

**PROGRAMME OUTCOME, COURSE OUTCOME
&
PROGRAMME SPECIFIC OUTCOME**

For AY 2020-2021

Department of Geography, Sonamukhi College, Sonamukhi, Bankura,

West Bengal

Under Bankura University

	Program Outcome (PO)
PO1	Students will have an idea of the origins and evolution of Earth, Tectonic and Geomorphic theories and processes.
PO2	Familiar with scale application, various cartographic techniques, projections and surveys.
PO3	Awareness about Nature of Human Geography, Environment, Society, Demography and Human adaptation.
PO4	Students will gain practical knowledge about cartographic representations of geographic data, mapping techniques and interpretation of topographic maps.
PO5	Information on atmospheric composition, structure, circulation, extreme events and climatic classification.
PO6	Understanding the physical, cultural and economic position and setting of India with special emphasis on West Bengal.
PO7	Know how to geographical data collection, representation, data analysis, interpretation, and application of it through computers.
PO8	Understanding of regional planning and development, models as well as theories towards India.
PO9	Concepts of economic activities such as agriculture, industry, trade, transport and tourism including geographical perspectives.

PO10	Understanding different approaches to environmental studies, environmental pollution and degradation, ecology, ecosystem together man-environmental conflict with special emphasis on Junglemahal area.
PO11	There is a summary of the evolution of geographical thought from ancient to modern era, and development of schools of thought in modern geography.
PO12	Use it as a preliminary concept of remote sensing for land use land cover mapping.
PO13	Gathering information on concepts, examples and management strategies related to natural disasters with special reference to India.
PO14	To fully understand the concept and application of research methodologies and field work.
PO15	Students will be aware of the elements of the hydrological cycle, topography of the ocean floor, marine resources, waves, tides and the evolution of coral reefs.
PO16	Awareness of cultural settings, pattern of rural and urban settlements, types, their features and morphology.
PO17	Learning the basic concepts of urban geography, urban processes, related theories and the process of urbanization in India and also case studies of Delhi, Kolkata, and Chandigarh with reference to land use.
PO18	Having detailed knowledge about soil development process, properties, taxonomy. Understanding the concept of biogeography, the causes and effects of environmental degradation and deforestation.
PO19	Understanding the concepts of population geography, demography, population composition and policies with recent contemporary issues.
PO20	Understanding the geographical concept of health and wellbeing and its applications, the spatial distribution of diseases with an emphasis on climate change and their causes.
PO21	Learn about the basics of computer and its application to the presentation of statistical analysis and geographical data
PO22	Familiar with the concepts of GIS, GPS and their application.

COURSE OUTCOME (CO)

SUBJECT

GEOGRAPHY HONOURS

SEMESTER-I		Course Outcome
101/C-1 Geo-Tectonics and Geomorphology	Unit 1: Earth: Origin and Evolution	CO1 1.Students can learn about the theories of formation, geological history of the earth, concepts of isostasy, internal structure. 2. Students have learned about Crystal Movement, Orogenesis, Epirogenesis, Sea Floor Spreading and Continental Drift Theories, Plate Movement Theories. 3.Students will learn about different types of landforms and their related theories, morpho-climatic zones, hillslope genesis and morphology.
	Unit 2: Tectonic Theories and Processes	
	Unit 3: Process Geomorphology	
102/C-2P: Cartographic Techniques	Unit-1: Scale	CO2 1. Students will learn to draw simple, comparative scales, diagonal and vernier scales and solve related problems. 2. Students will learn to draw both perspective and non-perspective projection. 3. Students are able to conduct height survey, leveling, contouring and traverse survey.
	Unit-2: Map Projections	
	Unit-3: Surveying	

SEMESTER-II		Course Outcome
SHGEO /201/C-3: Human Geography	Unit 1: Nature and Principles	CO3 1. Students learned about the nature, scope, and approaches to study human geography; resource, locational, landscape, environmental. The concept of race, ethnicity, space and society in a global perspective. 2. Students gain an overall idea of the causes and effects of population growth, including the evolution of human society, with special reference to the world and India. 3. Students gain a thorough knowledge of human adaptation to the environment (Eskimos and Santhal). Development and environmental conflicts, social morphology and rural settlement morphology.
	Unit 2: Society and Demography Unit 3: Ekistics and Adaptation	
202/C-4P: Cartograms and Thematic Mapping	Unit-1: Cartographic Representation of Geographical Data	CO4 1. Students are able to understand the data and the methods of arranging them so that they can illustrate the data through graphs, socio-economic and climate data plots. 2. Students are able to present data on the map through diagrams like dot, pi etc. 3. Students are able to understand the naming system of the OSM series of topsheets and analyze various basin morphologies such as drainage frequency, drainage density, etc.
	Unit-2: Mapping Techniques Unit-3: Interpretation of Topographical Maps	

SEMESTER- III		Course Outcome
301/C-5: Climatology	Unit-1: Structure and Composition of Atmosphere	<p>CO5</p> <p>1. Students will fully understand the factors that affecting variation of isolation, temperature variability, and atmospheric stability around the world. They will also be able to understand the processes of condensation and cloud formation.</p> <p>2. Students will have a broad idea about different planetary wind speeds and related weather events. They will also be able to understand their effects on the upper atmospheric wind systems such as jet streams, rossby waves and monsoons.</p> <p>3. They will learn the techniques of climate classification by Koppen, Thornweight.</p>
	Unit-2: Atmospheric Circulation	
	Unit-3: Extreme Events and Climatic Classification	
303/C-6: Geography of India	Unit 1: Physical Setting	<p>CO6</p> <p>1. This paper will enable students to gain an overall knowledge of the physical structure of India and its geological history, climate, soil type, vegetation pattern and mineral resources. Based on this, they will learn to regionalize India according to RL Singh.</p> <p>2. In this unit they can learn about the population and economic setting of India.</p> <p>3. Physical, demographic, economic and regional conditions as well as problems can be known with respect to West Bengal</p>
	Unit 2: Cultural and Economic setting	
	Unit 3: Geography of West Bengal	

302/C-7P: Statistical Methods in Geography	Unit-1: Data Collection and Representation	CO7 1. The study of geography is highly dependent on quantitative techniques. Thus students would learn the basics of presenting geographical data through tables, graphs and perform statistical analysis.
	Unit-2: Data Analysis and Interpretation	2. Students will understand data interpretation through scatter diagrams, regression plots, time series data and residual mapping.
	Unit-3: Computer Application in Statistics	3. Students will learn the above theoretical techniques and perform tasks using MS-Excel
SEMESTER- IV		Course Outcome
401/C-8: Regional Planning and Development Regional	Unit 1: Regional Planning	CO8 1. As geography is a regional and spatial science, students can learn the concepts, types and descriptive methods of regions. They understood the causes and effects of the planned areas in the context of India.
	Unit 2: Regional Development	2. Students will explain the theories of growth and development promoted by Rostow, Perroux, Hirschman, Friedman and Myrdal.
	Unit 3: Regional Planning & Development in India	3. Students will gain a thorough understanding of India's regional planning process, its shortcomings and the need to strike a regional balance.
	Unit-1: Economic Activity: Agriculture	CO9 1. Students will be aware of different agricultural systems, world classification as well as crop

402/C-9: Geography of Economic Activities	Unit-2: Economic Activity: Industry Unit-3: Economic Activity: Trade, Transport and Tourism	combination and diversification strategies. They will also learn about agricultural land use models (Von Thunen). 2. Similarly they will be trained locally on setting up the local driving industry, the theory of industry locations and their impact on the environment. 3. Through this unit students will be aware of the evolution of international trade, transport network and tourism industry.
403/C-10P: Environmental Geography	Unit 1: Approach towards environmental study Unit 2: Ecology and Ecosystem Unit 3: Man-Environment	CO10 1. This paper will enlighten students about the approach towards environmental geography studies and explore the evolution of perceptions towards the environment at different stages of civilization. 2. Students can learn about the effectiveness of an ecosystem, the causes and effects of environmental pollution. 3. Forests have occupied the interior of forests around the world. As a result, students will be able to understand the effects of such incidents locally, regionally and globally.
SEMESTER- V		Course Outcome
501/C-11: Evolution of Geographical Thought	Unit-1: Development of Geography Unit-2: Development of Schools of Thought in Modern	CO11 1. Geographical discipline has evolved through various thought processes. Students of the modern era will be able to understand the contributions of the ancient geographer and Humboldt, Ritter. 2. Students of different schools of thought (German, British, American

	<p>Geography</p> <p>Unit-3: Concepts and Trends in Geography</p>	<p>and Indian) will be introduced to the development of modern geography.</p> <p>3. Students will be entitled to a holistic understanding of concepts such as determinism, neo-determinism, positivism, possibilism, and dualism in geographical thought.</p>
502/C-12P: Remote Sensing	<p>Unit-1: Remote Sensing: Basic Concepts</p>	<p>CO12</p> <p>1. Students will gain knowledge about the physics behind remote sensing which is the interaction of electromagnetic energy reflected on different surfaces. They will have an understanding of different satellites and their images and use them to create LULC maps.</p>
SEMESTER- VI		Course Outcome
601/C-13T: Disaster Management	<p>Unit 1: Concepts and Approaches</p> <p>Unit 2: Disaster Case Studies</p> <p>Unit 3: Disaster Management in India</p>	<p>CO13</p> <p>1. Students will gain knowledge about the hazard and disasters, the differences between types and classifications, the shifting of paradigms in disaster management research, and their approach to management and research.</p> <p>2. Students will learn in detail about the occurrence, impact and management of various natural disasters.</p> <p>3. Students will be educated in various disaster prone areas of India.</p>
602/C-14P: Research Methodology and Field Work	<p>Unit 1: Research Methodology</p> <p>Unit 2: Field Work</p>	<p>CO14</p> <p>1. Students will learn to literature review, gather information, identify problems, and formulate research objectives.</p> <p>2. Students will have first experience conducting surveys, creating questionnaires, collecting data, analyzing it and writing reports.</p>

DSE		Course Outcome
504/DSE-1: Hydrology and Oceanography	Unit 1: Hydrology	CO15 1. Students will gain a broad knowledge of the approach to the study of hydrology, the hydrological cycle and its components. They will learn about hydroelectric units, groundwater recharge, discharge and sewage basin as the factors controlling it. 2. A wide range of information on ocean floor topography, chemical and physical properties of seawater, TS diagrams and water mass was available to the students. 3. The third unit will enable students to become familiar with the type of coral wall structure. There will be an overview of their marine resources and its sustainable use, tides and waves, as well as the causes and effects of sea level rise.
	Unit 2: Oceanography	
	Unit 3: Ocean resources and sea level change	
503/DSE-2: Cultural and Settlement Geography	Unit 1: Cultural Geography	CO16 1. Students will be thoroughly immersed in the definition, scope and content of cultural geography. They will be able to learn about cultural hearth, realm, race and ethnic groups. 2. They can know the definition, nature, characteristics, type of house and morphology of rural settlement. 3. They will know the definitions, nature, characteristics, classification and morphology and theories related to urban settlement.
	Unit 2: Rural Settlement	
	Unit-3: Urban Settlement	
503/DSE-2: Urban Geography	Unit -1: Basic Concepts	CO17 1. Students will relate to the definitions, opportunities, perspectives and developments of urban geography as well as theories. 2. The contents of this unit will enable
	Unit -2: Urban Processes	

	Unit -3: Urbanization in India	students to understand urban growth and related theories (multiple nuclei theory, city structure concentric zone, etc.). 3. This unit will provide students with information on problems related to the process of urbanization with reference to Indian cities
603/DSE-3: Soil and Biogeography Soil and Biogeography	Unit 1: Soil Geography Unit 2: Bio-Geography Unit 3: Human Behaviour and its impact on Soil and Biosphere	CO18 1. Students will collect a brief description of the soil forming processes, profile, characteristics and taxonomic classification. 2. The concepts of biosphere, ecosystem, biome, ecology, food chain, food web etc. will be clarified to them. They will have a detailed understanding about the biomes 3. This unit discusses the causes and effects of soil erosion and loss of biodiversity here.
604/DSE-4: Population Geography	Unit 1: Basic Concepts Unit 2: Population Composition Unit 3: Population Policies	CO19 1. Students will learn about the evolution of the field of population geography, the sources of population data, the distribution and pattern of population around the world, theories of generalization of trends of population growth. 2. Students will learn the demographic elements (age, gender, death, fertility, etc.) related to the world and India. 3. They will cover contemporary issues related to population policy, HDI, human resource areas and population in developed and developing countries.
	Unit-1: Perspectives on Health	CO20 This unit will enable students to have an idea about medical geography, health, application of medical geography and

604/DSE-4: Geography of Health and Wellbeing	Unit-2: Health Risks and Diseases	concepts environmental theories. 2. Students will be familiar with the geographical distribution of diseases, their types and causes, with an emphasis on tropical diseases like dengue. They will also learn about air, water, waste pollution, occupational risks and health risks related to nutrition for women and children.
	Unit-3: Climatic Change and Human Health	3. This unit teaches students about the effects of climate change on health.
SEC		Course Outcome
305/SEC-1: Computer Basics and Applications	Concepts in Theory	CO21 Students will get acquainted with MS-Excel and learn the basics of statistical analysis and graphical plots using MS-Excel.
405/SEC-2: Geographical Information System and GPS	Unit-1: Geographical Information System Unit-2: Global Positioning System Unit 3: Mapping in GIS	CO22 1. Students will have a complete idea about GIS, its components and the process of development of GIS 2. Students will have a theoretical idea about the functionality of GPS and the principles of data collection and mapping using its software. 3. Students will learn dereferencing, digitization, data joining, and their mapping in QGIS software.

COURSE OUTCOME (CO)

SUBJECT

GEOGRAPHY PROGRAMME

SEMESTER-I		Course Outcome
SP/GEO101/C-1A Physical Basis of Earth	Unit 1: Earth: Origin and Evolution	CO1 1. Students can learn about the theories of formation, geological history of the earth, concepts of isostasy, internal structure. 2. Students have learned about Crystal Movement, Orogenesis, Epeirogenesis, Sea Floor Spreading and Continental Drift Theories, Plate Movement Theories. 3. Students will learn about different types of landforms and their related theories, morpho-climatic zones, hill slope genesis and morphology.
	Unit 2: Tectonic Theories and Processes	
	Unit 3: Process Geomorphology	
SEMESTER-II		Course Outcome
SP/GEO201/C-1B Human Geography	Unit 1: Nature and Principles	CO2 1. Students learned about the nature, scope, and approaches to study human geography; resource, locational, landscape, environmental. The concept of race, ethnicity, space and society in a global perspective. 2. Students gain an overall idea of the causes and effects of population growth, including the evolution of human society, with special
	Unit 2: Society and Demography and Ekistics	

		reference to the world and India.
SEMESTER-III		Course Outcome
SP/GEO301/C-1C Maps and Diagrams and Cartographic Techniques	Unit 1: Scale and Cartograms Unit 2: Map Projections Unit 3: Surveying Unit 4: Field Report	CO3 1. Students will learn to draw simple, comparative scales, diagonal and vernier scales and solve related problems. 2. Students will learn to draw both perspective and non-perspective projection. 3 & 4. Students are able to conduct height survey, leveling, contouring and traverse survey.
SP/GEO/304/SEC-1 Computer Basics	Unit 1: Computer Basics	CO4 Students will get acquainted with MS-Excel and learn the basics of Computer and concept of Internet.
SEMESTER-IV		Course Outcome
SP/GEO401/C-1D Economic Geography	Unit 1: Agriculture System and Model Unit 2: Industrial and Transport System	CO5 1. Students will be aware of different agricultural systems. They will also learn about agricultural land use models (Von Thunen). 2. Similarly they will be trained locally on setting up the local driving industry, the theory of industry locations and their impact on the environment.
SP/GEO/404/	Unit 1: Computer	CO6 1.Students will get acquainted with

SEC-2 Computer Applications	Applications	MS-Excel and learn the basics of statistical analysis and graphical plots using MS-Excel
SEMESTER-V		Course Outcome
SP/GEO501/DSE-1A Hydrology and Oceanography	Unit 1:Hydrology	CO7 1. Students will gain a broad knowledge of the approach to the study of hydrology, the hydrological cycle and its components. They will learn about hydroelectric units, groundwater recharge, discharge and sewage basin as the factors controlling it.
	Unit 2: Oceanography	2. A wide range of information on ocean floor topography, chemical and physical properties of seawater, TS diagrams and water mass was available to the students.
SP/GEO501/DSE-1A Urban Geography	Unit 1: Basic Concepts	CO8 1. Students will relate to the definitions, opportunities, perspectives and developments of urban geography as well as theories.
	Unit 2: Urban Processes	2. The contents of this unit will enable students to understand urban growth and related theories (multiple nuclei theory, city structure concentric zone, etc.).
SP/GEO504/SEC-3 Remote Sensing	Unit 1: Remote Sensing: Basic Concepts	C09 1. Students will gain knowledge about the physics behind remote sensing which is the interaction of electromagnetic energy reflected on

		different surfaces. They will have an understanding of different satellites and their images and use them to create LULC maps
SEMESTER-VI		Course Outcome
SP/GEO601/DSE-1B Soil and Biogeography	Unit 1: Soil Geography	CO10 1. Students will collect a brief description of the soil forming processes, profile, characteristics and taxonomic classification. 2. The concepts of biosphere, ecosystem, biome, ecology, food chain, food web etc. will be clarified to them. They will have a detailed understanding about the biomes.
	Unit 2: Bio Geography	
SP/GEO601/DSE-1B Population Geography	Unit 1: Basic Concepts	CO11 1. Students will learn about the evolution of the field of population geography, the sources of population data, the distribution and pattern of population around the world, theories of generalization of trends of population growth. 2. Students will learn the demographic elements (age, gender, death, fertility, etc.) related to the world and India.
	Unit 2: Composition and Policies	
SP/GEO604/SEC-4 Geographic Information System Lab	Unit 1: Geographic Information System	CO12 1. Students will have a complete idea about GIS, its components and the process of development of GIS. Students will learn dereferencing, digitization, data joining, and their mapping in QGIS software.

PROGRAM SPECIFIC OUTCOME (PSO)

GEOGRAPHY

	Program Outcome
PSO1	The student will gain an introduction to physical geography which includes climate; Hydrology and oceanography. Students will have a general understanding of geomorphological and geotechnical processes that lead to the formation of different landforms. They will be able to identify the different landform characteristics of the field, understand the components of the hydrological cycle and its role in watershed management. They will be able to understand the processes related to different climate events and analyze different climate and hydrologic datasets. They will have a complete knowledge of the sea floor surface and ocean currents.
PSO2	They will be able to acquire knowledge of human geography and relate it to their practical life and surroundings. They will be able to relate the knowledge of physical geography to human geography which includes demographic, social, cultural, anthropological and economic aspects of the society. They will be able to realize different aspects of human welfare and wellbeing. They will be able to enable regional space on the basis of spatial qualities.
PSO3	Students will be able to identify the types of urban and rural settlements and analyze the physical as well as cultural environmental problems of both rural and urban areas. So they can also give advice to reduce the problem
PSO4	Students will learn to conduct various surveys such as Dumpy level, Theodolite, Prismatic Compass, GPS surveys and data mapping.

PSO5	Students will learn to represent different geographical data with the help of cartograms and carry out statistical analysis, in paper and through software.
PSO6	Students will be able to identify socio-economic and environmental problems with special emphasis on pedology in different regions. They will be able to conduct EIA surveys, analyze pollution-related data, and conduct pollution-related perception studies.
PSO7	They will learn how to prepare map based on remote sensing and GIS techniques.
PSO8	They will have a thorough understanding about the concept and application of research methodologies.
PSO9	They will be qualified to conduct community survey projects which are necessary to measure the development status of a particular group or section of the society. Once the field project is completed they will be proficient in their communication skills as well as social interactions. Some students have been able to understand and write effective reports and design certifications, be able to demonstrate effectively, and be able to give and receive clear instructions.
PSO10	They will have an idea about the process of evolution of geography as a discipline.
PSO11	Demonstrate knowledge of the impact of acquired knowledge in social and environmental contexts and the need for sustainable development.
PSO12	Prepare and acquire skills to be engaged in independent and lifelong learning in a wide range of social and environmental changes.