NETAJI SUBHAS OPEN UNIVERSITY

Bachelor Degree Programme (BDP)
Elective Geography Course (EGO)

SYLLABUS

Programme Objectives:

Geography is a field of science devoted to the study of the lands, the features, the inhabitants, and the phenomena of Earth. Geography's relevance to science and society arises from a distinctive and integrating set of perspectives through which geographers view the world around them. Geography means earth description has been long considered as one of the fundamental subjects in education system right from the beginning of the system. A subject that is unique in bridging the social and physical aspects of the globe. In general, as ODL is concerned, our main objective is to democratize education as a resource and provide every citizen, irrespective of gender, caste and creed, easy and affordable access to quality education and particularly, in the paradigm of social sciences. The basic philosophy of our aim is to "Reach the Unreached". Considering this, the University launched its Geography Programme at the Under-graduate level (BDP) from the session 2000-2001.

The main objectives for offering this program are –

(a) To focus within the curriculum for understanding and resolving issues about the environment and sustainable development. It is an important link between the natural and social sciences.

(b) To develop a mental map of the community, province or territory, country and the world so that the learners can understand the "where" of places and events and relate them in the real world.

(c) To equip individuals with the necessary scientific skills and competencies to enable them to seek jobs and progress in their career.

(d) To enhance the capabilities of the existing workforce in the country and abroad and thus contribute to economic development and business growth.

(e) To give chances to the willing students those who could not enter into the convention Universities due to their age, job and limitation of the seat in the respective subject.

Expected Programme Outcome:

After successful completion of the course, the learners are able to increase their knowledge base in the domain of geography which enhances their employability in various field. The greatest strength of geography, as a discipline is its ability to integrate and apply knowledge across the interface of the Earth's social and environmental systems. In Geography, we don't just learn in the classroom; we provide students with opportunities to learn relevant skills and apply their knowledge to real-world challenges. Our field courses are designed to give students an opportunity to do just that: learn valuable field skills, apply classroom knowledge, and connect to the many organizations and issues that require geographic and environmental expertise.

COURSE STRUCTURE:

Detailed Credit Structure:

Course Subjects	Number of Paper	Full Marks	Total Credit Value
Elective Geography Subjects	13	800	64
Subsidiary Subjects	3	300	24
Foundation course Subjects	2	200	16
Application Oriented Course	1	100	8
Language Course Subjects	2	100	8
Environmental Studies	1	50	4
Total		**1550 Marks**	**124 Credit**

- The curriculum design and detailed syllabus of Under Graduate Geography is given below:

Course	Course code	Block	Broad Heading	Credit	Marks
Elective Subject: Honours Course (Geography) EGR /EGO	EGR-1	1 & 2	Concepts of Physical Geography and Geotectonics	4	50
	EGR-2	1 & 2	Landform Processes	4	50
	EGR-3	1 & 2	Climatology	4	50
	EGR-4	1 & 2	Practical Geography–1	8	100
	EGR-5	1 & 2	Soil Geography Biogeography	4	50
	EGR-6	1 & 2	Geography of Resources	4	50
	EGR-7	1 & 2	Geography of Economic Activities	4	50
	EGR-8	1 & 2	Practical Geography – 2	8	100
	EGR-9	1 & 2	Geography of Settlement	4	50
	EGR-10	1 & 2	Geography of Population	4	50
	EGR-11	1 & 2	Evolution of Geographical Thought	4	50
	EGR-12	1 & 2	Practical Geography - 3	8	100
	EGR-13 & 14	1 & 2	Environmental Geography, Agricultural Geography & Regional Planning	4	50
Total			**Theory: 500 & Practical: 300 Marks**	**64**	**800**

Course	Broad Heading	Credit	Marks
Subsidiary Bengali or English	Subsidiary Bengali (SBG) / English (SEG), Paper-1	8	100
	Subsidiary Bengali (SBG) / English (SEG), Paper-2	8	100
	Subsidiary Bengali (SBG) / English (SEG), Paper-3	8	100
	Total	**24**	**300**
Compulsory Subject: Fundamental Course	Humanities and Social Science (FHS)	8	100
	Science and Technology (FST)	8	100
	Total	**16**	**200**
Application Oriented Course	Household Chemistry (AOC-3)	8	100
	Total	**8**	**100**
Language Course Subjects	Bengali (FBG)	4	50
	English (FEG)	4	50
	Total	**8**	**100**
Environmental Studies	Environmental Studies (ENVS)	**4**	**50**
		124	**1550**

Total Credit	64+24+16+8+8+4= 124 Credits	Total Marks: 1550
Evaluation System	Internal Assessment: 30%	Term End Examination: 70%
Examination System ***(Semester Wise)***	**Semester wise Paper**	**1550 Marks, 124 Credit**
1st Semester	FBG, FEG, EGR-1, EGR-4	4+4+4+8 = 20 Credit
2nd Semester	FHS, EGR-2, EGR-3, EGR-5, ENVS	4+4+4+4+8 = 24 Credit
3rd Semester	FST, EGR-6, EGR-8	8+4+8 = 20 Credit
4th Semester	EGR-7, EGR-9, EGR-10, SBG/SEG-1	4+4+4+8 = 20 Credit
5th Semester	EGR-11, EGR-12, SBG/SEG-2	4+8+8 = 20 Credit
6th Semester	EGR-13 & 14, SBG/SEG-3, AOC-3	4+8+8 = 20 Credit

Programme Duration: ***Course duration is 3 years***. However, the students have the liberty to complete its course ***within 6 years***.

DETAILED SYLLABUS:

Course -01: Concepts of Physical Geography and Geotectonics

Block 1:

1. Earthquake and Internal Structure of Earth
2. Volcano and Vulcanicity
3. Epeirogeny and Orogeny
4. Continental Drift and Plate Tectonics

Block 2:

5. Earth's Crust
6. Rocks: Origin and Classification
7. Folds, Faults and their influence on Landforms

Course - 02: Landform Processes

Block 1:

1. Weathering and Mass Wasting – Factors, Types, Influence on Landforms
2. Cyclic and Non-Cyclic Concept – Davis, Penck and Hack
3. Geomorphic Processes and Resultant Landforms : Fluvial
4. Geomorphic Processes and Resultant Landforms : Glacial
5. Geomorphic Processes and Resultant Landforms : Aeolian
6. Geomorphic Processes and Resultant Landforms : Coastal/Marine
7. Geomorphic Processes and Resultant Landforms : Karst
8. Evolution of Slopes ; Theories of Slope Development

Block 2:

9. Hydrological Cycle : Run off, Components and Importance
10. Groundwater - Factors, Underground Circulation of water
11. Topography of Ocean Floor
12. Continental Shelf and Continental Slope
13. Marine Deposition and Marine Resources

Course - 03: Climatology

Block 01:

1. Atmosphere: Nature, Composition, Layering; Importance of Ozone Layer, Greenhouse Effect
2. Insolation: Factors affecting ; Heat Budget of Earth
3. Horizontal and Vertical Distribution of Temperature ; Inversion of Temperature
4. Global Pressure Belts; Wind Systems; Relations of Wind and Pressure; Tri-cellular Model
5. Jet Stream and Air Mass

Block 2:

6. Condensation : Processes and Forms ; Evaporation
7. Precipitation : Mechanism and Form
8. Tropical and Mid-Latitude Cyclone ; Genesis and Characteristics
9. Monsoon, Thunderstorm
10. Climatic Classification

Course - 04: Practical Geography–1

1. Scale : Linear, Vernier & Diagonal
2. Prismatic Compass Survey
3. Levelling Survey
4. Theodolite Surveying

5. Map Projection: Basic concepts and Subject
6. Stereographic, Simple Conical and Bonne's Projection
7. Sinusoidal, Polyconic and Cylindrical Equal Area Projection
8. Practical Geographic Techniques
9. Isopleth, Choropleth, Dot and Sphere
10. Climatic Cartograms

Course - 05: Soil and Biogeography
Block 1: Soil Geography
1. Soil Formation: Factors and Processes
2. Development of Local Soil Profile; Laterite, Podzol, Chernozem
3. Physical Properties of Soil
4. Chemical Properties of Soil
5. Soil Classification – Dokuchaiev, Marbut, USDA, Indian

Block 2: Biogeography
6. Concept of Biogeography ; Biome – Tropical – Grassland – Taiga – Tundra
7. Components of Ecosystem; Community – Interrelationship between different Organisms of a community
8. Trophic Level–Food Chain, Energy Flow, Ecological Pyramid
9. Factors of Plant Growth
10. Biogeochemical Cycles, Conservation

Course - 06: Geography of Resources
Block 1:
1. Concept of Resources
2. Characteristics of Resource, Fundamental Theory of Resource
3. Nature and Resource
4. Man and Resource
5. Nonconventional Resource
6. Culture and Resource

Block 2:
7. Resource Utilisation–Processes, Technology and Environmental
8. Resource Utilisation–Forest, Animal, Fish, Oceanic
9. Resource Utilisation–Agriculture, Human
10. Resource Utilisation–Minerals, Energy
11. Depletion of Resource, Resource Conservation, Sustainable Development

Course - 07: Geography of Economic Activities
Block 1:
1. Land Use : Concepts – Von Thunen, Graham, Stamp and Lewis
2. Agriculture : Types, Characteristics
3. Industry : Location Theories, Weber, Hoover, Losch
4. Major Industry : Iron & Steel, Problems and Prospects

Block 2:
5. Major Industry: Cotton, Textile, Problems and Prospects
6. Major Industry: Petrochemicals, Problems and Prospects
7. Industrial Regions: Great Lakes; Ruhr
8. Industrial Regions: Tokyo–Yokohama; Hooghly

Course - 08: Practical Geography – 2

1. Nature of statistical data: Discrete, continuous, parametric, Non-parametric, Use of percentage
2. Sampling: Simple, Random, Classification – testing of data, sratified, tabulation
3. Frequency Distribution : Histogram, Polygon, Ogive, Normal distribution, Measures of Skewness
4. Measures of Central Tendency: Mean; Median; Mode; Partition values–Quartiles, Percentiles.
5. Measures of dispersion–Mean deviation ; Quartile deviation, Standard deviation
6. Time Series Analysis : Simple Bivariate Regression (from absolute number) ; Test of significance
7. Interpretation of topographical map : Plateau (1 map) ; Plains (1 map)
8. Interpretation of Indian daily weather map.
9. Morphometric techniques: 1. Profiles: Superimposed, projected, composite, 2. Stream order, 3. Relative Relief, 4. Drainage Frequency, 5. Drainage Density, 6. Dissection Index.

Course - 09: Geography of Settlement

Block 1:

1. Study of Settlement – Significance; Definition of Settlement, Settlement as Indicators of Models of Life and History.
2. Aspects of Settlement Study – Site, Situation, Size, Pattern, Function, House Type, Lay out, Morphology and Spatial Distribution.
3. Rural Settlement – Definition and Census Categories, Locational Factors, Size Variation, Patterns, Functions, Morphology (House Types, Building Materials, Street Pattern, etc.)

Block 2:

4. Urban Settlements–Origin and Development, Physical and Ecological Definitions of City; Functional classification of Towns and Cities. Christaller's Theory of Central Place Hierarchy; Urban Morphology; Problems of Urban Growth–decline and possible solutions.
5. Rural–Urban Differentiation : Spatial and Functional Differences ; Problems relating to Definition of Rural and Urban areas ; Concept of Urban Sprawl, Urban Fringe, Umland, Conurbation, Metropolis, Metropolitan area, Metropolitan Region.
6. Models of City Structure: Concentric Zone, Sector, Multiple Nuclei; City as a Social Organism – Reflection, Culture, Economy, Technology, Behaviour of Society; Indicators of Social Organism.

Course - 10: Geography of Population

Block 1:

1. Component and structure of population dynamics; Interdisciplinary nature of population studies
2. Population Growth: trends and patterns; measures of fertility and mortality; patterns and causes of fertility and mortality declines; world distribution of population; measures and factors of variation of population density and distribution.
3. Theories, problems and policies: Theories of population growth, population problems in relation to development; resources and environment ; population policies – pro and anti-natalist

Block 2:

4. Population Structure and Composition; Basic Pattern, causes and consequences – urban and rural: Age structure, sex structure, economic composition and others – language, religion, ethnicity and literacy.
5. Migration – internal and international; nature and types of migration–temporal and spatial dimensions; theories of migration
6. Basic characteristics of population in India; Growth structure (Age-Sex), composition (rural-urban) – their temporal and spatial changes; distribution and density.

Course -11: Evolution of Geographical Thought

Block 1:

1. Definition of Geography; Man-Environment Relation, Regional Differentiation, Location
2. Development of Geographical Thoughts: Encyclopaedism, Positivism, Quantitative Revolution, Radical Geography.
3. Concepts: Determinism, Possibilism, Structuralism and Materialism
4. Approaches: Regional approach, Cultural Landscape approach, Ecological approach, Resource approach.

Block 2:

5. Origin, Growth and Divergence of Cultural Systems ; Development and Spread of Technology ; Convergence and Diffusion of Culture
6. Changing Cultural Patterns of the World
7. Concept of Space: Absolute and Relative Space.

Course - 12: Practical Geography - 3

1. Field Report
2. Construction of Station Model.
3. Identification of Rocks and Minerals.
4. Geological Map
5. Basic Concept of Remote Sensing
6. Interpretation of Aerial Photographs.

Course - 13: Environmental Geography

Block 1:

1. Scope and Basic Concepts: Meaning of Environment and associated Terminology (Habitat, Human Ecology, Human Ecosystem, Phenomenal Environment, Environmental Perception); Geographer's approach to Environment ; Concept of Holistic Environment.
2. Components of Physical Environment ; Components of Socio-Economic Environments (Income, education, health, nutrition security, social stability, shelter)
3. Environmental degradation and hazards – their consequences: flood, drought, soil degradation, wastes and pollution; social effects, extreme events.

Block 2:

4. Major Contemporary Environment Issues – Global Scenario
5. Environment Conservation Vs. Economic Development; Social Systems and Environmental Problems.
6. Environmental Approach to Management: Basic Principles of 'Space Ship Earth'; Ecosystem Balance; Recycling of Materials; Population Control; Renewable Energy; Afforestation, Biodiversity; Social Adjustments.

Course - 14: Special Paper (Agricultural Geography and Regional Planning)

Block 1: Agricultural Geography

1. Nature, scope and content of Agricultural Geography; Development of Agricultural Geography.
2. Sinclair's model of peri-urban land use; Factors controlling agricultural land use; principles of land use planning.
3. Concept, techniques and delineation of Agricultural Regions; Agricultural regions of India; Impact of technology on agriculture and environment with special reference to India; Agricultural problems in India and possible remedies; recent trends in agriculture in India.

Block 2: Regional Planning

1. a Concept of regions, types of planning b. Basic principles of regional planning

c Locational theories of Weber, Losch and Christaller; Growth Pole theory of regional growth

2. a Definition of towns, classification – physical, functional and social

b. Metropolis and metropolitan concept, problems, planning and delineation

c. Rural – urban linkages (sectoral and spatial) – physical, commodity, human and informational linkage

3. a. Rural development programmes – case studies from India
   b. Role of agriculture and industry in regional development
4. Regional imbalances

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