

Course Objectives of Geography (CCF)

Course Code: GEOG-MD-CC01-1/3-Th&P

Course Title: Physical Geography

- Students will be able to describe the concept of Scales, Projections and Maps.
- Students will understand the concept of Internal Structure of the Earth.
- Students will be exposed to the concept of Weathering and Fluvial Processes.
- Students will learn about Nature, Composition and Layering of the Atmosphere.
- Students will develop a solid understanding of the concept of Planetary Winds, Jet Streams and Index Cycle.
- Students will understand the concept of Soil Formation and the Evolution of Soil Profile.
- Students will explain the Plant Adaptation Process and Classification of Hazards and Disasters in Indian Context.

Course Code: GEOG-MD-CC02-2/4-Th&P

Course Title: Human Geography

- Students will understand the elements of human geography.
- Students will be able to describe evolution of human societies such as hunting and food gathering, pastoral nomadism, subsistence farming and industrial society.
- Students will learn about human adaptation in the environment.
- Students will develop a solid understanding of the concept of demographic transition and distribution, density, growth of population in India.
- Students will understand the concept of urban and rural settlement.
- Students will also understand the concept of size-class classification of urban settlement after census of India.

Course Code: GEOG-MD-CC03-3/5-Th&P

Course Title: Economic Geography

- This course offers an introduction to the ways in which economic activities are organized over the earth surface.
- Students will be able to know primary, secondary, tertiary, quaternary and quinary activities.
- Students will understand the concept of location of economic activities such as theories of Von Thunen and Weber.
- The course explores the concept and processes of economic globalization, international trade and economic blocs.

Course Code: GEOG-MD-CC04-4/5/6-Th&P

Course Code: Geomorphology

- Students will be exposed to the nature of degradation process such as mass wasting.
- The course explores the process of different geomorphic agents.
- Students will understand the concepts of folds and faults, their classification and surface expressions.
- Students will develop a solid understanding of the concept of river network on granites, basalts and limestone.
- Students will be able to describe the models of landscape evolution view of Devis, Penck, King and Hack.
- Students will understand the concept of system approach and role of humans in landform developments.

Course Code: GEOG-MD-CC05-4/5/6-Th&P

Course Code: Climatology

- The aim of this course is to apprise the students to insolation, heat budget, horizontal & vertical distribution of temperature and inversion of temperature.
- Students will gain knowledge about climate change.
- Students will understand the concept of formation, depletion, restoration and significance of ozone layer.
- Students will also know about condensation process and theories of mechanism of precipitation such as Bergeron-Findeisen Theory & Collision-Coalescence Theory.
- Students will learn about air-mass, fronts, tropical cyclones and thunderstorms.
- Students will develop a solid understanding of the concept of monsoon circulation and mechanism.
- Students will be able to describe the climate classification after Koppen and Thornthwaite.

Course Code: GEOG-MD-CC06-5-Th&P

Course Code: Hydrology and Oceanography

- Students will be exposed to the nature of global hydrological cycle and its physical & biological role.
- The course explores the process of runoff, infiltration and evapotranspiration.
- Students will understand the concepts of water harvesting and watershed management.
- Students will develop a solid understanding of the concept of groundwater storage, groundwater recharge & discharge and groundwater movement.
- Students will be able to describe the physical and chemical properties of ocean water, ocean temperature and salinity, water mass, ocean wave and tide.
- Students will understand the concept of sea level change, marine resources and its sustainable utilization.

Course Code: GEOG-MD-CC07-5/6-Th&P

Course Code: Cultural and Settlement Geography

- Students will understand the definition, scope and content of cultural geography.
- Students will be able to describe the components of culture, cultural hearths and realms.
- Students will also understand the concept of cultural diffusion.
- Students will learn about world religions, languages, cultural segregation and diversity.
- Students will develop a solid understanding of the concept of rural and urban settlements.
- Students will be able to describe the models of urban morphology view of Burgess, Hoyt and Harris & Ullman.

Course Code: GEOG-MD-CC08-6-Th&P

Course Code: India and West Bengal

- The course offers an introduction to physiographic divisions of India.
- Students will understand the concept of climate, soil and vegetation regions of India.
- Students will also know about green revolution, white revolution and their impacts.
- Students will learn about industrial development such as automobile and information technology sectors.
- Students will understand the concept of regionalization.
- Students will be able to describe physiographic divisions and drainage system of West Bengal.
- Students will develop a solid understanding of the concept of changing pattern of industrialization in West Bengal.
- The course explores the concept of population growth, population distribution, migration and human development.

Course Code: GEOG-MD-SEC01-1/2/3-Th

Course Code: Methods in Geography

- Students will understand the concept of primary survey, research problems, sampling techniques, questionnaire and interview schedule.
- Students will gain knowledge about data compilation, field data entry, tabulation of data into frequency distribution tables and statistical analysis of data.
- Students will use of minor survey instruments like Brunton compass, distometer, smart phone leveling applications.
- Students will learn about textural analysis of maps, mapping of flooded areas and riverbank & coastline shift from satellite images.
- The course explores the methods of human geography such as dominant & distinctive functions, ternary diagram, accessibility map and flow chart.

Course Code: GEO-H-IDC01-1/2/3-Th&P

Course Code: Geomatics and Spatial Analysis

- Students will be able to describe the concept of scales, projections and maps.
- Students will understand the concept of bearing, geoid and spheroid.
- Students will also understand the concept of simple conical projection and universal transverse mercator.
- Students will be exposed to the basic concepts of surveying, survey equipment and their capabilities such as dumpy level, theodolite, total station and global navigation satellite system.
- Students will gain knowledge about remote sensing and sensors with reference to IRS and Landsat mission.
- Students will learn about false colour composition and supervised image classification.
- Students will understand the concept of Geographical Information System and raster & vector data.
- Students will prepare attribute tables, data manipulation, query and overlay.