

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 year B.A. /B.Sc. degree course
Under CBCS semester system
HONOURS COURSE IN GEOGRAPHY
With effect from the session: 2018 – 2019

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

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

1. Understand the geological time scale, interior of the earth, isostasy, plate tectonics and various types of fold and faults
2. Students will be able to know weathering, mass wasting, different types of structure, development of landforms, granite, basalt and lime stone.
3. Understand the different geomorphic process and associated landforms like coastal, glacial, aeoline.
4. Learn about the models of landscape evaluation.
5. Identify different minerals and rocks.
6. Interpretation of geological maps with unconformity and intrusions on uniclinal and folded Structures.
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

1. Understand the components and types of a map.
2. Learn about different types of scale
3. Know about map projection.
4. Understand coordinate system, concept of UTM projection, system of measurement.
5. Learn about reference scheme of old and open series topographical map of Survey of India and also its margin concept.
6. Graphically construct plain, comparative, diagonal and vernier scales.
7. Construct different map projections.
8. Learn about topographical maps.
9. Delineate of drainage basin from Survey of India topographical map.
10. Construct and interpret relief profiles and order streams on a drainage basin.
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 learn about

- (i) human civilization evolution,
- (ii) population distribution
- (iii) 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:

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

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

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

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

1. Understand types of region as an integral part of geographical study.
2. They can know about delineation of region
3. Gain knowledge about types, objectives, tools and needs of regional planning with special reference to India
4. Gain knowledge about the various indicators of development as well as human development
5. Build an idea about theories and models for regional development
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

1. Assess the significance of Economic Geography, the concept of economic man
2. They will also gain knowledge about economic distance and transport cost
3. Understand the concept of economic activity
4. Analyze the factors of location of agriculture and industries
5. Gain knowledge about different types of Economic activities
6. Understand the concepts of transport network and flows
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

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

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

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

Course Name: Core Course-12
Course Code: GEOACOR12T & GEOACOR12P
Topic Name: Disaster Management

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

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

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:

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

Course Name: Core Course-14
Course Code: GEOACOR14T & GEOACOR14P
Topic Name: Remote Sensing and GIS

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

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

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

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

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

1. Understanding the concept of hydrological cycle
2. Assessing the factors of Infiltration and evapotranspiration of run off cycle
3. Identify the watershed of different scale and related management practices
4. Evaluating the factors controlling recharge, discharge and movement of water in a local and regional scale
5. Identify the major relief features of bottom topography of oceans
6. Assessing the physical and chemical properties of ocean water including T-S diagram
7. Learn Ocean temperature and salinity determinants of different oceans and their distribution
8. Concept of Sea Level Change: Global and Regional

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

1. Understand the concept and classification of resources
2. Appraisal of the concept of Conservation of Natural Resources: Forest and Water
3. Analyze the problems of resource depletion in view of Sustainable Resource development attempts
4. Examine the contemporary energy crisis and assess the future scenario: regional and global scale
5. Assessing different management practices of Energy Resources: Conventional and Non-Conventional
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:

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

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

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GENERAL COURSE 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

1. Understand the basic concept of physical geography
2. Learn internal structure of the earth, Plate Tectonics
3. Understand the influence of rocks on topography.
4. Learn the fluvial process and landforms, cycle of erosion.
5. Understand about climatic phenomenon, planetary wind system, tropical cyclone.
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: The students will learn about

- (1) distribution of human population in India and global with particular reference to internal and international migration,
- (2) evolution of human civilization, and
- (3) 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:

1. Explain how maps work, conceptually and technically and will be able to understand science
2. Comprehend the art of cartography.
3. Understand the importance and draw map scales.
4. Recognize the benefits and limitations of some common map projections, their use and processes to draw.
5. Understand and perform interpretation of topographical maps.
6. Learn different techniques of graphical representation of data and 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

1. Gain knowledge about concept, scope of environmental geography and components of environment.
2. Develop an idea about human-environment relationships.
3. Build an idea about ecosystem.
4. Build an idea about current environmental issues like pollution, waste management, soil erosion etc.
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

1. Have knowledge of soil formation processes and soil profiles.
2. Learn about physical and chemical properties of soil.
3. Have comprehensive knowledge of soil classification.
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

1. Learn how a project work executed based on specific objective(s)
2. Creating concept of different stages of project works: Identifying the problem, methodology of data collection, data analysis and lesson learned.
3. Gathering experiences for direct participation of the students to field test the learning.
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

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