

# **COURSE OUTCOME** **GEOGRAPHY (HONOURS)**

## **FIRST SEMESTER**

### **(Geo-tectonics and Geomorphology, (GEOACOR01T & GEOACOR01P)**

**Credit: 04 & 02**

#### **COURSE OUTCOME**

- Understand the difference between endogenic and exogenic forces.
- Realize the basic concept of equilibrium. Students will be able to correlate between different types of geomorphic process and resultant landforms as a process response system.
- Identify the landforms as a geo-heritage.
- Students will be able to identify the appropriate landform for certain human activities and interpret the landforms as a tourist guide.
- Know about the basic characteristics of rocks and minerals and method of identification.

### **Cartographic Techniques, (GEOACOR02T & GEOACOR02P)**

**Credit: 04 & 02**

#### **COURSE OUTCOME**

- Students will be able to apply the concept of scale according to their character.
- Know about map making process through different projection.
- Achieve hand hold knowledge about the scale, projection construction.
- Understand about the differences among the scales as well as among the projections and also their applicability.
- The concept of drainage basin delineation, relative relief, slope map, stream ordering, will help student for drainage basin management.

## **SECOND SEMESTER**

### **Human Geography, (GEOACOR03T)**

**Credit: 06**

#### **COURSE OUTCOME**

- Understand the impact of environment on human society.
- In future student will be able to plan of new urban site based on urban morphology.
- Student will be able to scientific discussion about the heterogeneity of races, ethnicity etc and student will be able to understand about the different characters of population such as growth, composition etc.
- Understand about the evolution of human society therefore be able to show respect every human society and able to correlate between resource and population
- Student will be able to find out the proper location for a new settlement.

### **Cartograms and Thematic Mapping, (GEOACOR04T& GEOACOR04P)**

**Credit: 04 & 02**

#### **COURSE OUTCOME**

- Get a clear concept about the cartograms and thematic mapping and also be able to differentiate them.
- Student will get a theoretical concept about the surveying and also survey equipments.
- Know about representation the statistical data into a graphical picture. This multi dimensional creativity will create an aesthetic value in them.
- Learn hand holds training about prismatic and Dumpy Level survey. These will help them in higher studies during the field work.
- Students will learn to describe the land use and land cover pattern from different topographical maps.

## **THIRD SEMESTER**

### **Climatology, (GEOACOR05T & GEOACOR05T)**

**Credit: 04 & 02**

#### **COURSE OUTCOME**

- Learn about the elements of atmosphere i.e. nature, composition, insolation, distribution of temperature, green house gas etc. These topics help the student to understand about the change of climate and they will be able to correlate to their local climatic condition
- Students will be able to learn about the atmospheric phenomena and also climatic condition such as condensation process, air mass, front, cyclone, monsoon circulation in India.
- Students will be able to select suitable crop according to the climatic condition.
- The knowledge about cyclone help in student to take necessary action any cyclonic event as a disaster management.
- Learn to correlate Indian climatic condition with the global respect

### **Geography of India, (GEOACOR06T)**

**Credit: 6**

#### **COURSE OUTCOME**

- Know about the distribution of physiographic features, climatic provinces, soil, vegetation, population etc. Students will realize the vastness of India as well as West Bengal and also realize the unity in diversity.
- Students will be able to know about the distribution of resources in India and West Bengal also.
- Acquire knowledge about social stratification with special reference to tribes in India.
- Students will be able to realize about the allocation of industry.
- Learn about the regional disparity of India and they will be able to suggest the proper planning for the less developed part of India.

### **Statistical Methods in Geography, (GEOACOR07T &GEOACOR7P)**

## **Credit 04 & 02**

### **COURSE OUTCOME**

- Know about the theoretical concept of statistical data.
- Students will be able to know about the sources of geographical data for statistical analysis.
- Students will be able to know about the significances of frequency, cumulative frequency, normal and probability and will be able to correlate these with geography.
- Students will be able to represent the geographical data for frequency table and will be able to measure
- Students will be able to analysis the sample data set through scatter diagram and linear regression.

## **Remote Sensing, (GEOSSEC01M)**

### **Credit: 2**

### **COURSE OUTCOME**

- Understand the basic principles of Remote Sensing, Types of RS satellites and sensors and elucidate sensor resolutions and their applications with reference to IRS and Landsat mission.
- Prepare False Colour Composites from IRS LISS-3 and Landsat TM and OLI data and Prepare inventories of landuse land cover (LULC) features from satellite images.
- Explain concept of GIS and its applicability with emphasis on GIS data structures: types: spatial and non-spatial, Raster and vector.
- Identify principles of GNSS positioning and way point collection and transferring waypoints to GIS and ability to perform area and length calculations from GNSS data.
- Georeferencing of maps and images using Open-Source software (QGIS), preparation of FCC and identification of features using standard FCC and other band combinations perform digitization of features, data attachment, overlay and preparation of annotated thematic maps (choropleth, pie chart and bargraphs).

## **FOURTH SEMESTER**

### **Regional Planning and Development, (GEOACOR08T)**

**Credit: 6**

#### **COURSE OUTCOME**

- Understand the concept of regions, their classification and their delineation.
- Explain the types, principles, objectives, tools and techniques of Regional Planning with emphasis on need for regional planning in India, multi-level planning in India.
- Elucidate concepts of growth, development, underdevelopment, indicators and measures of economic, social, environmental and human development.
- Critically analyze the theories and models for regional development: Cumulative causation (Myrdal), Stages of development (Rostow), growth pole model (Perroux).
- Decipher the trends of regional development in India with emphasis on disparity and diversity.

### **Economic Geography, (GEOACOR09T)**

**Credit: 6**

#### **COURSE OUTCOME**

- Explicate the meaning, concepts and approaches to Economic Geography with emphasis on goods and services, production, exchange and consumption.
- Understand the concept of economic man, theories of choices, economic distance and transport costs, concept and classification of economic activities.
- Identify the factors affecting location of economic activity with special reference to agriculture (Von Thünen), and industry (Weber).
- Classify economic activities and identify the nature, characteristics and significance of different types of primary, secondary and tertiary activities.
- Understand the evolution, structure functions and significance of international trade and economic blocs: WTO, GATT and BRICS.

## **Environmental Geography, (GEOACOR10T & GEOACOR10P)**

**Credit: 4 & 2**

### **COURSE OUTCOME**

- Identify geographers' approach to environmental studies and acquire comprehensive knowledge about the concept of holistic environment and systems approach and understand the concept structure and functions of ecosystem.
- Delineate the space–time hierarchy of Environmental problems at local, regional and global scales and identify different environmental issues with special reference to the causes and consequences of land, water and air pollution and degradation, waste management.
- Elucidate important environmental policies viz. National Environmental Policy (2006), Earth Summits (Stockholm, Rio, Johannesburg) and Global initiatives for environmental management (special reference to Montreal Protocol, Kyoto Protocol, Paris Climate Summit).
- Acquire skills of conducting perception survey on environmental problems and acquire knowledge on environmental impact assessment and air quality.
- Student will be able to learn about the concept of questionnaire for survey on environmental problem and learn about the concept of check list for Environmental Impact Assessment, conducting perception survey on environmental problems and acquire knowledge on environmental impact assessment and air quality.

## **Advanced Spatial Statistical Techniques, (GEOSSEC02M)**

**Credit: 2**

### **COURSE OUTCOME**

- Students will be able to know about the sources of geographical data for statistical analysis.
- Understand probability theory, probability density functions with respect to Normal, Binomial and poisson distributions and their geographical applications.
- Understand sampling, sampling plans for spatial and non-spatial data, sampling distributions, sampling estimates for large and small samples tests involving means and proportions.
- Perform correlation and regression analysis with special reference to rank order correlation and product moment correlation, linear regression, residuals from regression, simple curvilinear regression and multi-variate.
- Perform time series analysis with emphasis on time Series processes, smoothing time series, time series components.

## **FIFTH SEMESTER**

### **Field work and Research Methodology (GEOACOR11T & GEOACOR11P)**

**Credit: 4 & 2**

#### **COURSE OUTCOME**

- To learn about the meaning and significance of research, techniques of literature review.
- To know about the research problems, objectives, hypothesis as well as research materials and method.
- Student will be able to learn about the selection of study area, and pre-field preparation, post field methods, i.e. processing, quantitative and qualitative data analysis.
- Understand the method of data collection, survey method in field techniques etc.
- To learn about the techniques of preparation of field report.

### **Remote Sensing and GIS, (GEOACOR12T & GEOACOR12P)**

**Credit: 04 & 02**

#### **COURSE OUTCOME**

- Understand the basic principles of Remote Sensing, Types of RS satellites and sensors.
- Elucidate sensor resolutions and their applications with reference to IRS and Land sat missions; prepare False Colour Composites from IRS LISS-3 and Landsat TM and OLI data.
- Prepare inventories of land-use land cover (LULC) features from satellite images.
- Explain concept of GIS and its applicability with emphasis on GIS data structures: types: spatial and non-spatial, raster and vector.
- To learn about the preparation of FCC, image processing through QGIS software.

### **Soil and Biogeography, (GEOACOR09T)**

**Credit: 6**

**COURSE OUTCOME**

- To identify the factors of soil formation and also realize the importance of man in soil formation, characteristics of Lateritic soil, Podzol soil and Chernozem soil. On the basis of this knowledge they will be able to identify their local soil and their utility.
- Learn about the physical and chemical properties of soil and will be able to imply this knowledge on their local soil. On the basis of this knowledge they can select suitable crop for the concern soil.
- Know about suitable mitigation processes for local soil erosion and degradation.
- Understand the concept about the ecosystem, biome etc and be able to identify the character of their local ecosystem as well as biome, importance of bio diversity and can take the active participation in Man and Biosphere Programme from the grass root level
- Student will be able to apply the knowledge of food chain, trophic structure etc on their local ecosystem. These can enhance the concept of micro level ecosystem management.

**Population Geography, (GEOADSE03T)**

**Credit:6**

**COURSE OUTCOME**

- The concept of population distribution helps the students to identify the allocation of the favorable conditions. Student will be able to relate these two variables which increase the analytical power of the students.
- Identify the regional disparity based on the population pattern of world as well as India.
- Student will be able to indicate the stage of development of a certain society based on age-sex composition, literacy, education and will be able to suggest the appropriate remedial actions.
- Understand the socio-economic condition of a region based on the character of migration. On the basis of the realization the students will be able to suggest the appropriate objectives of regional planning.



- Understand the problems of population growth in India.

## **SIXTH SEMESTER**

### **Evolution of Geographical Thought, (GEOACOR13T)**

**Credit: 6**

#### **COURSE OUTCOME**

- Understand the development of geography from pre modern age to recent time.
- Know about the contributions of great geographers which increase the will-force of the student.
- Learn about the development of geography in different parts of the world, i.e. USA, France, Britain, Germany and will be able to find out the connectivity, uniqueness etc among these different schools. This capability will grow the holistic sense in the mind of students.
- The long tradition and legacy of geography will create the humanity, values among the students.
- Know about the history as well as the evolution of Geographical thought in India.

### **Disaster Management, (GEOACOR014T& GEOACOR014P)**

**Credit: 04 & 02**

#### **COURSE OUTCOME**

- Understand the concept of hazards and disaster. This will help them to identify the hazards or disaster, when it hit in their locality.
- Student will be able to identify the factors of hazards which they will face in their locality.
- Learn about primary remedial activities against any hazards. This will save them and

their locality.

- A group work to prepare project may inculcate the leadership, unity, humanity, togetherness, empathy among the students.
- The completion of project report will help the students in hazards based higher study.

## **Hydrology and Oceanography, (GEOADSE04T)**

**Credit: 6**

### **COURSE OUTCOME**

- Understand systems approach in hydrology and the concept of global hydrological cycle, its physical and biological role.
- Identify the controlling factors of run-off, with emphasis on infiltration and evapo-transpiration.
- Describe drainage basin as a hydrological unit and explain the principles of water harvesting and watershed management.
- Explain the concept of groundwater and identify the factors controlling recharge, discharge and movement.
- Describe the major relief features of the ocean floor, its characteristics and origin according to plate tectonics, physical and chemical properties of ocean water, water mass, T-S diagram, ocean temperature and salinity and marine resources.

## **Resource Geography, (GEOADSE06T)**

**Credit: 6**

### **COURSE OUTCOME**

- Elucidate the concept of resource, uses, functionality, classification etc
- Classify natural resources
- Explain the utilitarian, conservational, community-based adaptation approaches to resource utilization:
- Elucidate the problems of resource depletion—global scenario (forest, water, fossil fuels).
- Understand the distribution, utilization, problems and management of mineral resources, energy resources