

COURSE OUTCOME
DEPARTMENT OF GEOGRAPHY
CBCS SYLLABUS

CORE COURSE/DSE/SEC	CC No. & PAPER NAME	OUTCOME OF COURSE
CORE COURSE SEMESTER I	GEO-A-CC-1-01-TH/P- GEOTECTONICS AND GEOMORPHOLOGY	<p>The students learn about the Earth's interior, structural changes, tectonic movements and their resultant landforms. They learn and study about the different theories of Geotectonics. The study of Geomorphology helps the students in understanding landform development, the various agents of denudation and their processes along with studying the landform development theories.</p> <p>The most important aspect learned here is regarding systems approach and the concept of time in landform evolution.</p> <p>In the practical part the students learn regarding rocks and minerals, the process of identification and their characteristics. They also learn to measure dip and strike with the help of a clinometer. Topographical maps impart an idea regarding mapping and scale along with helping to develop skills to identify features and establish a correlation between them. All these will help them to be prepared for field work in the future.</p>
	GEO-A-CC-1-02-TH/P- CARTOGRAPHIC TECHNIQUES	<p>This course is designed to understand the concept of maps and its components along with the method of preparation to represent geographical data. Projections help students to understand the shape and dimension of the Earth. They learn about the concepts of scales, bearings, geoid, spheroid, which help them in preparation of maps. In the practical part of this course they learn about preparation of scales, different types of map projection and develop the idea about different types of thematic mapping techniques.</p>
CORE COURSE SEMESTER II	GEO-A-CC-2-03-TH/P – HUMAN GEOGRAPHY	<p>The course helps students to understand the different approaches to Human Geography and also its scope, content and nature along with its evolution and recent trends. Students gain knowledge regarding space and society, concept of race and ethnicity. This course also focuses on a major concept and that is population growth and its distribution along with the causal factors. The pattern and morphology of rural settlement is also studied along with the hierarchy of urban settlements. In the practical part of this course</p>

		<p>students learn about the application of cartographic data in analysis of demographic data and the analysis of settlement forms from toposheet.</p>
<p>CORE COURSE SEMESTER III</p>	<p>GEO-A-CC-2-04-TH/P- CARTOGRAMS, THEMATIC MAPPING AND SURVEYING</p>	<p>In this course the students learn the techniques of map making. They learn about the concept of natural and logarithmic scales and the representation of data with cartograms. Preparation and interpretation of geological maps, weather maps, land use and land cover maps are important parts of this course. The students learn the theoretical aspects of surveying instruments like Dumpy level, Prismatic compass, Theodolite and then they learn its practical application on field.</p>
	<p>GEO-A-CC-3-05-TH/P- CLIMATOLOGY</p>	<p>This course gives an insight regarding the different elements of weather and climate. Students get an idea about the layering of the atmosphere, overview of climate change and monsoon mechanism with reference to India. Students also learn regarding atmospheric phenomena, climatic classification, formation of air mass, fronts, jet stream, cyclones and thunderstorms. In the practical part students learn to use different meteorological instruments like Fortin's barometer, Six's Maximum and Minimum Thermometer, Hygrometer and Rain gauge for measuring different elements of weather and climate. Students also learn to read and interpret the Indian Daily Weather maps prepared by the Indian Meteorological Department(IMD).</p>
	<p>GEO-A-CC-3-06-TH/P- HYDROLOGY AND OCEANOGRAPHY</p>	<p>In this course the students study the global hydrological cycle, run off, ground water movement, water harvesting and watershed management. The students can be involved in planning and sustainable use of domestic water usage.</p> <p>Oceanography deals with ocean water circulation and its physical and chemical properties. Different elements of ocean water, coral reefs, marine resources and sea level changes and the role of oceans in controlling global climatic events. This is an important course it generates awareness amongst the students that how climate change and pollution is threatening marine life.</p> <p>In the practical part students learn to prepare rating curves to understand flooding in rivers. Students also learn to construct and interpret</p>

		hydrological and rainfall dispersion graphs and diagrams.
	GEO-A-CC-3-07-TH/P- STATISTICAL METHODS IN GEOGRAPHY	In this course students learn about the method of collection, organizing and analyzing data. Conclusions will be drawn from data analysis and the findings will help in understanding the phenomena in concern. Processing of statistical data involve the application of suitable statistical techniques and the presentation of data will require selection of a suitable cartographic technique. In the process students will learn about frequency table and data matrix of samples; understand and draw a scatter diagram and linear regression by using two relevant attributes.
SEC SEMESTER III	GEO-A-SEC-A-3-01-TH- COASTAL MANAGEMENT	This course gives idea about coastal morphodynamic, coastal hazard, impact, tourism and coastal zone management. This course generates awareness about maintaining balance between development and utilization of resources and their protection. This course promotes research in coastal engineering and environmental issues. This course will guide students towards becoming planners, experts in Coastal Zone Management, etc.
CORE COURSE SEMESTER IV	GEO-A-CC-4-08-TH/P- ECONOMIC GEOGRAPHY	This course helps in understanding the various economies, their functions and impact upon society. The students learn about the locational theories related to agriculture and industry and assess the global economic relations among different nations. The practical component of this course deals with choropleth mapping, presentation of occupational structure, time series analysis and transport network analysis.
	GEO-A-CC-4-09-TH/P- REGIONAL PLANNING AND DEVELOPMENT	Students get a comprehensive idea about core concepts of regional planning with special reference to India. The outcome includes understanding the concept of development. Understanding about the existence of and cause of underdevelopment with special reference to India and how to formulate different measures for attaining balanced development. In the practical component students learn delineation of different types of regions and mapping regional disparity.
	GEO-A-CC-4-10-TH/P- SOIL AND BIOGEOGRAPHY	This course gives a holistic understanding of soil as a resource. Students learn about the soil forming factors, properties, nature of soil profile and soil and land classification. Importance is given to the study of soil erosion and land degradation. This will

		generate awareness among students regarding soil conservation. They get hands on training on soil testing and analysis of biogeographic data and determination of plant diversity. Biogeography teaches about the natural habitats of the world
SEC SEMESTER IV	GEO-A-SEC-B-4-03-TH- RURAL DEVELOPMENT	This course is important to understand the necessity to eradicate poverty. Strategies to deal with rural development is to be taken into consideration. Rural development initiatives contribute to sustainable livelihoods.
CORE COURSE SEMESTER V	GEO-A-CC-5-11-TH/P- RESEARCH METHODOLOGY AND FIELD WORK	In this course students are introduced to the concept of research. They learn to identify a research problem, select a study area, formulate research plan, hypothesis, methodology, analysis methods including both quantitative and qualitative and draw suitable conclusions. They also learn logistics and emergencies to be dealt in the field. The students gather theoretical knowledge about field work and research before going to the field and this knowledge helps in collection of primary data from the study area. They learn different skills of photography, recording, preparing transcripts and compilation and final presentation.
	GEO-A-CC-5-12-TH/P- REMOTE SENSING, GIS AND GNSS	GIS and remote sensing technologies help students to understand the Earth through scientific tools. They learn about sensors and resolutions and image referencing schemes. They learn to interpret satellite imagery and understand mainly land use and land cover. These images are interpreted with GIS software. They also learn digitizing and preparing maps and representing socio-economic data with the help of cartograms using the software and prepare thematic maps. They learn the use of GNSS as well where they collect waypoints and plot them in the software.
DSE SEMESTER V	GEO-A-DSE-A-5-02-TH/P- CLIMATE CHANGE: VULNERABILITY AND ADAPTATIONS	This course teaches students how to deal with climate change and learn mitigation measures. The course teaches about the impact of climate change on the society and various economic activities. The practical part familiarizes students with different techniques of analyzing and comparing temperature and rainfall variability.
CORE COURSE SEMESTER VI	GEO-A-CC-6-13-TH/P- EVOLUTION OF GEOGRAPHICAL THOUGHT	The content of geography is constantly changing and adapting to social, political and economic circumstances. Geography is a dynamic subject rapidly changing itself. Its evolution is studied in this course which helps students to understand the origin of the subject and also the direction in which it is going. Contributions of geographers through

		ages through stimulate its growth and evolution. Students must know the academic history of the subject they are studying.
	GEO-A-CC-6-14-TH/P-HAZARD MANAGEMENT	Hazards like earthquake, floods, etc. are recurrent in some countries. Including the hazard management study in the curriculum may improve the knowledge of students about the hazard and enable to take action to reduce their vulnerability.
DSE SEMESTER VI	GEO-A-DSE-A6-04-TH/P-RESOURCE GEOGRAPHY	This course is important from the light of economic significance. Students learn about the concept and classification of resources, analyse the problems of resource depletion and understand sustainable development. The students develop skill of mapping forest cover and water bodies from satellite images , analyse decadal change in state wise production of coal and iron ore and computation of HDI.
	GEOA-B-DSE-B-6-08-TH/P- GEOGRAPHY OF INDIA	Students will have an understanding of landforms and ecosystems and role of physical environment on human population. Students will know about the presence of minerals and power resources in spatial terms to explain what has happened in the past, understand the present and the future. They will learn about the lifestyles of tribes. They will also learn about physiography, forest cover, water resources, agriculture, mining and industries of West Bengal. The students also learn about the regional issues of Sundarbans and Darjeeling in West Bengal.