B.A. /B.Sc. The honours in Geography ought to involve the comprehensive understanding of physical and human geography, the ability to analyze and interpret geographical information as well as the ability to carry out fieldwork and research. Students' proficiency in geospatial technologies, environmental issues, and the utilization of geographical skills to understand real-life concerns will be put to test. Also, they should be capable to communicate, work in multi-ethnic, and demonstrate ethical and professional conduct during work. The program will equip the students to embark on different career paths in the environmental management, regional planning, GIS, as well as education practices that lead to teaching; it will also prepare the learners to pursue advanced education at the postgraduate level.

**The course outcomes of B.A. /B.Sc. (Honours) in Geography**

| Semester | Paper Title | Learning in Course | Achievement in Course |
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| **Semester I** | CC1 - Geotectonics and Geomorphology | The Geotectonics and Geomorphology paper covers Earth's structure, evolution, geological time scale, plate tectonics, landforms created by tectonic processes, weathering, mass wasting, landscape evolution models, development of river networks, glacial, karst and aeolian landforms, and relationship between rocks and landforms. Students will learn about interior structure, isostasy, crustal deformation, constructive, conservative and destructive plate boundaries, and factors controlling various landforms. | After completing this course, students will have a strong foundation in the Earth's structure, composition and the forces that drive landform evolution. They will be able to analyze and identify various landforms and their formative processes. Students will also gain skills to interpret and identify different rocks and associate them with landforms created. |
| | CC2 (Theory) – Cartographic Techniques and Geological Map Study | The Cartographic Techniques and Geological Map Study paper introduces students to mapmaking concepts including map types, scales, coordinate systems, projections and analysis of Survey of India topographical maps. Students learn identification of rocks, minerals, and geological structures like bedding planes, unconformities, dip and strike to interpret Earth's surface and landscape features represented on maps. | On completing this course, students gain skills in cartography like scale conversion, coordinate plotting and map projections, and become capable of analyzing topographic maps to interpret Earth's surface features and geology by identifying rocks, minerals and geological structures. |

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| | CC2 (Practical) – Cartographic Techniques and Geological Map Study | In this practical paper, students will learn cartographic skills like constructing map scales, projections, relief profiles and maps using various techniques. They will analyze drainage basins, create slope and stream order maps. Students will also gain proficiency in interpreting and analyzing geological maps and sections depicting different structures. | After completing the practical course, they will be able to apply cartographic techniques to create maps, analyze relief and drainage patterns, and interpret geological maps. |
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| **Semester II** | CC3 (Theory) – Human Geography | The Human Geography paper covers the nature, scope, principles and evolution of the subject including cultural aspects like languages, religions and diffusion. Students learn about stages in evolution of human societies, population distribution, composition, growth models and human-environment relations in different regions. | After completing this course, they will understand the basic concepts of human geography and analyze characteristics of human populations, settlements and human-environment interactions in different geographical contexts. |
| | CC4 (Theory) – Cartograms, Survey and Thematic Mapping | The Cartograms, Survey and Thematic Mapping paper introduces students to concepts of cartograms, isopleths, choropleth maps, climographs, hythergraphs, ergographs, age-sex pyramids, bearings, surveying equipments like abney level, clinometer, prismatic compass, dumpy level, theodolite, and land use land cover maps | By completing this course, students will gain knowledge of various thematic mapping techniques, acquire skills in surveying, be able to interpret demographic data, and analyze land use patterns depicted on maps. |
| | CC4 (Practical) – Cartograms, Survey and Thematic Mapping | This paper covers techniques like star, pie and age-sex pyramid diagrams to represent data, proportional symbols, isolines and choropleth maps to represent data spatially, contour mapping using dumpy level and prismatic compass, and height determination of objects using transit theodolite. | By completing the practical exercises, students will gain skills in data representation, thematic mapping, contouring, and height determination using surveying instruments. |
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| **Semester III** | CC5 (Theory) - Climatology | Students will learn about the atmosphere's composition, layering, insolation, heat budget, temperature distribution, condensation and precipitation processes, air masses, fronts, atmospheric circulation, weather systems like cyclones, monsoons, causes of climate change, and Köppen's and Thornthwaite's climate classification systems. | After completing this course, students will have a thorough understanding of the physical processes controlling weather and climate. They will be able to analyze atmospheric conditions using concepts like stability, fronts, and air masses. Students will also gain the ability to classify climates and understand the factors causing climate change. |
| | CC6 (Theory) - Statistical Methods in Geography | Students will learn about the importance of statistics in geography, types of data, sampling methods, frequency distribution, measures of central tendency like mean, median and mode, and measures of dispersion like range, standard deviation and coefficient of variation. They will also study correlation analysis, regression analysis and time series analysis. | After completing this course, students will have a good understanding of statistical techniques and their application in geographical analysis. They will be able to effectively collect, organize and summarize geographical data, apply sampling methods, calculate measures of central tendency and dispersion, test correlation between variables, develop regression models, and analyze time series data. Students will gain skills to interpret results and draw meaningful conclusions from geographical data using statistical tools. |
| | CC6 (Practical) - Statistical Methods in Geography | Students will learn to construct data matrices, calculate frequency distribution, measures of central tendency and dispersion, make histograms and frequency curves based on geographical datasets. They will create scatter diagrams, plot regression lines and map residuals from regression models. | By completing the practical exercises, students will be able to organize geographical data systematically, summarize it using statistical techniques, and represent data visually through graphs and maps. They will gain skills in applying correlation and regression analysis to real geographical data and interpreting the results meaningfully. Practical experience in statistical techniques will complement their theoretical knowledge. |
| | CC 7 – Geography of India | Students will learn about India's physiography, climate, soils, vegetation, population distribution and growth, agricultural regions, mineral resources, | After completing this course, students will have a comprehensive understanding of India's physical, demographic, agricultural, industrial and regional |

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| | | industries, and regionalization schemes. They will also study West Bengal's physiography, forests, water resources, population, agriculture, industries and regional development. | geography. They will be able to analyze population growth, resource distribution and utilization, agricultural development and regional disparities. Students will also gain knowledge of West Bengal's geographical aspects and regional development patterns. |
| | SEC 1 – Computer Basics and Computer Applications | Students will learn about numbering systems, binary arithmetic, data computation, storage and formatting in spreadsheets, statistical techniques like mean, standard deviation, correlation, regression, and generating annotated diagrams like scatter plots and histograms. | By completing this practical course, students will become proficient in computer fundamentals, spreadsheet applications, statistical analysis using software tools, and data visualization. They will gain skills in computing statistical measures, testing correlation, developing regression models, representing data graphically, and using the internet for information search and extraction. This will complement their theoretical knowledge and equip them to analyze geographical data using computer applications. |
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| **Semester IV** | CC8 (Theoretical) : Regional Planning And Development | Students will learn concepts of regional planning, types of planning, principles and techniques of regional planning, need for regional planning in India, metropolitan regions and areas. They will study models of regional development like growth pole, core-periphery, growth foci, measures of human development, regional imbalances in India and strategies for regional development by NITI Aayog. | By studying this course, students will understand the need and frameworks for regional planning in India. They will gain knowledge of models and strategies for balanced regional growth and development. Students will be able to analyze regional disparities, measures of human development and evaluate planning policies for mitigating regional imbalances. |
| | CC 9 (Theoretical) : Economic Geography | Students will learn approaches to economic geography, concepts of goods, services, production, consumption, factors influencing location of economic activities, transport costs, classification of economic activities, location theories, primary activities like agriculture and fishing, secondary | By studying this course, students will gain conceptual understanding of economic geography and spatial distribution of economic activities. They will be able to analyze locational factors, apply economic location theories, examine nature and patterns of primary, secondary and tertiary |

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| | | activities like manufacturing, tertiary activities like trade and services, agricultural systems, role of highways in economic development, and international trade blocs. | activities, evaluate agricultural systems and the role of transport in economic development. Students will understand the functioning of international trade organizations. |
| | CC 10 : Environmental Geography | Students will learn about geographers' approach to environment, changing perceptions, ecosystem concepts, environmental degradation and pollution, agricultural and urban environmental issues, biodiversity concerns, and environmental policies related to forests and wetlands. | Students will develop a comprehensive understanding of major environmental concerns and protection policies, and will be able to analyze environmental issues from a geographical perspective. |
| | CC 10 (Practical) : Environmental Geography | Students will learn to design questionnaires for environmental perception surveys, apply Leopold matrix for impact assessment, assess soil quality using field kits, and interpret air quality data. | By doing practical exercises, students will gain skills in environmental analysis tools and techniques that will complement their theoretical knowledge. |
| | SEC –2 (Practical) : Field Work | Students will learn to carry out comprehensive field work by selecting a geographical research problem related to a village, town, block or drainage basin. They will formulate background, objectives, methodology and present findings. | Students will gain first-hand experience in geographical field work including identification of research problems, data collection, analysis and interpretation. They will understand how to conduct independent field-based studies which will equip them for higher research. |
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| **Semester V** | CC 11 : Research Methodology And Field Work (Theory & Practical) | Students will learn the meaning, types and significance of geographical research, the role of literature review, defining research problems, objectives and hypotheses, selecting appropriate research methods and materials, and techniques of report writing including referencing styles, preparing abstracts and keywords. They will also learn the significance of fieldwork in geography. | Students will gain comprehensive understanding of geographical research methodology and will be able to effectively conceptualize, plan and execute research studies in geography by formulating problems, setting objectives, reviewing literature, selecting methods and presenting findings. Students will gain first-hand experience in geographical fieldwork which will equip them for independent research. |

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| | CC 12 : Remote Sensing And GIS (Theory and Practical) | Students will learn remote sensing principles including image types, platforms, sensors, false color composites, and image interpretation for land cover; GIS concepts like raster, vector models, overlay analysis, GNSS principles; and applications of RS and GIS. | Students will gain knowledge of remote sensing technology for earth observation and GIS for spatial analysis, thematic mapping and decision-making, along with technical skills in digital image processing and GIS. |
| | | In practical, techniques like georeferencing, false color composites, image classification, digitization of features and thematic mapping. | Through practicals, students will develop technical skills in image processing, spatial analysis and mapping using RS and GIS software. |
| | DSE-1 (Theoretical) : Cultural And Settlement Geography | Students will learn about the scope, concepts and development of cultural geography including cultural hearths, realms, landscapes, diffusion, diversity, segregation, and characteristics of major world races. They will also learn about rural and urban settlements, their site, situation and morphology, urban definitions and models, and functional classification. | Students will gain conceptual understanding of the geographical dimensions of human culture and settlement patterns. They will be able to analyze cultural diffusion, diversity, rural settlement characteristics, urban morphology and functionally classify settlements based on their attributes. |
| | DSE-2 (Theoretical) : Population Geography | Students will learn about theories and models explaining population growth, distribution, density and dynamics. And will learn about composition, characteristics, fertility, mortality, migration, development, policies and contemporary issues related to population. | They will gain a conceptual foundation in population geography and demography. They will understand population dynamics, analyze composition, growth, distribution patterns and policies adopted in different geographical contexts. Students will be able to examine contemporary population-related issues using analytical frameworks. |
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| **Semester VI** | CC-13 (Theory) EVOLUTION OF GEOGRAPHICAL THOUGHT | Students will learn about the definition, scope, historical development and schools of thought in geography from ancient to modern periods. And have a idea about major geographical schools of thought from Germany, France, USA and India. | Students will understand the evolution of geographical knowledge across different civilizations and changing perspectives over time. Along with they will gain conceptual understanding of determinism, possibilism, neo-determinism, systematic and regional approaches |

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| | CC-14 (Theory and Practical) DISASTER MANAGEMENT | Students will learn classification of hazards and disasters, approaches to hazard study like risk perception and vulnerability models, responses to hazards through preparedness and resilience building, mapping techniques, and detailed study of various hazards and its management. | It will help for conceptual understanding of hazards and disaster management frameworks. They will be able to assess vulnerabilities, map hazard risks, analyze consequences, and evaluate preparedness and mitigation strategies for different types of hazards in varying geographical contexts. |
| | DSE – 3 RESOURCE GEOGRAPHY | Students will learn about resource geography and its relation with other disciplines, resource concepts, classification, functional theory, problems of resource depletion, principles of conservation, concept of limits to growth, distribution and utilization of metallic and non-metallic minerals, conventional and non-conventional energy resources, and sustainable resource development. | Students will understand the geographical dimensions and analytical frameworks of resource management. They will gain knowledge to examine patterns of resource distribution, utilization, conservation strategies and sustainability issues. |
| | DSE – 4 SOIL AND BIO GEOGRAPHY | It will provide students with a comprehensive understanding of soil science and bio-geography, encompassing the principles of soil formation, soil properties, ecological interactions, and the interconnectedness of terrestrial ecosystems. | The students will gain insight into the overlap of soil geography and ecology, understanding how physical, chemical, and biological properties of soils influence water and nutrient availability to plants, and the cycling of nutrients within terrestrial ecosystems. |
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