p>Module: III</p> <p>Natural Resource: Concept, Classification; Distribution, Utilisation, Problems and Management of Land, Water, Forests and Energy</p>	<p>CO5: Distribution, utilization and proper management of natural resources.</p>
<p>Module: IV</p> <p>Conservation of Environment and Natural Resources with special reference to Soil, Water, Forest; Sustainable Resource Development</p>	<p>CO6: Necessities of conservation of environment and natural resources and conservation measures. CO7: Sustainability of resources and their development.</p>

Semester – IV
Digital Remote Sensing (BSCHGEOC403):

<p>Module: V</p> <p>Environmental Monitoring Programme: Policies – Global, National and Local</p>	<p>CO8: The necessities that are pre-requisite for assessment and review of planning and policies at global, national and local level.</p>
<p>Module: I</p> <p>EMR Interaction with Atmosphere and Earth Surface; Concept of Image Processing (Digital and Visual): Pre-processing (Atmospheric, Radiometric and Geometric Correction); Enhancement (Filtering); Classification supervised and Un-supervised)</p>	<p>Students will have ability to</p> <p>CO1: Get the concept of digital and visual image processing.</p> <p>CO2: Develop the skills so as to use digital satellite data using software.</p> <p>CO3: Classify supervised and unsupervised data.</p>
<p>Module:II</p> <p>Digital Image Processing and Interpretation</p>	<p>CO4: Prepare the maps based on satellite images and data to compare with the ground realities.</p>
<p>Module: III</p> <p>Application of Digital Remote Sensing: Land Use /Land Cover Mapping and Interpretation</p>	<p>CO5: Classify digital data for LULC studies and urban studies.</p>
<p>Module: IV</p> <p>Application of Digital Remote Sensing in Urban Studies with special reference to Urban Sprawl Analysis, Mapping and Interpretation</p>	<p>CO6: Compare the LULC maps in different periods of times.</p>
<p>Module: V</p> <p>Application of Remote Sensing in weather (tropical cyclones) studies and natural hazards (floods)</p>	<p>CO6: Study weather disturbances and natural hazards and mapping.</p>

Semester – IV
Industrial Development (BSCHGEOGE401):

<p>Module: I Nature and Scope of Industrial Geography</p>	<p>Students learn about CO1: Nature and Scope of Industrial Geography</p>
<p>Module:II Types, Geographical Characteristics and Location of Industries, Weber's theory of Industrial Location</p>	<p>CO2: Understand the factors responsible for location of an industry CO3: Understand the socio-economic and environmental applications of various types of industries.</p>
<p>Module: III Small, Medium and Heavy Industries: Coal and Iron based industries, Agro-based Industries, Footloose Industry</p>	<p>CO4: Small, Medium and Heavy Industries</p>
<p>Module: IV Mega Industrial complexes: National Capital region, Mumbai-Pune Industrial Region, Bengaluru-Chennai Industrial Region and Kota-Nagpur Industrial region</p>	<p>CO5: Mega Industrial Complexes</p>
<p>Module: V Industrial Policy of India, Impact of industrialisation in India</p>	<p>CO5: Differentiate various types of industries and gain knowledge about industrial regions and policies of India</p>

Semester – IV
Thematic Atlas (BSCHGEOSE402):

<p>Module: I Maps – Classification and Types; Principles of Map Design</p>	<p>Students will have the ability to CO1: Have a concrete knowledge about classification of maps, mapping principle and elements of map design.</p>
<p>Module:II Diagrammatic Data Presentation – Line Graph, Bar Graph, Proportional Circle, Pie Graph</p>	<p>CO2: Know the techniques of geographical data presentation explaining geographical issues. CO3: Know the proper application of techniques.</p>

Semester – IV Environmental Geography (BSCPGEOC401):		
	Module: III Thematic Mapping Techniques – Properties, Uses and Limitations; Areal Data - Choropleth, Dot, Proportional Symbol; Isopleths map	CO4: Know the methods of preparation of various thematic maps and their proper uses.
	Module: IV Cartographic Overlays – Point, Line and Areal Data	CO5: Have ideas about the methods of overlay (vector and raster). CO6: Know the generalization techniques for points, lines and areas.
	Module: V Rainfall dispersion diagram, Line graph showing trend of population growth, β index map	CO7: Have a sound knowledge regarding techniques and methods showing the rainfall variability, trend of decadal and annual growth of population and level of connectivity in a graph.
	Module: I Environmental Geography: Concepts and Approaches; Ecosystem – Concept and Structure; Ecosystem Functions: Concepts of food chain, food web, nutrient cycle and energy flow	Students learn about CO1: Appreciate the structure and functions of ecosystems with examples
Module:II Human-Environment Relationship in Equatorial, Desert, Mountain and Coastal Regions	CO2: Human-Environment Relationship in Equatorial, Desert, Mountain and Coastal Regions	

	<p>Module: III</p> <p>Environmental Problems and Management: Air Pollution; Solid and Liquid Waste; Biodiversity Loss</p>	CO3: Understand the environmental problems and relevant management strategies
	<p>Module: IV</p> <p>Environmental Programmes and Policies: Developed Countries; Developing Countries</p>	CO4: Acquire knowledge about the new environmental policies and the need to revise policies to tackle the environmental issues of India, in particular
	<p>Module: V</p> <p>New Environmental Policy of India; Government Initiatives</p>	CO5: New Environmental Policy of India; Government Initiatives
<p>Semester – IV Fundamentals of Remote Sensing and GPS (BSCPGE0SE401):</p>	<p>Module: I</p> <p>Remote Sensing: Definition, Development, Platforms and Types</p>	<p>Students learn about</p> <p>CO1: Basic concept of remote sensing</p>
	<p>Module:II</p> <p>Aerial Photography: Principles, Types and Geometry</p>	CO2: Aerial Photography: Principles, Types and Geometry
	<p>Module: III</p> <p>Satellite Remote Sensing: Principles, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS) and Sensors</p>	CO3: Understand the basics of EMR and energy interaction in atmosphere and on earth surface features
	<p>Module: IV</p> <p>Interpretation and Application of</p>	CO4: Interpretation and Application of Remote Sensing: Land use/ Land Cover

Semester – 5
Regional Planning and Sustainable Development (BSCHGEOC501) :

<p>Remote Sensing: Land use/ Land Cover</p>	
<p>Module: V Global Positioning System (GPS) and Global Navigation Satellite System (GNSS): Principles and Uses</p>	<p>CO6: Appreciate the development and uses of aerial and satellite remote sensing system and navigation satellite systems in India and other nations CO7: Analyse and interpret the aerial and satellite data products and GNSS/GPS survey results</p>
<p>Module: I a) Concept of Region: b) Formal, Functional, and planning regions, c) Evolution, Need and types of Regional Planning: d) Characteristics of Planning Region, delineation of Planning Region, regionalization of India for Planning, Agro-Ecological Zones:</p>	<p>Students learn about CO1: The general concepts of regions, CO2: Knowledge about different concepts of regionalization and Agro-Ecological zones</p>
<p>Module: II a) Theories and models for Regional Planning b) Myrdal, Hirschman, Rostow and Friedman; c) Growth Pole Model of Perroux; Village Cluster</p>	<p>After the completion of course, the students will have ability to: CO1. Identify notable backward regions and solutions for their overall development. CO2. Have comprehensive understanding regarding the different regions and application of different models and theories for integrated regional development. CO 3. Select appropriate indicators for the measurement of socio-economic regional development.</p>
<p>Module: III a) Sustainable Development: Concept of Development and Underdevelopment; b) Efficiency Equity Debate: c) Definition, Components and Sustainability for Development. Indicators (Economic, Social and Environmental)</p>	<p>After the completion of course, the students will have ability to: CO 1. Concept development of North-South debate CO 2. Built-up Knowledge about the needs for Sustainable Development</p>
<p>Module: IV a) Sustainable Development Policies and Programmes: Rio+20;</p>	<p>After the completion of course, the students will have ability to: CO 1. Concept development of North-South debate CO 2. Built-up Knowledge about the needs for</p>

	<p>b) Goal-Based Development; c) Financing for Sustainable development</p>	<p>sustainable Development CO 3. Select appropriate indicators for the measurement of socio-economic regional development.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Semester – 5 Field Techniques, Surveying and Research Methods (BSCHGEOC502) :</p>	<p>Module: I a) Meaning, Significance, Types and Approaches to Research in Geography; b) Literature review; c) Field Work in Geographical Studies –Defining the Field and Identifying the Case Study</p>	<p>Students learn about CO 1: The general concepts of research, CO 2: Knowledge about different Field Survey, Field techniques and Case study.</p>
	<p>Module: II a) Research Design: Identification of Research Problem; Research questions. b) Data Collection: Type and Sources of Data; Methods of Collection; Data Analysis, Data Representation techniques</p>	<p>After the completion of course, the students will have ability to: CO 1. Conduct proper field work for the collection of primary data to bring out grassroots realities. CO 2. Make use of proper tools and surveying methods for measurement in context of collection and processing of data. CO 3. Prepare a report based on field data</p>
	<p>Module: III a) Field Techniques – Merits, Demerits and Selection of the appropriate Technique; b) Observation (Participant / Non-Participant), c) Questionnaires (Open/ Closed Structured / Non-Structured)</p>	<p>After the completion of course, the students will have ability to: CO 1. Make use of proper tools and surveying methods for measurement in context of collection and processing of data. CO 2. Prepare a report based on field data</p>
	<p>Module: IV a) Surveying Use of Field Tools:umpy level, Prismatic Compass, theodolite b) Designing the Field Report – aims and Objectives, Methodology, analysis, c) Interpretation and Writing the report</p>	<p>After the completion of course, the students will have ability to: CO 1. Conduct proper field work for the collection of primary data to bring out grassroots realities. CO 2. Make use of proper tools and surveying methods for measurement in context of collection and processing of data. CO 3. Prepare a report based on field data</p>
<p>Semester – 5 Geography of West Bengal</p>	<p>Module: I a) Physiography of West Bengal: Physiography and Broad Physiographic Division,</p>	<p>Students learn about CO 1: The general concepts of Physiography, CO 2: Overall Knowledge about West Bengal mainly its Soil, Climate, Water etc.</p>

<ul style="list-style-type: none"> b) Climate, c) Drainage System and Ground water, d) Soil and Forest resources 	
<p>Module: II</p> <ul style="list-style-type: none"> a) Demography of West Bengal: b) Population Composition (age, sex, literacy, religion, and caste) c) Population Growth and distribution, d) Urbanization (Characteristics and Pattern) 	<p>After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> CO 1. Understand the demography, economy, and regional issues of West Bengal CO 3. Assess the developmental problems of West Bengal in the context of future planning
<p>Module: III</p> <ul style="list-style-type: none"> a) Economy of West Bengal: b) Irrigation and Agriculture, c) Mining, Industries, and transport development 	<p>After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> CO 1. Knowing about Economy, Irrigation, Agriculture, Mining, Industries, and transport development of West Bengal
<p>Module: IV</p> <ul style="list-style-type: none"> a) Developmental Perspective of Special Regions in West Bengal: b) Darjeeling Hill Region, Jharkhand Region, Sundarban region c) Developmental Problems and potentials of West Bengal: d) Deforestation and Joint Forest management, e) Special Economic Zones, f) Regional Dimension of Human development 	<p>After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> CO 1. Understand the demography, economy, and regional issues of West Bengal CO 2. Assess the developmental problems of West Bengal in the context of future planning
<p>Module: I</p> <ul style="list-style-type: none"> a) Hydrological Cycle b) Systems approach in Hydrology, Basin and Global Hydrological cycle, human impact on the Hydrological cycle c) Precipitation, interception, evaporation, evapotranspiration, infiltration, ground-water, runoff, and runoff cycle 	<p>Students learn about</p> <ul style="list-style-type: none"> CO 1: The general concepts of Hydrology Cycle, CO 2: Overall Knowledge Hydrology.
<p>Module: II</p> <ul style="list-style-type: none"> a) Water Balance: b) input and output; c) floods and droughts; 	<p>After the completion of course, the students will have ability to:</p> <ul style="list-style-type: none"> CO 1. Understand the basic components of hydrological cycle

<p>d) Integrated water resource management.</p>	<p>CO 2. Comprehend practices of integrated watershed management.</p>
<p>Module: III</p> <p>A) River Basin: Characteristics and problems of river basins, B) basin surface run-off, and measurement of river discharge. C) Watershed management - with reference to DVC</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1.Integrated water shed management. CO 2. Evaluate the water balancing and river basin and water disputes.</p>
<p>Module: IV</p> <p>A) River Water Dispute: Kaveri and Teesta River water dispute: B) River linkages in India – merits and demerits</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1.Understand about River disputes. CO 2.Knowledge about River linkages and its’ pitfalls.</p>
<p>Module: I</p> <p>a) Structure and Relief, b) Drainage, c) Climate of India</p>	<p>Students learn about</p> <p>CO 1: The general concepts of Physiography, Drainage, Climate of India.</p>
<p>Module: II</p> <p>a) Size and Growth of Indian population since 1901, Distribution, Literacy, b) Sex Ratio of Indian population c) Settlement System - Rural Settlement Types and Patterns, Urban Settlement Patterns.</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1.Understand the Indian demographic and settlement structure.</p>
<p>Module: III</p> <p>a) Resource Base – Livestock (Cattle and Fisheries), b) Power (Coal, and Hydro-electricity), c) Minerals (Iron Ore and Manganese)</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1.Study the economy and various types of resources in India CO 2.Know about the resource base of the country.</p>

<p>Module: IV</p> <p>a) Economy – Agriculture (Rice, Wheat, Jute, Groundnut, Tea);</p> <p>b) Industries (Cotton Textile, Iron-Steel, Automobile), IT and service-based Industries</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1.Study the economy and various types of resources in India.</p> <p>CO 2.Know about agriculture, Industries etc.</p>
<p>Module: I</p> <p>I) Field work in Geographical studies</p> <p>II) Definition, Concept, Role, Value and Ethics of Field work</p>	<p>Students learn about</p> <p>CO 1. Fieldwork its' importance.</p> <p>CO 2. Value and Ethics of Field work.</p>
<p>Module: II</p> <p>I) Defining the Field and Identifying the Case Study – Rural / Urban / Physical / Human / Environmental,</p> <p>II) Types of data.</p> <p>III) Field Techniques – Merits, Demerits and Selection of the appropriate Technique</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1 conduct field work in physical and human geography, besides investigating socioeconomic and environmental issues;</p> <p>CO2 Develop tools to collect primary data from the field and interpret them meaningfully;</p>
<p>Module: III</p> <p>I) Surveying methods: Questionnaires (Open/ Closed / Structured / Non-Structured);</p> <p>II) Interview with Special Focus and Focused Group Discussions;</p> <p>III) Participatory Rural Appraisal (PRA).</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1 Describe the meaning of Questionnaires, Interview.</p> <p>CO 2 Meaning of Participatory Rural Appraisal</p>
<p>Module: IV</p> <p>I) Designing the Field Report – aims and Objectives, Methodology, Analysis,</p> <p>II) Interpretation and Writing the report.</p>	<p>After the completion of course, the students will have ability to:</p> <p>CO 1.Prepare field report with suitable tables, maps and diagrams based on the data collected from the field and secondary sources.</p>

Semester – VI
Evolution of Geographic Thought (BSCHGEOC601) :

<p>Module: I Pre-Modern Geography– Early origins of Geographical Thinking with reference to the Greek, Roman and Arab thinkers (Ancient and Medieval)</p>	<p>Students learn about CO1: Understand the development of geographical thinking.</p>
<p>Module: II Modern Geography – Evolution of geographical Thinking and Disciplinary trends in Germany, France, Britain, United States of America</p>	<p>CO2: Evolution of Geographical Thinking and disciplinary Trends</p>
<p>Module: III Debates between Environmental Determinism and Possibilism, Systematic and Regional Geography, Ideographic and Nomothetic approach in Geography</p>	<p>CO3: Debates between Environmental Determinism and Possibilism</p>
<p>Module: IV Paradigms and Paradigm shift in geography: Quantitative to Critical evolution, Modernism to Post modernism</p>	<p>CO4: Understand paradigms in geography discipline through time</p>
<p>Module: V Recent Trends –Systems Approach, Radicalism, Feminism; Concept of Space Geography, Future of Geography</p>	<p>CO5: understand the past and future trends of geography as a discipline</p>

Semester – VI
Disaster Management Project Work (BSCHGEOC602) :

The Project Report based on any two field-based case studies among following disasters and one disaster preparedness plan of respective college/locality and district:

1. Flood
2. Drought
3. Cyclone and Hailstorms
4. Earthquake and Volcanoes
5. Landslides
6. Human Induced Disasters: Fire hazards, Chemical, Subsidence, industrial accidents.

After the completion of course, the students will have ability to:

- CO1: Understand processes and impact of disaster on empirical basis.
- CO2: Distinguish both the natural and man-made disaster.
- CO3: Design and prepare project work on disasters.

Semester – VI
Biogeography (BSCHGEODSE602) :

Module: I
Introduction to Bio-geography: nature, scope, and contents

Students learn about
CO1:Familiarise the dynamics of climate and related theories.
CO2: Introduction to Bio-geography

Module: II
Biogeographical regions of the world

CO3: Understand of Vegetation as an index of climate.
CO4:Biogeographical regions of the world

Module: III
Definition of biosphere, meaning of ecology, Eco-tone, Communities, habitats, ecological niche, Biomes, ecological pyramids

CO5: Assess of different aspects of floral and faunal provinces.
CO6:Biomes, ecological pyramids

	<p>Module: IV</p> <p>Ecological successions: stages and climax</p>	CO7: Ecological successions
	<p>Module: V</p> <p>Biodiversity; bio-diversity hotspots, biodiversity conservation: Tiger and elephant conservation in India</p>	CO8: Biodiversity; bio-diversity hotspots, biodiversity conservation
<p>Semester – VI Soil Geography (BSCHGEODSE605) :</p>	<p>Module: I</p> <p>Concept of soil, pedology, and endogenic processes, soil functions, physical and chemical properties of soil: texture, Structure, pH, Organic matter</p>	<p>Students learn about</p> <p>CO1: Understand the concepts related to soil. CO2: Physical and chemical properties of soil: texture, Structure, pH, Organic matter</p>
	<p>Module: II</p> <p>Factors of soil development, Concept of soil profile, profile development of zonal soils: Laterite, Chernozem and Podzol</p>	CO3: profile development of zonal soils: Laterite, Chernozem and Podzol
	<p>Module: III</p> <p>Concept of soil fertility, factors affecting fertility and fertility improvement methods.</p>	CO4: To know about soil fertility and its significance
	<p>Module: IV</p> <p>Soil erosion, soil degradation, need and strategies of soil conservation, distribution and characteristics of Indian soils</p>	CO5: Importance of their preservation
	<p>Module: V</p> <p>USDA classification of Soils, types of soil survey</p>	CO6: : The soil diversities
<p>Semester – VI Disaster Risk Reduction</p>	<p>Module: I</p> <p>Disasters, Hazards, Risk, Vulnerability and Disasters: Definition and Concepts</p>	<p>Students learn about</p> <p>CO1: Disasters, Hazards, Risk, Vulnerability and Disasters</p>

	<p>Module: II Disasters in India: (a) Causes, Impacts and Distribution: Flood and Drought</p>	<p>CO2: Acquire knowledge on concepts, types, distribution and mapping of disasters in India CO3: Causes, Impacts and Distribution: Flood and drought</p>
	<p>Module: III Disasters in India: (b) Causes, Impacts and Distribution: Earthquake and cyclone</p>	<p>CO4: Acquire knowledge on concepts, types, distribution and mapping of disasters in India CO5: Causes, Impacts and Distribution: Earthquake and Cyclone</p>
	<p>Module: IV Human induced disasters: Causes, impacts and Distribution: Underground fire and land subsidence in colliery region</p>	<p>CO4: Understand the man-made disasters and human negligence in the context of environment</p>
	<p>Module: V Disaster Risk Reduction: Mitigation and Preparedness, NDMA and NIDM; Community Based Disaster Management; Do's and Don'ts during disasters</p>	<p>CO5: Bring awareness about the preparedness, mitigation and processes of disaster risk reduction</p>
<p>Semester – VI Introduction to Geographic Information System (BSCPGE0601) :</p>	<p>Module: I Geographic Information System (GIS): Definition, Components and Principles</p>	<p>Students learn about CO1: Appreciate the basic principles and components of GIS</p>
	<p>Module: II GIS Data Structures: Types (Spatial and Non-spatial), Raster and Vector Data structure</p>	<p>CO2: Apply raster and vector data structure for GIS analysis</p>
	<p>Module: III GIS Data Analysis: Input; Geo-referencing; Editing and Output; Overlays</p>	<p>CO3: GIS Data Analysis: Input; Geo-Referencing; Editing and Output; Overlays</p>
	<p>Module: IV Application of GIS in Urban Sprawl</p>	<p>CO4: Analyse the basic resources, land use and urban related data using GIS software for meaningful interpretation</p>

natural Resource Management

Module: V

Application of GIS in Land use/Land-cover

CO5: Application of GIS in Land use/Land-cover