

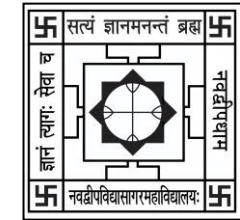


Nabadwip Vidyasagar College

Department of Geography

Under Graduate Programme

Programme Outcome(PO) and Course Outcome(CO)



Programme Outcome (PO): Geography mainly concerns changes in spatial attributes in a temporal perspective. The Honours programme in geography is tailored to meet the students' specific educational and professional goals in mind. It focuses on spatial studies, qualitative as well as quantitative, and emphasises on human-environment relationship. During the first and second semester, the students are trained on advanced concepts of physical and human geography. The last semester allows them to concentrate on specific areas of the subject, on which they complete their field reports. After completing the course, the students will be amply prepared for professional careers in geography and allied disciplines like GIS and Remote Sensing. They will also be able to pursue M.A. /M.Sc. Course in Geography.

- ✓ **Acquiring Knowledge of Physical Geography:** Student will gain the knowledge of physical geography. Student will have a general understanding about the geomorphological and geotechnical process and formation. They will be able to correlate the knowledge of physical geography with the human geography.
- ✓ **Acquiring Knowledge of Human Geography:** They will be able to acquire the knowledge of Human Geography and will correlate it with their practical life.
- ✓ **Ability of Problem Analysis:** Student will be able to analyse 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.
- ✓ **Conduct Social Survey Project:** They will be eligible for conducting social survey project which is needed for measuring the status of development of a particular group or section of the society.
- ✓ **Application of modern instruments:** Students will be able to learn the application of various modern instruments and by these they will be able to collect primary data. PSO6. Application of GIS and modern Geographical Map Making Techniques: They will learn how to prepare map based on GIS by using the modern geographical map making techniques.
- ✓ **Development of Observation Power:** As a student of Geography Honours Course they will be capable to develop their observation power through field experience and in future they will be able to identify the socioenvironmental problems of a locality.
- ✓ **Development of Communication Skill and Interaction Power:** After the completion of the project they will be efficient in their communication skill as well as power of social interaction. Some of the students are being able to understand and write effective reports and design credentials, make effective demonstrations, and give and receive clear instructions.

- ✓ Enhancement of the ability of Management: Demonstrate knowledge and understanding of the management principles and apply these to their own work, as a member and leader in a team, to manage projects. They will perform effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- ✓ Understand Environmental Ethics and Sustainability: Understand the impact of the acquired knowledge in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development.
- ✓ Life-long learning: Identify the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of societal and environmental change.

Semester	Course Code	Course Content	Course Outcome (CO)
I	GEO/H/C C/T/01	Unit-1: Geotectonics	CO1. Understand earth's tectonic and structural evolution. CO2. Gain knowledge about earth's interior. CO3. Develop an idea about concept of plate tectonics, and resultant landforms. CO4. Acquire knowledge about types of folds and faults and earthquakes, volcanoes and associated landforms.
		Unit-2: Geomorphology	CO1. Develop an idea about geomorphology and different types of fundamental concepts. CO2. Explain different types of geomorphic processes like weathering and mass wasting and cycle of erosion. CO3. Understand the processes of erosion, deposition and resulting landforms. CO4. Acquire knowledge about slope forms and processes.
	GEO/H/C C/T/02	Cartographic Techniques and Geological Map Study	CO1. Knowing types of scales and constructing scales and representing Geographical data through cartograms, CO2. interpreting reading identifying and analyzing features from geological and topographical map, CO3. identifying rocks and minerals and listing their properties and Development of observation skills.

	GEO/H/C C/P/02: (Practical) :	Cartographic Techniques and Geological Map Study	CO1. Knowing types of scales and constructing scales and representing Geographical data through cartograms, CO2. interpreting reading identifying and analyzing features from geological and topographical map, CO3. drawing of maps with the help of map projection with basic concepts.
II	GEO/H/C C/T/03	Human Geography Unit-1: Nature and Principles	CO1. Gain knowledge about major themes of human geography. CO2. Develop an idea about space and society. CO3. Build an idea about population growth and distribution of population. CO4. Know about population –resource relationship
		Unit-2: Society, Demography and Ekistics	CO1. Understand political systems, state, territory and borders. CO2. Understand basic elements of culture. CO3. Know about racial group of world. CO4. Gain knowledge about major themes of human Geography. CO5. Acquire knowledge on the history and evolution of humans CO6. Understand the approaches and processes of Human Geography as well as the diverse patterns of habitat and adaptations. CO7. Develop an idea about space and society
	GEO/H/C C/T/04: (Theory):	GEO/H/CC/T/ 04: (Theory): Cartograms, Survey and Thematic Mapping	CO1. Know about diagrammatic data presentation like line, bar and circle. CO2. Develop an idea about different types of thematic mapping techniques

	GEO/H/C C/P/04: (Practical) :	GEO/H/CC/P/ 04: (Practical): Cartograms, Survey and Thematic Mapping	CO1. Comprehend the concept of scales and representation of data through cartograms. CO2. Interpret geological and weather maps. CO3. Learn the usages of survey instruments. CO4. Brings direct interaction of different types of surveying instruments like Dumpy level and Theodolite with environment. CO5. Develop an idea about different types of thematic mapping techniques.
III	GEO/H/C C/T/05: (Theory): Climatolo gy	Climatology Unit-1: Elements of the Atmosphere	CO1. Learn the interaction between the atmosphere and the earth's surface. CO2. Understand the importance of the atmospheric pressure and winds. CO3. Understand how atmospheric moisture works. CO4. Develop an idea about cyclones.
		Unit-2: Atmospheric Phenomena, Climate Change and Climatic Classification	CO1. Understand the elements of weather and climate Learn about the various atmospheric phenomena and climate change CO2. Learn the different approaches of climate classification CO3. Learn the interaction between the atmosphere and the earth's surface. CO4. Understand the importance of the atmospheric pressure and winds. CO5. Know about the use of various meteorological instruments. CO6. To clarify the idea about cyclones CO7. Understand the relation between earth's atmosphere and global climate.
	GEO/H/C C/T/06: (Theory):	Statistical Methods in Geography	CO1. Understand the significance of different statistical techniques in geography CO2. Learn the use of data in geography and their importance. CO3. Understand the types of sampling CO4. Assess the geographical phenomenon with the help of statistical data CO5. Know about the applications of statistics in geography CO6. Learn about correlation and association. CO7. Develop an idea about theoretical distribution

	GEO/H/C C/P/06: (Practical) :	Statistical Methods in Geography	CO1. Understand the significance of different statistical techniques in geography CO2. Learn the use of data in geography and their importance. CO3. Understand the types of sampling CO4. Assess the geographical phenomenon with the help of statistical data CO5. Know about the applications of statistics in geography CO6. Learn about correlation and association. CO7.. Develop an idea about theoretical distribution
	GEO/H/C C/T/07	Unit-1: Geography of India	CO1. Gain knowledge about the formation of land, climate and natural vegetation of India. CO2. Learn about the mineral and power resources of India. Know about the concept of regionalization of India. CO3. Develop an idea about the population distribution and growth in India.
		Unit 2: Geography of West Bengal	CO1. Gain knowledge about the formation of land, climate and natural vegetation of WestBengal. CO2. Learn about the mineral and power resources of West Bengal. CO3. Know about the concept of regionalization of west bengal. CO4. Develop an idea about the population distribution and growth in West bengal.
	GEO/H/S EC/P/01/A	Computer Basics and Computer Applications	CO1. Understand about the binary numbers. CO2. Application of different statistical method through computer applications such as mean, median, mode, correlation etc. CO3. Learn the Preparation of different diagrams such as scatter and histogram Understand about the binary numbers. CO4. Application of different statistical method through computer applications such as mean, median, mode, correlation etc. CO4. Learn the Preparation of different diagrams such as scatter and histogram

	GEO/H/S EC/P/01/B : (Practical) :	Remote Sensing	CO1. They can know about remote sensing. CO2. They understand the satellite remote sensing CO3. They understand the image processing. CO4. Develop an idea about satellite image interpretation.
IV	GEO/H/C C/T/08	Regional Planning and Development Unit-I: Regional Planning	CO1. Identify regions as well as understand the regional disparity and measures development indicators. CO2. Learn the evolution and types of regional planning.
		Unit-II: Regional Development	CO1. Gain knowledge regarding the models and theories of regional planning.
		Unit-II: Economic Activities	CO1. To identify different types of economic activities and their conceptual framework CO2. Understand locational theory of agriculture (Vonthunen) and industry (Weber) and global scenarios CO3. Know about the manifold of primary economic activities and their spatio-temporal analysis in India and worldwide. CO4. Understand about the manifold of secondary activities with special reference to manufacturing (Cotton textile in India and U.S.A., and Iron and Steel in India and Japan). CO5. Clarify about the special economic zone and technology parks and their global distribution.

			CO6. Know about the manifold of transport, trade and services and their spatio-temporal scenarios. CO7. Understand about the agricultural systems w.r.t tea plantation in India and mixed farming in Europe. CO8. Knowledge about the transitional sea-routes, railways and highways w.r.t India.
	GEO/H/C C/T/10:	Environmental Geography	CO1. Know about the environmental geography and its themes and interrelationship between disciplines. CO2. Learn the changing concept of environment through the different stages of civilization. CO3. Learn the holistic concept of environment and EIA. CO4. Understand about the ecosystem, its types, structure and functions. CO5. Understand about the manifold of environmental pollution and degradation and its consequences. CO6. Establish the manifold environmental issues regarding agriculture. CO7. Know urban waste sources, issues, management and consequences upon environment. CO8. Build knowledge about the different global, national, and local level environmental policies and their importance.
	GEO/H/C C/P/10:	Environmental Geography	CO1. Know about the questionnaire, types and application to acquire field data on environmental problems. CO2. Assessment of soil quality using pH, NPK and mapping. CO3. Analysis of air quality using CPCB/WBPCB data.

	GEO/H/S EC/P/02/A	Advance Spatial Statistical Techniques	CO1. Identify the geographical data and application of Nearest Neighbour Analysis in geographical studies. CO2. Acquire the knowledge about probability, non-probability, normal and skewed distribution in geographical studies with application. CO3. Build idea about sampling, typology, procedure, selection of sample size with respect to population and its application to geographical study. CO4. Know about the correlation between variables and regression analysis and residuals map preparation on the geographical data set. CO5. Learn about the data series analysis with respect to time and trend of the concerned data set using statistical method.
	GEO/H/S EC/P/02/B	Field Work	CO1. Learn geographical problem-based perception field study.
V	GEO/H/C C/T/11: (Theory)	Research Methodology and Field Work Unit-I: Research Methodology	CO1. Learn the significance of field work in geographical studies. CO2. Understand the meaning of field and identifying the case study.

		Unit-II: Fieldwork	CO1. Know about different types of field techniques. CO2. Develop an idea about research problems.
	GEO/H/C C/P/11	Research Methodology and Field Work	CO1. 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. CO2. Handle logistics and other emergencies on field. CO3. Develop skills in photography, mapping and video recording.
	GEO/H/C C/T/12	Unit-I: Remote Sensing	CO1. They can know about concepts, components, development, platforms and types of remote sensing and GIS. CO2. They understand about Aerial photography and Satellite Remote Sensing. CO3. Know about GIS data structures. CO4. Develop an idea about interpretation and application of remote sensing and GIS
		Unit-II: Geographical Information Systems and Global Navigation Satellite System	CO1. Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes. CO2. Interpret satellite imagery and understand the preparation of false color composites from them. CO3. Training in the use Geographic Information System (GIS) software for contemporary mapping skills. CO4. Analyzing and interpreting remotely sensed satellite images and aerial photographs in order to understand topographical and cultural variations on the Earth's surface. CO5. Conducting field excursions and preparation of field report on research on problem in different areas of India

			CO6.Apply GIS to the preparation of thematic maps. CO7. Use GNSS.
	GEO/H/C C/P/12: (Practical)	Remote Sensing and GIS	CO1. Have knowledge of the principles of remote sensing, sensor resolutions and image referencing schemes. CO2. Interpret satellite imagery and understand the preparation of false color composites from them. CO3.Training in the use Geographic Information System (GIS) software for contemporary mapping skills.
	GEO/H/D SE/T/01/A : (Theory): GEO/H/D SE/T/01/A	Urban Geography Unit-I	CO1. Students can explain the town and cities in India and World perspective. CO2. Gain knowledge about the history of urbanization in the developed and developing countries. CO3. They can understand the functional differences between rural and urban settlements. CO4. Students can define the problems of urban area. And try to solve them. CO5. They will know the characteristics of urban settlement. CO6. To be able to identify the urban environmental problem and how to solve those problem.
		Unit-II	CO1.Temporal analysis of urban growth using census data CO2. Trace the origin of urban places over time and analyze the factors, stages and characteristics of these places CO3.Analyze the theories of urban evolution and growth, Hierarchy of urban settlements CO4.Understand the various aspects of urban place : location, site and situation; Rank-size rule and Law of primate city CO5. Understand the concept of urban hierarchies CO7. Understand the patterns of urbanization in developed and developing countries

			CO8. Understand the ecological processes of urban growth; urban fringe; city-region CO9. Analyze the models on city structure CO10. Identify and analyze the problems of housing, slums and civic amenities CO11. Understand the patterns and trends of urbanization in India CO12. Assess the policies on urbanization in post-liberalized India CO13. Study the changing land use of Delhi, Kolkata and Chandigarh CO14. Learn the technique to plot Rank-Size Rule and establish a hierarchy of urban settlements CO15. Assess state-wise variation and trends of urbanization CO16. Learn to analyze census data to measure urban growth CO17. Develop a skill to prepare urban land use map from satellite images
		Urban Geography Unit-I	CO1. Understand nature, development, themes and manifold approaches to urban geography with relevance. CO2. Learn urban morphology, CBD and different land-use theories of urban morphology. CO3. Understand the concept settlement hierarchy and interrelationship and services of the urban centres. CO4. Know about the urban system and mathematical law of distribution of population of a city. CO5. Know global pattern of urbanisation in developed and developing countries and its consequences.
		Unit-II	CO1. Understand the process of urban growth in global scenario. CO2. Know the city region, its morphological structure and characteristics and its spatial distribution. CO3. Identify the pattern and trends of urbanisation with temporal basis. CO4. Identify the urban land-use and issues w.r.t metropolitan cities in India (Kolkata and Delhi). CO5. Know about urban renewal programme taken by the Indian Government and its planning.

	GEO/H/D SE/T/01/B : (Theory)	Cultural and Settlement Geography Unit-I:	CO1. Understand about the cultural geography and its relation to other disciplines and themes. CO2. Know spatio-temporal development of cultural geography. CO3. Understand source region of culture and its influencing area, spatio-temporal mobilization, different process and typology of cultural diffusion. CO4. Know cultural segregation and cultural diversity, its causes, types and consequences and interrelationship and role among culture, technology and development. CO5. Identify major racial groups, factors affecting, typology, characteristics and spatio-temporal analysis of the world.
		Unit-II: Settlement Geography	CO1. Understand about the periphery and subject matter settlement geography. CO2. Gain knowledge about morphology of rural settlement and internal and external factors of rural settlement. CO3. Acquire knowledge about the rural house types, house materials and factors affecting rural house and difference from north Indian rural house to south Indian rural house. CO4. Overview and critical appraisal of classical model of urban land-use and classification of cities based on functions.
	GEO/H/D SE/T/02/A :	Population Geography Unit-I	CO1. Acquire knowledge about sources of demographic data. CO2. Understanding determinants, growth, pattern and spatio-temporal distribution of world population and concept of optimum population. CO3. Overview and critical appraisal of theory of population and relevance at the present day. CO4. Understanding spatio-temporal growth, density and distribution profile in India.

		Unit-II	CO1. Understanding the elements of population. CO2. Gain knowledge about fertility and mortality in global scenario. CO3. Interpretation of population data w.r.t India from Census of India dataset. CO4. Know about the global scenario of migration, types, causes and consequences and different theories of migration and its applicability. CO5. Overview and critical appraisal of global scenario of HDI of developed and developing countries. CO6. Understanding the global population and resource ratios and development. CO7. Gain knowledge about the population policies and critical evaluation. CO8. Analysing effect of population on human health and unemployment.
	GEO/H/D SE/T/02/B	Social Geography Unit-I	CO1. Knowing the nature, periphery, and subject of social geography. CO2. Understanding about the social groups and their characteristics. CO3. Identify the social assembly and process. CO4. Overview of different social structure and their effect. CO5. Know the social status in India. CO6. Critical appraisal of social-environmental issues in India and present-day relevance.
		Unit-II	CO1. Understanding the concept social well-being and standard of living. CO2. Overview the indicators of Knox and Smith regarding social well-being. CO3. Identify the inclusion and exclusion of social geographies. CO4. Understanding the different social pathology and consequences. CO5. Overview and interpretation of social impact assessment. CO6. Understanding the different policies and development for social improvement in India .
VI	GEO/H/C C/T/13	Evolution of Geographical Thoughts Unit-I: Nature of Pre Modern Geography	CO1. Gain knowledge about development of geographical thought. CO2. Develop an idea about evolution of geographical thinking and disciplinary trends in Germany, France, Britain, and United States of America. CO3. Build an idea about between environmental determinism and possibilism, systematic and regional. CO4. Know about the trends of geographical thoughts.

		Unit-II: Foundations of Modern Geography and Recent Trends	CO1. Perceive the evolution of the philosophy of Geography. CO2. Appreciate the contribution of the thinkers in Geography. CO3. Give power point presentations on different schools of geographical thought. CO4. Discussing the evolution of geographical thought from ancient to modern times. CO5. Establishing relationship of Geography with other disciplines and man-environment relationships. CO6. Analyzing modern and contemporary principles of Empiricism, Positivism, Structuralism, Human and Behavioral Approaches in Geography
	GEO/H/C C/T/14	Disaster Management Unit-I: Concepts	CO1. Understand the definition, classification of hazards and disasters CO2. Gain knowledge about approaches to hazard study. CO3. Develop an idea about factors, consequences and management of earthquake, landslide, flood and riverbank erosion. CO4. Acquire knowledge about human induced disaster.
		Unit-II: Disaster Case Studies	CO1. Understand the nature of hazards and disasters. CO2. Assess risk, perception and vulnerability with respect to hazards. CO3. Prepare hazard zonation maps. CO4. Assessing the nature, impact and management of major natural and man-made hazards affecting the Indian subcontinent.
	GEO/H/C C/P/14: (Practical) :	Disaster Management	CO1. They have to know how prepare a project report based on any one field based case study on flood, landslide, earthquake and human induced disaster.

	GEO/H/D SE/T/03/A	Fluvial Geomorphology	CO1. Understand the Scope and significance of Fluvial Geomorphology; Concept of Fluvial Hydro system; Geographers approach to study of the rivers CO2. Acquire knowledge of Run off: components and controlling factors; Run off cycle CO3. Get an idea on Channel pattern: types and controlling factors CO4. knowledge about Drainage basin and its significance as a hydrological unit CO5. understand Linear, areal and altitudinal properties of drainage basin; Horton's stream laws; Hypsometric curve CO6. Develop an idea on Fluvial landforms: Terraces, alluvial fans, badlands and accretion topography CO7. Able to understand River bank erosion: management and its impact on land use CO8. Acquire knowledge about Integrated watershed management: Principles and significance
	GEO/H/D SE/T/03/B	Resource Geography Unit-I	CO1. Understand the concept and classification of resources CO2. Understand the approaches to resource utilization CO3. Appreciate the significance of resources CO4. Assess the pressure on resources CO5. Analyze the problems of resource depletion with special reference to forests, water and fossil fuels CO6. Understand the concept of Sustainable Resource development CO7. Understand the distribution, utilization, problems and management of metallic and non-metallic mineral resources
		Unit-II	CO1. Analyze the contemporary energy crisis and assess the future scenario CO2. Understand the concept of Limits to Growth, resource sharing and sustainable use of resources CO3. Develop the skill of mapping forest cover from satellite images CO4. Develop the skill of mapping water bodies from satellite images CO5. Analyze the decadal changes in state-wise production of coal and iron ore CO6. Learn to compute HDI

	GEO/H/D SE/T/04/A	Soil and Bio Geography	CO1. Have knowledge about the character and profile of different soil types. CO2. Understand the impact of man as an active agent of soil transformation, erosion and degradation. CO3. Recognize land capability and classify it. CO4. 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. CO5. Understand the varied ecosystems and classify them. CO6. Recognize the significance of biogeochemical cycles and biodiversity. CO7. Comprehend the devastating impact of deforestation. CO8. Identify soil types and derive their pH.
	GEO/H/D SE/T/04/B	Agricultural Geography Unit-I	CO1. Able to understand Progress of Agricultural Geography with reference to allied disciplines; Approaches to study of Agricultural Geography CO2. Gather knowledge about Origin and dispersal of agriculture; Role of agriculture on human society CO3. Understand the Factors affecting agriculture; Classification of world agricultural systems CO4. Concept about the Location and characteristics of major agricultural types: Intensive subsistence, Extensive commercial and Plantation agriculture
		Unit-II	CO1. Concept of cropping pattern, crop combination, gross and net cropped area, crop rotation CO2. Concept about A critical review and contemporary perspective of Von Thunen's model CO3. Know the Definition and factors affecting yield; Measures of agricultural productivity CO4. Acquire knowledge about Role of irrigation in agriculture with special reference to India CO5. Identify the Problems of agriculture with special reference to South Asian Countries

			CO6. Concept about World patterns of agricultural production and food security CO7. Knowledge about Land use survey and land classification (USDA) CO8. Concept about Globalization and Agriculture with special reference to India
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