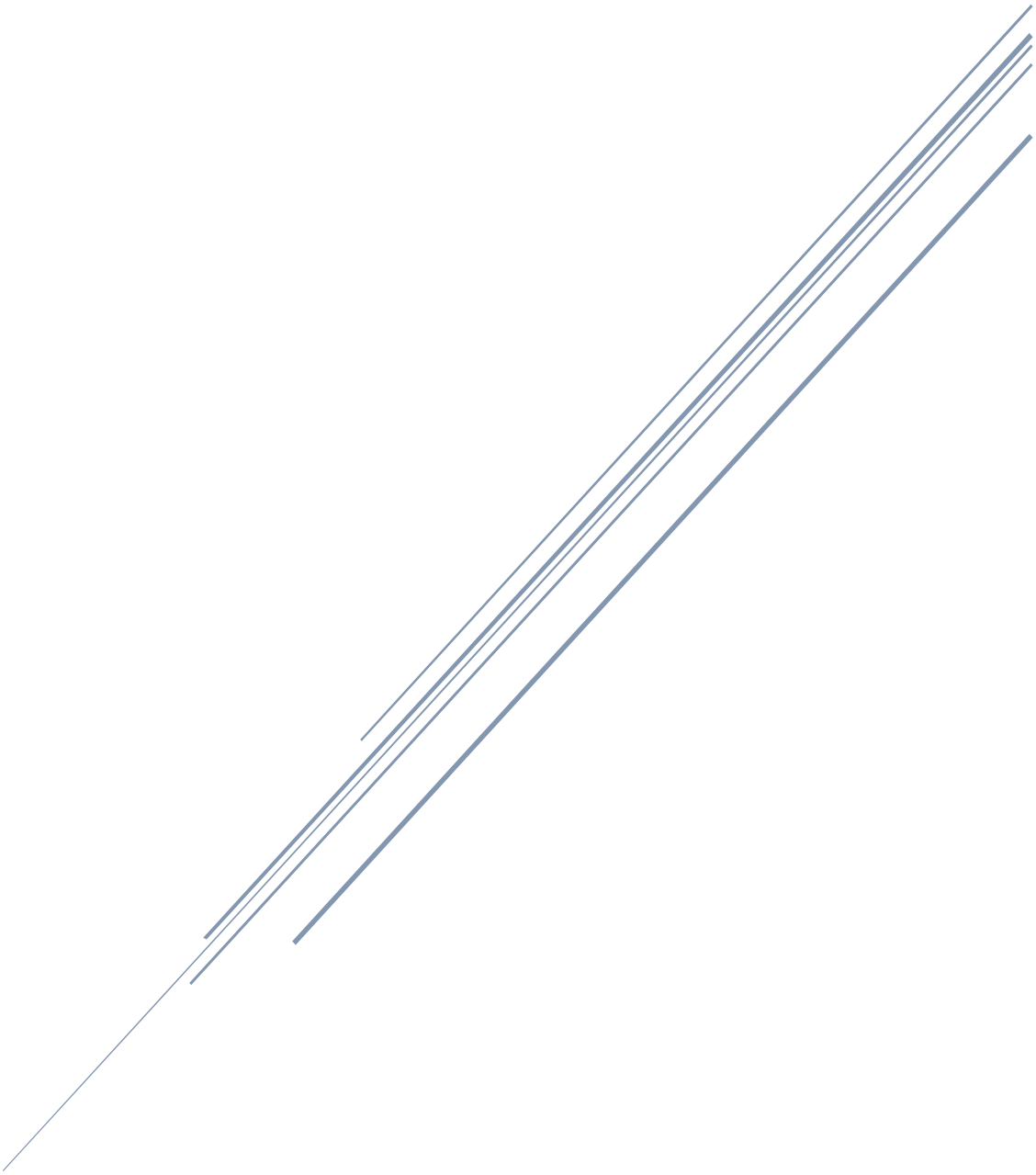
BACHELOR OF SCIENCE (HONS) (GEOGRAPHY)-ODL

PROGRAMME PROJECT REPORT (PPR)



School of Sciences

PPR of B.Sc. in Geography approved by 39th Academic Council (vide memo no.: Reg/0322 dated 14.03.2023) for delivery of programme through Open Distance Learning mode.

i. Programme's mission and objectives:

Geography a word derived from the Greek word geographia which means earth description has been long considered as one of the fundamental subjects in education system right from the beginning of the system. It is a unique subject which bridging the social and physical aspects of the globe. Geography is 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. Netaji Subhas Open University which was established in the year 1997 following the State Act (W.B. Act (XIX) of 1997 and Recognised by U.G.C.), is catering wide range of courses in the vernacular medium to various disadvantaged groups of aspiring learners.

The objective of the programme is to provide facility for lifelong education in Geography and 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 Honours in Geography (HGR) is designed accordingly so that the learners at the end are able to secure practical training skills required for a profession with geography background or Industry. The syllabus for Geography at undergraduate level using the Choice Based Credit system has been framed in compliance with model syllabus given by UGC.

The main objective of framing this new syllabus is to give the learners a holistic understanding of the subject giving substantial weightage to both the core content and techniques used in Geography. The syllabus has given equal importance to the three main branches of physical as well as social sciences.

The ultimate goal of the programme is to equip learners with the necessary skills and competencies to progress in their academic career as well as it will help them to secure a jobs. Keeping in mind and in tune with the changing nature of the subject, adequate emphasis has been given on new techniques and understanding of the subject. The fresher and existing employees can take the advantage of ODL system to enhance their skills and competency in this particular field without disturbing their work schedule. Therefore, the prime mission of the programme Honours in Geography (HGR) is to educate and train the learners to become an effective manager, good educator, employer as well as a good researcher in the near future.

Programme Objectives:

The main objectives for offering this programme can be pointed as:

1. To prepare the learners for higher studies in this discipline by focussing the curriculum for understanding and resolving issues related to the environment and sustainable development. It is an important link between the natural and social sciences.

2. To help the learners to develop a mental map of the community, province or territory, country and the world so that the learners can understand the 'location' of places and events and relate them in the real world.

3. The university is well-prepared to offer such a programme. In this context, cooperation from study centres/colleges under different universities has been managed to keep the parity between regular as well distance mode of learning in the discipline of geography.

4. To educate and trained individuals to be effective managers and decision-makers by the field work carried out in the programme.

5. To equip individuals with the necessary scientific skills and competencies to enable them to seek jobs and progress in their career by the hands on practical teaching learning and acquiring the practical experiences.

6. To enhance the capabilities of the existing workforce in the country and abroad and thus contribute to economic development and business growth as they can cater the knowledge of such portions through the curricula.

7. To give chances for higher education to the willing learners who could not get entry to the convention universities due to their age, job and other limitations and make them capable like regular learners of other universities.

ii. Relevance of the program with HEI's Mission and Goals:

The program is entirely consistent with the University's strategic goals as well as its mission to provide modern education to underprivileged sections of society. The program is also in accordance with the NSOU's goals to provide quality education in science establishing an equitable knowledge society within the state. Thus, NSOU brings forth this proposal after extended and thoughtful deliberations.

This UG Geography programme is following some significant mission of the University, like:

- ✓ To propagate quality education in flexible mode all over the State and to provide access to different skills-enhancing support.
- ✓ To collaborate with other Higher Education Institutions (HEIs) for academic endeavours.
- ✓ To provide education at low cost to the underprivileged people.
- ✓ To provide facility of Life Long Education to the intending learners.
- ✓ To integrate technological tools in the pedagogy for facilitating the learning experiences.
- ✓ To contribute to the existing body of knowledge through research and extension activities.
- ✓ To render services for the development of the State in particular and the Nation in general in order to sensitize the learners towards a humanistic and democratic ecosystem.

iii. Nature of prospective target group of learners:

Geography is a field of science devoted to the study of the lands and its features, the inhabitants, earth's description and the phenomena of the Earth. Relevance of Geography's to science and society arises from a distinctive and integrating set of perspectives through which geographers view the world around them. Geography has long been considered as one of the fundamental subjects in the education system right from the beginning of the system at the school level. 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". The growing number of enrolment in the under graduate course in Geography was the result of the demand of the discipline. The instruction is designed to engage students in learning experiences that not only enable them to learn content but also to develop greater passion for learning – enabling them to 'learn to learn' and to be lifelong learners. In the learner-centred paradigm of education, students are encouraged to take greater responsibility for their learning outcomes. We are also promoting the use of English language for HGR SLM and total programme and these are translated into Bengali version considering the students demand.

For the HGR programme, the students must have Geography in Higher Secondary level from any recognized board. They are considered as the target group of learners for the programme. In West Bengal, a lot of Learners pass higher secondary (10+2) examination with science background. But due to limitation of seats in the conventional Universities/ colleges in Geography (Honours), all of them could not get enrolled themselves in the subject of their choice (i.e., Geography). In recent years there are ample scope of higher studies as well as research in Geography, thus the Learners opt this subject by choice.

Besides, target group of learners are people from different age groups who wishes to pursue higher education and enhance their knowledge in the discipline to seek for a better career and lead a

responsible life. The learners are from different socio-economic background and are located in different parts of the state of West Bengal and also from neighbouring other states. In compliance with the ultimate objective of distance education to reach the unreached, special care is taken to include learners from marginalised sections of the society, backward caste and tribes.

This makes for a very heterogeneous learner group.

iv. Appropriateness of programme to be conducted in Open and Distance Learning and/or Online mode to acquire specific skills and competence:

This programme is suitable in the ODL system to acquire skills and competence with the quality education. As the state and national level, the higher educational institutions are expected to provide quality education, education for all, strategic plans for an institution that defines targets and measures of the programmes to be achieved by the institution. Apart from physical infrastructure, administrative policy and code of behaviour, school of sciences is actively engaged in its academic development of respective subjects. The School of Sciences has been designed its curriculum by the help of the Board of Studies (BOS), several learning resource materials, and feedback system through the BOS and an expert committee. Learning material through print-media named Self-Learning Materials (SLMs) is developed with the approach of self-explanatory, self-contained, self-motivating and self-evacuating followed by the UGC guideline.

- ✓ It tries to ensure quality service to the learners of the subject through development of good and appropriate standard Study Learning Material (SLMs), integration of modern methods of teaching learning process.
- ✓ Hands on practice during the Practical Sessions or Laboratory Counselling-cum-evaluation Sessions (LCES) will help the learners to acquire knowledge in the practical domain of Geography. Learners will enhance skills in assessment of personal safety, and the safety of others, in the laboratory environment.
- ✓ Online support services, PCPs, tutorial classes are also provided.
- ✓ It also includes the usage of ICT and credibility of evaluation procedures.
- ✓ Organization of inter and intra Schools/ Institutional workshops, seminars on quality related themes and promotion of quality circles.
- ✓ Arrangement for feedback responses from learners, parents and other stakeholders on quality related institutional processes will help to maintain the quality of the programme.
- ✓ Counsellors with expertise in various fields of geography like geomorphology, hydrology, bio-geography, climatology, environment, disaster management, population, social, economic, urban geography, regional planning, etc. work together to teach the graduate learners about the fundamental and applied problems that are of compelling societal and scientific interest. Issues such as climate change, global warming, water balance, energy use, resource use, hazards, socio-environmental problems, human geography and dynamics of population and settlements, issues associated with environmental change and management, landscape development, and human impacts on the environment will also be studied with particular emphasis in this programme.

v. Instructional Design:

The curriculum design and detailed syllabus for UG-CBCS Geography Learners is as follows.

Introduction: This programme is very popular and demanding since its stating in West Bengal. It is well designed and well structured following the UGC guidelines and the syllabus is also well framed following the major educational institutions in West Bengal and India. Each and every year a very good number of students enrolled in this programme and complete it successfully. This programme for Honours in Geography (HGR) at undergraduate level is well designed and well structured following the Choice Based Credit system in compliance with UGC guidelines and the syllabus is also well framed

following the major educational institutions in West Bengal and India. The programme consists of fourteen (14) Core Courses (CC), four (04) Discipline Specific Elective [DSE] courses, two (02) Skill Enhancement Courses [SEC], two (02) Ability Enhancement Compulsory Courses [AECC] and four (04) Generic Elective Courses [GEC]. The fresher and existing employees can take the advantage of ODL system to enhance their skills and competency in this particular field without disturbing their work schedule.

The Department takes every care to prepare the Learning Materials in printed form popularly known as the Self-Learning Materials (SLM) with the approach of self-explanatory, self-contained, self-motivating and self-evacuating following the guidelines offered by the University Grants Commission through its notifications. The details of the Under graduate programme given below:

a. Course Structure: (Please see the detailed table below):

SEM		CODE	Course Name	Credit	Study Hours	TE Full Marks	Assig. Full Marks	Total Marks
1st Year	I	**CC-GR-01**	Cartographic Techniques Lab & Thematic Mapping and Surveying Lab	6	180	70	--	70
		CC-GR-02	Geotectonics and Geomorphology Lab & Climatology Lab	6	180	70	--	70
		AE-BG-11	* Bengali	2	60	50	20	70
		AE-EG-12	* English					
		GE-01: # Refer Table below		6	180	50	20	70
	II	**CC-GR-03**	Geotectonics and Geomorphology	6	180	50	20	70
		CC-GR-04	Human Geography	6	180	50	20	70
		AE-ES-21	Environmental Studies	2	60	50	20	70
		GE-02: # Refer Table below		6	180	50	20	70
2nd Year	III	**CC-GR-05**	Statistical Methods in Geography Lab & Human Geography Lab	6	180	70	--	70
		CC-GR-06	Remote Sensing, GIS Lab & Research Methodology and Field Work Lab	6	180	70	--	70
		CC-GR-07	Climatology	6	180	50	20	70
		SE-GR-11	Remote Sensing	2	60	50	10	60
		GE-03: # Refer Table below		6	180	50	20	70
	IV	**CC-GR-08**	Environment Geography	6	180	50	20	70
		CC-GR-09	Hydrology and Oceanography	6	180	50	20	70
		CC-GR-10	Economic Geography	6	180	50	20	70
		SE-GR-21	Research Methods	2	60	50	10	60
		GE-04: # Refer Table below		6	180	50	20	70
3rd Year	V	**CC-GR-11**	Disaster Management Lab & Environment Geography Lab	6	180	70	--	70
		CC-GR-12	Regional Planning and Development	6	180	50	20	70
		DS-GR-11	Soil & Bio Geography	6	180	50	20	70
		DS-GR-21	Urban Geography	6	180	50	20	70
	VI	**CC-GR-13**	Evolution of Geographical Thought	6	180	50	20	70
		CC-GR-14	Geography of India	6	180	50	20	70
		DS-GR-31	Population Geography	6	180	50	20	70
		DS-GR-41	Social Geography	6	180	50	20	70

GE combination list:

Subject	SEM-I: GE-01	SEM-II: GE-02	SEM-III: GE-03	SEM-IV: GE-04
Political Science	**GE-PS-11:** Nationalism in India	**GE-PS-21:** Feminism: Theory and Practice	**GE-PS-31:** Gandhi and the Contemporary World	**GE-PS-41:** Understanding Ambedkar
				GE-PS-42: United Nations and Global Conflicts
History	**GE-HI-11:** EASTERN INDIA (WITH SPECIAL REFERENCE TO BENGAL): (EARLIEST TO 1203/1204)	**GE-HI-21:** EASTERN INDIA (WITH SPECIAL REFERENCE TO BENGAL): (1203/1204-1757)	**GE-HI-31:** EASTERN INDIA (WITH SPECIAL REFERENCE TO BENGAL): (1757-1947)	**GE-HI-41:** MAKING OF CONTEMPORARY INDIA
				GE-HI-42: MAKING OF CONTEMPORARY WORLD
Sociology	**GE-SO-11:** Indian Society	**GE-SO-21:** Population and Society	**GE-SO-31:** Gender and Violence	**GE-SO-41:** Sociology of Social Movements

				GE-SO-42: Rethinking Development

* Learners have to choose any one from AE-BG-11: Bengali or AE-EG-12: English as Ability Enhancement Compulsory Course 1

Learners have to choose any one course from each individual GE group of Semester I, II, III and IV.

Course Legend: CC – Core Courses, AECC – Ability Enhancement Compulsory Courses, GEC – Generic Elective Courses, SEC – Skill Enhancement Courses, DSEC – Discipline Specific Elective Courses

b. Detailed Syllabus: (Learners are advised to check the relevant Self Learning Materials (SLM's) for actual distribution of Modules and Units. All courses have been designed in keeping with UGC (Open and Distance Learning and Online Programmes) Regulations, 2020 regarding the minimum number of Units)

Semester-I

Core Course-2 (Practical) Credit-6, Full Marks-70

Course Code: CC-GR-02, Course Title: Geotectonics and Geomorphology Lab & Climatology Lab

Module-1: Geotectonics and Geomorphology Lab:

Units:

Extraction and interpretation of geomorphic information from Survey of India 1:50k

1. Topographical maps of plateau region: Delineation of drainage basin from Survey of India topographical map. Construction and interpretation of relief profiles (superimposed, projected and composite)
2. Relative relief map, Slope map (Wentworth)
3. Correlation between physical and cultural features from Survey of India topographical maps using transect chart
4. Construction of hypsometric curve from Survey of India 1:50k topographical maps of plateau region
5. Megascopic identification of

(a) Mineral samples: Bauxite, calcite, chalcopyrite, feldspar, galena, gypsum, hematite, magnetite, mica, quartz, talc, tourmaline;

(b) Rock samples: Granite, basalt, dolerite, laterite, limestone, shale, sandstone, conglomerate, slate, phyllite, schist, gneiss, quartzite, marble

6. Measurement of dip and strike using Clinometer
7. Preparation and interpretation of simple Geological Maps (Horizontal, Uniclinal and Simple Anticline & Synclinal Fold Structure)

Module-2: Climatology Lab

Units:

1 Measurement of weather elements using analogue instruments: Mean daily temperature, Air pressure

2. Interpretation of a Daily Weather Map of India (any two): Pre-Monsoon, Monsoon and Post-Monsoon
3. Construction and interpretation of Climograph (G. Taylor)
4. Construction and interpretation of Wind Rose
5. Construction and interpretation of Climatic Chart
6. Construction and interpretation of Ombrothermic Chart

Semester-II

Core Course-3 (Theory) Credit-6, Full Marks-70
Course Code: CC-GR-03, Course Title: Geotectonics & Geomorphology

Module-1: Geotectonics
Units:
1. Earth's tectonic and structural evolution with reference to geological time scale
2. Earth's interior with special reference to seismology. Isostasy: Models of Airy and Pratt
3. Plate Tectonics: Processes at constructive, conservative, destructive margins and hotspots; resulting landforms
4. Folds and Faults—origin and types

Module-2: Geomorphology
Units:
1. Degradation processes: Weathering, mass wasting and resultant landforms
2. Processes of entrainment, transportation and deposition by different geomorphic agents. Role of humans in landform development.
3. Development of river network and landforms on Uniclinal and Folded structures
4. Landforms on igneous rocks with special reference to Granite and Basalt
5. Karst landforms: Surface and sub-surface
6. Glacial and Fluvio-glacial processes and landforms
7. Aeolian and Fluvio-aeolian processes and landforms
8. Models on landscape evolution: Views of Davis, Penck, King and Hack

Semester-II

Core Course-4 (Theory) Credit-6, Full Marks-70
Course Code: CC-GR-04, Course Title: Human Geography

Module-1: Nature and Principles
Units:
1. Nature and scope and recent trends. Elements of Human Geography
2. Approaches to the study of Human Geography; Resource, Locational, Landscape, Environmental
3. Evolution of humans. Concept of race and ethnicity
4. Space, society and cultural regions (language and religion)

Module-2: Society, Demography and Ekistics
Units:
1. Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming, industrial and urban societies
2. Human adaptation to environment: Eskimo, Masai, Jarwa, Gaddi, Santhals.
3. Population growth and distribution, population composition; demographic transition model
4. Population–Resource regions (Ackerman)
5. Human population and environment with special reference to development–environment conflict
6. Social morphology and rural house types in India
7. Types and patterns of rural settlements
8. Types and patterns of urban settlements

Semester-III

Core Course-5 (Practical) Credit-6, Full Marks-70
Course Code: CC-GR-05, Course Title: Statistical Methods in Geography Lab & Human Geography Lab

Module-1: Statistical Methods: Basics
Units:
1. Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio), sources of data, Collection of data and formation of statistical tables
2. Theoretical distribution: frequency, cumulative frequency, normal, Sampling: Need, types, and significance and methods of random sampling
3. Central tendency: Mean, median, mode, partition values
4. Measures of dispersion: Mean Deviation, Standard Deviation, Coefficient of Variation
5. Association and correlation: Rank correlation, Product moment correlation
6. Linear Regression
7. Time Series Analysis (Moving Average)

Statistical Methods in Geography Lab:
Units:
1. Construction of data matrix with each row representing an aerial unit (districts / blocks / mouzas / towns) and columns representing relevant attributes.
2. Based on the above, a frequency table would be computed and interpreted
3. Measures of Central Tendency
4. Measures of Dispersion.
5. Histograms and Frequency Curve would be prepared on the dataset.
6. Based on of the sample set and using two relevant attributes, a scatter diagram and regression line would be plotted
7. Drawing of Time Series Graph & Trend Line by Moving Average Method

Module-2: Human Geography
Units:
1. Spatial variation in continent- or country-level religious composition by divided proportional circles
2. Measuring decadal growth rate of population
3. Types of Age-Sex pyramids: Graphical representation and analysis
4. Nearest neighbour analysis from Survey of India 1:50k topographical maps
5. Choropleth mapping based on population data
6. Variation in occupational structure by Proportional Divided Circles
7. Time Series Analysis of industrial production (India and West Bengal)
8. Transport network analysis by Shortest Path Method

Semester-III
Core Course-6 (Practical) Credit-6, Full Marks-70
Course Code: CC-GR-06, Course Title: Remote Sensing, GIS Lab & Research Methodology and Field Work Lab

Module-1: Remote Sensing & GIS
Units:
1. Principles of Remote Sensing (RS): Types of RS satellites and sensors
2. Sensor resolutions and their applications
3. Preparation of False Colour Composites from IRS LISS-3 & Landsat TM data.

4. Principles of image interpretation. Preparation of inventories of land use land cover (LULC) features from satellite images.
5. GIS data structures: types (spatial and non-spatial), raster and vector
6. Principles of GNSS positioning and waypoint collection
7. Transferring of waypoints to GIS.
8. Area and length calculations from GNSS data.

Remote Sensing, GIS: List of Practical

A Project File, comprising one exercise each is to be submitted (Use any available software for the Project Report)

1. Georeferencing of maps and images
2. Image classification, post-classification analysis and class editing
3. Digitisation of features. Data attachment, overlay and preparation of thematic map
4. Collection and Plotting of Waypoint by GPS

Module-2: Research Methodology: List of Practical

Units:

1.Each student will prepare an individual report based on primary data collected from field survey and secondary data collected from different sources for either a rural area (mouza) or an urban area (municipal ward) based on cadastral or municipal maps to study specific problems.
2. The duration of the field work shall not exceed 10 days
3. The report should be hand written in English on A4 size paper in candidate's own words within 5,000 to 8,000 words excluding figures, tables, photographs, maps, references and appendices
4. A copy of the bound report, duly signed by the concerned teacher, should be submitted

Semester-III

Core Course-7 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-07, Course Title: Climatology

Module-1: Elements of Atmosphere

Units:

1. Nature, composition and layering of the atmosphere,
2. Insolation: controlling factors. Heat budget of the atmosphere.
3. Temperature: Horizontal and Vertical distribution. Inversion of Temperature
4. Greenhouse effect and importance of Ozone layer.

Module-2: Atmospheric Phenomena and Climatic Classification

Units:

1. Condensation: Process and forms. Mechanism of Precipitation: Bergeron-Findeisen theory, Collision and Coalescence Theory. Forms of precipitation.
2. Air mass: Origin and characteristics.
3. Fronts: Warm and Cold; frontogenesis and frontolysis.
4. Weather: stability and instability.
5. Circulation in the atmosphere: Planetary winds, Jet Stream
6. Tropical and Mid-Latitude Cyclones
7. Monsoon Circulation and Mechanism with reference to India
8. Climatic classification after Köppen and Thornthwaite

Semester-IV

Core Course-8 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-08, Course Title: Environment Geography

Module-1: Concept and Nature

Units:

1. Geographers' approach to environmental studies
2. Perception of environment in different stages of civilization
3. Concept of holistic environment and system approach
4. Ecosystem: Concept, structure and functions
5. Wetland ecosystem with special reference to East Kolkata Wetlands
6. Environmental pollution and degradation: Land, water and air
7. Space–time hierarchy of environmental problems: Local, regional and global

Module-2: Principles and Management

Units:

8. Urban environmental issues with special reference to waste management

Rural environmental issues: Special reference to sanitation and public health

9. Environmental policies – Club of Rome, Earth Summits (special reference to Stockholm, Rio, Johannesburg)
10. Global initiatives for environmental management (special reference to Montreal, Kyoto, Paris)
11. Environmental Impact Assessment and Environmental Management Planning
12. Overview of principal environment-related regulations of India. Review of their achievements
13. Principles of wasteland management with special reference to West Bengal
14. Principles of forest management with special reference to West Bengal

Semester-IV

Core Course-9 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-09, Course Title: Hydrology & Oceanography

Module-1: Hydrology

Units:

1. Systems approach in hydrology. Global hydrological cycle: Its physical and biological role
2. Run off: controlling factors. Run off cycle
3. Infiltration and evapotranspiration.
4. Drainage basin as a hydrological unit.
5. Principles of water harvesting and watershed management
4. Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement.

Module-2: Oceanography

Units:

1. Major relief features of the ocean floor: characteristics and origin according to plate tectonics.
2. Water mass: Physical and chemical properties of ocean water, T–S diagram
3. Ocean temperature and salinity: Distribution and determinants.
4. Air-Sea interactions, ocean circulation, wave and tide.
5. Coral Reefs: Formation, classification and threats.
6. Marine resources: Classification and sustainable utilisation
7. Sea Level Change: Types and causes

Semester-IV

Core Course-10 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-10, Course Title: Economic Geography

Module-1: Concept and Nature

Units:

1. Meaning and approaches to Economic Geography, new Economic Geography
2.Concepts in Economic Geography: Goods and services, production, exchange and consumption
3. Concept of economic man
4. Economic distance and transport costs

Module-2: Economic Activity

Units:

1. Concept and classification of economic activities
2. Factors affecting location of economic activity with special reference to agriculture (Von Thunen), and industry (Weber).
3. Primary activities: Subsistence and commercial agriculture, forestry, fishing and mining
4. Secondary activities: Manufacturing (cotton textile, iron and steel), concept of manufacturing regions, special economic zones and technology parks
5. Tertiary activities: transport, trade and services
6. Agricultural systems: Case studies of tea plantation in India and mixed farming in Europe
7. Transnational sea-routes, railways and highways with reference to India
8. International agreements and trade blocs: GATT and OPEC

Semester-V

Core Course-11 (Practical) Credit-6, Full Marks-70

Course Code: CC-GR-11, Course Title:

Module-1: Disaster Management Lab

Units:

An individual Project Report based on any one case study among the following disasters incorporating a preparedness plan in the vicinity of the candidate's institution or residence:

1. Thunderstorm
2. Landslide
3. Flood
4. Coastal / riverbank erosion
5. Fire
6. Industrial accident
7. Structural collapse

Module-2: Environment Geography Lab

Units:

1. Preparation of questionnaire for perception survey on environmental problems
2. Preparation of check-list for Environmental Impact Assessment of an urban / industrial project
3. Quality assessment of soil using field kit: pH and NPK
4. Determination of soil type by ternary diagram textural plotting
5. Time series analysis of biogeography data
6. Interpretation of air quality using CPCB / WBPCB data

Semester-V

Core Course-12 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-12, Course Title: Regional Planning and Development

Module-1: Regional Planning

Units:

1. Concept of regions: Types of regions and their delineation.

2. Types of planning, principles and objectives of regional planning, multi- level planning in India
3. Tools and techniques of regional planning
4. Metropolitan concept: metropolitan areas, and urban agglomerations

Module-2: Regional Development

Units:

1. Development: Meaning, growth versus development
2. Concept and strategies of regional development with reference to India
3. Theories and models for regional development: Growth pole model of Perroux; growth centre model in Indian context
4. Theories and models for regional development: Cumulative causation (Myrdal) and core-periphery (Hirschman, Rostow and Friedman)
5. Changing concept of development, concept of underdevelopment; efficiency-equity debate
6. Indicators of development: Economic, social and environmental. Human development.
7. Regional development in India, regional inequality, disparity and diversity
8. Need and measures for balanced development in India

Semester-VI

Core Course-13 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-13, Course Title: Evolution of Geographical Thought

Module-1: Nature of Pre Modern Geography

Units:

1. Development of Geography and contributions of Greek, Chinese, and Indian geographers.
2. Impact of 'Dark Age' on Geography
3. Transition from Cosmography to Scientific Geography (Contributions of Bernard Varenius and Immanuel Kant)
4. Dualism and Dichotomies (General vs. Particular, Physical vs. Human, Regional vs. Systematic, Determinism vs. Possibilism, Ideographic vs. Nomeothetic)
5. Man-Environment Relationship, Ecological Approach
6. Cultural Landscape, Cultural Diffusion

Module-2: Foundations of Modern Geography & Recent Trends

Units:

1. Evolution of Geographical thoughts in Germany, France, Britain and United States of America.
2. Contributions of Humboldt and Ritter
3. Contributions of Richthofen, Hettner and Ratzel
4. Trends of Geography in the post World War-II period
5. Quantitative Revolution and its impact, positivism, behaviouralism, systems approach, radicalism, feminism
6. Towards Post Modernism: Changing concept of space in geography. Geography in the 21st Century

Semester-VI

Core Course-14 (Theory) Credit-6, Full Marks-70

Course Code: CC-GR-14, Course Title: Geography of India

Module-1: Geography of India

Units:

1. Structure & Relief of India, physiographic divisions (S.P. Chatterjee)
2. Climate, soil and vegetation: Characteristics and broad classification

3. Population: Distribution, growth, structure and policy
4. Distribution of population by race, caste, tribes, religion, language
5. Agricultural regions (Randhawa & ICAR). Green revolution and its consequences
6. Mineral and power resources distribution and utilisation of iron ore, coal, petroleum, natural gas;
7. Industrial development: Automobile and Information technology
8. Regionalisation of India: Physiographic

Module-2: Geography of West Bengal

Units:

1. Physical perspectives: Physiographic divisions, forest and water resources
2. Population: Growth, distribution and human development
3. Resources: Mining, agriculture and industries
4. Regional Problem: Darjeeling Hills and Sundarban

Discipline Specific Elective Courses

Semester-V
Discipline Specific Elective Course-1 (Theory) Credit-6, Full Marks-70
Course Code: DS-GR-11, Course Title: Soil & Bio Geography

Module-1: Soil Geography

Units:

1. Factors or soil formation. Man as an active agent of soil transformation.
2. Soil profile. Origin and profile characteristics of Lateritic, Podzol and Chernozem soils
3. Definition and significance of soil properties: Texture, structure and moisture,
4. Definition and significance of soil properties: pH, organic matter and NPK
5. Soil erosion and degradation: Factors, processes and mitigation measures
6. Principles of soil classification: Genetic and USDA. Concept of land capability and its classification.

Module-2: Bio Geography

Units:

1. Concepts of biosphere, ecosystem, biome, ecotone, community and ecology
2. Concepts of trophic structure, food chain and food web. Energy flow in ecosystems
3. Geographical extent and characteristic features of: Tropical rain forest, Taiga and Grassland biomes
4. Bio-geochemical cycles with special reference to carbon dioxide and nitrogen
5. Deforestation: Causes, consequences and management
6. Bio-diversity: Definition, types, threats and conservation measures

Semester-V
Discipline Specific Elective Course-2 (Theory) Credit-6, Full Marks-70
Course Code: DS-GR-21, Course Title: Urban Geograph*y*

Module-1: Concept and Nature

Units:

1. Urban Geography: nature and scope, different approaches and recent trends in urban geography
2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern periods- factors, stages, and characteristics.
3. Theories of Urban Evolution and Growth: Hydraulic Theory, Economic Theory
4. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, The Law of the Primate City
5. Urban Hierarchies: Central Place Theory; August Losch's theory of Market Centres
6. Patterns of urbanisation in developed and developing countries

Module-2: Urban Issues

Units:

1. Ecological processes of urban growth; Urban fringe; City- Region
2. Theories of city structure-concentric zone theory, sector theory, multiple nuclei theory
3. Urban Issues: problems of housing, slums, civic amenities (water and transport)
4. Patterns and trends of urbanization in India
5. Policies on urbanization. Urban change/landscape in post-liberalized period in India
6. Case studies of Delhi, Kolkata, and Chandigarh with reference to land use

Semester-VI
Discipline Specific Elective Course-3 (Theory) Credit-6, Full Marks-70
Course Code: DS-GR-31, Course Title: Population Geography

Module-1: Population Dynamics
Units:
1. Development of Population Geography as a field of specialization. Relation between population geography and demography. Sources of population data, their level of reliability and problems of mapping.
2. Population distribution: density and growth. Classical and modern theories in population distribution and growth, Demographic transition model.
3. World patterns determinants of population distribution and growth. Concept of optimum population.
4. Population distribution, density and growth profile in India.

Module-2: Demographic Attributes and Issues
Units:
1. Population Composition and Characteristics– Age-Sex Composition; Rural and Urban Composition; Literacy.
2. Measurements of fertility and mortality. Concept of cohort and life table
3. Population composition of India. Urbanisation, Occupational structure.
4. Migration: Causes and types
5. National and international patterns of migration with reference to India.
6. Population and development: population-resource regions. Concept of human development index and its components.
7. Population policies in developed and less development countries. India's population policies, population and environment, implication for the future.
8. Contemporary Issues – Ageing of Population; Declining Sex Ratio; Population and environment dichotomy, HIV/AIDS.

Semester-VI
Discipline Specific Elective Course 4 (Theory) Credit-6, Full Marks-70
Course Code: DS-GR-41, Course Title: Social Geography

Module-1: Concept and Nature
Units:
1. Social Geography: Concept, Origin, Nature and Scope
2. Concept of Space, Social differentiation and stratification; social processes
3. Social Categories: Caste, Class, Religion, Race and Gender and their Spatial distribution
4. Basis of Social region formation; Evolution of social-cultural regions of India
5. Peopling Process of India: Technology and Occupational Change; Migration.
6. Social groups, social behaviour and contemporary social environmental issues with special reference to India

Module-2: Social Dynamics
Units:
1. Concept of Social Well-being, Quality of Life, Gender and Social Well-being
2. Measures of Social Well-being: Healthcare, Education, Housing, Gender Disparity

3. Social Geographies of Inclusion and Exclusion, Slums, Gated Communities, Communal Conflicts and Crime.
4. Social Planning during the Five Year Plans in India
5. Social Policies in India: Education and Health
6. Social Impact Assessment (SIA): Concept and importance

Skill Enhancement Courses

Semester-III
Skill Enhancement Course 1 (Theory) Credit-2, Full Marks-60
Course Code: SE-GR-11, Course Title: Remote Sensing

Units:
1. Principles of Remote Sensing (RS): Classification of RS satellites and sensors
2. Sensor resolutions and their applications with reference to IRS and LANDSAT missions, image referencing schemes and data acquisition
3. Preparation of False Colour Composites from IRS LISS-3 and LANDSAT TM and OLI data. Principles of image rectification and enhancement
4. Principles of image interpretation and feature extraction. Preparation of inventories of land use and land cover features from satellite images
5. Guidelines for a project report based on the above themes. (A project file consisting of four exercises on the above themes is to be submitted)

Semester-IV
Skill Enhancement Course 2 (Theory) Credit-2, Full Marks-60
Course Code: SE-GR-21, Course Title: Research Methods

Units:
1. Geographic Enquiry: Definition and Ethics; Literature Review; Framing Research Questions, Objectives and Hypothesis; Preparing Sample Questionnaires and inventories
2. Data Collection: Type and Sources of Data; Methods of data Collection; Data Input and Editing
3. Data Analysis: Qualitative and Quantitative Analysis; Techniques Data Representation
4. Structure of a Research Report: Preliminaries; Text; Citation, Notes, References, Bibliography and Abstract and Key words

Generic Elective Courses

(For learners of Honours programmes other than Geography)

Semester-I

Generic Elective Course-1 (Theory) Credit-6, Full Marks-70

Course Code: GE-GR-11, Course Title: Rural Development

Module-1:

Units:

1. Defining Development: Inter-Dependence of Urban and Rural Sectors of the Economy
2. Paradigms of Rural Development: Lewis Model of Economic Development, 'Big Push' theory of Development, Myrdal's thesis of Spread and Backwash Effects
3. Need for Rural Development, Gandhian Approach to Rural Development
4. Rural Economic Base: Agriculture and Allied Sectors, Non-Farm Activities
5. Rural Co-operatives and Agricultural marketing
6. Area Based Approach to Rural Development: Drought Prone Area Programmes, PMGSY

Module-2:

Units:

7. Target Group Approach to Rural Development: SJSY, MNREGA, Jan DhanYojana
8. Provision of Services – Physical and Socio-Economic Access to Elementary Education and Primary Health Care and Micro credit; Concept of PURA
9. Rural Governance: Panchayati Raj System
10. Rural Development Policies and Programmes in India
11. Rural Infrastructural Development programmes relating to: Rural Electrification, Transport, Housing, and Connectivity
12. Rural Development Programmes for Women and children: Janani SurakshaYojana, National Nutrition Mission, Drinking water and sanitation programmes, NRHM, Sarva Sikha Mission

Semester-II

Generic Elective Course-2 (Theory) Credit-6, Full Marks-70

Course Code: GE-GR-21, Course Title: Geography of Tourism

Module-1:

Units:

1. Scope and Nature: Concepts and Issues, Tourism, Recreation and Leisure Inter-Relations; Geographical Parameters of Tourism by Robinson
2. Types of Tourism: Ecotourism, Cultural Tourism, Adventure Tourism, Medical Tourism, Pilgrimage, International, National
3. Factors influencing tourism: historical, natural, socio-cultural and economic
4. Spatial pattern of tourism: Domestic and International; areal and locational dimensions comprising physical, cultural, historical and economic
5. Impact of tourism: physical, economic and social and perceptive positive and negative impacts
6. Environmental laws and tourism - current trends, spatial patterns and recent changes

Module-2:

Units:

7. Role of foreign capital and impact of globalization on tourism
8. Recent Trends of Tourism: International and Regional; Domestic (India); Sustainable Tourism, Meeting Incentives Conventions and Exhibitions (MICE)
9. Tourism in India: Tourism Infrastructure; Regional dimensions of tourist attraction; Case Studies of Dal lake, Goa, Garhwal Himalaya, Desert and Coastal Areas
10. Promotion of Tourism-National Tourism Policy
11. Infrastructure and support system-accommodation and supplementary accommodation; other facilities and amenities
12. Tourism circuits-short and longer detraction - Agencies and intermediaries - Indian hotel industry

Semester-III

Generic Elective Course-3 (Theory) Credit-6, Full Marks-70

Course Code: GE-GR-31, Course Title: Climate Change: Vulnerability and Adaptations

Module-1:

Units:

1. The Science of Climate Change: Origin, scope and trends
2. Understanding Climate Change with reference to the Geological Time Scale
3. Evidences and factors of climate change: the nature- man dichotomy
4. Green House Gases and Global Warming
5. Global climatic assessment: IPCC reports

Module-2:

Units:

6. Climate change and vulnerability: Physical; economic and social
7. Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health and morbidity
8. Global initiatives to climate change mitigation: Kyoto Protocol, Carbon trading, Clean development mechanism, COP, Climate fund
9. National Action Plan (of India) on Climate Change
10. Role of Local Bodies on climate change mitigation: Awareness and action programmes.

Semester-IV

Generic Elective Course-4 (Theory) Credit-6, Full Marks-70

Course Code: GE-GR-41, Course Title: Disaster Management

Module-1:

Units:

1. Definition and Concepts of Hazards and Disasters; Risk and Vulnerability; Classification of hazards
2. Causes and consequences of hazards: Physical, economic and cultural
3. Role of National and International organizations in disaster management
4. Causes, Impact and Distribution of: Earthquake and Tsunami, Landslides
5. Causes, Impact, Distribution of: Flood and drought
6. Causes, Impact, Distribution of: Deforestation, Desertification, Salinization

Module-2:

Units:

7. Response and Mitigation to Disasters: Institutional set up, NDMA and NIDM
8. Indigenous Knowledge and Community-based Disaster Management; Do's and Don'ts During

and Post Disasters
9. Emerging approaches to Disaster management: (a) Pre-disaster stage, (b) Emergency Stage and (c) Post disaster stage
10. Regional perspectives of hazards in India with reference to dimension, causes, consequences and remedial measures: (a) Hills (b) Coasts
11. National and international policies for disaster management
12. Role of geospatial technology (RS and GIS) in disaster management

c. Duration of the programme:
The minimum duration of the Programme is 3 (three) years from the date of registration. The registration is valid for a period of maximum 6 (six) years.

d. Faculty & Support Staff requirement:

Sl. No.	Faculty	Name of the Faculty	Work at (HQ/RC)	Number
1	Associate Professor	Dr. Chhanda Dana Kundu	RC - 1	1
2	Associate Professor	Dr. Ajit Kumar Sil	RC - 1	1
3	Associate Professor	Smt. Dipali Kundu	RC - 1	1
4	Assistant Professor	Dr. Biraj Kanti Mondal	RC - 1	1
5	Assistant Professor	Smt. Tinki Kar Bhattachya	RC - 1	1

e. Support Staff:

Sl. No.	Office Staff (Designation)	Work at (HQ/RC)	Number
1	Junior Assistant	RC - 1	1
2	Junior Assistant Cum Typist	HQ - 1	1

f. Instructional Delivery Mechanisms:

Mode of Delivery/ Types	Delivery Mechanisms	Provided (Yes/No)	Detailed Information (Please Mention the Activity Hour)
Face to Face Mode	PCP	Yes	Provided at LSC. For 6 Credits Theory Courses 9 counselling sessions of 2 hours each (Total 18 hrs); for 2 Credits Ability/Skill Courses 3 counselling sessions of 2 hours each (Total 6 hrs)
	Tutorials/ Special Classes/ Remedial Classes/ PCP	Yes	Provided online by NSOU faculty @ 6 hrs for each 6 Credits Course; Offline remedial classes once every semester at RC's (6 hrs for each 6 Credits Course)
	Seminar/ Research Colloquium	Yes	Learners participates in the seminar/workshops conducted by the University as per prior notice
	Laboratory based Practical	Yes	96 hour Practical session per Core Courses and Discipline Specific Courses
Self-Learning	SLMs	Yes	All Courses are designed within the range of Units specified by relevant regulations. 20 hours of self- study time is envisaged for each SLM
	Reference Books	Yes	All Units have suggested reading lists. Additionally, faculty at LSC (during PCP) & NSOU faculty (at online sessions) guide learners regarding Reference Books
	Online (Web driven/Mobile App)	Yes	Learners have access to institutional Learning Management System (LMS)

Mode of Delivery/ Types	Delivery Mechanisms	Provided (Yes/No)	Detailed Information (Please Mention the Activity Hour)
ICT/ Digital Wellness of students	Offline DVD/SD Card/USB Drive	Yes	USB drive used
	Telecommunications	Yes	Supports are given as per need. Communication Support is provided to the learners through University technical team as per requirement
Blended	Smart Classrooms	Yes	Arrangements are available both at RC's and at LSC's
	Flipped Learning	No	Will come into effect in a phased manner from the upcoming session with the development of NSOU MOOC

vi. Procedure for admissions, curriculum transaction and evaluation:

University frames its policy related to admission entry criteria, method of admission, conduction of admission through the Admission Committee (statutory body) following the guideline of the UGC (Open and Distance Learning and Online Programmes) Regulations, 2020 and Department of Higher Education, Govt. of West Bengal. Admissions are conducted entirely through Online mode centrally by the University.

Information Circulation Policy:

All information related to the programme like admission policy, eligibility, fee structure, course curriculum, medium of instruction, method of instruction, evaluation method, SLMs etc. are transacted through prospectus, brochure, official notification etc.

Learner Support Services:

Learner support services are provided by the University at three level of functioning of the Open University architecture i.e. Learner Support Centre (LSC), Regional Centre and Head Quarter.

Following the UGC (Open and Distance Learning and Online Programmes) Regulations, 2020 LSCs are provide various learner support services in order to facilitate the acquisition of teaching-learning experience for its enrolled learners throughout at various phases of learners' study life cycle. LSC also main contact points for access by the learners, responsive and facilitating information centres, arranging contact sessions and other operations like processing of assignments etc.

University has constituted Learner's Facilitation Centre (LFC) at each Regional Centres to provide various support services. Beside that University has also provided learners support services through web based platform/ telephone/ email/ instant messaging services.

Transaction of Curriculum and Academic Planner:

The whole curriculum of the programme is well structured and well designed with the updated syllabus structure. The curriculum transaction involves the face to face PCP sessions through chalk and talk method, use of Power Point presentations, web-based lessons, animated videos, etc. The PCP sessions would be such that the learner should participate actively in the discussion. Apart from this ICT enables online supports are provided for better understanding of the subject.

For practical courses exclusive study materials containing the requirements, procedure for the experiments are issued to the learners. In the laboratory, instruction would be given for the experiments followed by demonstration and finally the learners have to do the experiments individually.

Curriculum transaction is through Online and or Offline modes as detailed above and all academic activities are conducted following the programme is following the below mentioned activity planner during the academic session:

Name of the Activity	Tentative months schedule (specify months) during Year			
	From (Month)	To (Month)	From (Month)	To (Month)
Admission	Jun	Jul	NA	NA
Distribution of SLM	Jul	Aug	NA	NA
Contact Programmes (counselling, Practical, etc.)	Aug	Oct	Jan	Mar
Assignment Submission	Oct	Nov	Mar	Apr
Evaluation of Assignment	Nov	Nov	Apr	Apr
Examination	Nov	Dec	May	Jun
Declaration of Result	Dec	Dec	Jun	Jun
Renewal/ Re–registration	NA	NA	Jun	Jul

Evaluation:

Evaluation is on a 2-tier basis, divided into Assignment submission (online mode) and Term End Examinations (Offline mode). The weightage is as follows:
Assignment – 20 marks
Term End Examination – 50 marks
Total marks for each course – 70

A**ssignment / Internal Assessment/ Continuous Assessment / Formative Assessment:** Assignment submission is the first interaction between the learner and the teacher. It has a very important role to play in the teaching-learning process in distance education. So, submission of Assignment is mandatory for all learners. The assignment responses reflect what the learners have understood and learnt. The assignment answer scripts are returned to the learners so that the assignment answers serve the purpose of providing feedback to the learners and inform them their strengths and weaknesses. Learners will be required to submit assignment for each course and the marks obtained on evaluation of those assignment courses will be entered into his/her individual record of performance. This will constitute 30% (maximum) of the Full marks in the course as per University Grants Commission (Open and Distance Learning Programmes and Online Programmes) regulations, 2020. All the Marks secured by the learners will be progressively entered into the result card. Every learner is required to submit the assignment courses before each Term-End Examination. In practical course of Science stream, there is no assignment.

Term-End Examinations: Minimum 70% of the total credit points of the course (except practical course where it is 100%) would be reserved for Term-End Examination as per University Grants Commission (Open and Distance Learning Programmes and Online Programmes) Regulations, 2020. Minimum qualifying marks in each course is 30% (Term End Examination Marks + Assignment Marks).

Practical Examination:

To educate the students in more scientific way, a rhythmic practical class programme has been introduced.

Laboratory support: NSOU has advanced laboratories for Geography practical at Kalyani Regional Centre where Learners can gain hand-on experiences of modern laboratory techniques. NSOU provides the necessary laboratory facilities to the students in their respective study centres. For Under Graduate, the practical classes are held in the respective study centre. NSOU provides the necessary laboratory facilities to the Learners in their respective study centres in addition to the university's own laboratory. The practical classes are arranged mostly during the September-December each year by clubbing the students of respective study centres, consequencing an examination at the 12th day after

a series of classes of 11 days. For UG level, a period of 12 days (eight hours per day) has been allotted for the Learners during the Puja vacation. The College and University teachers have been appointed to take classes which show a beautiful sharing of resource persons among the conventional and distance institutions. The Learners of different study centres have been clubbed into a nearby study centres for practical classes. An inspected team of subject expert visit the Laboratory Cum Evaluation Session (LCES) centres during the 12 days. A workshop is conducted in every year for the practical papers and the proper guidelines and instructions for the academic counsellor and the learners are shared with the respective section in due time. With the help of such guidelines and instructions, the practical papers are conducting successfully in each and every year and the learners become capable to understand the important issues of the practical papers, solve the problems and challenges by its field expose and enrich them for the higher studies. The practical papers includes Scale, Surveys, Map Projection, Practical Geographic Techniques, Thematic Maps, Cartograms, Interpretation of topographical map, Interpretation of Indian daily weather map, Statistical Techniques, Morphometric techniques, Field Report, Construction of Station Model, Identification of Rocks and Minerals, Geological Map, Basic Concept of Remote Sensing, Interpretation of Aerial Photographs etc., the paper wise which is mentioned below:

Practical Paper Wise Mapping of Credit Hours:

Year	Paper	Paper Code	Full Marks	Credit
1st	Cartographic Techniques Lab & Thematic Mapping and Surveying Lab	CC-GR-01	70	6
1st	Geotectonics and Geomorphology Lab & Climatology Lab	CC-GR-02	70	6
2nd	Statistical Methods in Geography Lab & Human Geography Lab	CC-GR-05	70	6
2nd	Remote Sensing, GIS Lab & Research Methodology and Field Work Lab	CC-GR-06	70	6
3rd	Disaster Management Lab & Environment Geography Lab	CC-GR-11	70	6

Waive of Programme Fee:

University waive of full course fee for transgender learners.

vii. Requirement of the laboratory support and Library Resources:

Library facility is one of important services in any higher educational institution. In addition to the Self Learning Materials (SLMs) and other learning resources the University provides library facility to all of its registered learners. The Library Department, Netaji Subhas Open University is located at Kalyani Campus.

Further, to cater to the needs of huge number of registered students, the University needs unlimited libraries to provide educational support to everyone. To cope with the situation, the University has initiated the process of setting up a strategic partnership with the existing network of Public Libraries that are available in the State of West Bengal to offer educational support to our learners all over the State. This initiative taken by NSOU is the first of its kind in the country.

viii. Cost estimate of the programme and the provisions:

Total course fee is Rs. 15,000/- (Excluding Examination and Studentship Renewal Fees). An approximate distribution of expenditure is given below to get prior view:

Assigned Head	Sub Head	% of Expenditure
Development	SLM Preparation and Development Cost	7
	SLM Printing	44
	Maintenances Grant	15

Maintenance & Programme Delivery	Counselling/ PCP/ Lab Counselling	15
	Delivery Charges	4
	Other Overhead Expenses	8
ICT Support	Admission Processing	1
	ICT Support Services	5
	Computer Training	1

ix. Quality assurance mechanism and expected programme outcomes:

Centre for Internal Quality Assurance (CIQA) as per UGC (Open and Distance Learning and online programme) Regulations, 2020 to ensure the delivery of high quality programmes to its learners and CIQA has the following functions:

- ✓ Facilitating the creation of a learner-centric environment conducive for quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process.
- ✓ Arrangement for feedback responses from stakeholders, such as Learners, alumni, employers, and community members, is gathered through surveys, focus groups, and other methods to ensure that the program is meeting the needs of the community and to identify areas for improvement.
- ✓ Dissemination of information on the various quality parameters of the University.
- ✓ Development of quality culture in the University, and encourage creativity and innovation among the faculty and staff.
- ✓ Organization of inter and intra Schools/ Institutional workshops, seminars on quality related themes and promotion of quality circles.
- ✓ Documentation of the various programmes / activities of the School leading to quality improvement
- ✓ Acting as a nodal agency of the institution for quality-related activities, including adoption and dissemination of good practices.

Moreover, CIQA records activities undertaken on quality assurance along with the preparation of the PPRs and Annual Reports. The program aims to make learners knowledgeable, proficient and competent enough to secure good job opportunities as well as take up further research work in the field of social sciences.

Board of Studies (BOS): Board of Studies ensure quality of the Curriculum of Bachelor's Degree Programme in Geography as per University norms. BOS plays a vital role as the following

- ✓ Curriculum review and development of quality Self Learning Materials (SLMs) in print under Choice Based Credit System (CBCS) system. The curriculum is reviewed regularly to ensure that it is up-to-date and relevant to the needs of learners.
- ✓ Learner's assessment and evaluation process through a variety of methods, including exams, assignments. This helps to ensure that Learners are meeting the learning outcomes of the Programme.

Expected Programme outcomes:

Geography discourse is a practical based science discipline which has a huge demand for its knowledge base of the real world and job orientation. The Under Graduate Geography course at NSOU is cost effective and the total cost of the course is quite low and therefore, it is successfully running since its initiation and learners are the pillar for such achievement. Thus, in Geography, the learners don't just learn in the classroom; they have the opportunities to learn relevant skills and apply their knowledge to real-world challenges.

The programme geography provides its learners the opportunities to skilled adequately by learning relevant proficiency and apply their knowledge to real world challenges. The various courses of the programme are designed to give the learners an opportunity to learn valuable skills, apply classroom knowledge, and connect to some organizations and issues that require geographical and environmental expertise. Thus, the learners completing this programme will positively be able to:

- ✓ The learners will have a firm foundation in the fundamentals and application of current physical and scientific theories related to Geography.
- ✓ The learners appreciate Earth as the homeland of mankind and provide wise decisions about how the resources of the planet should be used properly.
- ✓ The programme geography provides its learners the opportunities to skilled adequately by learning relevant proficiency and apply their knowledge to real world challenges.
- ✓ The various courses of the programme are designed to give the learners an opportunity to learn valuable skills, apply classroom knowledge, and connect with many organizations and issues that require geographical and environmental expertise.
- ✓ The learners definitely understand from the geographical point of view the way of looking at the world through the lenses of place, space, and scale. Indeed, geographical location provides a cross-cutting way of looking at processes and phenomena while other disciplines tend to treat in isolation. Geographers focus on 'real world' relationship and dependency among the phenomena and processes will give character to any location or place.
- ✓ After completion of the programme, the learners can be able to analyse environmental-societal dynamics and relating human behaviour to the physical environment, environmental dynamics by linking the physical systems, and human societal dynamics by linking economic, social, and political systems.
- ✓ The learners can be able to accomplish spatial representation using visual, verbal, mathematical, digital, and cognitive approaches. In geography, places are like natural laboratories, where the study of the complex relationship between processes and phenomena of the earth can be understood.
- ✓ The learners of geography can be able to enhance their capabilities in the workforce by contributing a lot by their skills as it designed in such a manner.
- ✓ The learning outcome from the discourse make the learners capable with the necessary scientific skills and competencies, enrich and enable them to become a better educator, teacher, employer or researcher.
- ✓ The field survey course in the programme is designed to explore the theoretical knowledge, so that the learners can apply classroom knowledge to learn the valuable field skills and connect to the issues operated in the environment and the surrounding society.
- ✓ With the help of such designed structure in the practical courses, the learners become capable to understand the important items to solve the problems and challenges and this enrich them for the higher studies. The practical courses include different types of scale, surveying, map projection, geographic techniques, thematic maps, cartograms, topographical maps, morphometric techniques, weather maps, identification of rocks and minerals, geological map, station model, statistical techniques, etc. relevant to this course.
- ✓ The knowledge gained in Remote Sensing (RS) and Geographic Information System GIS) incorporated in geography enables the learners to discover the modern applications of science in the physical, social and environmental spheres. This will help in higher studies and further extended in research works in various fields of geography as well as in the fields of human and environmental aspects at local, national and regional level.