

BARASAT GOVT COLLEGE
UNDER GRADUATE DEPARTMENT OF GEOGRAPHY
B.A. Geography (Hons) CBCS Syllabus
With effect from 2018-19

Programme Specific Outcomes

After successful completion of the UG course in Geography students will be able to:

- Gain basic theoretical and practical concepts on various fields of geography.
- Reveal the comprehensive and systematic knowledge of the subject.
- Deal with current geographical issues and their solutions.
- Evaluate critically various aspect of the subject in respect of spatial and temporal dimensions.
- Prepare and Interpret maps and diagrams to illustrate various facets of the subject from global to local level on various time scales.
- Acquire knowledge about various statistical methods, remote Sensing and GIS and can apply these knowledge in various application fields.
- Learn about research activities, can extract the ground level realities through survey work and will be able to prepare project report.
- Apply the acquired skills obtained from this discipline in their professional life in future.

BARASAT GOVERNMENT COLLEGE
Course Outcome or Learning Outcome
Three years B.A. /B.Sc. degree course
Under CBCS semester system
HONOURS COURSES IN GEOGRAPHY
With effect from the session: 2018 – 2019

Course Name: Core Course-1
Course Code: GEOACOR01T & GEOACOR01P
Topic Name: Geotectonic and Geomorphology

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Understand the geological time scale, interior of the earth, isostasy, plate tectonics and various types of fold and faults.
- CO 2: know weathering, mass wasting, different types of structure, development of landforms, granite, basalt and lime stone.
- CO 3: Understand the different geomorphic processes and associated landforms like coastal, glacial, aeoline.
- CO 4: Learn about the models of landscape evaluation.
- CO 5: Identify different minerals and rocks.
- CO 6: Interpret different geological maps with unconformity and intrusions on uniclinal and folded Structures.
- CO 7: Draw geological cross sections.

Course Name: Core Course-2
Course Code: GEOACOR02T & GEOACOR02P
Topic Name: Cartographic Techniques

Course Outcome: After successful completion of this course students will be able to

- CO 1: Understand the components and types of a map.
- CO 2: Learn about different types of scale
- CO 3: Know about map projection.
- CO 4: Understand coordinate system, concept of UTM projection, system of measurement.
- CO 5: Learn about reference scheme of old and open series topographical map of Survey of India and also it's margin concept.
- CO 6: construct plain, comparative, diagonal and vernier scales graphically.
- CO 7: Draw different map projections.
- CO 8: Learn about topographical maps.
- CO 9: Delineate drainage basins from Survey of India topographical map.
- CO 10: Construct and interpret relief profiles and order streams on a drainage basin.
- CO 11: Identify the correlation between physical and cultural features from Survey of India topographical maps.

Course Name: Core Course-3
Course Code: GEOACOR03T
Topic Name: Human Geography

Course Outcome: After the completion, the students will be able to

- CO 1: Understand the evolution of human civilization.
- CO 2: Analyze population distribution pattern.
- CO 3: Explore different anthropological aspects of Geography.

Course Name: Core Course-4
Course Code: GEOACOR04T & GEOACOR04P
Topic Name: Cartogram and Thematic Mapping

Course Outcome: After successful completion of this course students will be able to:

- CO 1: learn the basic aspects of map drawing, techniques of map drawing, distribution of pattern of map and scale.
- CO 2: Draw thematic maps like choropleth, dots and spheres, pie.
- CO 3: Perform traverse survey using prismatic compass.
- CO 4: Make profile survey using dumpy Level.

Course Name: Core Course-5
Course Code: GEOACOR05T & GEOACOR05P
Topic Name: Climatology

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Understand the Nature, composition and layering of the atmosphere.
- CO 2: Comprehend the elements of weather and climate and their impacts.
- CO 3: Learn the interaction between the atmosphere and the earth's surface.
- CO 4: Know about upper atmospheric conditions, Jet stream, fronts, and cyclonic features.
- CO 5: Learn different approaches to climatic classification and different climatic regions.
- CO 6: Analyze the dynamics of the Earth's atmosphere and global climate.
- CO 7: Know about Greenhouse effect and ozone layer.
- CO 8: Draw weather maps, hythergraph, climograph, and wind rose diagram.
- CO 9: Draw and interpret daily weather map of India for Pre-Monsoon, Monsoon and Post-Monsoon seasons.
- CO 10: Construct and interpret hythergraph and climograph.
- CO 11: Construct and interpret wind rose diagram.

Course Name: Core Course-6
Course Code: GEOACOR06T
Topic Name: Geography of India

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Learn about the detailed physiographic, climatic, soil, vegetational features of India.
- CO 2: Know about the population of India.
- CO 3: Understand about the details of different tribes of India.
- CO 4: Learn about the agricultural regions and green revolution in India.
- CO 5: Gain knowledge on the distribution of mineral resources and Industrial distribution.
- CO 6: Develop an idea about the regionalization of India.
- CO 7: Know the physical perspectives, forest, water, economic resources of West Bengal.
- CO 8: Understand the economic resources of West Bengal.
- CO 9: Know the population characteristics and regional issues of West Bengal.

Course Name: Core Course-7
Course Code: GEOACOR07T & GEOACOR07P
Topic Name: Statistical Methods in Geography

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Learn the significance of statistics in geography.
- CO 2: Understand the importance of the use of data in geography.
- CO 3: Recognize the importance and application of Statistics in Geography.
- CO 4: Interpret statistical data for a holistic understanding of geographical phenomena.
- CO 5: Know about different types of sampling.
- CO 6: Develop an idea about theoretical distribution and scales of measurement.
- CO 7: Gain detailed knowledge of statistical techniques to analyze the quantitative data
- CO 8: Acquire knowledge about correlation, regression, and time series analysis.
- CO 9: Construct data matrix.
- CO 10: Compute and interpret frequency table, measures of central tendency and dispersion.
- CO 11: Draw samples using different sampling techniques.
- CO 12: Compute and interpret scatter diagram, correlation and regression.

Course Name: Core Course-8
Course Code: GEOACOR08T
Topic Name: Regional Planning and Development

Course Outcome: After successful completion of this course students will be able to

- CO 1: Understand types of regions as an integral part of geographical study.
- CO 2: Know about delineation of region.
- CO 3: Gain knowledge about types, objectives, tools and needs of regional planning with special reference to India.
- CO 4: Learn about the various indicators of development as well as human development.
- CO 5: Build an idea about theories and models for regional development.
- CO 6: Appreciate the varied aspects of under development and regional disparity, in order to formulate measures of balanced development.

Course Name: Core Course-9
Course Code: GEOACOR09T
Topic Name: Economic Geography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Assess the significance of Economic Geography, the concept of economic man.
- CO 2: Gain knowledge about economic distance and transport cost.
- CO 3: Understand the concept of economic activity.
- CO 4: Analyze the factors of location of agriculture and industries.
- CO 5: Gain knowledge about different types of Economic activities.
- CO 6: Understand the concepts of transport network and flows.
- CO 7: Assess the significance and functioning of international trade and economic blocks.

Course Name: Core Course-10
Course Code: GEOACOR10T & GEOACOR10P
Topic Name: Environmental Geography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Gain knowledge about different concepts, scope of environmental geography.
- CO 2: Develop an idea about space time hierarchy of environmental problems.
- CO 3: Build an idea about current environmental issues like pollution, waste management etc.
- CO 4: Learn about global environmental programmes and policies
- CO 5: Know how to prepare a questionnaire for perception survey on environmental problems
- CO 6: Develop concepts and skills regarding preparation of check list for Environmental Impact Assessment
- CO 7: Learn skills regarding interpretation of air quality using secondary data sources
- CO 8: Prepare questionnaire for perception survey on environmental problems.
- CO 9: Make check-list for Environmental Impact Assessment of an urban / industrial project.
- CO 10: Interpret data of air quality.

Course Name: Core Course-11
Course Code: GEOACOR11T & GEOACOR11P
Topic Name: Field work and Research Methodology

Course Outcome: After successful completion of this course students will be able to

- CO 1: Learn the significance of field work and research in geographical studies.
- CO 2: Know about different types of field techniques and develop ideas about research design, problems.
- CO 3: Understand the field ethics and different tools of field study.
- CO 4: Conduct field work on physical and socio-economic aspects of geographical landscapes.
- CO 5: Learn the process to collect primary data from the field and to use secondary data.
- CO 6: Prepare field report with suitable tables, maps and diagrams based on collected data and to represent the realities of the study area.
- CO 7: Conduct field work on physical and socio-economic aspects of geographical landscapes.
- CO 8: Learn the process to collect primary data from the field and to use secondary data.
- CO 9: Prepare field report with suitable tables, maps and diagrams based on collected data and to represent the realities of the study area.
- CO 10: Draw different field maps and diagrams.

Course Name: Core Course-12
Course Code: GEOACOR12T & GEOACOR12P
Topic Name: Remote Sensing and GIS

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Perform georeferencing of maps and images using open-source software.
- CO 2: Prepare FCC and identify features using standard FCC and other band combinations.
- CO 3: Digitize features and attach data.
- CO 4: Conduct overlay analysis and prepare annotated thematic maps: choropleth, pie chart and bar graphs.

Course Name: Core Course-13
Course Code: GEOACOR13T
Topic Name: Evolution of Geographical Thought

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Identify the evolution of the philosophical thoughts of Geography/Earth Sciences.
- CO 2: Escalate the contribution of the great thinkers in Geography/ Earth Sciences.
- CO 3: Make Comparative study of different schools of geographical thought developed in different Period/Phase.
- CO 4: Learn the evolution of geographical thought from ancient to modern to post- modern times.
- CO 5: Establish the relationship of Geography with other allied disciplines
- CO 6: Understand the changing scenario of man-environment relationships through time.

Course Name: Core Course-14
Course Code: GEOACOR14T & GEOACOR14P
Topic Name: Disaster Management

Course Outcome: After successful completion of this course students will be able to

- CO 1: Understand the concept and classification of hazards and disasters.
- CO 2: Gain the knowledge of approaches to hazards study.
- CO 3: Know about the human responses to the hazards.
- CO 4: Acquire comprehensive knowledge on various disasters in India with special reference to the consequences and mitigation measures.
- CO 5: Write a report on disaster incorporating a preparedness plan.
- CO 6: Prepare one individual report based on case study on disasters that have occurred in West Bengal.

Course Name: Discipline Specific Elective-1
Course Code: GEOADSE01T
Topic Name: Soil and Bio Geography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Gain knowledge of the soil formation processes, soil profiles.
- CO 2: Learn about the physical and chemical properties of soil.
- CO 3: Have comprehensive knowledge of soil erosion and degradation and soil classification.
- CO 4: Learn about the concept of biosphere, ecosystem, ecotone, community, niche, succession, ecology, trophic structure, food chain, food web, biomes, bio geo chemical cycles.
- CO 5: Gain knowledge of bio diversity and man environment relation.

Course Name: Discipline Specific Elective-2
Course Code: GEOADSE03T
Topic Name: Population Geography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Learn about the development of Population Geography.
- CO 2: Gain comprehensive knowledge of population distribution and theories related to it.
- CO 3: Know about the growth and distribution of Indian and World population.
- CO 4: Acquire concept of various component of Population Geography like age-sex structure, fertility, mortality, population composition, migration.
- CO 5: Learn about different population policies in developed and less developed countries.
- CO 6: Gain knowledge of various contemporary issues on population studies.

Course Name: Discipline Specific Elective-3
Course Code: GEOADSE04T
Topic Name: Hydrology and Oceanography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Understand the concept of hydrological cycle.
- CO 2: Assess the factors of Infiltration and evapotranspiration of run off cycle.
- CO 3: Identify the watershed of different scale and related management practices.
- CO 4: Evaluate the factors controlling recharge, discharge and movement of water in a local and regional scale.
- CO 5: Know about the major relief features of bottom topography of oceans.
- CO 6: Assess the physical and chemical properties of ocean water including T-S diagram.
- CO 7: Acquire knowledge on determinants of ocean temperature and salinity of different oceans and their distribution.
- CO 8: Know the concept of Sea Level Change in global and regional level.

Course Name: Discipline Specific Elective-4
Course Code: GEOADSE06T
Topic Name: Resource Geography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Understand the concept and classification of resources.
- CO 2: Gain the concept of Conservation of Natural Resources: Forest and Water.
- CO 3: Analyze the problems of resource depletion in view of Sustainable Resource development attempts.
- CO 4: Examine the contemporary energy crisis and assess the future scenario: regional and global scale.
- CO 5: Assess different management practices of Energy Resources: Conventional and Non-Conventional.
- CO 6: Appreciate the concept of Limits to Growth, resource sharing and sustainable use of resources.

Course Name: Skill Enhancement Course-1
Course Code: GEOSSEC01M
Topic Name: REMOTE SENSING

Course Outcome: After successful completion of this course students will be able to:

- CO 1: Understand the principles of remote sensing.
- CO 2: Classify Remote Sensing satellites and sensors.
- CO 3: Comprehend sensor resolutions and their applications concerning IRS and Landsat missions, image referencing schemes and data acquisition.
- CO 4: Understand FCC and learn to prepare False Colour Composites from IRS LISS-3 and Landsat TM and OLI data.
- CO 5: Understand the principles of image rectification and enhancement.
- CO 6: Learn the principles of image interpretation and feature extraction.
- CO 7: Prepare inventories of land use land cover features from satellite images.
- CO 8: Develop an idea about satellite image interpretation.

Course Name: Skill Enhancement Course-2
Course Code: GEOSSEC02M
Topic Name: Advanced Spatial Statistical Techniques

Course Outcome: After successful completion of this course students will be able to

- CO 1: Learn about the probability theory and their application in geography.
- CO 2: Understand various sampling techniques and sampling estimates.
- CO 3: Gain knowledge about the correlation and regression.
- CO 4: Recognize the importance and application of time series analysis.

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Course Outcome or Learning Outcome
Three years B.A. /B.Sc. degree course
Under CBCS semester system
GENERAL COURSES IN GEOGRAPHY
With effect from the session: 2018 – 2019

Course Name: Generic Elective/Department Specific Core Course-1
Course Code: GEOHGEC01T / GEOGCOR01T
Topic Name: Physical Geography

Course Outcome: After successful completion of this course student will able to
CO 1: Understand the basic concept of physical geography.
CO 2: Learn internal structure of the earth, Plate Tectonics.
CO 3: Understand the influence of rocks on topography.
CO 4: Learn about the fluvial processes and landforms, cycle of erosion.
CO 5: Understand about climatic phenomenon, planetary wind system, tropical cyclone.
CO 6: Learn about Hydrological cycle, Ocean surface characteristics.

Course Name: Generic Elective/Department Specific Core Course-2
Course Code: GEOHGEC02T / GEOGCOR02T
Topic Name: Human Geography

Course Outcome: After successful completion of this course student will able to
CO 1: Learn about the distribution of human population in India and global with particular reference to internal and international migration.
CO 2: Know the process of evolution of human civilization.
CO 3: Gain knowledge on Anthropological aspects of Geography.

Course Name: Generic Elective/Department Specific Core Course-3
Course Code: GEOHGEC03T / GEOGCOR03T
Topic Name: GENERAL CARTOGRAPHY

Course Outcome: After successful completion of this course students will be able to:
CO 1: Explain how maps work, conceptually and technically and will be able to understand science.
CO 2: Comprehend the art of cartography.
CO 3: Know about the importance of map scales and processes to draw it.
CO 4: Recognize the benefits and limitations of some common map projections, their use and processes to draw.
CO 5: Understand and perform interpretation of topographical maps.
CO 6: Learn different techniques of graphical representation of data and to draw them properly.

Course Name: Generic Elective/Department Specific Core Course-4
Course Code: GEOHGEC04T / GEOGCOR04T
Topic Name: Environmental Geography

Course Outcome: After successful completion of this course students will be able to
CO 1: Gain knowledge about the concept, scope of environmental geography and components of environment.
CO 2: Develop an idea about human-environment relationships.
CO 3: Build an idea about ecosystem.
CO 4: Gain knowledges on current environmental issues like pollution, waste management, soil erosion etc.
CO 5: Know about environmental programmes and policies.

Course Name: Department Specific Elective-1

Course Code: GEOGDSE01T

Topic Name: Soil and Bio Geography

Course Outcome: After successful completion of this course students will be able to

- CO 1: Gain knowledge of soil formation processes and soil profiles.
- CO 2: Learn about physical and chemical properties of soil.
- CO 3: Acquire comprehensive knowledge of soil classification.
- CO 4: Learn about the concept of biosphere, ecosystem, ecotone, community, niche, succession, ecology, trophic structure, food chain, food web, biomes and bio geo chemical cycles.

Course Name: Department Specific Elective-2

Course Code: GEOGDSE04P

Topic Name: Project Report Based on Field Work

Course Outcome: After successful completion of this course students will be able to

- CO 1: Learn how a project work executed based on specific objective(s).
- CO 2: Gain creating concept of different stages of project works: Identifying the problem, methodology of data collection, data analysis and lesson learned.
- CO 3: Gather experiences for direct participation of the students to field test the learning.
- CO 4: Prepare an individual report based on primary and secondary data collected during field work.

Course Name: Ability Enhancement Compulsory Course (AECC)

Course Code: ENVSAEC01T

Topic Name: Environmental Studies

CO 1: After the completion, the students will learn about the basic aspects of environmental studies and sustainable development of human civilization.