

**THIRD SEMESTER**  
**GEOGRAPHY HONOURS COURSE**  
**DISCIPLINE SPECIFIC CORE COURSE -DSC**

**CLIMATOLOGY**

**COURSE CODE: GEO-H-DSC-3-05-TH Credit: 04**

1. Atmospheric composition and structure; insolation and temperature: factors and distribution, heat budget, temperature inversion.
2. Atmospheric pressure and winds: planetary winds, forces affecting winds, Monsoon: origin and mechanism.
3. Cyclones: Tropical cyclones, extra tropical cyclones

**PRACTICALS**

**Credit: 02**

1. Meteorological instruments: Recording of maximum and minimum thermometer, hygrometer; Interpretation of Indian daily weather report (summer and winter case)

*Practical Record: A project file covering all practical topics must be prepared.*

**STATISTICAL METHODS IN GEOGRAPHY**

**COURSE CODE: GEO-H-DSC-3-06-TH Credit: 04**

1. Significance of Statistics in Geography
2. Use of data in Geography: Sources of data, scales of measurement (nominal, ordinal, interval, ratio)
3. Sampling: purposive, random, systematic and stratified

**PRACTICALS Credit: 02**

1. Tabulation of data; frequency distribution table, class group and class interval; Descriptive statistics: Deciles, Quartiles, Cross Tabulation, Measures of Central Tendency (Mean, Median and Mode), Measures of Dispersion (Standard Deviation, Variance and Coefficient of Variation).

**GEOGRAPHY OF INDIA**

**COURSE CODE: GEO-H-DSC-3-07-TH Credit: 04**

1. Physical: Physiographic divisions, soil, vegetation, climate (characteristics and classification)
2. Economic: Mineral and power resources distribution and utilization of coal, petroleum, gas; agricultural production and distribution of rice and wheat;
3. Social: Distribution of population by race, caste, religion.

**COURSE CODE: GEO- H-DSC-3-07-PR Credit: 02**

**PRACTICALS**

1. Monthly temperature and rainfall graphs of five selected stations from different physiographic regions of India

*Practical Record: A project file covering all practical topics must be prepared.*

**SKILL ENHANCEMENT COURSE - SEC (ANY ONE)**

*Students will have to choose any one from the given course*

**REMOTE SENSING**

**COURSE CODE: GEO-SEC-A-3-01-TH Credit: 02**

1. Remote Sensing: Definition and development; platforms and types; photogrammetry.
2. Satellite Remote Sensing: Principles, EMR Interaction with atmosphere and earth surface; satellites (Landsat and IRS); sensors
3. Application of Remote Sensing: Land Use/Land Cover.

**RURAL DEVELOPMENT**

**COURSE CODE: GEO-SEC-A-3-01-TH Credit: 02**

1. Rural Development: Concept, basic elements, measures of level of rural development
2. Paradigms of rural development: Gandhian approach to rural development;
3. Area based approach to rural development: PMGSY; Target group approach to rural development: SJSY, MNREGA, Jan DhanYojana

**FIFTH SEMESTER**  
**GEOGRAPHY HONOURS COURSE**  
**DISCIPLINE SPECIFIC CORE COURSE –DSC**

**ENVIRONMENTAL GEOGRAPHY**

**COURSE CODE: GEO-H-DSC-5-11-TH**

**Credit: 04**

1. Environmental Geography: components of environment (physical and socio-cultural)
2. Human-environment relationships: adaptation in different biomes.
3. Ecosystem: Concept, structure and functions and problems in tropical and temperate ecosystems

**COURSE CODE: GEO-H-DSC-5-11-PR**

**Credit: 02**

**PRACTICALS**

1. Project on environmental problems of North Bengal. Project Report
  - a. Each student will prepare an individual report based on primary and secondary data
  - b. The word count of the report should be about 4000 to 6000 excluding figures, tables, photographs, maps, references and appendices
  - c. One typed copy of the report on A4 size paper should be submitted in soft binding.

**REMOTE SENSING AND GIS**

**COURSE CODE: GEO-H-DSC-5-12-TH**

**Credit: 04**

1. Remote Sensing and GIS: Definition and components, development, platforms and types.
2. Aerial Photography and Satellite Remote Sensing: principles, types and geometry of aerial photograph; principles of remote sensing, EMR interaction with atmosphere and earth surface; satellites (Landsat and IRS) and sensors.
3. GIS Data Structures: raster and vector data structure.

**COURSE CODE: GEO-H-DSC-5-12-PR**

**Credit: 02**

**PRACTICALS**

1. Image Processing (Digital & Manual), Classification (Supervised & Unsupervised); Georeferencing, Editing and Output, Overlays.

Practical Record

*A project file consisting of two exercises will be done from aerial photos and satellite images (scale, orientation and interpretation) and 3 exercises using any of the following software: Map Info/Global Mapper/QGIS/ERDAS*

**Important Note: Continuing evaluation will be as follows:**

**COURSE CODE: GEO-H-DSC-5-11: Seminar**

**COURSE CODE: GEO-H-DSC-5-12: Class Test**

**ELECTIVE DISCIPLINE SPECIFIC-DSE (ANY TWO)**

*(Students will have to choose any two courses, from Population Geography or Resource Geography and Urban Geography or Agricultural Geography)*

**COURSE CODE: GEO-H-DSE-5-01-TH Credit: 04**

**POPULATION GEOGRAPHY (THEORY)**

1. Population size, distribution and growth: Determinants and patterns.
2. Theories of growth; Malthusian Theory and Demographic Transition Theory.
3. Population dynamics: Fertility, mortality and migration; measures and determinants.

**COURSE CODE:GEO-H-DSE-5-01-PR Credit: 02**

**POPULATION GEOGRAPHY (PRACTICAL)**

1. Population projection by arithmetic method; Population density mapping for India.

**COURSE CODE: GEO-H-DSE-5-01-TH Credit: 04**

**RESOURCE GEOGRAPHY (THEORY)**

1. Distribution, utilization, problems and management of land resources and water resources.
2. Distribution, utilization, problems and management of forests and energy resources .
3. Sustainable resource development.

**RESOURCE GEOGRAPHY (PRACTICAL)**

**Credit: 02**

1. Computing Human Development Index: comparative decadal change of top five Indian states.

**COURSE CODE: GEO-H-DSE-5-02-TH Credit: 04**

**URBAN GEOGRAPHY (THEORY)**

1. Patterns of urbanization in developed and developing countries.
2. Functional classification of cities: Quantitative and qualitative methods.
3. Urban Issues: Problems of slums and housing.

**COURSE CODE: GEO-H-DSE-5-02-PR Credit: 02**

**URBAN GEOGRAPHY (PRACTICAL)**

1. Hierarchy of urban settlements: Rank-size rule.

**COURSE CODE: GEO-H-DSE-5-02-TH Credit: 04**

**AGRICULTURAL GEOGRAPHY (THEORY)**

1. Defining the field: Nature and scope; Land use/ land cover definition and classification.
2. Determinants of Agriculture: Physical, technological and institutional.
3. Agricultural Regions of India: Agro-climatic, Agro-ecological & Crop Combination Regions.

**COURSE CODE: GEO-H-DSE-5-02-PR Credit: 02**

**AGRICULTURAL GEOGRAPHY (PRACTICAL)**

1. Measurement of agricultural efficiency (Bhatia, Martin-Gibbs methods).

**GEOGRAPHY GENERIC ELECTIVE  
(FIRST/THIRD SEMESTER)**

**COURSE CODE: GEO-GE-01-TH**

**PHYSICAL GEOGRAPHY**

1. Geography as a discipline: Meaning, scope and content, branches of geography.
2. Interior structure of the earth; Rocks: Major types of rocks and their characteristics.
3. Geomorphology: Erosional and depositional features of river, glacier and wind.

**COURSE CODE: GEO-GE-01-PR**

**PRACTICALS**

1. Scale: Definition, classification, construction of simple linear scale; Map Projection: Definition and classification.

**THIRD SEMESTER**  
**GEOGRPHYPROGRAMME COURSE**  
**CORE COURSE – CC**

**REGIONAL DEVELOPMENT (THEORY)**

**COURSE CODE: GEO-P-CC-3-03-TH Credits: 04**

1. Definition, types of Regional planning: Formal, Functional, and Planning regions.
2. Regional Imbalances and problems of functional regions.
3. Problem Regions and Regional Planning.

**COURSE CODE: GEO-P-CC-3-03-PR Credits: 02**

**PRACTICALS**

1. Interpretation of Indian Topographical maps: plains and plateaus; scale 1:50000 (Broad physiography, drainage, natural vegetation, settlement, transport and communication, simple profiles and transect chart)

**SKILL ENHANCEMENT COURSE - SEC (ANY ONE)**

*Students will have to choose any one from the given course*

**REMOTE SENSING**

**COURSE CODE: GEO-SEC-A-3-01-TH**

**Credit: 02**

1. Remote Sensing: Definition and development; platforms and types; photogrammetry.
2. Satellite Remote Sensing: Principles, EMR Interaction with atmosphere and earth surface; satellites (Landsat and IRS); sensors
3. Application of Remote Sensing: Land Use/Land Cover.

**RURAL DEVELOPMENT**

**COURSE CODE: GEO-SEC-A-3-01-TH**

**Credit: 02**

1. Rural Development: Concept, basic elements, measures of level of rural development
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**FIFTH SEMESTER**  
**GEOGRPHYPROGRAMME COURSE**  
**DISCIPLINE SPECIFIC ELECTIVE - DSE**

*(Students will choose either Disaster Management or Sustainable Management)*

**DISASTER MANAGEMENT**

**COURSE CODE: GEO-P-DSE-5-01-TH Credits: 04**

1. Disasters: definition and concepts: hazards, disasters; risk and vulnerability; classification
2. Disasters in India: (a) flood: causes, impact, distribution and mapping; landslide: causes, impact, distribution and mapping; drought: causes, impact, distribution and mapping

**COURSE CODE: GEO-P-DSE-5-01-PR Credits: 02 PRACTICALS**

1. Project report based on any one field based case studies among the following disasters:
  - i. Flood
  - ii. Landslide
  - iii. Human induced disaster: fire, chemical and industrial accidents

**Practical Record**

- a. *Each student will prepare an individual report based on primary and secondary data collected during field work.*
- b. *The word count of the report should be about 4000 to 6000 excluding figures, tables, photographs, maps, references and appendices.*
- c. *One typed copy of the report on A 4 size paper should be submitted in soft binding*

**SUSTAINABLE DEVELOPMENT**

**COURSE CODE: GEO-P-DSE-5-01-TH Credits: 04**

1. Sustainable Development: Definition, components, limitations and historical background.
2. Inclusive Development: education, health; climate change: the role of higher education in sustainable development; the human right to health; poverty and disease; the challenges of universal health coverage; policies and global cooperation for climate change

**PRACTICALS**

1. Project report based on any one field based case study among the following:
  - i. Health issues in any local village
  - ii. Education status in any local village

**Practical Record**

- a. *Each student will prepare individual report based on primary and secondary data collected during field work.*
- b. *The word count of the report should be about 4000 to 6000 excluding figures, tables, photographs, maps, references and appendices.*
- c. *One typed copy of the report on A4 size paper should be submitted in soft binding.*