



DEPARTMENT OF GEOGRAPHY  
PRESIDENCY UNIVERSITY

Detailed Syllabus for Third Semester of Geography (Major) Undergraduate Course

Course Name: **Climatology**

Course Type: Core Course

Course Code: **GEOG03C5**

Credits: 6

Total Marks: 100

Course Evaluation:

Question Pattern -

Internal Assessment -

**GEOG03C5 (Theory) [Credits: 4 Marks: 70]**

**UNIT 1: Atmospheric Composition, Structure and Energetics**

- 1.1 Atmospheric Composition - Variation with Altitude, Latitude and Season; Constant and Variable gases; Vertical structure of the atmosphere; Temperature Inversion [3]
- 1.2 Mechanism of energy transfers: Conduction, convection and radiation; Nature of radiation; Radiation laws [6]
- 1.3 Atmosphere-Solar radiation interactions: reflection, scattering, absorption, transmission [6]
- 1.4 Planetary Radiation balance; Latitudinal heat balance; Greenhouse effect [4]

**UNIT 2: Atmospheric Moisture**

- 2.1 Evaporation, Measures and measurements of atmospheric humidity; Vapour pressure and saturation [3]
- 2.2 Adiabatic temperature changes; Stability and Instability; near-surface condensation - dew, mist, fog and clouds [5]
- 2.3 Lifting processes: orographic, frontal, convergence and convective [3]
- 2.4 Precipitation: Types and mechanisms [4]

**UNIT 3: Atmospheric Pressure and Winds**

- 3.1 Laws governing air motion and resulting flow patterns [6]
- 3.2 Planetary Winds, General Circulation, Jet Streams [6]
- 3.3 Zonal circulations: Tropical, Mid latitudes and High latitudes [6]

**UNIT 4: Atmosphere-Ocean Interactions and Climatic Classification**

- 4.1 Walker circulation and ENSO
- 4.2 Monsoon - Origins and Mechanisms
- 4.3 Classification of world climates (Koppen and Thornthwaite); Genetic Classification using air masses (Oliver)

**GEOG03C5 (Practical) [Credits: 2 Marks: 30]**

**UNIT 1: Climate Data Analysis**

- 1.1 Preparation of Station model and interpretation of synoptic chart
- 1.2 Preparation of climatological diagrams including hythergraph, hyteograph, climographs, ergograph, ombrothermic, water-balance, rainfall dispersion and relative temperature diagrams

  
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DEPARTMENT OF GEOGRAPHY  
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Detailed Syllabus for Sixth Semester of Geography (Major) Undergraduate Course

Module Name: Social and Political Geography

Module Type: Discipline Specific Elective

Paper Code: GEOG06DSE4

Credits: 6

Total Marks: 100

Module Evaluation:

Question Pattern -

Internal Assessment -

GEOG06DSE4 (Theory) [Credits: 4 Marks: 70]

Unit 1: Social Geography

- 1.1 Relevance of Social Geographic relevance: Peopling Process of India and Indian Society; Technology and Occupational Changes; Migration and Diaspora [8]
- 1.2 Social Categories: Caste, Class, Language, Religion, Race, Gender and their spatial distribution [8]
- 1.3 Geographies of Welfare and Wellbeing: Concept and Components - Healthcare, Housing, Education and Empowerment [8]
- 1.4 Social Geographies of Inclusion and Exclusion, Slums, Gated Communities, Communal Conflicts and Crime [8]

Unit 2: Political Geography

- 2.1 State, Nation and Nation State: Frontiers, Boundaries, Territory and Sovereignty, Concept of Nation State; Concept of geopolitics and theories (Heartland and Rimland) [16]
- 2.2 Electoral Geography - Geography of Voting, Geographic Influences on voting pattern, Geography of Representation, Gerrymandering [16]

GEOG06DSE4 (Practical) [Credits: 2 Marks: 30]

Unit 1: Practical learning

- 1.1 Analysis of access, infrastructure, and availability of healthcare, housing and educational facilities using data for India [22]
- 1.2 Analysis of political issues pertaining to election, displacement, SEZ, disputes arising from water and natural resource using secondary data [22]
- 1.3 Literature review, book review, written assignment submission, and presentation on various topics on social and political geography [20]

  
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DEPARTMENT OF GEOGRAPHY  
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Detailed Syllabus for Sixth Semester of Geography (Major) Undergraduate Course

Course Name: Fieldwork

Course Type: Core Course

Paper Code: GEOG06C14

Credits: 6

Total Marks: 100

Course Evaluation:

**GEOG06C14 (Field Survey) [Credits: 4 Marks: 70]**

A Field Survey shall involve "Identification, Mapping and Interpretation of Salient Features of the Habitat, Economy and Society of the Local Inhabitants" [64]

Measurement and mapping of slope using Clinometer / Dumpy Level / Abney Level or other instruments

Measurement and mapping of geomorphic and geographical features with GPS and other relevant instruments

Acquisition and mapping of landuse pattern by 'plot-to-plot' survey using cadastral map or of a municipal ward

Acquisition and mapping of socio-economic data by 'door-to-door' household enumeration using questionnaire

Identifying the relations between and among the attributes / components of : habitat, economy and society

Pages containing illustrations (sketches, graphs, diagrams, maps, photographs, etc) = 25 (maximum)

Documentation and generation of the field report with the following arrangement : preface, introduction, objectives, methodology, data acquisition, data analysis, data display and interpretation, analysis and conclusion, appendix (of data), and bibliography / references

Word Limit = 8000 (maximum) excluding Tables and Appendix (Computer typed, Line Spacing = 1½, Arial / Times New Roman / Helvetica / Calibri / Trebuchet 10 / 11)

**GEOG06C14 (Field Report) [Credits: 2 Marks: 30]**

A Field Report to be prepared and submitted individually by each student, based on actual Field Survey of an area, done jointly or in groups with other students under the supervision of one or more Prof-in-Charge, Field Study [64]

Presentation, Group Discussion and Viva on the prepared Field Report as stated above

**Suggested Readings: Fieldwork**

1. Saha, P.K. and Basu, P. (2009): *Advanced Practical Geography*, Books and Allied (P) Ltd., Kolkata
2. Sarkar, A. (2008): *Practical Geography: A Systematic Approach*, Orient BlackSwan, Kolkata



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DEPARTMENT OF GEOGRAPHY  
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Detailed Syllabus for Fourth Semester of the Postgraduate Course in Geography

Module Name: **Fieldwork Project**

Paper Type: Practical

Paper Code: **GEOG 1091**

Total Marks: 50

**Module Evaluation:** Part Evaluation based on performance in the Field and during preparation of the Field Report,  
Part Evaluation based on Presentation and Viva Examination at semester end

One proto-type research project based on guided tour type or pseudo-experimental fieldwork has to be undertaken. Candidates are expected to make factual or values enquiry using objective or subjective data, respectively, through the sequential stages of observation and perception; definition and description; analysis and explanation; prediction and evaluation; and decision-making. Following is a list of possible topics for project work.

**Physical Geography Topics (For Elective Stream I):**

**People-environment relationship**

- hazards like- flood, slope instability etc. and perception of such hazards (related to frequency, severity, risk etc.)
- pattern and fluctuation of pollution within an area
- effects of tourism pressure on a local beauty spot
- conflicts of interest over landuse change
- causes and effects of soil/land erosion
- environments costs and economic benefits of development projects
- environmental and ecological effects of excessive water abstraction

**Comparing contrasting places**

- two stretches of coasts with respect to forms, processes, habitats etc.
- two rivers or different stretches of one river with respect to morphology, hydrology, ecology etc.
- soils up a catena
- a succession of sand dunes
- areas of two different rock types
- local climate of two slopes, in and out of a town, in and out of a forest

**Temporal changes**

- Time scale may vary from a few days to few months or even years. But methods for collecting/deriving temporal data are to be so chosen that they yield comparable data sets.
- variations in beach profiles in different seasons of the year
- effects of deforestation or expansion of built-up area on sediment yield
- pattern of shoreline changes
- shifting of river
- change of vegetal cover
- erosion/accretion of riverine islands

**Analysis of distributions**

- landforms, drainage patterns
- sediment characteristics
- meanders and ox-bow lakes
- soil types, plant associations
- nature and amount of slope

**Analysis of processes**

- weathering and erosion, mass movement
- factors controlling river hydrograph
- beach processes
- development of soil profile, ecosystem processes

Pages containing illustrations (sketches, graphs, diagrams, maps, photographs, etc) = 25 (maximum). Documentation and generation of the field report with the following arrangement : preface, introduction, objectives, methodology, data acquisition, data analysis, data display and interpretation, analysis and conclusion, appendix (of data), and bibliography / references. Word Limit = 8000 (maximum) excluding Tables and Appendix (Computer typed, Line Spacing = 1½, Arial / Times New Roman / Calibri10 / 11)

Time allotted for Viva Voce / Examinee = 15 minutes (maximum), Marks on Field Performance of individual students (= 15) shall be awarded by the Internal Examiner(s) and on both Presentation (= 15) and Viva Voce (= 20) by the External Examiner(s).

**Suggested Readings: Fieldwork Project**

1. Saha, P.K. and Basu, P. (2009): *Advanced Practical Geography*, Books and Allied (P) Ltd., Kolkata
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**Human Geography Topics (For Elective Stream II)**

**Investigating local issues**

- disadvantaged inner-city areas/housing estates
- decaying green belts
- provision for an aging population
- rise in criminal activities
- impacts of the construction of a super market
- environmental/economic impacts of opening of a new bypass

**Examining a theory**

- Central Place theory
- models of urban morphology
- von Thunen's model of agricultural landuse
- demographic transition model

**Comparing contrasting places**

- areas of influence of three/four urban centres
- two or more markets
- two or more urban wards/boroughs/neighbourhoods

**Temporal changes**

- population characteristics of a country/state/urban centre over a Century
- characterization and impacts of social change in a rural village/urban centre
- landuse in rural/urban area
- gentrification of a small inner city area
- shop types along a major road

**Analysis of distributions**

- ethnic groups
- health facility centres
- crime
- diseases and morbidity
- schools
- deep tube wells for irrigation

**Study of People's behaviour**

- shopping behaviour
- household movement
- tourism and recreation
- residential preference
- health related practices (smoking, alcoholism, physical exercise etc.)

DEPARTMENT OF GEOGRAPHY  
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Detailed Syllabus for Fourth Semester of the Postgraduate Course in Geography

Module Name: **Dissertation Project**

Paper Type: Dissertation

Paper Code: **GEOG 1092**

Total Marks: 50

**Module Evaluation:** Part Evaluation based on performance in the Field and during preparation of the Dissertation Report and its Research and Academic Quality, Part Evaluation based on Presentation and Viva Examination at semester end

**Dissertation Report** comprises an object-specific, goal-oriented Geographical Study based on the following types:

- 1) those which test a hypothesis or theory, as virtually all aspects of Geography have theories attached to them,
- 2) those which compare the geographical characteristics of two places or phenomena. A variation on this theme is a comparison of the geographical characteristics of one place or phenomena at two or more stages of time, i.e., a study of changes over time,
- 3) those which study a geographical problem related to the habitat, economy and society of people.

Each Examinee shall prepare a Dissertation Paper individually under the supervision of a Departmental Faculty on his / her own chosen Theme.

The Report must be documented in triplicate (1 = examinee, 2 = seminar library, 3 = supervisor) under the following Heads - *Introduction & Conceptual Background; Statement of the Problem; Objectives of Study; Literature Review; Methodology including data / information / map collection; Location of the Study Area; Analysis, Display and Interpretation of Data (relating to each Objective separately); and Conclusion.*


The Dissertation Paper should contain *Acknowledgement, Preface, Table of Content, List of Tables, List of Figures, List of Photographs, List of References, Appendix, and Bibliography/ Reference.*

Pages containing Illustrations (Sketches, Graphs, Diagrams, Maps, Photographs, etc) = 40 (maximum).

Word Limit = 10000 (maximum) excluding Tables and Appendix (Computer typed, Line Spacing = 1½; Font = Arial Narrow / Times New Roman / Calibri; Font size = 10 / 11).

Each Examinee shall present his / her Paper before an audience comprising Internal / External Examiners and others on the day of Examination using OHP or LCD Projector (maximum 25 slides about - *concept / idea / theme; major objectives; methodology; study area; observations and analysis; conclusion*).

Marks shall be awarded by the External Examiner(s) on the Research and Academic Quality of the Report (= 15) followed by the Presentation and Viva Voce (= 35).



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