

## **PROGRAM OUTCOMES, PROGRAM SPECIFIC OUTCOMES AND COURSE OUTCOMES DEPARTMENT OF GEOGRAPHY**

### **UNDERGRADUATE SECTION**

**Model Reference:** University of Calcutta, Syllabus for General (CBCS) 2018-19

Choice Based Credit System (CBCS): Syllabus in Geography 2018-19

**Introduction:** In compliance with recent directives from the University Grants Commission, the undergraduate syllabus for Geography is reframed into Choice Based Credit System largely following the model syllabus prepared by the West Bengal State Council of Higher Education.

The main objective of this new curriculum is to give the students a holistic understanding of the subject, putting equal weightage to the core content and techniques used in Geography. The syllabus tries to give equal importance to the two main branches of Geography: Physical and Human.

The principal goal of the syllabus is to enable the students to secure a job at the end of the undergraduate programme. Keeping this in mind and in tune with the changing nature of Geography, adequate emphasis is rendered on applied aspects of the subject such as emerging techniques of mapping and field-based data generation, especially in the General course. The syllabus emphasizes on development of basic skills of the subject, so that everyone need not go for higher studies in search of professional engagement or employment.

### **PROGRAMME OUTCOMES**

**PO1** Students will be able to understand basic concepts of Geography.

**PO2** This programme trains the students in scientific skill both in theory and practical. It develops their aptitude for geography.

**PO3** The programmes have been instigating our students to secure skillfully their jobs as teachers, researchers in the institutes, teachers-both in schools and higher education institutes, administrators in government jobs as well as in private companies, personnel in industries, naturalists and in many other positions.

**PO4** The programme has helped the learners develop their aptitude of individual planning, habit of working in groups, field survey, practical skills and other skills which fit them in various spheres of life.

**PO5** The course develops a sense of awareness about the environment, society, and the scientific community.

**PO6** Students become equipped with the ability to respond to both natural and man-made disasters and acquire management skills. This is attained through the curriculum by studying and analyzing hazards, disasters, their impact and management.

**PO7** Ability to undertake research in interdisciplinary studies and problems or issues beyond the realm of what strictly comes under the purview of geography. This is possible because of the varied nature of the curriculum that encompasses the study and analyses of concepts of sub-disciplines and allied disciplines

of Geology, Seismology, Pedology, Hydrology, Environmental Studies, Disaster Management, Resource, Management and Conservation, Regional Planning and Development Studies etc.

## **PROGRAM SPECIFIC OUTCOMES**

After the successful completion of B.A/B.Sc. in Geography, students gain the knowledge of the following:

**PSO1** Student will gain the knowledge of physical geography. They will gather knowledge about the fundamental concepts of Geography and will have a general understanding about the geomorphologic and geotectonic process and formation. Imbibing knowledge, skills and holistic understanding of the Earth, atmosphere, oceans, and the planet through analysis of landform development; crustal mobility and tectonics, climate change.

**PSO2** Developing a sustainable approach towards the ecosystem and the biosphere with a view to conserve natural systems and maintain ecological balance.

**PSO3** Explaining and analyzing the regional diversity of India through interpretation of natural and planning regions.

**PSO4** Awareness about the hazards and disasters to which the subcontinent is vulnerable; and their management.

**PSO5** Training in practical techniques of mapping, cartography, interpretation of maps, photographs, and images etc.; so as to understand the spatial variation of phenomena on the Earth's surface.

**PSO6** Analyzing the differential patterns of the human habitation of the Earth, through studies of human settlements and population dynamics. Understanding and accounting for regional disparities, poverty, unemployment, and the impacts of globalization

**PSO7** Training in practical techniques of mapping, cartography, software, interpretation of maps, photographs, and images etc.; so as to understand the spatial variation of phenomena on the Earth's surface. They will learn how to prepare map based on GIS by using the modern geographical map making techniques.

## **1.1 GENERAL COURSE: CORE SUBJECTS**

**GEO-G-CC-1-01-TH/P – Physical Geography**

**GEO-G-CC-2-02-TH/P – Environmental Geography**

**GEO-G-CC-3-03-TH/P – Human Geography**

**GEO-G-CC-4-04-TH/P – Cartography**

## **1.2 GENERAL COURSE: CHOICES FOR TWO DISCIPLINE SPECIFIC ELECTIVES**

**GEO-G-DSE-A-5-01-TH/P – Regional Development**

**GEO-G-DSE-A-5-02-TH/P – Geography of Tourism**

**GEO-G-DSE-B-6-03-TH/P – Agricultural Geography**

**GEO-G-DSE-B-6-04-TH/P – Population Geography**

## **1.3 GENERAL COURSE: CHOICES FOR TWO SKILL ENHANCEMENT COURSES**

**GEO-G-SEC-A-3/4-01-TH – Coastal Management**

**GEO-G-SEC-A-3/4-01-TH – Forest and Wildlife Management:**

**GEO-G-SEC-B-5/6-03-TH – Rural Development**

**GEO-G-SEC-B-5/6-03-TH – Sustainable Development**

## **COURSE OUTCOMES[GENERAL] 2018-19**

The course outcomes of the different papers offered are presented below. After completion of the course the student will be able to:

**Course code: CC-1-01-TH/P**

**Course title: Physical geography**

**Credits: 4+2=6**

**Course outcomes:**

- Understand the theories and fundamental concepts of
- Geotectonic and Geomorphology. Understand earth's
- tectonic and structural evolution. Gain knowledge about
- earth's interior. Develop an idea about concept of plate
- tectonics, and resultant landforms.
- Acquire knowledge about types of folds and faults and
- earthquakes, volcanoes, and associated landforms.
- Understanding crustal mobility and tectonics; with
- special emphasis on their role in landform development.
- Overview and critical appraisal of landform
- development models.
- Ability to record temperature, pressure, humidity and
- rainfall
- Develop the skills of identification of features and
- correlation between them.

- Do field surveys using appropriate techniques.
- Identification of rocks and minerals.
- Analyze the concepts of Hydrology and Oceanography
- Emphasizing the significance of groundwater
- quality and its circulation
- Evaluate the role of the global hydrological cycle.
- Studying the behavior and characteristics of the global oceans.
- Realize the importance of water conservation.
- Identify marine resources and characteristics of ocean waters.
- Interpret hydrological and rainfall dispersion graphs and diagrams.

**Course code CC-2-02-Th/P**

**Course title: Environment geography**

**Credit: 4+2=6**

- Understand the elements of weather and climate. different atmospheric phenomena and climate change.
- Learn to associate climate with other environmental and human issues. Approaches to climate classification.
- To analyze the dynamics of the Earth's atmosphere and global climate. Assessing the role of man in global climate change.
- Prepare various climatic maps and charts and interpret them.
- Learn to use of various meteorological instruments.
- Learn the interaction between the atmosphere and the earth's surface. Understand the importance of the atmospheric pressure and winds.
- Understand how atmospheric moisture works.
- Have knowledge about the character and profile of different soil types.
- Understand the impact of man as an active agent of soil transformation, erosion and degradation.
- Recognize land capability and classify it.
- Explaining the Pedological and Edaphological
- Approaches to Soil Studies - Processes of soil formation, types of soil, and principles of soil and land classification; and management.
- Understand the varied ecosystems and classify them.
- Recognize the significance of biogeochemical cycles and biodiversity.
- Comprehend the devastating impact of deforestation.
- Identify soil types and derive their pH

**Course code CC-3-03-Th/P**

**Course title: Human geography**

**Credit: 4+2=6**

- Gain knowledge about major themes of human Geography.
  - Acquire knowledge on the history and evolution of humans.
  - Understand the approaches and processes of Human Geography as well as the diverse patterns of habitat and adaptations.
  - Develop an idea about space and society
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- Understand the scope and content of cultural geography
  - Trace the development of cultural geography in relation to allied disciplines
  - Understand the concept of cultural hearth and realm, cultural diffusion, diffusion of religion
  - Develop an understanding of cultural segregation and cultural diversity, technology, and development
  - Learn about the various races and racial groups of the world
  - Identify the cultural regions of India

**Course code CC-3-03-Th/P**

**Course title: Cartography**

**Credit: 4+2=6**

- Understand and prepare different kinds of maps.
- Recognize basic themes of map making.
- Development of observation skills.
- Comprehend the concept of scales and representation of data through cartograms.
- Interpret geological and weather maps.
- Learn the usages of survey instruments.
- Brings direct interaction of different types of surveying instruments like Dumpy level and Theodolite with environment.
- Develop an idea about different types of thematic mapping techniques.
- Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes.
- Interpret satellite imagery and understand the preparation of false color composites from them.
- Training in the use Geographic Information System (GIS) software for contemporary mapping skills.

- Analyzing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface.

## **GENERAL COURSE : DISCIPLINE SPECIFIC ELECTIVES**

**Course Code: DSE-A-5-01TH/P**

**Course title: Regional geography**

**Credits:4+2=6**

- Understand and identify regions as an integral part of geographical study.
- Appreciate the varied aspects of development and regional disparity, in order to formulate measures of balanced development.
- Analyzing the concept of regions and regionalization.
- Studying typical physiographic, planning, arid and biotic regions of India. Understanding the detailed geography of India.
- Gain knowledge about definition of region, evolution, and types of regional planning. Develop an idea about choice of a region for planning.
- Build an idea about theories and models for regional planning. Know about measuring development indicators.
- They can know about delineation of formal regions by weighted index method and also delineation of functional regions by breaking point analysis.
- Gain knowledge about measuring inequality by Location Quotient, and also measuring regional disparity by Sopher Index.

**Course Code: DSE-A-5-02TH/P**

**Course title: Geography of tourism**

**Credits:4+2=6**

- Learn Scope and Nature: Concepts and issues, tourism, recreation, and leisure inter-relations; Factors influencing tourism, Types of Tourism: Ecotourism, cultural tourism, adventure tourism, medical tourism, pilgrimage, international, national.
- Use of information on factors (Historical, natural socio-cultural, and economic; motivating factors for pilgrimages) to plan destination marketing; tourism products; niche tourism planning ; Tourism impact assessment, Sustainable tourism, Information Technology and Tourism, Tour operations planning and guiding.
- Increasing Global tourism; Tourism in India: Tourism infrastructure, access, planning for different budgets for case study sites of Western Himalayas, Goa, Chilka / Vembanad, Jaipur

**Course Code: DSE-B-6-03TH/P**

**Course title: Agriculture geography**

**Credits: 4+2=6**

- To study the Progress of Agricultural Geography with reference to allied disciplines, approaches to study of Agricultural Geography. Role of agriculture on human society, Factors affecting agriculture, Classification of world agricultural systems, study about major agricultural types: Intensive subsistence, extensive commercial and plantation agriculture.
- To study Concept of cropping pattern, crop combination, gross and net cropped area, crop rotation, and factors affecting yield and measures of agricultural productivity.
- To study critical review and contemporary perspective of Von Thünen model.
- To study the role of irrigation in Indian agriculture and Problems of agriculture with special reference to South Asian countries, World patterns of agricultural production and food security. Land use survey and land classification (USDA). Globalization and agriculture with special reference to India.
- To practice the Preparation and interpretation of crop calendar using Ergograph, Preparation of crop combination regions by Weaver , Determination and mapping of cropping intensity, determination, and mapping of crop diversity .

**Core course:DSE-B-6-04-TH/P**

**Course title:Population geography**

**Credits: 4+2=6**

- To study about Relation between population geography and demography and Population distribution: density and growth. Classical and modern theories in population distribution and growth, Demographic transition model, optimum population, Population distribution, density and growth profile in India.
- To study Concepts of age-sex composition; Rural and urban composition; Literacy and education. Measurements of fertility and mortality, Population composition of India: Urbanization and occupational structure.
- To know the Migration: Causes and types and National and international patterns of migration with reference to India, human development index and its components.
- India's population policies. Population and environment, implication for the future.
- To study the issues: Ageing of population, declining sex ratio, population and environment dichotomy, impact of HIV/AIDS.
- To practice the Population projection by arithmetic method, Population density mapping: State wise for India. Analysis of work participation rate: Total and gender-wise for India. Analysis occupation structure by dominant and distinctive functions: Districts of West Bengal

### **GENERAL COURSE: CHOICES FOR TWO SKILL ENHANCEMENT COURSES**

This SEC paper helps to enhance skills to identify problems and its management in the coastal areas

**Course Code: SEC-A-3/4-01-TH**

**Course title: Coastal Management**

**Credits:2**

- Understand the nature of hazards and disasters.

- Assess risk, perception and vulnerability with respect to hazards.
- Prepare hazard zonation maps.
- Assessing the nature, impact and management of major
- natural and man-made hazards affecting the Indian subcontinent

**Course Code:** SEC-A-3/4-01-TH

**Course title:** Forest and wild life management

**Credits:** 2

- To study the importance and strategies of forest and wildlife management.
- To study the Legal frameworks of forest and wildlife protection in India like the Indian
- Forest Act 1927, forest conservation Act 1980, Wildlife Protection Act 1972, Biodiversity Act 2000.
- Learn about forest rights, management of poaching and illegal logging.
- To know about various cases of human-wildlife conflicts like Jangal Mahal, Sundarban and Duars.

**Course Code:** SEC-B-5/6-03-TH

**Course title:** Rural geography

**Credits:** 2

- To study the importance and strategies of forest and wildlife management.
- To study the Legal frameworks of forest and wildlife protection in India like the Indian
- Forest Act 1927, forest conservation Act 1980, Wildlife Protection Act 1972, Biodiversity Act 2000.
- Learn about forest rights, management of poaching and illegal logging.
- To know about various cases of human-wildlife conflicts like Jangal Mahal, Sundarban and Duars.

**Course Code:** SEC-B-5/6-03-TH

**Course title:** Sustainable development

**Credits:** 2

- Sustainable development To study the concept, historical background, components, limitations of sustainable development.
- To study Challenges of sustainable development like Determinants, linkage among sustainable development, environment, and poverty.
- To know about Global environmental issues like Population, income, and urbanization, health care, forest, and water resources
- To study the Global goals for sustainable development



## **PROGRAM OUTCOME (Geography general, three year general course 2019- 2020, 1+1+1 system)**

### **MODULE V REGIONAL GEOGRAPHY**

- Understand and identify region as an integral part of geographical study.
- Appreciate the varied aspect of development and regional disparity, in order to formulate measures of balanced development.
- Build and idea about theories and model for region.
- Planning know about measuring development indicator.

### **MODULE VI APPLIED GEOGRAPHICAL TECHNIQUES**

- Understand and prepare different kinds of maps and map projection
- Recognize basic themes of map making and cartograms
- Development an idea about different type of thematic mapping techniques.
- Brings direct interaction of the different types of survey.

### **MODULE VII LAND USE AND SETTLEMENT GEOGRAPHY**

- Development an idea about urban and rural land use.
- Understand about rural settlement, nature, and physical environment
- Acquire knowledge about urban settlement, morphology and function.

### **MODULE VIII REMOTSENSING AND THEMATIC MAPPING**

- Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes.
- Interpret satellite imagery and understand about various types of land and there uses.
- preparation of false color composites from them.
- Training in the use Geographic Information System (GIS) software for contemporary mapping skills.
- Analyzing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface.