

HOOGHLY WOMEN'S COLLEGE

DEPARTMENT OF GEOGRAPHY

B.A./B.Sc. Honours in Geography (under CBCS curriculum notified by The University of Burdwan).

Programme Outcome (PO)

The Choice Based Credit System (CBCS) in Geography was introduced from the academic session 2017-18. This entails a Bachelor of Arts (B.A.) / Bachelor of Science (B.Sc.) Honours Degree Programme, spanning three years and encompassing six semesters. The envisioned Programme Outcome is enumerated as follows:

Geotectonics, Geomorphology, Climatology, Soil and BioGeography and Environmental Geography

Knowledge regarding the origin of the Earth and the universe, their composition, tectonic evolution and mechanisms, Geomorphic theories and processes, composition and nature of the atmosphere, wind circulation, atmospheric disturbance and various weather phenomena, climatic classification, concept of soil, soil forming processes, nature and types of soil, concepts related to ecosystem and various facets of the ecosystem as well as the anthropogenic impact on components of the ecosystem., burning environmental issues, the concept of Environmental Impact Assessment and matrices. Practical training through construction of matrix, interpretation of Air Quality Index, quality assessment of soil and perception survey.

Cartographic Techniques and Thematic Mapping

Practical knowledge and hands on training on the concept and types of Scale, projections and their uses, importance of survey, use of surveying instruments, surveying techniques, interpretation of geological maps, weather maps, topographical maps and creation of thematic maps.

Human Geography, Cultural Geography, Population and Settlement Geography

The nature, scope & approaches of Human Geography, Society and its various facets, ideas of ecumene and ekistics, concept of culture with its dimensions, the dynamics of Population, concept, nature and types of Rural & Urban settlements are imparted to the students to get an overview of the ever changing society, its nature as well as its fascinating components.

Statistical Methods in Geography

Theoretical As well as practical knowledge on geographical data collection, representation, statistical analysis and application.

Computer Basics and Application

The students would become familiar with MS- excel and learn the basics of statistical analysis and their graphical representation.

Geography of India and West Bengal

An overview of India and the state of West Bengal with its dialectics have been provided as well as knowledge about some specific areas from West Bengal have also been highlighted.

Economic Geography

A geographical perspective on various economic activities such as agriculture, industry, transports and trade and the distribution of resources have been highlighted upon. Some of the location theories have also been enumerated.

Concept of Regional Planning and Development

An idea about Regional planning and development, application, models, concept of regional inequality and disparity along with strategies for mitigation of regional imbalances with special reference to India have been provided.

Research Methodology and Field Work

The significance of research and its types, methodology followed in pursuit of research and the techniques of writing a research project have been discussed. The role and significance of field work, techniques and use of various tools and collection of samples have been provided through field study tour.

Remote Sensing and GIS

Theoretical knowledge regarding the concept of Remote Sensing, GIS and GNSS along with its practical counterpart wherein specific software has been used to provide hands on experience in

various aspects of GIS like georeferencing, conversion of conventional maps into their digitized version and preparation of thematic maps in digital format.

Geographical Thought

The historical evolution and the growth of Geography as a separate discipline along with its different schools of thought and various approaches have been elucidated.

Disaster Management

Geography being a science harping upon environment and the effect of man on environment, it entails the concepts of disasters and hazards, their classification, responses and preparedness along with techniques of mapping hazards. Some important hazards have been studied with special emphasis on upon their vulnerability, consequences and management.

Course Outcome:

Sem I

COURSE OUTCOME	
CC1 (Geotectonics and Geomorphology) Unit 1	Students would study about the evolution of the earth with reference to geological time scale, interior of the earth with special reference to seismology, concepts of isostasy and plate tectonics.
Unit 2	Weathering and mass wasting, Models of landscape evolution, slope Development, development of river network and landforms on uniclinal and folded structures, types of rocks and resultant landforms , Karst, Glacial and fluvio-glacial processes and landforms and Aeolian and fluvio-aeolian processes and landforms would be discussed.
CC2 (Theory) (Cartographical Techniques and Geological Map StudyI)	Thgeoretical knowledge about the classification and types of maps and scale, Coordinate Systems, Geoid and Spheroid, Map Projections, Concept of Generating Globe, Grids: Angular and Linear Systems of Measurement, Topographical Maps and their interpretation, types of rocks and minerals and their characteristics, various concepts related to interpretation of geological maps would be imparted to the students.
Unit 2 (practical)	The practical part includes construction of Scales, Projections,

	interpretation of Topographical Maps and Geological Maps.
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Sem-II

COURSE OUTCOME	
<p><u>CC3 (Theory) – Human Geography</u></p> <p>Unit 1: Nature and Principles</p> <p>Unit 2: Society, Demography and Ekistics</p>	<p>Knowledge regarding nature, scope and recent trends of Human Geography, evolution of humans, concept of race and ethnicity; description of major racial groups of the world, concept of Space, society and cultural regions (language and religion), concept of Culture, Cultural Diffusion, Convergence, Cultural Realms of the world.</p> <p>Description about the evolution of human societies: Hunting and gathering, Pastoral nomadism, Subsistence farming, Industrial and urban societies, human – environment relations with special reference to Arctic and hot desert regions, population growth and distribution, population composition; demographic transition model, Population–Resource regions and human, population and environment relations with special reference to Development– environment conflict. Also the concept of Social morphology, different rural house types in India, types and patterns of rural settlements as well as the Functional Classification of urban settlements are included in this unit.</p>
<p>CC4 (Theory) – Cartograms, Survey and Thematic Mapping</p>	<p>Theoretical knowledge about Cartograms and Thematic Maps, concept and utility of Isopleths and Choropleth, concept, utility, and interpretation of :Climograph, Hythergraph and Ergograph are provided to the students. The preparation and interpretation of demographic charts and diagrams (Age-Sex Pyramid) and the basic concepts of surveying and survey equipments and the interpretation of Land use and land cover maps are been elucidated.</p>
<p>(Practical) – Cartograms, Survey and Thematic</p>	<p>Practical aspect includes the diagrammatic representation of data like the Age-sex pyramid diagram, pie diagram, proportional circles, dots and spheres. Techniques for drawing of isolines and Choropleth</p>

Mapping	mapping are also included. Field survey entailing Contouring by Dumpy Level and Prismatic Compass and the determination of Height of objects using Transit Theodolite are also taught.
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Sem-III

COURSE OUTCOME	
<p><u>CC 5 (Theory) – Climatology</u></p> <p>Unit 1: Elements of the Atmosphere</p> <p>Unit 2: Atmospheric Phenomena, Climate Change and Climatic Classification</p>	<p>Description of the nature, composition and layering of the atmosphere, insolation, heat budget of the atmosphere, horizontal and vertical distribution of temperature, inversion of temperature and the concept of the Greenhouse effect and importance of ozone layer.</p> <p>Students gain knowledge about the processes, mechanisms and types of condensation and precipitation, types, characteristics and modifications of air mass, fronts, weather stability and instability, atmospheric circulation, types of climate and climate change</p>
<p>CC 6 (Theory) – Statistical Methods in Geography</p>	<p>The importance and significance of Statistics in Geography, types and collection of data, sampling and scales of measurement of data, frequency distribution, various aspects of statistical analysis like central tendency, measures of dispersion, correlation and regression and time series analysis are discussed in detail.</p>
<p>CC 6 (Practical) – Statistical Methods in Geography</p>	<p>Practical portion includes the construction of data matrix, Histograms and frequency curve, scatter diagram and Regression line and their corresponding interpretation.</p>
<p>CC 7 – Geography of India</p> <p>Unit 1: Geography of India</p>	<p>A vivid description of the Geology and physiographic divisions, climate, soil, vegetation and population as well as distribution of population by race, caste, religion, language, tribes of India have been imparted. The agricultural regions, the Green revolution, mineral and power resources and industrial development India's since independence have also been dealt with. The idea of regionalisation of India with emphasis of the</p>

<p>Unit 2: Geography of West Bengal</p> <p>SEC 1 – Computer Basics and Computer Applications</p>	<p>views of Spate and Bhatt are also discussed.</p> <p>An overview of the state of West Bengal entailing the physiographic divisions, forest and water resources, population and human development, its resources including mining, agriculture and industries have been provided. Special emphasis on regional Development of Darjeeling Hills and Sundarban has been given.</p> <p>Basic knowledge about the Numbering System, data computation, storing and formatting in Spreadsheets: computation of Rank, Mean, Median, Mode, Standard Deviation, Moving Averages, Derivation of Correlation, Covariance And regression, preparation of Annotated Diagrams and its interpretation: Scatter diagram and Histogram using MS Excel and techniques of internet surfing and extraction of information thereafter have been provided.</p>
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Sem-IV

COURSE OUTCOME	
<p>CC8 (Theoretical) : REGIONAL PLANNING AND DEVELOPMENT</p> <p>Unit 1: Regional Planning</p> <p>Unit 2: Regional Development</p> <p>CC 9 (Theoretical) : ECONOMIC</p>	<p>Description about the concept and classification of Regions, types of Planning; Principles and Techniques of Regional Planning its need and Multilevel Planning in India and the concepts of Metropolis, Metropolitan Areas and Metropolitan Region.</p> <p>The meaning of development, growth versus development, various models for Regional Development like the Growth Pole (Perroux) and Core Periphery (Hirschman) models, . Model for Regional Development in India: Growth Foci (R.P.Misra) have been enumerated along with the concept of regional inequality and disparity. The concept, significance and the indicators of Human Development have been dealt with. The status of Regional Imbalances in India, its strategies with emphasis on NITI Aayog has been discussed.</p> <p>The meaning approaches and concepts in Economic Geography and</p>

GEOGRAPHY	factors influencing location of economic activity and forces of agglomeration have been described in this unit.
Unit 1: Concepts and Approaches	
Unit 2: Economic Activities	This unit includes the description of the concept and classification of economic activities. The Location Theories of Von Thünen and Alfred Weber have been discussed and analysed. An insight into the functions of the International Trade Blocs: WTO and OPEC have also been provided.
CC 10 : ENVIRONMENTAL GEOGRAPHY	The students are introduced to the concept of Environmental Studies, the historical changes in perception of Environment, the concept of Ecosystem, its structure and functions, environmental degradation and pollution, environmental issues related to agriculture and waste management. The concept and issues related to bio-diversity and the various environmental programs and policies on Forest and Wetland have also been touched upon.
(Theoretical) Environmental Issues	
CC 10 (Practical) : ENVIRONMENTAL GEOGRAPHY	The practical part includes the preparation of questionnaire for perception survey on environmental problems, construction and interpretation of Environmental Impact Assessment: Leopold Matrix, quality assessment of soil and interpretation of air quality.
Environmental Geography (Practical)	
SEC –2 (Practical) : FIELD WORK	The students during their field study tour are trained to carry out a comprehensive fieldwork selecting a particular research problem and later on they are to write a report based on their findings using suitable methodology.

Sem-V

COURSE OUTCOME	
CC 11 : RESEARCH METHODOLOGY AND FIELD WORK (Theoretical)	The students are initiated into the world of research through a theoretical knowledge of the meaning, types and significance of research, literature review in research, research problem, objectives and hypothesis building, research materials and methods and the techniques

Unit 1: Research Methodology	of writing scientific reports.
Unit 2: Field Work	
CC 11 (Practical) : RESEARCH METHODOLOGY AND FIELD WORK	Knowledge about fieldwork in Geographical studies, its significance, techniques and tools and collection of samples are been given to the students.
RESEARCH METHODOLOGY AND FIELD WORK	The students during their field study tour would be trained to conduct a field survey and later on to prepare a field report based on their findings collected from field work.
CC 12 : REMOTE SENSING AND GIS	
Unit 1: Remote Sensing	The definition, concepts and principles of Remote Sensing (RS): Types of Air Photo, RS Satellites, sensors and platforms, EMR Interaction with Atmosphere and Earth Surface, Sensor resolutions and their Applications with reference to IRS, Principles of False Colour Composites, Image Processing, Pre-processing; enhancement; classification and principles of interpretation of images are been vividly described and discussed.
Unit 2: GIS and GNSS	Knowledge about the definition and Components of Geographical Information System (GIS) and raster and Vector data structures, principles of preparing attribute tables and overlay analysis, principles of GNSS, applications of Geographical Information System in Flood Management and Urban Sprawl are been imparted to the students.
CC 12 (Practical) : REMOTE SENSING AND GIS	Hands on training through a specified software are been provided for Georeferencing of scanned maps, preparation of FCC, preparation of LULC Map by Supervised Image Classification, digitisation of Point. Line and Polygon Features and Preparation of Thematic Map.
DSE-1 (Theoretical) : CULTURAL AND SETTLEMENT GEOGRAPHY	
Unit 1: Cultural Geography	Description of the concept of Cultural geography, its definition, scope, content and development, concept of Cultural Hearth, Realm; Cultural Landscape, cultural innovation and diffusion, cultural segregation, cultural diversity, and acculturation and the world distribution and their corresponding characteristics of major races are been imparted to the students.
Unit 2: Settlement	In this unit the scope and content of Settlement Geography, the

Geography	definition and characteristics of Rural Settlement, the concept of site and situation of Rural Settlements, definition of Urban Settlements, Urban Outgrowth, Urban Agglomeration, Urban Morphology and some classical models and the Functional Classification of Cities have been discussed.
DSE-2 (Theoretical) : POPULATION GEOGRAPHY	The development of Population Geography, relation between Population Geography and Demography, determinants of population dynamics, some selected theories of population growth, distribution, density and growth of population in India since 1951 have been described in this unit.
Unit 1:	
Unit 2 :	This unit includes description of the concepts of population composition and characteristics, measures of fertility and mortality, population composition of India: rural and urban, occupational Structure as Per Census of India, migration: Theories, Causes and Types, concept of Human Development Index, population and development: population-resource regions, population policies in some selected countries: Sweden and China and contemporary issues in Population: health and unemployment.

Sem-VI

COURSE OUTCOME	
CC 13 (Theoretical) : EVOLUTION OF GEOGRAPHICAL THOUGHT	Definition, scope and content of Geography,,development of Geography in ancient and medieval period, knowledge about Geography in the Age of Explorations, characteristics of Classical Geography and the concept of Quantitative Revolution have been elucidated in this unit.
Unit: 1	
Unit: 2	Various Schools of Thought like the German, the French and the American as also the Indian Contribution to Geography, the concepts of Determinism, Possibilism and Neo-Determinism, the approaches to the study of

<p>CC 14 DISASTER MANAGEMENT (Theory)</p> <p>Unit 1</p> <p>Unit:2</p> <p>Disaster Management Project Work (Practical)</p>	<p>Geography all have been elaborately described in Unit 2.</p> <p>Knowledge about Hazards and Disasters, approaches to hazard study, responses to hazards and mapping of hazards have been provide.</p> <p>Some specific disasters like earthquake, landslide, cyclone and fire have been elaborately discussed.</p> <p>The students are trained to prepare a project report based on specified disasters incorporating preparedness, mitigation and management.</p>
<p>DSE – 3 (Theoretical) : RESOURCE GEOGRAPHY</p> <p>Unit: 1</p> <p>Unit: 2</p>	<p>The students are given an insight into the concept, classification, importance of Resource Geography and its relation with other sub-discipline, concept of resource, the Functional Theory of Resource, problems of resource depletion and conservation of resource and the concept of ‘Limits to Growth’.</p> <p>The distribution and utilisation of mineral, energy and power resources in India, the contemporary energy crisis and sustainable resource development constitute Unit 2.</p>
<p>DSE – 4 (Theoretical) : SOIL AND BIO GEOGRAPHY</p> <p>Unit: 1: Soil Geography</p> <p>Unit-2: Bio-Geography</p>	<p>Initiation into the concept of soil, factors of formation, idea of soil profile, physical and chemical properties of soil, types of soil and its classification and soil degradation and management.</p> <p>This unit consist of definition and scope of Bio-geography, meaning of Biosphere, Ecology, Ecosystem, Environment, Communities, Habitats, Niche, Ecotone and Biotopes, Laws of Energy Exchange, Food Chain, Food Web and Energy Flow, Bio-Geo Chemical Cycles, factors of growth of plants, the concept and classification of Biomes and the looming threat to biodiversity.</p>