COURSE & PROGRAM OUTCOMES
OF
GEOGRAPHY HONOURS (B.A. & B.SC.)
UNDER CBCS

Geography is the study of places and the relationships between people and their environments. Geographers explore both the physical properties of Earth's surface and the human societies spread across it. They also examine how human culture interacts with the natural environment and the way those locations and places can have an impact on people. Geography seeks to understand where things are found, why they are there, and how they develop and change over time. The study of the diverse environments, places, and spaces of Earth's surface and their interactions. It seeks to answer the questions of why things are as they are where they are. The modern academic discipline of geography is rooted in ancient practice, concerned with the characteristics of places, in particular their natural environments and peoples, as well as the relations between the two.

Choice Based Credit System (CBCS): Syllabus in Geography

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 honours course. The syllabus emphasises on development of basic skills of the subject, so that everyone need not go for higher studies in search of professional engagement or employment.

LEARNING OUTCOMES: This syllabus is designed to impart basic knowledge on geography as a spatial science and train the undergraduates to secure employment in the sectors of geospatial analysis, development and planning, mapping and surveying.

Honours Course: Core Subjects

GEO-A-CC-1-**01**-TH/P – Geotectonic and Geomorphology
GEO-A-CC-1-**02**-TH/P – Cartographic Techniques
GEO-A-CC-2-**03**-TH/P – Human Geography
GEO-A-CC-2-**04**-TH/P – Cartograms, Thematic Mapping and Surveying
GEO-A-CC-3-**05**-TH/P – Climatology
GEO-A-CC-3-**06**-TH/P – Hydrology and Oceanography
GEO-A-CC-3-**07**-TH/P – Statistical Methods in Geography
GEO-A-CC-4-**08**-TH/P – Economic Geography
GEO-A-CC-4-**09**-TH/P – Regional Planning and Development
GEO-A-CC-4-**10**-TH/P – Soil and Biogeography
GEO-A-CC-5-**11**-TH/P – Research Methodology and Fieldwork
GEO-A-CC-5-**12**-TH/P – Remote Sensing, GIS and GNSS
GEO-A-CC-6-**13**-TH/P – Evolution of Geographical Thought
GEO-A-CC-6-**14**-TH/P – Disaster Management

Honours Course: Choices for Four Discipline Specific Electives

GEO-A-DSE-A-5-**01**-TH/P – Fluvial Geomorphology
GEO-A-DSE-A-5-**02**-TH/P – Climate Change: Vulnerability and Adaptations
GEO-A-DSE-A-5-**03**-TH/P – Environmental Issues in Geography
GEO-A-DSE-A-5-**04**-TH/P – Resource Geography
GEO-A-DSE-B-6-**05**-TH/P – Cultural and Settlement Geography
GEO-A-DSE-B-6-**06**-TH/P – Social Geography
GEO-A-DSE-B-6-**07**-TH/P – Urban Geography
GEO-B-DSE-B-6-**08**-TH/P – Geography of India

1.1 Honours Course: Choices for Two Skill Enhancement Courses

GEO-A-SEC-A-3-**01**-TH – Coastal Management
GEO-A-SEC-A-3-**02**-TH – Tourism Management
GEO-A-SEC-B-4-**03**-TH – Rural Development
GEO-A-SEC-B-4-**04**-TH – Sustainable Development

1.2 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

1.3 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

1.4 General Course: Choices for Two Skill Enhancement Courses

GEO-G-SEC-A-3/4-**01**-TH – Coastal Management
GEO-G-SEC-B-5/6-**03**-TH – Rural Development

COURSE OUTCOMES

[Honours]

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

Course Code	Course Title	Credits	Course Outcomes
CC-1-01 Th+P	Geotectonics and Geomorphology	4+2=6	• 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. • Ablity 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.
CC-1-02 Th+P	Cartographic Techniques	4+2=6	• Understand and prepare different kinds of maps. • Recognize basic themes of map making. • Development of observation skills.
CC-2-03 Th+P	Human Geography	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

CC-2-04 Th+P	Thematic Mapping and Surveying	4+2=6	• 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.
Course Code	**Course Title**	**Credits**	**Course Outcomes**
CC-3-05 Th+P	Climatology	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.
CC-3-06 Th+P	Hydrology and Oceanography	4+2=6	• Analyse 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.

CC-3-07 Th+P	Statistical Methods in Geography	4+2=6	• e Learn the significance of statistics in geography. Understand the importance of use of data in geography • Recognize the importance and application of Statistics in Geography • Interpret statistical data for a holistic understanding of geographical phenomena. Know about different types of sampling. • Develop an idea about theoretical distribution. • Learn to use tabulation of data. Gain knowledge about association and correlation.
Course Code	**Course Title**	**Credits**	**Course Outcomes**
CC-3-SEC 1 TH	Tourism Management	2	• 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
CC-4-08 Th+P	Economic Geography	4+2=6	• Understand the concept of economic activity, factors affecting location of economic activity. Gain knowledge about different types of Economic activities • Assess the significance of Economic Geography, the concept of economic man and theories of choice. • Analyze the factors of location of agriculture and industries. • Understand the evolution of varied types of economic activities. • Map and interpret data on production, economic indices, transport network and flows.
CC-4-09 Th+P	Regional Planning and Development	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	**Course Title**	**Credits**	**Course Outcomes**
CC-4-10 Th+P	Soil and Biogeography	4+2=6	• 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.
CC-4-SEC 2	Rural Development	2	• Rural Development: Concept, basic elements, measures of level of rural development [5] • Paradigms of rural development: Gandhian approach to rural development Lewis model of economic development, 'big push' theory of development, Myrdal's model of 'spread and backwash effects' [10] • Area based approach to rural development: Drought prone area programmes, PMGSY, SJSY, MNREGA, Jan Dhan Yojana [10] • Rural Governance: Panchayati Raj System and rural development policies and Programmes in India [5]

CC-5-11 Th+P	Research Methodology and Fieldwork	4+2=6	• Have expertise in identification of area of study, methodology, quantitative and quantitative analysis, and conclusions to be drawn about the area – fundamental to geographical research. • Handle logistics and other emergencies on field. • Develop skills in photography, mapping and video recording.
Course Code	**Course Title**	**Credits**	**Course Outcomes**
CC-5-12 Th+P	Remote Sensing, GIS and GNSS	4+2=6	• 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. • Conducting field excursions and preparation of field report on research on problem in different areas of India • Apply GIS to the preparation of thematic maps. • Use GNSS.
CC-6-13 Th+P	Evolution of Geographical Thought	4+2=6	• Perceive the evolution of the philosophy of Geography. • Appreciate the contribution of the thinkers in Geography. • Give power point presentations on different schools of geographical thought. • Discussing the evolution of geographical thought from ancient to modern times. • Establishing relationship of Geography with other disciplines and man-environment relationships. • Analyzing modern and contemporary principles of Empiricism, Positivism, Structuralism, Human and Behavioral Approaches in Geography

CC-6-14 Th+P	Hazard Management	4+2=6	• 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 OUTCOMES

[DISCIPLINE SPECIFIC ELECTIVES]

Course Code	Course Title	Credits	Course Outcomes
GEO-A-DSE-A-5-02-TH+P	Climate Change: Vulnerability and Adaptations	4+2=6	• Understand climate change with reference to the geological time scale • Assess the Origin Greenhouse gases and global warming • Global climatic assessment and Impact of climate change: Agriculture and water; flora and fauna; human health and morbidity • Learn Global initiatives to climate change mitigation: Kyoto Protocol, carbon trading, clean development mechanism, COP, climate fund. • Analysis of trends of temperatures • Analyze the rainfall variability of about three decades of climatic regions of India. • Understand Climate change vulnerability assessment and adaptive strategies with particular reference to South Asia • Analyse Role of urban local bodies, panchayats and educational institutions on climate change mitigation: Awareness and action programmes • Develop concepts and skills regarding mitigation measures concerning climatic hazards.

GEO-A-DSE-A-5-04 T+P	Resource Geography	4+2=6	• Understand the concept and classification of resources • Understand the approaches to resource utilization • Appreciate the significance of resources • Assess the pressure on resources • Analyze the problems of resource3 depletion with special reference to forests, water and fossil fuels • Understand the concept of Sustainable Resource development • Understand the distribution, utilization, problems and management of metallic and non-metallic mineral resources • Analyze the contemporary energy crisis and assess the future scenario • Understand the concept of Limits to Growth, resource sharing and sustainable use of resources • Develop the skill of mapping forest cover from satellite images • Develop the skill of mapping water bodies from satellite images • Analyze the decadal changes in state-wise production of coal and iron ore • Learn to compute HDI
Course Code	**Course Title**	**Credits**	**Course Outcomes**
GEO-A-DSE-B-6-05-T+P	Cultural and Settlement Geography	4+2=6	• 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 • Acquire knowledge about Rural settlements- Definition, nature and characteristics • Analyze the morphology of rural settlements • Learn the rural house types, census categories of rural settlements and idea of social segregation • Learn the census definition and categories of urban settlements • Analyze the urban morphology models of Burgess, Hoyt, Harris and Ullman • Differentiate between city-region and conurbation • Analyze the functional classification of cities • Develop the skill of mapping language distribution of India • Learn to plot proportional squares to illustrate housing distribution • Acquire the skill of identifying rural settlement types from topographical sheet • Understand Social Area Analysis of a city based on Shevky and Bell
GEO-A-	Urban Geography	4+2=6	• Understand the nature, scope, approaches and recent trends in

DSE-B-6-07-T+P			Urban Geography • Temporal analysis of urban growth using census data • Trace the origin of urban places over time and analyze the factors, stages and characteristics of these places • Analyze the theories of urban evolution and growth, Hierarchy of urban settlements • Understand the various aspects of urban place : location, site and situation; Rank-size rule and Law of primate city • Understand the concept of urban hierarchies • Understand the patterns of urbanization in developed and developing countries • Understand the ecological processes of urban growth; urban fringe; city-region • Analyze the models on city structure • Identify and analyze the problems of housing, slums and civic amenities • Understand the patterns and trends of urbanization in India • Assess the policies on urbanization in post-liberalized India • Study the changing land use of Delhi, Kolkata and Chandigarh • Learn the technique to plot Rank-Size Rule and establish a hierarchy of urban settlements • Assess state-wise variation and trends of urbanization • Learn to analyze census data to measure urban growth • Develop a skill to prepare urban land use map from satellite images

PROGRAM OUTCOMES

- To understand the scope and evolution of the diverse discipline of Geography.

- Recognize, synthesize and evaluate diverse sources of knowledge, arguments and approaches pertinent to exploring human-environment problems. Explain societal relevance of geographical knowledge and apply it to real world human- environment issues.

- Appreciate and reflect critically on the importance of holistic and interpretative human- environment perspectives.

- An understanding and acknowledgment of the threats that endanger the earth's natural systems. This helps in further realization of the significance of anthropogenic causes of many of the disasters and threats that puts life on this planet on the edge.

- Development of knowledge, skills and holistic understanding of the discipline among students. Encouragement of scientific mode of thinking and scientific method of enquiry in students. This goal is achieved through the regular field excursions conducted by the Department to various parts of India extensively and the writing of a report/thesis on it.

- 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.

- 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.

PROGRAMME SPECIFIC OUTCOMES

- PSO 1 - 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.

- PSO 2 – Associating landforms with structure and process; establishing man-environment relationships; and exploring the place and role of Geography vis-a-sis other social and earth sciences. Students can easily correlate the knowledge of physical geography with the human geography. They will analyze the problems of physical as well as cultural environments of both rural and urban areas. Moreover they will try to find out the possible measures to solve those problems

- PSO 3 – Understanding the functioning of global economies, geopolitics, global geostrategic views and functioning of political systems

- PSO 4 – Developing a sustainable approach towards the ecosystem and the biosphere with a view to conserve natural systems and maintain ecological balance.

- PSO 5 –The physical environment, human societies and local and/or global economic systems are integrated to the principles of sustainable development

- PSO 6 – Inculcating a tolerant mindset and attitude towards the vast socio-cultural diversity of India by studying and discussing contemporary concepts of social and cultural geography. Explaining and analyzing the regional diversity of India through interpretation of natural and planning regions.

- PSO 7 – 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

- PSO 8 – Understanding the history of the subject; over viewing ancient and contemporary geographical thought and its relationship with modern concepts of empiricism, positivism, radicalism, behaviouralism , idealism etc.

- PSO 9 – Sensitization and awareness about the hazards and disasters to which the subcontinent is vulnerable; and their management.

- PSO 10 – As a student of the Course they will enrich their observation power through field experience and in future this will be helpful for identifying the socio- environmental problems of their community.

- PSO 11 – 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.