

Course outcomes (CO): Geography

Semester	Paper	Unit	Course	Outcome
Semester-I	GEO-H-CC-1-01 (TH & PR)	Geotectonic Course	CO1	CO1.1. Understand the earth tectonic and structural evolution with reference to geological timescale
				CO1.2. Knowledge about earth's interior and different types of folds and faults with associated drainage landforms
				CO1.3. Concept of Plate tectonic and mountain building
				CO1.4. Understand the concept and application of scale and its construction; and drawing of map projections with classification, properties and uses
	GEO-H-CC-1-02 (TH & PR)	Geomorphology Course	CO2	CO2.1. Understand the Fundamental concepts of Geomorphology and geomorphic processes
				CO2.2. Understand the Evolution of erosional and depositional landforms of different topography.
				CO2.3. Concept of slope forms and processes with slope development theories
				CO2.4. Know about Topographical Map and understand the morphometry with Interpretation of plateau/mountain area and learn the megascopic identification of rocks and minerals
Semester II	GEO H-CCH L-201	Human Geography	CO3	CO3.1. Learn about the concept, scope and content of human geography
				CO3.2. Gain knowledge about the space, society, and cultural regions; and spatial distribution of race, language, religion and caste systems in India and World.
				CO3.3. Build up an idea about population growth, spatial distribution of population, and population composition
				CO3.4. Understand the concept of population-resource relationship, and the spatial pattern of population resource regions in world.
				CO3.5. Computation and presentation of diagrammatic data
				CO3.6. Presentation and interpretation of Thematic Mapping Techniques related to population distribution.
	GEO H-CCH L-202	Settlement Geography	CO4	CO4.1. Know the details about concept, origin, and growth of rural and urban settlements.
				CO4.2. Understand the Types, patterns and morphology of rural settlements.
				CO4.3. Idea about the trends and patterns of world urbanization
				CO4.4. Knowledge about the urban morphology and land use pattern
				CO4.5. Interactions of different types of levelling and surveying instruments like

				Prismatic Compass (closed traverse, Dumpy Level, Theodolite (transit), and know its application.
				CO4.6. Preparation and interpretation of the geological sections.
Semester III	GEO-H-CC-3-05 (TH & PR)	Climatology	CO5	CO5.1. Understanding of Atmospheric composition and structure; know about insolation and temperature, pressure and planetary wind system
				CO5.2. Develop the concept about Atmospheric moisture, cyclones and climatic regions with classification
				CO5.3. Learn to use Meteorological instruments like Recording of Maximum and Minimum thermometer, Hygrometer, Fortin's barometer
				CO5.4. Able to Interpret the Indian daily weather report; and to represent climatic data by climographs and hythergraphs
	GEO-H-CC-3-06 (TH & PR)	Statistical Methods Ingeography	CO6	CO6.1. Understand the Significance of statistics in Geography and learn about the use of data in Geography and also gain knowledge of sources of data and scales of measurement
				CO6.2. Build an idea of Sampling and develop the theoretical concept of probability and normal distribution
				CO6.3. Acquire the knowledge of frequency distribution table and able to calculate the measures of Central Tendency and Measures of Dispersion
				CO6.4. Learn about the Association and Correlation of different variables and understand the Simple Linear Regression with scatter diagram and linear regression line
	GEO-H-CC-3-07 (TH & PR)	Geography Of India	CO7	CO7.1 Know about the characteristics and classification of physical aspects of India.
				CO7.2. Gain knowledge regarding Indian economies like Mineral and power resources, agricultural production and distribution and industrial development (Automobile and Information Technology)
				CO7.3. Develop the knowledge of spatial distribution of population by race, caste, religion, language and tribes; more over, know the Regionalization of India.
				CO7.4. Able to plot Monthly temperature and rainfall graphs with Indian data and Decadal growth rate of population and learn about Measures of Inequality
	GEO-SEC-A-3-01-TH	Remote Sensing	CO8	CO8.1. Develop the concept of Remote Sensing, its principles and Photogrammetry, EMR, satellites (Landsat and IRS);sensors.
CO8.2 Understand the Visual Satellite Image Interpretation and know about the Application of Remote Sensing in Land use/Land cover mapping				
GEO-SEC-	Rural Development	CO9	CO9.1. Understand the concept of Rural Development and Paradigms of rural development	

	A-3-01-TH			
				CO9.2. Know about the Major Rural Development Programmes in India and Rural Governance
Semester IV	GEO H-CCH L-401	Economic Geography	CO10	CO10.1. Know the concept of economic activity, factors affecting location of economic activity with special reference to agriculture, Industry.
				CO10.2. Understand the primary activities like subsistence and commercial agriculture, and lumbering.
				CO10.3. Learn about the secondary activities like manufacturing Industries and Special Economic Zones with reference to India.
				CO10.4. Gain the knowledge about the tertiary activities like transport, International trade.
				CO10.5. Computation and interpretation of the connectivity and accessibility of transport network.
				CO10.6. Representation of state wise variation in occupational structure and work participation rate using thematic mapping techniques.
	GEO H-CCH L-402	Regional Planning And Development	CO11	CO11.1. Know the definition and types of region, and the evolution of regional planning and its need.
				CO11.2. Understand the choice of a region for planning, characteristics and delineation of planning region, and regionalization of India for planning.
				CO11.3. Study about the different theories and models for regional planning.
				CO11.4. Gain knowledge about the Indicators of Human development.
				CO11.5. Delineation and interpretation of formal regions and functional regions.
				CO11.6. Measurement and interpretation of inequality analysis.
	GEO H-CCH L-403	Field Work And Research Methodology	CO12	CO12.1. Know about the components, objectives, types and stages of research in Geography.
				CO12.2. It gives the idea of role of field work in geographical studies.
				CO12.3. Understanding different field techniques and its merits, demerits and selection of the appropriate like observation technique, questionnaires, schedules, interview.
				CO12.4. Learn about different research problems, research design and hypothesis.
				CO12.5. Preparation of questionnaire/ and

				<p>schedule on rural/urban; physical/cultural aspects</p> <p>CO12.6. Know about the uses of field tools, and data collection techniques for physical or socio-economic surveys based on the above questionnaire/schedules.</p> <p>CO12.7. Know how to design the field report and also its aims, objectives, interpretation and report writing techniques.</p>
	GEO H-SECT-405	Geographical Information System	CO13	<p>CO13.1. Know about the definition and components of Geographical Information System(GIS).</p> <p>CO13.2. Understand the Principles and uses of Global Positioning System (GPS).</p> <p>CO13.3. Learn about the types of GIS data structures and data analysis.</p> <p>CO13.4. Gain the knowledge of the application of GIS.</p>
	GEO H-SECT-405	Tourism Management	CO14	<p>CO14.1. Know the concepts, and geographical elements of tourism.</p> <p>CO14.2. Learn about the types of tourism like Heritage tourism, Cultural tourism, Medical tourism, Home stay tourism and Eco-tourism.</p> <p>CO14.3. Understand the recent trends of tourism, case studies of Himalayas with special reference to North Bengal and coastal areas with special reference to South Bengal.</p> <p>CO14.4. Gain the knowledge of National Tourism Policy of India,2007.</p>
Semester V	GEO-H-CC-5-11 (TH & PR)	Environmental Geography	CO15	<p>CO15.1. Knowledge of Environmental Geography and Human-environment relationships and adaptation in different biomes</p> <p>CO15.2. Know about Concept, structure and functions and problems in tropical and temperate ecosystems and Environmental programmes and policies</p> <p>CO15.3. Understand the perception survey on environmental problems and able to make a Project on environmental problems</p>
	GEO-H-CC-5-12 (TH & PR)	Remote Sensing And Gis	CO16	<p>CO16.1. Know about Remote Sensing and GIS; Understand the Aerial Photography and Satellite Remote Sensing.</p> <p>CO16.2. Understand the GIS Data Structures; Learn the Interpretation and know the application of Remote Sensing and GIS</p> <p>CO16.3. Learn to interpret Air photo (using pocket stereoscope); and manual interpretation satellite imagery; and learn to Process Satellite image using GIS software.</p>
	GEO-H-	Population Geography	CO17	CO17.1. Know about the Nature and scope of Population Geography and sources of population

	DSE-5-01 (TH & PR) OR GEO-H-DSE-5-01 (TH & PR)			data with special reference to India
				CO17.2. Understand the Theories of population and Population dynamics along with Population composition and characteristics
				CO17.3. Practical use of Population projection by arithmetic method; Learn to do Population density mapping for India and Analysis of work participation rate
	GEO-H-DSE-5-01 (TH & PR)	Resource Geography	CO18	CO18.1. Know the Concept of Resource Geography; Distribution, utilization, problems and management of land, water, forests and energy resources
				CO18.2. Knowledge on Appraisal and conservation of natural resources and sustainable resource development
				CO18.3. Able to Prepare land use /land cover map and Compute Human Development Index
	GEO-H-DSE-5-02 (TH & PR) OR GEO-H-DSE-5-02 (TH & PR)	Urban Geography	CO19	CO19.1. Knowledge on nature and scope of Urban geography and Patterns of urbanisation in developed and developing countries
				CO19.2. Know about the Functional classification of cities and Urban Issues related to problems of housing, slums, civic amenities
				CO19.3. Able to calculate the Rank-size rule and understand State-wise variation and trends of urbanization
	GEO-H-DSE-5-02 (TH & PR)	Agricultural Geography	CO20	CO20.1. Idea on nature and scope of Agricultural Geography and Physical, technological and institutional determinants of Agriculture.
				CO20.2. Know about Agricultural Regions of India and Agricultural revolutions in India; and understand Agricultural Systems of the world and Agricultural land use model
				CO20.3. Able to measure agricultural efficiency, crop concentration and crop diversification.
Semester VI	GEO-H-CC-6-13-TH & PR	Evolution Of Geographical Thoughts	CO21	CO21.1. Learn about the evolution of geographical ideas during the ancient period in Western world and India
				CO21.2. Understand the evolution of geographical ideas during the medieval period in Western world and India
				CO21.3. Know the modern evolution of geographical thinking in Germany, France, Britain, United States of America.
				CO21.4. Assess the differences between Environmental Determinism and Possibilism, and Systematic and Regional geography.
				CO21.5. Presentation and interpretation of the quantitative techniques in geography like Chi-square, standard score.
				CO21.6. Computation and representation of crop combination after Weaver, Rafiulla and Doi.

	GEO-H-CC-6-14-TH & PR	Disaster Management	CO22	CO22.1. Know the concept and classification of hazards and disasters.
				CO22.2. Study about the risk perception and vulnerability assessment.
				CO22.3. Understand the factors, consequences and management of earthquake, flood, riverbank erosion and landslide.
				CO22.4. Knowledge about the human induced disaster like fire hazard and industrial accidents.
				CO22.5. Presentation on the project report about the flood, landslide, or earthquake based on field study.
	GEO-H-DSE-6-03-TH & PR	Advanced Cartography	CO23	CO23.1. Know the nature, scope and history of cartography
				CO23.2. Know about the principle, application, and components of instruments like Dumpy Level and Transit Theodolite.
				CO23.3. Learn about the properties, advantages, limitations and derivation of Polar Zenithal Equal Area, Polar Zenithal Equidistant, Cubic Development of Gnomonic Projection; Simple Conical Projection with two standard parallels; International Projection, Universal Transverse Mercator's Projection.
				CO23.4. Understand the concept, principles and components of Remote Sensing and GIS.
				CO23.5. Observe and taking readings from Dumpy Level and transit Theodolite, and finally plot the contour mapping and determine the height and distance of an object
				CO23.6. Construction of Polar Zenithal Equal Area, Polar Zenithal Equidistant, Simple Conical Projection with two standard parallels, and International Projection.
	GEO-H-DSE-6-03-TH & PR	Political Geography	CO24	CO24.1. Understand the concepts, nature and scope of Political Geography.
				CO24.2. Know about the concept of nation, state and nation state, frontiers and boundaries, geopolitics, and Heartland and Rimland.
				CO24.3. Learn about the water sharing disputes, conflicts related to forest rights in India.
				CO24.4. Gain the knowledge about the politics of displacement like issues of relief, compensation and rehabilitation with special reference to dams in India
				CO24.5. Preparation and interpretation of spatial distribution maps of India related to gender, caste, and religion.
				CO24.6. Preparation of questionnaire on socio-

				economic status of rural and urban centres of India.
GEO- H- DSE- 6-04- TH & PR	Hydrology And Oceanograph y	CO25	CO25.1. Learn about concept and factors of the hydrological cycle, systems approach in hydrology, human impact on the hydrological cycle, precipitation, interception, evaporation, evapo-transpiration, infiltration, ground-water, runoff, overland flow, and hydrological input and output.	
			CO25.2. Study about the characteristics of river basins, basin surface run-off, measurement of river discharge, and spatial pattern of floods and droughts.	
			CO25.3. Know the detail accounts on bottom floor topography of oceans, and distribution and determinants of ocean salinity and temperature.	
			CO25.4. Understand the types and origin of coral reefs, types of marine deposits, and distribution of ocean resources.	
			CO25.5. Assess the morphometric analysis of any river basin from topographical map like stream frequency, drainage texture, circulatory ratio, elongation ratio, etc.	
			CO25.6. Calculation and interpretation of discharge by area velocity methods.	
	GEO- H- DSE- 6-04- TH & PR	Social Geography	CO26	CO26.1. Study about the concept, origin, nature and scope of social geography.
				CO26.2. Know about the types, causes and consequences of migration in India and World, and technological and occupational change of the people of India.
				CO26.3. Understand the spatial distribution of caste, class, religion, race and gender.
				CO26.4. Learn about the concept and components of welfare and wellbeing, and distribution of slums.
				CO26.5. Presentation and interpretation of Flowchart to show migration trends.
				CO26.6. Apply suitable cartographic techniques for identifying the spatial distribution of caste, religion and gender in India.

Programmes Specific Outcome (PSO): Geography (H)

The students of Geography (Hons.) will acquire their theoretical, computational and experimental knowledge about the different branches of Geography like Physical Geography, Human Geography, Environmental Geography, Geography of India, Geography of Thought, Practical Geography, Computer application in Geography, etc. by studying this programme. They will attain the quantitative and predictive understanding of Geography in different physical and human phenomena. This programme also opens up the career paths to select in many related and sub-related areas like academics, research, GIS based map consultant, hydrologist GIS and water resource modelling consultant, etc.

After completion of the programme, the graduates will be capable of-

PSO1: Acquiring the knowledge about the different core branches of Geography like Physical Geography, Human Geography, Practical Geography, Environmental Geography, etc.

PSO2: Developing the ability to use skills in Geography and its related domains of practical knowledge for formulating and tackling Geography-related problems.

PSO3: Acquiring their understanding skills about the different experiments of different branches of Geography by designing as well as conducting several experiments in different problems to solve the problem by proper interpretation and analysis of the experimental results and drawing the conclusions by the supporting data.

PSO4: Developing several experiment related tools e.g. statistical techniques for representation of data, summaries, various graph and diagram, and data analysis.

PSO5: Accumulating their knowledge and skills about the applications of GIS and remote sensing techniques for sketch out the problems and explore the spatio-variation, which can help the planners and policy makers to solve the problem.

PSO6: Attaining a level of proficiency and intellectually in predicting the geographical phenomena by using spatial, computational and remote sensing knowledge and abilities about the applications of computer programming and GIS techniques for solving different problems of Geography as well as global problems.

PSO7: Comprehending and cultivating an understanding of the influence of Geography on the modern society and livelihood patterns with the means of sustainable development.

PSO8: Attaining the quantitative and qualitative understanding of Geography in different theoretical and practical phenomena.

PSO9: Theoretical knowledge and abilities on different GIS and remote sensing software as well as statistical software, etc. that helps them in their higher studies in Geography.

PSO10: Demonstrating professional behaviour such as being objective, unbiased and truthful in all aspects of work and avoiding unethical, irrational behaviour such as fabricating, falsifying or misrepresenting data or committing plagiarism and the ability to identify the potential ethical issues in work-related situations.

PSO11: Developing knowledge and abilities on the use of different measurement instruments and as well as workshops skills.

PSO12: Developing communication skills involving the ability to listen carefully, to read texts and research papers analytically and to present complex information in a concise manner to different groups/audiences of technical or popular nature.

PSO13: Opening the career paths to select a career in many related and sub-related areas like academics, research, GIS based map consultant, hydrologist GIS and water resource modelling consultant etc.

Programmes Specific Outcome (PSO): Geography (Gen)

The students of Geography (Gen or DSC) will acquire their theoretical and practical basic knowledge about the different branches of Geography like Physical Geography, Human Geography, Environmental Geography, Geography of India, Soil and Biogeography, Economic Geography, Urban Geography, Remote Sensing, Computer Basics, etc. by studying programme. This programme also opens up the career paths to select in many related and sub-related areas like academics, research, computer and space related work etc.

After completion of the programme, the graduates will be capable of-

PSO1: Acquiring the knowledge about the different core branches of Geography like Physical Geography, Environmental Geography, Human Geography, Maps and Diagrams, etc.

PSO2: Developing the ability to use skills in Geography and its related domains of practical field for tackling Geography-related problems.

PSO3: Acquiring their understanding skills about the different practical work of different branches of Geography by the proper solve, interpretation, analysis of the results, and drawing the conclusions by the supporting data.

PSO4: Accumulating their knowledge and skills about the applications of techniques for solving different problems of different branches of Geography, beside the theoretical and practical skills.

PSO5: Comprehending and cultivating a basic understanding of the influence of Geography on the modern society and it's application on our society.

PSO6: Attaining the quantitative and predictive understanding of Geography in different practical and theoretical phenomena.

PSO7: Demonstrating professional behaviour such as being objective, unbiased and truthful in all aspects of work and avoiding unethical, irrational behaviour such as fabricating, falsifying or misrepresenting data or committing plagiarism and the ability to identify the potential ethical issues in work-related situations.

PSO8: Developing proficiency and skill on the set up of different practical instruments and computer basics knowledge.

PSO9: Opening the career paths to select a career in many related and sub-related areas like academics, research, soil and environment related work, space related work, Govt and private sector job in different field, etc.