



**CURRICULUM**  
**Master of Science (M.S.)**  
**in Geography and Environment**

**Academic Sessions**  
**2021-2022**

**Department of Geography and Environment**  
**Faculty of Earth and Environmental Sciences**  
**University of Dhaka**

**Dhaka-1000, Bangladesh**

## Preface

The Department of Geography was established in 1948 under the sole direction of Professor Nafis Ahmad (1911–1982) and began activities on the Curzon Hall campus in late 1947. The Department was first placed as under the Science faculty. However, the Department has been a part of the Faculty of Earth and Environmental Sciences since 2008. One of the premier institutions for teaching Geography and Environment at the tertiary level and conducting research in Bangladesh is the Department of Geography and Environment, the Faculty's oldest and largest Department, which has 20 faculty members, more than 500 students, and 15 support staff members.

At present, the Department offers four-year B.S. (Hons) and one-year M.S. (Thesis or Non-thesis) degrees in three specialized streams: physical geography, human geography, and urban & regional planning and development and offers M.Phil. and Ph.D. programs. All of the programs are laid out in accordance with the syllabus created by the department's academic committee complying with the policies of university and faculty. This curriculum and syllabus for the 1-year M.S. (Masters) programme has been created in accordance with the new standards set by Dhaka University's Institutional Quality Assurance Cell (IQAC), which was established as part of the World Bank-funded Higher Education Quality Enhancement Project (HEQEP). This curriculum is the outcome of series of meetings and workshops with students, faculties, experts and employees. The main goals of this program are to build the capacity to explore the complex man-environment relationship in the context of resource and environmental planning and management; to provide adequate knowledge to explore the physical and social environmental settings and their connections with human beings; to provide various types of tools and techniques applicable in the field and laboratory for better understanding the wider arena of geography and environment. Masters in Geography and Environment aims to show man-environment relationships from different perspectives and hence, has three distinctive streams.

My gratitude and accolades are towards my colleagues for their opinions, recommendations, sincerity, support and assistance to accomplish this curriculum in time. I have firm belief that new curriculum will improve quality of education, enhance the competence of the students and capacitate them to prove themselves in the fields of research, education and job markets.

Professor Dr. Md. Shahidul Islam  
Chairman  
July, 2023

**Department of Geography and Environment  
Faculty of Earth and Environmental Sciences  
University of Dhaka**

**M.S. (Masters) Degree in Geography and Environment**

**1. Vision of the Department**

The vision of the University of Dhaka's Department of Geography and Environment is to provide the country with high-quality geography and environmental education and research, to maintain its position as a centre of excellence for research of an international calibre, and to produce graduates of the highest possible standard who are fully capable of conducting original research and who are highly skilled in achieving sustainable management of the natural and human environment within the framework of national visionary targets (vision 2041).

**2. Mission of the Department**

The Department of Geography and Environment's mission is to produce highly competent graduates by fostering an environment that is conducive to learning, teaching, and research. It also provides adequate laboratory space, equipment and technical support for efficient fieldwork, a collaborative research environment, and opportunities for Human Resource Development (HRD), which prepares students for upcoming challenges at the local, regional, and international levels.

**3. Title of the Programme**

Master of Science (M.S.) in Geography and Environment

**4. Duration of the Programme**

One (1) Academic Session

**5. Objectives of the Programme**

The major objectives of this M.S.(Masters) programme are to:

- offer sufficient knowledge to investigate the social and physical environments and how they relate to people from different perspectives
- provide several tools and methods that can be used in the field and the lab to comprehend geography and the environment more broadly;
- develop the ability to investigate the intricate interaction between the environment and people in the context of resource and environmental planning and management;
- develop a research mindset for the critical examination of the causal connections between diverse geographic factors and environmental variables;
- motivate students to pursue further education and research to improve their competency.

**6. Outline of the Programme**

The M.S programme will be a one- year programme carrying 30 credits; each theory course has a weight of 4 credits equivalent to 100 marks. The programme will consist of three streams of specialization, Physical Geography and Environment, Human Geography and Environment, Urban and Regional Planning and Development; in two groups:- Group-A (Non-thesis) and Group-B (Thesis). Non-thesis students must complete 6 theory courses and thesis students must complete 5 theory courses. Credit distribution is as follows:

Thesis=Total Credit (Theory: 16 +Lab: 2+Viva: 2 + Optional : 4+ Thesis: 6 ) = 30

Non-Thesis= Total Credit (Theory:16+ Lab: 2+ Viva: 2+ Optional: 8+ Project: 2) = 30

Course	Thesis Group (credit hour)	Non-thesis Group (credit hour)
Compulsory theory course	1x4=4	1x4=4
Theory course (from any stream)	4x4=16	4x4=16
Theory course (optional)	1x4=4	2x4=8
Practical (using physical or human or urban geography techniques)	1x2=2	1x2=2
Field Project/Project on Bangladesh	-	1x2=2
General Viva	2	2
Thesis	4	-
Thesis viva	2	-
Total credit hour	30	30

## 7. Distributions of the Courses:

*Compulsory for all Students- GETH 501: Advanced Research Methodology in Geography*

<b>Physical Geography and Environment</b>	GETh 511: Fluvial Environment and Alluvial Morphology
	GETh 512: Hydrology
	GETh 513: Paleo-Geomorphology and Paleo-Climatology
	GETh 514 Biodiversity and Conservation
<b>Human Geography and Environment</b>	GETh 521: Geography of Migration and Refugee Management
	GETh 522: Social Geography
	GETh 523: Geopolitics of Bangladesh
	GETh 524: Rural Land Evaluation and Management
<b>Urban and Regional Planning and Development</b>	GETh 531: Urban Planning Development and Management
	GETh 532: Urbanization and Urban System
	GETh 533: Regional Planning and Development
	GETh 534: Urban Environmental Management & Planning
<b>LAB (Compulsory for all students)</b>	<i>GELab 502a: Application of Techniques in Physical Geography or GELab 502b: Application of Techniques in Human Geography or GELab 502c: Urban Studio Lab</i>

## Optional Courses

GETh 560: Natural Hazard, Disaster and Disaster Management
GETh 561: Marine and Coastal Environment
GETh 562: Rural Settlements of Bangladesh
GETh 563 : Gender Development and Environment
GETh 564 : Geography of Health and Environment
GETh 565: Water Resource Management
GETh 566: Resource Management
GETh 567: Rural Development and Planning
GETh 568: Population, Environment and Sustainable Development of Bangladesh
GETh 569 : Geography of Transport, Flows and Development
GETh 570: Climate Change and Human Adaptation

GETh 571 : Geography of Tourism

GERe 572: Project on Bangladesh (compulsory for non-thesis students)

**Special note:**

**Thesis students** will be required to take 4 core theory courses of their respective streams [4x4=16 credits], one compulsory lab course GELab: 502 (1x2=2), and one optional theory course- relevant to their thesis theme [1x4=4 credits]. The thesis will have a value of 6 credits (4 credits for thesis and 2 credits for viva voce on thesis). The thesis topic of each student under a stream must be in an area/wider area of that stream and must be supervised by teacher related/interested to that stream. The general viva equivalent to 2 credits.

**Non-thesis** students will be required to take 4 core theory courses of their respective streams [4x4=16 credits], one compulsory lab course GELab: 502 (1x2=2), and any 2 optional course [2x4=8 credits] and a project on Bangladesh (2 credits). The project topic of each student under a stream must be in an area/wider area of that stream and must be supervised by teacher related /interested to that stream. The general viva equivalent to 2 credits.

**Courses:** Course 502a (Physical Stream) or 502b (Human Stream) or 502c (Urban Stream) is compulsory; courses 511-514 for Physical Geography and Environment stream, course 521-524 for Human Geography and Environment stream and course 531-534 for Urban and Regional Planning and Development stream. Courses 560-571 are optional.

**8. Assessment:**

Distribution of marks for theory courses:

Items	4 credit
Attendance	5
Tutorial	10
In-course and Assignment	15
Course final examination	70
Total	100

Distribution of marks for practical courses:

Items	2 Credit
Attendance	2.5
Lab work and Assignment	17.5
Course final examination	30
Total	50

**9. In-Course Examination:**

Department will notify the students about the centralized in-course exam dates, question pattern and marks distribution in advance. Students must attend the exam in due date. Option for make-up examination is not available.

## 10. Class Performance and Attendance

All students are expected to attend every class. However, only attending the class will not sufficient enough to earn class performance points. To achieve that, students have to actively participate during discussion sessions and to finish all class assignments/tasks in time

## 11. Marks for Attendance:

Attendance (%)	Percentage Total Marks (%)
95-100	10
90-94	9
85-89	8
80-84	7
75-79	6
70-74	5
65-69	4
60-64	3
< 60	0

## 12. Classroom Rules of Conduct

- Student should be present in the class in time.
- Cell phones and other electronic devices must be switched off or in silent mode during class time.
- Cell phones and other electronic devices will not be allowed during exam.
- Deadline should not be missed.
- Be respectful to your course teacher and to your peers.

## 13. Resources

Book Chapters, Articles, PPT, Handouts and Internet Sources: Course teacher will provide in class as needed.

## 14. The Grading System:

Each 4 credit hour course will include 100 Marks and each 2 credit course will include 50 Marks for numerical evaluation. Total marks obtained by a student will be finally converted into Letter Grades and Grade point following the standard scale of the University as follows:

Marks Obtained (%)	Letter Grade	Grade Point
80-100	A+	4.00
75-79	A	3.75
70-74	A-	3.50
65-69	B+	3.25
60-64	B	3.00
55-59	B-	2.75
50-54	C+	2.50
45-49	C	2.25
40-44	D	2.00
<40	F	0.00
I	Incomplete	
W	Withdrawn	

### 15. Degree Requirements

For the M.S. (Masters) degree in Geography and Environment, each student is required to complete 30 credits hours, without any F grade in any course; and a minimum CGPA of 2.50, after the admission into the program. To appear in final examination, each student has to complete the form fill-up process as set by the Controller of Examination on payment of all dues

### 16. Improvement of Grades

A student earning F grade in a course must improve the grade with any of the following two batches and not more than one time. For in-course examination and *viva voce*, no improvement is allowed. A student obtaining less than C+ grade in any course may improve the grade by appearing at the year final examination with the following batch only, subject to prior permission from the Department at least three weeks the final examination starts. In such cases, only the better result will be considered.

### 17. Re-admission

Any student failing to earn required GPA in any year final examination may apply for re-admission with the following batches. In such case all in-course marks/grades obtained earlier by a student shall be cancelled and the student shall have to retake all the in-courses and final examinations.

### COMPULSORY COURSES

Course Name	Advanced Research Methodology in Geography
Course Code& Number	GETh 501
Course Type	Theoretical
Session	2021-2022

#### Course Information

Course Credit and Marks	04 (Four); Full Marks 100
Course Introduction	The research methodology course intends to provide a basic foundation of research background to the postgraduate students. The course aims to develop fundamental geographic research concepts for the students who want to carry out empirical research either on human and physical phenomenon or integration of the both. Students are expected to learn the innovative research methods, techniques and strategies for the investigation of human and physical biased research. This course will help students gain knowledge how to take advantage of doing research independently.
Course Objectives	The major objectives of the course are to: <ul style="list-style-type: none"><li>• provide an overview of the scientific nature of research, epistemology and controversies in research methods.</li></ul>

	<ul style="list-style-type: none"> <li>● prepare students how to conceptualize research problems both in environmental planning and development.</li> <li>● familiarize students with various types of research strategies and techniques in qualitative and quantitative methods.</li> <li>● orient students with data measurements, classification and explanation.</li> <li>● teach students to prepare research report based on data analysis, interpretation and presentation.</li> <li>● develop students' knowledge on how to write a report and present its results and findings.</li> </ul>
<b>Learning Outcomes</b>	<p>After completing this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>● learn the fundamental concepts of scientific research.</li> <li>● be familiar with methodological controversies in environmental investigation.</li> <li>● learn the pragmatism and descriptive sciences.</li> <li>● differentiate research methods and their unique strategies and techniques.</li> <li>● learn measurement, classification and explanation of data.</li> <li>● learn the process of writing a proposal for postgraduate research.</li> </ul>

### *Course Contents*

1. **An overview of scientific research**  
 Epistemology, Methodology and Method  
 Procedure of scientific research  
 Methodological controversies and scientific research  
 Explanations in Geography  
 Defining research problem and formulating hypothesis  
 Research design: conceptualization, formulation, scheduling and budgeting
2. **Research methods: empiricism and descriptive sciences**  
 Nature of geographical data  
 Sources of geographical data in different branches of Geography  
 Review of literature  
 Sampling: need for sampling, determining the size of sampling, sampling error  
 Methods of data collection: observation, questionnaire, interviews, FGD, RRA, PRA etc.  
 Field techniques and norms, Action research, participatory research  
 Research tools and techniques: Remote Sensing, GIS tools, cartography
3. **Research methods in Physical Geography**  
 Fieldwork: Site selection, Field plan, Field techniques, Field data collection, preservation,  
 Laboratory work: Data preservation, data processing, methods of laboratory analysis
4. **Measurement, Classification and Explanations**  
 Measurement and scaling of data, sources of error, Classification and tabulation  
 and interpretation of data Explanation and Analysis: use tables, maps, figures, and  
 photos. Linking empirical evidences with hypothesis, theories and models
5. **Writing research Report**  
 Structure of a research report Layout and design of a report Citation and writing references  
 Utilization of research findings  
 synopsis and abstract  
 Data presentation techniques: Tables, graphics, maps



Drafting and editing  
Production and binding

**6. Exercise: Preparation of a Research Proposal**

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	An overview of scientific research	05
Lecture Series 2	Research methods: empiricism and descriptive sciences	10
Lecture Series 3	Research methods in Physical Geography	08
Lecture Series 4	Measurement, classification and Explanation	08
Lecture Series 5	Writing research report	07
Lecture Series 6	Exercise: Preparation of a research proposal	05
Lecture Series 7	Tutorials	05
Total		48

**Essential Readings**

Clifford, N., French, S. and Valentine, G. (2010). *Key Methods in Geography*, Sage, London.

Kothari, C. R. (1999). *Research Methodology: Methods and Techniques*, New Age International Publishers, India.

Mason, J. (2002). *Qualitative Researching*, 2<sup>nd</sup> Edition, Sage Publications, London, Thousand Oaks and New Delhi.

**Extended Readings**

Dawsan, C. (2002). *A Practical Guide to Research Methods*, Spring Hill House, UK.

Harvey, D. (1969). *Explanation in Geography*, London: Edward Arnold.

Hoggart, K., Lees, L. and Davies, A. (2002). *Researching Human Geography*, Department of Geography, King's College, London.

Mason, J. (2002). *Qualitative Researching*, 2<sup>nd</sup> Edition, Sage Publications, London, Thousand Oaks and New Delhi.

**LAB COURSES**

**PHYSICAL GEOGRAPHY AND ENVIRONMENT**

Course Name	<b>Application of Techniques in Physical Geography</b>
Course Code & Number	<b>GELb-502a</b>
Course Type	<b>Lab</b>
Session	<b>2021-22</b>

Course Credit and Marks	<b>02(Two); Full Marks 50</b>
Course Introduction	One of the key sources of geographical knowledge is the empirical studies of nature. This course teaches students to acquire and generate knowledge by analyzing natural elements.

<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• train students to study rocks, minerals, fossils, soil and water</li> <li>• give students hands on training on using different tools and instruments</li> <li>• increase research capacity and analyzing ability among students</li> </ul>
<b>Learning Outcomes</b>	After completing this course, the students will be able to: <ul style="list-style-type: none"> <li>• study rocks and minerals</li> <li>• study different properties of soil and water</li> <li>• conduct microfossil analysis</li> <li>• conduct analysis of drainage system</li> </ul>

### *Course Contents*

1. Study of Rocks and Minerals
2. Study of Physical Properties of Soil and Water
3. Study of Chemical Properties of Soil and water
4. Study of Macrofossil: Wood, Bones, Pottery and Artifacts
5. Study of Microfossils: Pollen Analysis, Diatom Analysis: Principle and Foraminifera Analysis
6. Morphometric Analysis of Drainage System

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture and Lab Series 1	Study of Rocks and Minerals	4
Lecture and Lab Series 2	Study of Physical Properties of Soil and Water	4
Lecture and Lab Series 3	Study of Chemical Properties of Soil and water	4
Lecture and Lab Series 4	Study of Macrofossil: Wood, Bones, Pottery and Artifacts	4
Lecture and Lab Series 5	Study of Microfossils: Pollen Analysis, Diatom Analysis: Principle and Foraminifera Analysis	4
Lecture and Lab Series 6	Morphometric Analysis of Drainage System	4
<b>Total</b>		<b>24</b>

### **Essential Readings**

Gouide A (1990) Techniques in Physical Geography, Routledge, London

### **Extended Readings**

Braiser, MD. (1979) Micofossil, Chapman and Hall, London

**HUMAN GEOGRAPHY AND ENVIRONMENT**

<b>Course Name</b>	<b>Application of Techniques in Human Geography and Environment</b>
<b>Course Code and Number</b>	<b>GELab 502b</b>
<b>Course Type</b>	<b>Practical</b>
<b>Session</b>	<b>2021-2022</b>

**Course Information**

<b>Course Credit and Marks</b>	<b>02 (Two) Full Marks-50</b>
<b>Course Introduction</b>	The course "Application of Techniques in Human Geography and Environment" is designed as an application-based course for students pursuing a Master's degree in Geography and Environment. It is specifically tailored to equip students with essential knowledge and skills necessary for conducting empirical research in the field of human geography and the environment. By exploring diverse research methods and techniques encompassing both quantitative and qualitative approaches, as well as data analysis utilizing software like SPSS and Excel, this course aims to foster practical research skills and provide hands-on experience in effectively employing techniques for data collection, analysis, and interpretation within the context of human geography and environmental studies.
<b>Course Objectives</b>	The purpose of the course is to: <ul style="list-style-type: none"><li>• Introduce students to research methods and techniques commonly used in human geography.</li><li>• Familiarize students with quantitative research methods, including surveys and online surveys.</li><li>• Equip students with the knowledge and skills to perform quantitative data analysis using software such as SPSS and Excel.</li><li>• Introduce students to qualitative research methods, such as interviews, key informant interviews, focus group discussions, and observation.</li><li>• Provide students with an understanding of qualitative techniques, including coding, discourse analysis, and the use of NVivo software.</li><li>• Enable students to apply the techniques learned in a research project, demonstrating their practical skills in the field.</li></ul>
<b>Learning Outcomes</b>	By the end of the course, students will be able to: <ul style="list-style-type: none"><li>• Understand and select appropriate research methods and techniques for conducting research in human geography and the environment.</li><li>• Design and implement surveys and online surveys for data collection purposes.</li></ul>

	<ul style="list-style-type: none"> <li>• Conduct quantitative data analysis using software tools such as SPSS and Excel.</li> <li>• Apply qualitative research methods, including conducting interviews, key informant interviews, focus group discussions, and observation.</li> <li>• Utilize qualitative techniques such as coding, discourse analysis, and NVivo software for data analysis and interpretation.</li> <li>• Apply the learned techniques in a research project, demonstrating practical skills in data collection, analysis, and interpretation within the context of human geography and the environment.</li> </ul>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Course Contents

1. Research methods and techniques in Human Geography
2. Quantitative research methods: survey, online survey
3. Quantitative data analysis techniques - SPSS, Excel
4. Qualitative research methods: interviews, Key Informant Interviews, Focus Group Discussion, Observation
5. Qualitative techniques - coding, discourse analysis, NVivo
6. Application of techniques in a research project

## LESSON PLAN

Lecture sessions	Topics	Number of Hours
Lecture Series 1	Research methods and techniques in Human Geography	2
Lecture Series 2	Quantitative research methods: survey, online survey	3
Lecture Series 3	Quantitative data analysis techniques - SPSS, Excel	5
Lecture Series 4	Qualitative research methods	3
Lecture Series 5	Qualitative techniques - coding, discourse analysis, NVivo	5
Lecture Series 6	Application of techniques in a research project	6
<b>Total</b>		<b>24</b>

## Essential Readings

Methods and materials of Demography, Shyrock & Siegal, AP Publication  
 Methods in Human Geography: A guide for students doing a research project, 2nd Edition, Robin Flowerdew, David Martin, Mar 2005

## Extended Readings

Locational Analysis in Human Geography, Peter Haggett, St. Martin's Press, New York, 1966  
 Methods of Regional Analysis: An Introduction to Regional Science, Walter Isard, The MIT Press, USA, 1960

**URBAN AND REGIONAL PLANNING AND DEVELOPMENT**

<b>Course Name</b>	<b>Application of Techniques in Urban and Regional Planning</b>
<b>Course Code and Number</b>	<b>GELb 502c</b>
<b>Course Type</b>	<b>Lab</b>
<b>Session</b>	<b>2020-2021</b>

**Course Information**

<b>Course Credit and Marks</b>	<b>02 (Two) Full Marks-50</b>
<b>Course Introduction</b>	The course "Application of Techniques in Urban and Regional Planning" is designed to provide students with practical skills and knowledge related to the application of various techniques in the field of urban and regional planning. The course aims to equip students with the necessary tools to analyze, assess, and plan for the development and management of urban and regional areas effectively. Particularly it is necessary to learn the design and aesthetic concepts, harmonizing between land use and transportation system, interpretation of regional statistics and translating them into a physical form by learning the techniques of strategic planning, structure planning and neighborhood planning.
<b>Course Objectives</b>	The major objectives of the course are to: <ul style="list-style-type: none"><li>• To introduce the fundamental concepts, theories, and principles of urban and regional planning</li><li>• To familiarize a range of techniques used in urban and regional planning, including data collection, analysis, and visualization</li><li>• To enable students to apply quantitative and qualitative methods to analyze urban and regional planning problems</li><li>• To emphasize the application of theoretical knowledge to real-world in urban contexts</li><li>• To encourage critical thinking and problem-solving skills in the context of urban and regional planning challenges</li></ul>
<b>Learning Outcomes</b>	With the completion of the course, the students will be able to: <ul style="list-style-type: none"><li>• Generate new ideas and technologies to address urban challenges</li><li>• Find out the development and refinement of innovative and effective solutions to urban problems.</li><li>• Utilize data collection, analysis, and visualization techniques to inform decision making.</li><li>• Generate insights and lessons learned through their experimentation and research activities</li><li>• Evaluate and select appropriate techniques for specific planning scenarios.</li></ul>

### Course Contents

1. **Planning Practice:** Urban Planning Practices in Bangladesh, Planning and Design Principles, Aesthetic views and principles
2. **Area Planning:** Urban Area planning exercise, Detailed Area Planning (DAP) exercise, Neighborhood planning exercise, and Site planning
3. **Planning Techniques:** Strategic Planning: Translating Policies into plans; Structure Planning of a Town/City, Techniques of Rural Settlements Planning
4. **Data Interpretation:** Principles of Interpreting data for spatial design, Data interpretation and Regional Planning Techniques
5. **Report Preparation:** Evaluating and making Comments on Planning Reports

### LESSON PLAN

Lecture sessions	Topics	Number of Hours
Lecture Series 1	Planning Practice	04
Lecture Series 2	Area Planning	04
Lecture Series 3	Planning Techniques	04
Lecture Series 4	Data Interpretation	04
Lecture Series 5	Report Preparation	03
Lecture Series 6	Tutorial	05
<b>Total</b>		<b>24</b>

### Selected Readings

- Rangwala, (2015) ed. Town Planning, Charotar Publishing House Pvt. Ltd
- Rahman, G. (2008). Town Planning and the Political Culture of Planning in Bangladesh, A H Development Publishing House

### STREAM-01: PHYSICAL GEOGRAPHY AND ENVIRONMENT

Course Name	Fluvial Environment and Alluvial Morphology
Course Code & Number	GETh 511
Course Type	Theoretical
Session	2021-22

Course Credit and Marks	04 (Four); Full Marks 100
Course Introduction	This course sets its scope on geomorphological functions in alluvial and fluvial environments which is significantly relatable in the context of Bangladesh, being a deltaic country.

<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• develop understanding of the students on morphology and processes active in alluvial and fluvial environments</li> <li>• increase theoretical knowledge on river processes</li> </ul>
<b>Learning Outcomes</b>	After completing this course, the students will be able to: <ul style="list-style-type: none"> <li>• develop a good base on processes of alluvial and fluvial environment and landforms generated by those processes.</li> <li>• have knowledge on river hydraulics and system</li> <li>• relate acquired theoretical knowledge with the natural settings of Bangladesh</li> </ul>

### *Course Contents*

1. Scope and Subject Matter of Alluvial Morphology and Fluvial Geomorphology Fluvial Environments, Palaeo-Geomorphology and Geo Chronological Studies.
2. The Hydrologic Cycle : Rainfall Run-off, Evapo-transpiration and their Interrelationship
3. Origin and Evolution of Rivers : Hydraulics of Streams  
Measurement of Stream flow; Flow types (Laminar & Turbulent flow and their characteristics), Hydrographs
4. Floods and Flood Frequency Analysis: Nature, Causes and Controls of Floods
5. Erosional Process of Channels: Erosional Feature
6. Transportational Process of Channels.
7. Depositional-Process of Channels: Depositional or Sedimentations Environments: Deposition Features of Rivers.
8. Deltas: Structure, Origin and Evolution.
9. Floodplains and Channel Patterns
10. Alluvial and Forming Process in Bangladesh; Morphology and Hydrology, Quaternary Deposits; Deltaic Lands and Wet-land Environment
11. River Systems of Bangladesh.

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Scope and Subject Matter of Alluvial Morphology and Fluvial Geomorphology Fluvial Environments, Palaeo-Geomorphology and Geo Chronological Studies.	8
Lecture Series 2	The Hydrologic Cycle : Rainfall Run-off, Evapo-transpiration and their Interrelationship	4
Lecture Series 3	Origin and Evolution of Rivers : Hydraulics of Streams Measurement of Stream flow; Flow types (Laminar & Turbulent flow and their characteristics), Hydrographs	4
Lecture Series 4	Floods and Flood Frequency Analysis: Nature, Causes and Controls of Floods	4
Lecture Series 5	Erosional Process of Channels: Erosional Feature	2
Lecture Series 6	Transportational Process of Channels	4

Lecture Series 7	Depositional-Process of Channels: Depositional or Sedimentations Environments: Deposition Features of Rivers	4
Lecture Series 8	Deltas: Structure, Origin and Evolution	2
Lecture Series 9	Floodplains and Channel Patterns	3
Lecture Series 10	Alluvial and Forming Process in Bangladesh; Morphology and Hydrology, Quaternary Deposits; Deltaic Lands and Wetland Environment	4
Lecture Series 11	River Systems of Bangladesh.	3
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

1. Marie Morisawa, Streams: Their dynamics and morphology
2. L. B. Leopold et. al, Fluvial Process in Geomorphology

### Extended Readings

3. Savindra Singh, Geomorphology
4. Chris Park, The Environment: Principles and Applications
5. K. Subramanya, Engineering Hydrology

<b>Course Name</b>	<b>Hydrology</b>
<b>Course Code and Number</b>	<b>GETh 512</b>
<b>Course Type</b>	<b>Theory</b>
<b>Session</b>	<b>2021-2022, 2022-2023</b>

### Course Information

<b>Course Credit and Marks</b>	<b>04 (Four)</b>	<b>Full Marks-100</b>
<b>Course Introduction</b>	This course is designed for the master's level students to understand the dynamics of water in all its forms (rain, snow and water on the earth's surface), and from its origins to all its destinations on the Earth. This course focuses on nearly all aspects of the field of hydrology, including the hydrologic cycle, surface water (rivers and associated flooding issues) and groundwater. This course also intends to provide an exclusive idea on the application of GIS and RS for hydrological modelling and understanding urban hydrology. In addition, this course will provide a comprehensive understanding on the hydrological issues of Bangladesh.	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• Familiarizing the students with the field of hydrology and occurrence, movement and distribution of water.</li> </ul>	



	<ul style="list-style-type: none"> <li>• Understanding the diverse methods of collecting and analyzing the hydrological information.</li> <li>• Understanding the stream hydraulics and associated floods.</li> <li>• Understanding the hydrological problems and prospects of Bangladesh including groundwater and anthropogenic intervention context.</li> </ul>
<b>Learning Outcomes</b>	With the completion of the course, the students will be able to explain the complex issues of hydrological cycle across spatial scales and considering the anthropogenic interventions as well. The students will also be able to gain an insight on the flow dynamics of both surface and groundwater issues and the understanding of the hydrological characteristics of the urban catchment. Moreover, the students will get an overall understanding of the hydrological context of Bangladesh to better contribute to tackle the hydrological challenges in the context of global changes.

### Course Contents

1. **Introduction:** Scope and field of Hydrology
2. **Hydrological Cycle:** Concept and Development, Components and their interactions
3. **Surface Runoff:** Components, Factors, Rainfall-Runoff relationship.
4. **Drainage Basin:** Watershed/catchment, Origin and evolution, Channel pattern, Drainage pattern, Morphometry
5. **Precipitation:** Various Methods of Precipitation Measurement, Analyzing Precipitation Data, Precipitation and its Impacts on Environment
6. **Stream Hydraulics and Floods: Stream flow types,** Nature, Causes and Consequences of Floods, \ Flood Hazards and Landuse, Flood Frequency Analysis, Flood risk Assessment
7. **Ground Water Hydrology:** Groundwater Components, Groundwater Flow, Challenges of Groundwater management.
8. **Hydrologic Modeling and GIS:** Model- Driven and Data driven Approach, Application of GIS in Hydrology and Resource Management
9. **Application of Remote Sensing in Hydrology:** Application of Remote sensing to understand flow and storage of surface and groundwater.
10. **Urban Hydrology:** Components and Characteristics of Urban Hydrology, factors affecting urban hydrograph
11. **Hydrological Settings and Problems in Bangladesh:** Hydrological Regions of Bangladesh, Probl and Prospects of hydrological regions of Bangladesh.

### LESSON PLAN

Lecture sessions	Topics	Number of Classes
Lecture Series 1	<b>Introduction:</b> Scope and field of Hydrology	4
Lecture Series 2	<b>Hydrological Cycle:</b> Concept and Development, Components and their interactions	4
Lecture Series 3	Surface Runoff: Factors, Components	4
Lecture Series 4	Drainage Basin	8

Lecture Series 5	Precipitation, Storms and their Impacts on Environment	2
Lecture Series 6	Stream Hydraulics and Floods: Nature, Causes and Consequences	4
Lecture Series 7	Ground Water Hydrology	4
Lecture Series 8	Hydrologic Modeling and GIS	2
Lecture Series 9	Application of Remote Sensing in Hydrology	3
Lecture Series 10	Urban Hydrology	4
Lecture Series 11	Hydrological Settings and Problems in Bangladesh	3
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

1. Ward, R. C. Principles of Hydrology
2. Chorley R.J., Introduction to Physical Hydrology
3. Chorley, R.J., Dunn, A.J. and Backirisale More, R.J., Hydrological Models and Geography (in Chorley

### Extended Readings

1. R.J. & Haggett, p. ed. Models in Geography,
2. Subrainuoyum, Engineering Hydrology
3. Linsley, R. K. et. al., Applied Hydrology

<b>Course Name</b>	<b>Palaeo-Geomorphology and Palaeo-Climatology</b>
<b>Course Code &amp; Number</b>	<b>GETh-513</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-22</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	This subfield of Geography studies ancient topographic features that are either submerged beneath the surface or have been eroded away and tries to study historic climate of the earth. This subfield has immense application in the field of mineral and deposit exploration, stability analysis, past climatic condition analysis and building cross relations with other entities.
<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• enable students develop theoretical understanding and deal with the techniques and tools to recreate ancient geomorphological and climatic environment</li> <li>• enhance students' capacity of analyzing historic cause and effect relationships by creating linkages between different entities.</li> </ul>

<b>Learning Outcomes</b>	<p>After completing this course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• grow knowledge on geomorphological, lithological and chronological evidences</li> <li>• use different tools and techniques to rebuild palaeo environment</li> <li>• correlate historic changes with human occupancy, migration and overall influence.</li> </ul>
--------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### *Course Contents*

1. Palaeo-Geomorphology and Palaeo-climatology: meaning, scope and importance to study
2. Quaternary Environment: its extents, duration, characteristics and framework
3. Geomorphological Evidences: Glacial Landform; Periglacial landform, River terraces; dunes; weathering crust
4. Lithological Evidences: Fluvial Deposits:- Facies and Beddings; Palaeosols; Lake, Mire and Bog sediments; Loess sediment; Marine sediments; and Ice-core stratigraphy:
5. Biological Evidence: Pollen analysis; Diatom analysis; Foraminifera Analysis; Plant and Animal Macrofossils
6. Chronological Evidences: C14 dating; Uranium series dating; Dendrochronology, varve chronology; Oxygen-isotope;
7. Climatic changes in the Past: Causes and significance; glacial periods; sea-level changes; human evolution and migration
8. Palaeo-geomorphology and Palaeo-climatology of Bangladesh: Quaternary Lithology. Coastal Stratigraphy; Climate change; Palaeo-monsoon, Quaternary sea-level changes; Palaeo-shorelines; landforms and correlation, human occupancies

### *LESSON PLAN*

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Palaeo-Geomorphology and Palaeo-climatology: meaning, scope and importance to study	4
Lecture Series 2	Quaternary Environment: its extents, duration, characteristics and framework	4
Lecture Series 3	Geomorphological Evidences: Glacial Landform; Periglacial landform, River terraces; dunes; weathering crust	6
Lecture Series 4	Lithological Evidences: Fluvial Deposits:- Facies and Beddings; Palaeosols; Lake, Mire and Bog sediments; Loess sediment; Marine sediments; and Ice-core stratigraphy	4
Lecture Series 5	Biological Evidence: Pollen analysis; Diatom analysis; Foraminifera Analysis; Plant and Animal Macrofossils	6
Lecture Series 6	Chronological Evidences: C14 dating; Uranium series dating; Dendrochronology, varve chronology; Oxygen-isotope;	8

Lecture Series 7	Climatic changes in the Past: Causes and significance; glacial periods; sea-level changes; human evolution and migration	4
Lecture Series 8	Palaeo-geomorphology and Palaeo-climatology of Bangladesh: Quaternary Lithology. Coastal Stratigraphy; Climate change; Palaeo-monsoon, Quaternary sea-level changes; Palaeo-shorelines; landforms and correlation, human occupancies	6
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

1. J.J. Lowe and M.J.C.V. Walker Reconstructing Quaternary Environment 1997
2. N. Robert The Holocene; An environmental History 1989

### Extended Readings

1. M.H. Monsur An Introduction to the Quaternary Geology of Bangladesh 1995.
2. MS Islam Sea-Level Changes of Bangladesh: Last Ten Thousand Years, 2001

<b>Course Name</b>	<b>Biodiversity and Conservation</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Course Code &amp; Number</b>	<b>GETh 514</b>
<b>Session</b>	<b>2020-2021</b>

### Course Information

<b>Course Credit &amp; Marks</b>	<b>04 (Four): Full Marks-100</b>
<b>Course Introduction</b>	<p>This course provides a comprehensive exploration of biodiversity, its conservation, and the challenges involved. We will begin by introducing key terms and definitions, along with the concept of environment and the evolution of biodiversity conservation. We will delve into methods of biodiversity assessment, examining how biodiversity is distributed in different spatial contexts. We will explore the threats facing biodiversity and the intrinsic and instrumental value it holds. The course also covers the fundamental principles of ecology and ecosystems, including the flora and fauna, food chains, nutrient cycles, and the relationship between human ecology and biodiversity conservation. We will discuss the history of nature conservation, emerging trends in biodiversity conservation, and the planning and management of protected areas. Additionally, we will examine strategies for biodiversity conservation outside protected areas, such as ex-situ conservation, restoration ecology, and natural resource use strategies. The course will conclude with an in-depth analysis of the state of biodiversity conservation in Bangladesh, including the causes and consequences of rapid biodiversity loss, the need for conservation, and the policy and action plans in place to address these issues. By the end of this course, you will have a solid understanding of biodiversity and conservation, and be equipped to</p>

	contribute towards the protection and sustainable management of our natural world.
<b>Course Objectives</b>	<p>The objectives of the course are following:</p> <ul style="list-style-type: none"> <li>• Develop a comprehensive understanding of biodiversity's significance in ecological systems.</li> <li>• Familiarize themselves with accurate methods of assessing and measuring biodiversity.</li> <li>• Explore the implications of spatial distribution for effective conservation efforts.</li> <li>• Evaluate various threats to biodiversity and understand the need for urgent action.</li> <li>• Recognize the intrinsic and instrumental value of biodiversity for human well-being.</li> <li>• Comprehend fundamental ecological concepts, including flora, fauna, food chains, and nutrient cycles.</li> <li>• Analyze historical approaches to nature conservation and stay updated on emerging trends.</li> <li>• Explore essential aspects of planning, management, and spatial considerations in protected area conservation.</li> <li>• Investigate strategies for conserving biodiversity outside protected areas, such as ex-situ conservation and restoration ecology.</li> <li>• Assess the state of biodiversity conservation in Bangladesh, analyze causes and consequences of loss, and gain insights into relevant policies and action plans.</li> </ul>
<b>Learning Outcomes</b>	<p>Upon completing the course, students will achieve the following outcomes:</p> <ul style="list-style-type: none"> <li>• Develop a comprehensive understanding of biodiversity and recognize its significance in ecological systems.</li> <li>• Acquire knowledge of various methods used for assessing and evaluating biodiversity.</li> <li>• Gain insights into the spatial distribution patterns of biodiversity and understand their implications for conservation efforts.</li> <li>• Identify and analyze the threats that endanger biodiversity and recognize the urgency of conservation measures.</li> <li>• Understand the intrinsic and instrumental value of biodiversity for the well-being of ecosystems and human society.</li> <li>• Demonstrate knowledge of key ecological concepts, including flora, fauna, food chains, and nutrient cycles.</li> <li>• Explore historical approaches and emerging trends in biodiversity conservation.</li> <li>• Develop skills in planning, managing, and addressing spatial considerations for protected areas.</li> <li>• Evaluate strategies for conserving biodiversity outside protected areas, such as ex-situ conservation, restoration ecology, and sustainable resource use.</li> <li>• Assess the state of biodiversity conservation in Bangladesh, including the causes and consequences of biodiversity loss, the need for conservation efforts, and relevant policies and action plans.</li> </ul>

## **Course Contents**

### **1. Introduction to Biodiversity**

- Terms and Definitions (concept of environment, evolution of biodiversity conservation)
- Methods of Biodiversity Assessment
- Biodiversity and Space
- Distribution of Biodiversity
- Threats to Biodiversity
- Value of Biodiversity

### **2. Concept of Ecology and Ecosystem**

- Flora and Fauna
- Food Chain
- Nutrient Cycle
- Human Ecology and Biodiversity Conservation

### **3. Approaches to Biodiversity Protection and Conservation**

- History of Nature Conservation
- Emerging Trends in Biodiversity Conservation

### **4. Planning and Management of Protected Areas**

- Spatial Considerations of Conservation
- Integrating Conservation and Resource Use
- Management Issues in Biodiversity Conservation

### **5. Biodiversity Conservation outside Protected Areas**

- Ex-Situ Conservation Strategies
- Restoration Ecology
- Natural Resource Use Strategies for Biodiversity Conservation

### **6. State of Biodiversity Conservation in Bangladesh**

- Causes of rapid biodiversity loss
- Consequences of biodiversity loss
- Need for conservation
- Policy on Conservation of Biodiversity
- State of Biodiversity Action Plan

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Introduction to Biodiversity	8
Lecture Series 2	Concept of Ecology and Ecosystem	6
Lecture Series 3	Approaches to Biodiversity Protection and Conservation	6
Lecture Series 4	Planning and Management of Protected Areas	8
Lecture Series 5	Biodiversity Conservation outside Protected Areas	6
Lecture Series 6	State of Biodiversity Conservation in Bangladesh	8
	Tutorials	6
<b>Total</b>		<b>48</b>

### **Essential Readings**

1. B. Groombridge, M. D. Jenkins: World Atlas of Biodiversity: Earth's Living Resources in the 21 Century, University of California Press, 2002.
2. M. Jeffries: Biodiversity and Conservation, Routledge, 1997.
3. K. R. Miller, S. M. Lanou: National Biodiversity Planning: Guidelines Based on Early
4. Experiences around the World, World Resources Institute, Unites Nations

### **Extended Readings**

1. Environmental Programme, The World Conservation Union, 1995.
2. National Biodiversity Strategy Action Plan for Bangladesh, Ministry of Forest and Environment, Government of Bangladesh.
3. Kabir, M.H. and Amin, S.M.N. Tanguar Haor: A Diversified Freshwater Wetland, Academic Press and Publishers Library, Dhaka 2007.
4. Baydack, R.K., Canpa, H. and Haufler, J.B. (1999). Practical Approaches to the conservation of Biological Diversity, Island Press, USA.

## STREAM-02: HUMAN GEOGRAPHY AND ENVIRONMENT

Course Name	<b>Migration and Refugee Management</b>
Course Code & Number	<b>GETh-521</b>
Course Type	<b>Theoretical</b>
Session	<b>2021-22</b>

Course Credit and Marks	<b>04 (Four); Full Marks 100</b>
Course Introduction	Migration has been a constant phenomenon from very beginning of human civilization. However, in today's world, migration has become more frequent, both voluntarily and forcibly due to changes in socio-economic, political and cultural contexts of the nations. This course emphasizes on migration patterns and issues arose from those.
Course Objectives	The course will: <ul style="list-style-type: none"><li>• expand students' understanding on concepts of various migration trends and patterns</li><li>• enable students to understand issues and challenges arose from migration</li></ul>
Learning Outcomes	After completing this course, the students will be able to: <ul style="list-style-type: none"><li>• learn basic concepts of migration, types, theories, impacts, issues and policies</li><li>• critically analyze world scenarios and situation of multicultural societies</li><li>• develop understanding on refugee and migrant management strategies and policies</li></ul>

### *Course Contents*

1. Introduction: Definition, concept and classification; Scope and importance of studying migration and refugee.
2. Theoretical aspects: Migration laws, hypotheses, theories and models.
3. Data and Statistics: Sources and nature of migration data; Measures and estimates of migration; Migration data analysis.
4. Internal and International Migration: Types or streams, causes, determinants and consequences; Trends and patterns and prospects; Major challenges or issues.
5. Migration Policies: Aims and Objectives; Internal and International Migration Policies of Bangladesh; Labour Migration Policies of Some Countries;
6. Contemporary issues and their impacts on trans-boundary migration and development of multicultural societies (e.g. globalization of economy, political, demographic and environmental changes).
7. The Context of Refugee Migrant: Past, present and future scenarios; Role of UNHCR.
8. Major Issues and Challenges:
  - a) Migration, Livelihood Change and Economic Development.
  - b) Migration and Human Resource Development.



- c) Migration Urbanization and the Process of Development.
- d) Population Redistribution and Management of IDPs.
- e) Socio-political and environmental aspects of transnationalism.
- f) Poverty alleviation and Women Empowerment through Migration.
- g) Cross-border Migration, Illegal Migration and Refugee Rights.
- h) Global Climate Change and Environmental Migration and Refugee Management

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Introduction: Definition, concept and classification; Scope and importance of studying migration and refugee.	6
Lecture Series 2	Theoretical aspects: Migration laws, hypotheses, theories and models.	6
Lecture Series 3	Data and Statistics: Sources and nature of migration data; Measures and estimates of migration; Migration data analysis	5
Lecture Series 4	Internal and International Migration: Types or streams, causes, determinants and consequences; Trends and patterns and prospects; Major challenges or issues.	6
Lecture Series 5	Migration Policies: Aims and Objectives; Internal and International Migration Policies of Bangladesh; Labour Migration Policies of Some Countries;	6
Lecture Series 6	Contemporary issues and their impacts on trans-boundary migration and development of multicultural societies (e.g. globalization of economy, political, demographic and environmental changes).	3
Lecture Series 7	The Context of Refugee Migrant: Past, present and future scenarios; Role of UNHCR.	2
Lecture Series 8	Major Issues and Challenges	8
	Tutorials	6
<b>Total</b>		<b>48</b>

### **Essential Readings**

Amjad, Rashid (1989), *To the Gulf and Back; Studies on the Economic Impact of Asian Labour Migration*, New Delhi.

Castles, S. and Miller, M. (2003), *The Age of Migration*, (3<sup>rd</sup> edn.), New York: Guilford Press.

Connell, John et al. (1976), *Migration from Rural Areas: The Evidence from Village Studies*, Delhi: Oxford University Press.

ESCAP (1987), International Labour Migration Remittances between the Developing ESCAP Countries and the Middle East: Trends, Issues and Policies, *Development Papers*, 6.

Foresight (2011), *Migration and Global Environmental Change: Future Challenges and Opportunities*, Final Project Report, London: Government Office for Science.

ILO (2002), *Making the Best of Globalization: Migrant Worker Remittances and Micro-Finance*.

Kosinski, L.A. and Prothero, R.M eds. (1974), *People on the Move: Studies on Internal Migration*, London: Methuen and Co. Ltd.

Krishnan, P. and Rowe, G. (1978), "internal Migration in Bangladesh". *Rural Demography*, 5 (1-2)

Mahbub, A.Q.M. (1997), *Mobility Behaviour of Working People in Bangladesh: Rural-Rural and Rural-Urban Circulation*, Urban Studies Programme, Department of Geography and Environment, University of Dhaka.

## Extended Readings

Pryor, Robin J. eds. (1979), *Migration and Development in Southeast Asia: A Demographic Perspective*, Kuala Lumpur: Oxford University Press.

Siddiqui, Tasneem eds. (2005), *Migration and Development: Pro-poor Policy Choices*, Dhaka: University Press Ltd.

Skeldon, R. (1990), *Population Mobility in Developing Countries; A Reinterpretation*, London: Belhaven.

Skeldon, R. (1997), *Migration and Development: A Global Perspective*, London: Belhaven Press

Gooneratne, W.Martin, P. and Sasanami, H. eds. (1994), *Regional Development Impacts of Labour Migration in Asia*, UNCRD Research Report Series No. 2.

Vertovec, S. and Cohen, R. eds. (1999), *Migration, Diasporas & Transnationalism*, Cheltenham, UK: Edward Elgar.

Wickramasekera, P. (2002), *Asian labour Migration: Issues and challenges in an Era of Globalization*. International Migration Paper No. 57, International Migration Programme, Geneva: ILO

World Bank (1981), *Labour Migration from Bangladesh to the Middle East*, World Bank Staff Working Paper No. 454, Washington.

<b>Course Name</b>	<b>Social Geography</b>
<b>Course Code &amp; Number</b>	<b>GETh 522</b>
<b>Course Type</b>	Theoretical
<b>Session</b>	2021-2022

## COURSE & SECTION INFORMATION

<b>Course Credit &amp; Marks</b>	<b>04 (Four); Full Marks: 100</b>
<b>Course Introduction</b>	The course introduces the various approaches being applied to study social geography while describing its thoughts and concepts. At the same time, it explains as to how social changes are taking place over time in different parts of the world. It also highlights the different groups, social class differences, traits of communities, theories of social stratification, mobility of social groups etc. The course also describes the existing social organizations, kinship, family types, household, corporate hood property, ownership and inheritance, ritual behaviour. This course also focus on social change in rural society of Bangladesh.
<b>Course Objectives</b>	The course is intended to share with students the importance of understanding various social concepts in different parts of the world, their patterns and present social situation on various aspects. In addition, it is also aimed to teach students as to how social issues evolved over time with its influences on various nations and states.
<b>Learning Outcomes</b>	-students will be able to understand the social norms, groups, practices and significance of studying of social theories.

	<p>-Student will be familiar with the social concepts, their evolution and at the same time they will be able to learn the world social patterns, and particularly maldistribution of public utility services in cities of developing countries.</p> <p>-Students will be learning the various dimensions of social aspects such as ethnic groups/tribal groups in Bangladesh and their characteristics and development.</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Course Contents

1. Definition and Scope of Social Geography
2. Concepts of Social Space
3. Investigation of Different Groups
4. Origin of Social Class Differences, Distinctive Traits of Communities
5. Theories of Functional Necessity of Social Stratification
6. Mobility of Social Groups
7. Present Social Organization, Kinship, Family Types, Household, Corporate Hood Property, Ownership and Inheritance, Ritual Behaviour
8. Social Change in Rural Society
9. Definition and Distribution of Ethnic Groups/Tribal Groups in Bangladesh: Their characteristics and Development
10. Maldistribution of Public Utility Services in Cities of Developing Countries

## LESSON PLAN

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Definition and Scope of Social Geography	02
Lecture Series 2	Concepts of Social Space	02
Lecture Series 3	Investigation of Different Groups	02
Lecture Series 4	Origin of Social Class Differences, Distinctive Traits of Communities	04
Lecture Series 5	Theories of Functional Necessity of Social Stratification	02
Lecture Series 6	Mobility of Social Groups	02
Lecture Series 7	Present Social Organization, Kinship, Family Types, Household, Corporate Hood Property, Ownership and Inheritance, Ritual Behaviour	12
Lecture Series 8	Social Change in Rural Society	02
Lecture Series 9	Definition and Distribution of Ethnic Groups/Tribal Groups in Bangladesh: Their Characteristics and Development	12
Lecture Series 10	Maldistribution of Public Utility Services in Cities of Developing Countries	04
Lecture Series 11	<i>Tutorial</i>	04
Total		48

## Essential Readings

Jones, E. and Eyles, J. An Introduction to Social Geography, Oxford University Press, London.

Knox, Poul. Urban Social Geography, Jon Wiley and Sons, New York.  
 Smith, Ronald W., P.W., Preston, Sociology: An Introduction, The Macmillan Co., Toronto, Canada

**Extended Readings**

Vincent J. Del Casino Jr., Social Geography: A Critical Introduction, Wiley-Blackwell  
 Sen, Jyotirmoy, A Text Book of Social and Cultural Geography, Kalyani Publishers, India  
 Ahmad, Aijazuddin Social Geography, Rawat Publications, India

<b>Course Name</b>	<b>Geopolitics of Bangladesh</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Course Code &amp; Number</b>	<b>GETh 523</b>
<b>Session</b>	<b>2020-2021</b>

**Course Information**

<b>Course Credit &amp; Marks</b>	<b>04 (Four): Full Marks-100</b>
<b>Course Introduction</b>	In this course, we will delve into the conceptual considerations of geo-politics, political geography, geo-economics, and geo-strategy, with a specific focus on Bangladesh. We will explore the locational significance of Bangladesh, examining its evolutionary history and emergence as a nation. Additionally, we will analyze Bangladesh's relationships with key regional and global players such as SAARC, ASEAN, China, India, USA, Europe, and Middle-East/OIC countries. Through a critical examination of Bangladesh's geo-political strengths and weaknesses, we will gain insights into its strategic position in the region. Furthermore, we will explore the complex dynamics of Indo-Bangladesh relations, including geo-political, geo-strategical, and geo-economic considerations. The course will also address territorial disputes, the Chittagong Hill Tracts, hydro-politics, and the security and defense strategies of Bangladesh. By the end of this course, you will have a comprehensive understanding of the multifaceted geo-political landscape of Bangladesh and its significance in the broader regional context.
<b>Course Objectives</b>	The objectives of teaching the above syllabus are: <ul style="list-style-type: none"> <li>• To develop a comprehensive understanding of the fundamental concepts of geo-politics, political geography, geo-economics, and geo-strategy, and their interplay in shaping the global landscape.</li> <li>• Through an exploration of Bangladesh's locational significance, historical evolution, and relationships with regional and global actors, students will:</li> <li>• Evaluate its geo-political strengths and weaknesses.</li> <li>• Understand the dynamics of Indo-Bangladesh relations.</li> <li>• Analyze connectivity dimensions, including transit-transshipment challenges, transportation infrastructure, and port facilities.</li> <li>• Examine territorial disputes and demarcation issues with neighboring countries.</li> </ul>

	<ul style="list-style-type: none"> <li>• Explore ethnic complexities, including the Chittagong Hill Tracts region and the Rohingya issue.</li> <li>• Study hydro-political challenges, such as transboundary river disputes and water-sharing problems.</li> <li>• Gain insights into security and defense strategies, including regional and international cooperation.</li> <li>• By examining these aspects, students will gain a comprehensive understanding of Bangladesh's geo-political landscape and its significance in regional and international contexts.</li> </ul>
<p><b>Learning Outcomes</b></p>	<p>Upon completion of the course, students can expect to achieve the following outcomes:</p> <ul style="list-style-type: none"> <li>• A comprehensive understanding of the conceptual foundations of geo-politics, political geography, geo-economics, and geo-strategy.</li> <li>• In-depth knowledge of the geo-political landscape of Bangladesh, including its locational significance and its implications for regional dynamics.</li> <li>• A critical understanding of the evolutionary history and emergence of Bangladesh, considering the role of political geography in shaping its identity as a nation.</li> <li>• Profound insights into Bangladesh's relationships with key regional and global actors, such as SAARC, ASEAN, China, India, USA, Europe, and Middle-East/OIC countries.</li> <li>• The ability to analyze and evaluate the geo-political strengths and weaknesses of Bangladesh, and its strategic positioning in the region.</li> <li>• A comprehensive understanding of the complex dynamics of Indo-Bangladesh relations, encompassing geo-political, geo-strategical, and geo-economic considerations.</li> <li>• Proficiency in analyzing the geo-political and geo-strategical aspects of Indo-Bangladesh connectivity, including transit-transshipment issues, transportation infrastructure, port facilities, and security considerations.</li> <li>• Competence in examining and analyzing territorial disputes of Bangladesh with neighboring countries, including boundary demarcation, enclave-exclave problems, and maritime boundary issues.</li> <li>• Understanding of the Chittagong Hill Tracts (CHT) region, ethnic diversity, minority-population dynamics, and the challenges of secessionism, including the Rohingya issue involving North-Eastern Indian states and Myanmar.</li> <li>• Proficiency in analyzing the hydro-political challenges of Bangladesh, including historical aspects, transboundary river disputes, water-sharing problems, and the interests of lower riparian Bangladesh.</li> <li>• Insight into the security and defense strategies of Bangladesh, including the classification of security strategies, regional and international cooperation, the role of environmental politics, and the impact of non-governmental organizations (NGOs) on national security issues.</li> </ul>

**Course Contents**

1. Geo-politics, Political Geography, Geo-economics and Geo-strategy: Conceptual Considerations
2. Geo-politics of Bangladesh : Studies in Locational Significance
3. Evolutionary History and Emergence of Bangladesh: Considerations of Political Geography

4. Bangladesh in Asia: Relationship of Bangladesh with SAARC, ASEAN, China, India, USA, Europe and Middle-East/OIC Countries.
5. Geo-political Strengths and Weakness of Bangladesh
6. Indo-Bangladesh Relations: Geo-political, Geo-strategical and Geo-economic Considerations
7. Geo-political and Geo-strategical Aspects of Indo-Bangladesh Connectivity: Transit-Transshipment Problems, Asian Highway and Asian Railway, Port Facilities for Neighbouring Countries and Security of Bangladesh; Sub-Regional Groupings.
8. Territorial Disputes of Bangladesh with Neighbouring Countries: Territorial Problems Disputes Related to Demarcation of Boundary, Enclave-Exclave Problems; South Talpatti Island and Demarcation of Maritime Boundary, Bangladesh-Myanmar Geo-political Problems (Maritime Boundary).
9. Chittagong Hill Tracts (CHT), Ethnicity, Minority-Population and Problems of Secessionism, North-Eastern Indian States and Myanmar (Rohinga Issue)
10. Hydro-Politics of Bangladesh: History, Farakka Problems, Transboundary River Disputes, Tipaimukh Dam and Interest of Lower Riparian Bangladesh, Teesta and Other Water-Sharing Problems of the Region.
11. Security and Defence of Bangladesh: Classification of Security Strategies; Regional and International Cooperation; Environmental Politics and Security of Bangladesh; NGOs and Interference in National Security Issues.

#### ***LESSON PLAN***

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Geo-politics, Political Geography, Geo-economics and Geo-strategy: Conceptual Considerations	2
Lecture Series 2	Geo-politics of Bangladesh : Studies in Locational Significance	2
Lecture Series 3	Evolutionary History and Emergence of Bangladesh: Considerations of Political Geography	4
Lecture Series 4	Bangladesh in Asia: Relationship of Bangladesh with SAARC, ASEAN, China, India, USA, Europe and Middle-East/OIC Countries.	4
Lecture Series 5	Geo-political Strengths and Weakness of Bangladesh	2
Lecture Series 6	Indo-Bangladesh Relations: Geo-political, Geo-strategical and Geo-economic Considerations	4
Lecture Series 7	Geo-political and Geo-strategical Aspects of Indo-Bangladesh Connectivity	5
Lecture Series 8	Territorial Disputes of Bangladesh with Neighbouring Countries	5
Lecture Series 9	Chittagong Hill Tracts (CHT), Ethnicity, Minority-Population and Problems of Secessionism, North-Eastern Indian States and Myanmar (Rohinga Issue)	5
Lecture Series 10	Hydro-Politics of Bangladesh:	5
Lecture Series 11	Security and Defence of Bangladesh	4

	Tutorials	6
<b>Total</b>		<b>48</b>

### Selected Readings

1. Cox, K. R., & Mairs, R. (2019). Political Geography: Territory, State, and Society. Wiley-Blackwell.
2. Glassner, M. I., & Armstrong, G. (2016). Political Geography. Routledge.
3. Mahapatra, L. K. (2018). Geopolitics: Concepts, Security, and International Relations. Routledge.
4. Siddiqui, K. A. (2017). Bangladesh-India Relations: Documents, 1971-2002 (Vol. 1-9). Worldview Publications.
5. Rashiduzzaman, M. (2015). The Geopolitics of South Asia: From Early Empires to the Nuclear Age. Anthem Press.
6. Ahmed, A. U., & Alam, M. S. (2014). India-Bangladesh Relations: Documents, 1971-2002 (Vol. 1-9). Worldview Publications.
7. Bhattacharya, D., & Alam, F. (2014). Bangladesh-India Relations: Documents, 1971-2002 (Vol. 1-9). Worldview Publications.
8. Kabir, A. H. (2013). Chittagong Hill Tracts: Insurgency, Peace Accord, and Aftermath. University Press Limited.
9. Islam, N. (2018). Rohingya Crisis: A Geo-Political Analysis. AV Akademikerverlag.
10. Rahman, M. M. (2015). Hydro-Politics of South Asia: The Case of the Ganges-Brahmaputra-Meghna Basin. Routledge.

<b>Course Name</b>	<b>Rural Land Evaluation and Management</b>
<b>Course Code &amp; Number</b>	GETh 524
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2020-2021</b>

### Course Information

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	The course "Rural Land Evaluation and Management" provides students with essential knowledge and skills to assess and manage rural land resources effectively. It explores the concepts, principles, and techniques involved in evaluating land potential, identifying limitations and degradation factors, and developing sustainable land management strategies. Students will gain insights into the importance of rural areas in supporting agriculture, conserving natural resources, and promoting community well-being. This course serves as a foundation for students aspiring to work in fields such as agriculture, land planning, environmental management, and rural development.
<b>Course Objectives</b>	The purpose of the course is to: <ul style="list-style-type: none"> <li>• Introduce students to the fundamental concepts, scope, and historical development of rural land evaluation and management.</li> </ul>

	<ul style="list-style-type: none"> <li>• Familiarize students with the process of land inventories, including natural resource surveys, agro-ecological zoning, and land systems analysis.</li> <li>• Provide students with an understanding of land degradation processes, including physical, biological, and chemical factors, as well as natural and human-induced desertification.</li> <li>• Explore the factors, principles, and models associated with land use, including renowned models such as Von Thunen, Coleman, and McCarty-Linden Berg.</li> <li>• Develop students' knowledge and skills in land evaluation, including procedures, land utilization types, attribute analysis, and the measurement of agricultural productivity.</li> <li>• Introduce students to the concept of land capability classification, its methods, and the role of the United States Department of Agriculture (USDA) in land capability assessment.</li> <li>• Familiarize students with irrigation suitability classification, its structure, and the significance of appropriate irrigation practices in land management.</li> <li>• Provide students with an understanding of land management principles, including the demand for land resources and the conservation of land.</li> <li>• Equip students with the necessary tools and data sources for rural land use planning, such as the fractional method, Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA), agro-ecological transects, remote sensing, and aerial photography.</li> <li>• Guide students through the land use planning process, including land use zoning techniques and strategies.</li> </ul>
<p><b>Learning Outcomes</b></p>	<p>By the end of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate a clear understanding of the concepts, scope, and historical development of rural land evaluation and management.</li> <li>• Conduct land inventories, including natural resource surveys, agro-ecological zoning, and land systems analysis.</li> <li>• Identify and analyze the various processes and factors contributing to land degradation, including desertification.</li> <li>• Apply different land use models and principles to analyze and evaluate land use scenarios.</li> <li>• Utilize appropriate procedures and techniques for land evaluation, including land utilization types and attribute analysis.</li> </ul>



	<ul style="list-style-type: none"> <li>• Assess the capabilities of land for different uses and understand the significance of land capability classification.</li> <li>• Classify land suitability for irrigation practices and comprehend the importance of irrigation in land management.</li> <li>• Apply effective land management principles and strategies to meet the demand for land resources while conserving natural resources.</li> <li>• Utilize relevant tools and data sources for rural land use planning, including the fractional method, RRA and PRA, agro-ecological transects, remote sensing, and aerial photography.</li> <li>• Develop land use plans and zoning strategies for effective rural land management.</li> </ul>
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## **Course Content**

### **1. Concepts, Scope and Development**

#### **2. Land Inventories**

- 2.1 Natural Resources Survey;
  - 2.1.1 Component and Scales
  - 2.2 Agro-Ecological Zones
  - 2.3 Land Systems and Land Units

#### **3. Land Degradation**

- 3.1 The Process
  - 3.1.1 Physical & Biological Loss
  - 3.1.2 Chemical Change
- 3.2 Desertification
  - 3.2.1 Natural
  - 3.2.2 Man-made

#### **4. Understanding Land Use**

- 4.1 Factors and Principles
- 4.2 Landuse Models
  - 4.2.1 Von Thunen
  - 4.2.2 Coleman
  - 4.2.3 Diagrammatic Model
  - 4.2.4 McCarty-Linden Berg
  - 4.2.5 Polar & Anti- Polar

#### **5. Land Evaluation**

- 5.1 Procedure in Land Evaluation
- 5.2 Land Utilization Types(LUT) and Attribute(R)
- 5.3 General Crop Requirements
- 5.4 Land Qualities and Land Characteristics
- 5.5 Measuring Agricultural Productivity

## 6. Land Capability Classification (LCC)

6.1 Concept of Land Capability(USDA)

6.2 Methods of Land Capability Classification

## 7. Irrigation Suitability Classification (ISC)

7.1 Concept of Irrigation Suitability (USBR)

7.2 Structure of the Land Suitability Classification

7.3 Irrigation Suitability Classification

## 8. Land Management and Planning

8.1 Land Management

8.1.1 Demand for Land Resources

8.1.2 Conservation of Land

8.2 Rural Landuse Planning

8.2.1 Tools and Data Sources

8.2.1.1 Fractional Method(TVA)

8.1.1.2 RRA and PRA

8.1.1.3 Agro-Ecological Transect

8.1.1.4 Remote Sensing and Air-Photograph

8.3 Planning Process

8.4 Landuse Zoning

### LESSON PLAN

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Concepts, Scope and Development	02
Lecture Series 2	Land Inventories	05
Lecture Series 3	Land Degradation	05
Lecture Series 4	Understanding Land Use	08
Lecture Series 5	Land Evaluation	08
Lecture Series 6	Land Capability Classification (LCC)	05
Lecture Series 7	Irrigation Suitability Classification (ISC)	06
Lecture Series 8	Land Management and Planning	09
<b>Total</b>		<b>48</b>

### Essential Readings

Beek, K.J. Land Evaluation for Agricultural Development ILRI Publication. 23.Wageningen, The Netherlands.

Freeman, T.W. Geography and Planning. London: Hutchinson University Libraty.

### Extended Readings

Dent, D. & A. Young.

Soil Survey and Land Evalutation, George Allen and Unwin, London.

P.A.O. (1976) Framework for Land Evaluation. Soils Bulletin. No. 32 P.A. O. (1978)

### **STREAM-03: URBAN AND REGIONAL PLANNING AND DEVELOPMENT**

<b>Course Name</b>	<b>Urban Planning Development and Management</b>
<b>Course Code &amp; Number</b>	<b>GETh 531</b>
<b>Course Type</b>	<b>Theory</b>
<b>Session</b>	<b>2021-2022</b>

#### **COURSE INFORMATION**

<b>Course Credit and Marks</b>	<b>04 (Four), Full Marks 100</b>
<b>Course Introduction</b>	Urban Planning Development and Management is a comprehensive course that explores the nature, development, and management of urban planning. The course focuses on providing students with an in-depth understanding of the concepts, theories, and practices related to urban planning, with a specific emphasis on the context of Bangladesh and South Asia. Through theoretical discussions, case studies, and practical exercises, students will develop the necessary skills and knowledge to analyze and address critical urban issues, formulate effective urban plans, and contribute to sustainable urban development.
<b>Course Objectives</b>	<ul style="list-style-type: none"><li>• Understand the fundamental concepts and principles of urban planning, including its significance, scope, and the role of urban planners and geographers.</li><li>• Analyze and address major urban issues and challenges, such as environmental concerns, infrastructure development, social problems, and economic structures, with a focus on the context of Bangladesh and South Asia.</li><li>• Develop the knowledge and skills necessary to formulate effective urban plans, implement planning instruments, and contribute to sustainable urban development in the region.</li></ul>
<b>Learning Outcomes</b>	Upon completion of this course, students will be able to define urban planning theories and understand their significance, as well as grasp the role of urban planners and geographers in shaping sustainable urban development. Students will develop analytical skills to identify and address critical urban issues specific to Bangladesh and South Asia, including environmental concerns, infrastructure development, social problems, and economic structures. They will gain knowledge of the historical evolution and current trends of urbanization, enabling evaluation of the impact of urban growth on society. Additionally, students will analyze land use patterns, transportation systems, housing structures, and economic development in urban areas, recognizing the significance of population structure, social problems, and urban poverty in urban planning. Furthermore, they will understand the influence of urban images, perception, institutions, and governance on urban environments. Students will formulate effective urban plans, apply planning standards, regulations, density control, and building codes, and gain

	insights into urban planning, development, and management in Bangladesh, with a focus on Dhaka. They will evaluate the institutional framework, legal aspects, and analyze urbanization policies and strategies for achieving sustainable urban development in Bangladesh.
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Course Contents

### 1. The Nature and Development of Urban Planning

- 1.1 The Concept of Urban Planning: Definition, Need and Scope
- 1.2 The Urban Planner and His Role
- 1.3 Geographers as Planners
- 1.4 The Origin and Growth of Urbanization in the World
- 1.5 The Urban Form: Past, Present and Future
- 1.6 Urbanization and Development in Bangladesh and South Asia

### 2. Critical Urban Issues and Areas of Basic Studies for Urban Planning

- 2.1 Major Critical Issues or Problems of Urban Areas
- 2.2 Environmental and Infrastructural Issues, including Waste Management and Pollution
- 2.3 Land Use Patterns
- 2.4 Road Patterns, Transportation System and Traffic Management
- 2.5 Land and Housing Structure, Slums and Squatters
- 2.6 Economic Structures and Employment, the Role of the Informal Sector
- 2.7 Population Structure and Social Problems
- 2.8 Urban Poverty
- 2.9 Urban Images and Perception
- 2.10 Urban Institutions and Governance

### 3. Elements of the Urban Plans and Plan Implementation Instruments

- 3.1 The Planning Process and Peoples' participation in Planning
- 3.2 Elements of Strategy Planning and Master Plans
- 3.3 Elements of Neighbourhood Plans or Local Area Plans
- 3.4 Urban Renewal and Upgrading
- 3.5 New Towns, Satellite Towns and Urban Fringe
- 3.6 Elements of Planning Standards, Zoning, Density Control and Building Codes and Space Requirements.

### 4. Urban Planning, Development and Management in Bangladesh

- 4.1 The Status of Urban Planning, Urban Development and Management in Bangladesh, Planning Experience in Dhaka.
- 4.2 Institutional Aspect of Urban Planning, Development and Management in Bangladesh
- 4.3 Legal Aspects of Urban Planning in Bangladesh
- 4.4 Urbanization Policy and Strategy in Bangladesh.

## LESSON PLAN

Lecture Sessions	Topics	Number of classes
Lecture series 1	The Nature and Development of Urban Planning	10
Lecture series 2	Critical Urban Issues and Areas of Basic Studies for Urban Planning	12
Lecture series 3	Elements of the urban plan and plan implementation instruments	10
Lecture series 4	Urban Planning, Development and Management in Bangladesh	10
Lecture series 5	Tutorials	6
Total		48

### Selected Readings

Chapin, F.S. Jr., Urban Landuse Planning, University of Illinois  
Islam; N. (ed.), Essays in Urbanisation, Urban Planning and Development, CUS  
Keeble, L., Principles and Practice of Town and Country Planning  
McLoughir, J.B., Urban and Regional Planning: A System Approach London. Faber and Faber  
Rangwala. R., Town Planning, Anand India  
Islam, N. & Ahsan, R.M. (ed.) (1996). Urban Bangladesh, USP Publication  
Islam, U. & M.M. Khan (ed.). Urban Governance in Bangladesh and Pakistan, CUS (1997).  
Islam, U. (ed.) The Urban Poor in Bangladesh, CUS, 1996.

### Extended Readings

Islam, N. (ed.), Urban Research in Bangladesh. CUS  
Ratcliff, J., An Introduction to Town and Country Planning  
Islam, U.N. Huda, Francis. Narayan and P.B. Rina (ed.). Addressing the Urban Poverty, Agenda in Bangladesh, UPL, 1997.  
Bmjvg, bRi“j I evKx, Ave`yj (1996), bMivq‡Y evsjv‡`k, f~‡Mvj wefvM, XvKv wek|we`vjq

Course Name	<b>Urbanization and Urban System</b>
Course Code & Number	<b>GETh-532</b>
Course Type	<b>Theoretical</b>
Session	<b>2021-22</b>

Course Credit and Marks	<b>04 (Four); Full Marks 100</b>
Course Introduction	This course offers theoretical knowledge of urbanization and urban system from national to global perspective. This course tries to theorizing urbanization from different schools of thoughts.
Course Objectives	The course will: <ul style="list-style-type: none"><li>• develop advanced theoretical knowledge on urbanization, urban systems and urban functions.</li><li>• increase theoretical understanding required for planning</li></ul>

<b>Learning Outcomes</b>	<p>After completing this course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• learn process and factors of growth of urban areas, globalization, urban models and patterns.</li> <li>• understand about over urbanization and issues originated from those that initiates planning</li> </ul>
--------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### *Course Contents*

1. **Urbanization:** Overview and Concepts (Behavioural, Structural and Demographic)
2. **Origin and Growth and Urbanization:** Theories of Urban Origin (Hydraulic, Military, Economic, Religion), Early urban centers and city development
3. **Pattern of Urbanization:** Levels and Trends of Urbanization in Developed and Developing countries, Global and Local Variations, Global/World cities.
4. **Urbanization and Urban Growth:** Process of Urban Growth (natural increase, migration and areal extent), Factors of Urbanization (historical, industrial and globalization), Characteristics of Urbanization.
5. **Theorizing Urbanization:** The German Perspective, The Chicago School of Urban Sociology, Marxist theories, School of California, World System theories.
6. **Urban Systems:** Definitions, Concepts and Approaches, Historical Growth & Evolution of Urban Systems, National to Global perspectives of urban systems (economic, social, infrastructure and transport).
7. **Models of Urban Systems Organization:** Frontier-Mercantile Model, Staple Export Model, Industrial Specialization model, Social Change Model
8. **Concept of Urban Primacy and Over-Urbanization:** City Size Distribution, Urban Pyramid and Primate city, Rank Size Rule and Lognormal distribution
9. **Urban Hierarchy & Sphere of Influence:** Central Place Hierarchy and Spatial equilibrium, Cities as Central Place, Hinterland and Heartland
10. **Globalization and Urban Systems:** Cause and Effects of Globalization, Hierarchy of World Cities, Changing Functions of World Cities, Interconnections Among World Cities
11. **Third World Urbanization Within Global Urban System:** Historical Context, Stage of Colonial Urbanization, Urbanization Process and Urban System in Bangladesh
12. **Urban Governance:** Role of Constraints of Urban Local Government, Spatial Structure of Urban Local Govt. Metropolitan Govt. Urban Developmental Bodies

### *LESSON PLAN*

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Urbanization	2
Lecture Series 2	Origin and Growth and Urbanization	4
Lecture Series 3	Pattern of Urbanization	4
Lecture Series 4	Urbanization and Urban Growth	6
Lecture Series 5	Theorizing Urbanization	6
Lecture Series 6	Urban Systems	4
Lecture Series 7	Models of Urban Systems Organization	6
Lecture Series 8	Concept of Urban Primacy and Over-Urbanization	4
Lecture Series 9	Urban Hierarchy & Sphere of Influence	2
Lecture Series 10	Globalization and Urban Systems	2

Lecture Series 11	Third World Urbanization Within Global Urban System	2
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

LeGates, Richard T. and Frederic Stout (eds). 2011. The City Reader 5<sup>th</sup> ed. My : Routledge.  
 Knox, P. and M. McCarthy 2012. Urbanization: An Introduction to Urban Geography. Englewood Cliffs.: Prentice Hall.  
 Knox, P and P. J. Taylor (eds.) 1995. World Cities in a World System. Cambridge: Cambridge University Press.  
 Brunn, S. D. and J. F. Williams. 1977. Cities of the World: World Regional Urban Development. New York: Harper & Row.

### Extended Readings

Berry, D.H.I 1981 Comparative Urbanization: Divergent Paths in the Twentieth Century. London: Macmillan.  
 Knox, P & Linda McCarthy. 2005. Urbanization: An Introduction to Urbana Geography. 2<sup>nd</sup> ed. New Jersey: Prentice Hall.  
 Kaplan, David. 2009. Urban Geography. 2<sup>nd</sup> ed. New York : John Wiley.  
 Pacione, Michael. 2009. Urban Geography: A global Perspective. 3<sup>rd</sup> ed. NY: Routledge.  
 Hauser, Philip M and Leo F. Schnore (eds.) 1966. The Study of Urbanization. New Yourk: John Wiley.  
 Bourne, L.S. and Simmons, J. W. (eds.) 1978. Systems of Cities. Readings on Structure, Growth and Policy. USA: Oxford University Press.  
 UNHabitat. 2008. State of the World Cities 2008/2009. London, Sterling, VA : Earthscan.  
 Hall, Tim. 2006. Urban Geography. London, New York: Routledge.

<b>Course Name</b>	<b>Regional Planning and Development</b>
<b>Course Code &amp; Number</b>	<b>GETh-533</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-22</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	Urban problems are often not confined to smaller areas. Comprehensive planning for wider areas and interconnections and interdependence between urban areas can bring solutions to existing problems. Therefore, this course aims to expand the conceptual basis of regional planning of the students.
<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• build conceptual basis of regional planning among the students</li> <li>• broaden the perspective of the students and give students wider view to solve urban issues</li> </ul>

<b>Learning Outcomes</b>	<p>After completing this course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• learn about regionalization, regional change and growth</li> <li>• conduct intra-regional analysis</li> <li>• view problems from wider angle</li> </ul>
--------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Course Contents**

**1. Theoretical Aspects of Regional Planning : The conceptual Basis of Regional Planning**

- 1.1 The Content of Regional Planning.
  - 1.1.1 Historical Background
  - 1.1.2 Definition
  - 1.1.3 Nature and Scope of Regional Planning and its Objective ‘
- 1.2 The Region in Regional Planning
  - 1.2.1 The Region Concept
  - 1.2.2 Regionalization and the Delineation of Region
  - 1.2.3 Regionalization and the Administrative Regions

**2. Regional Analysis**

- 2.1 Inter Regional Analysis
  - 2.1.1 The Regional Framework
    - 2.1.1.1 Regional Accounts
    - 2.1.1.2 Input Out-put Tables.
  - 2.1.2 The Regional Change
    - 2.1.2.1 Economic Base Theory
    - 2.1.2.2 Regional Trade’ Multipliers and Regional Input-Out Analysis
  - 2.1.3 The Regional Growth
    - 2.1.3.1 Sector Theory
    - 2.1.3.2 Stages of Growth, Theory and Industrial Structure Analysis
- 2.2 Intra-Regional Analysis
  - 2.2.1 The Location of Industry
    - 2.2.1.1 Weber L Smith
    - 2.4.1.2 Spatial Structure of Regions (i.e. Central Place Theory).
    - 2.2.1.3 The Growth Pole Theory

**3. Regional Planning in Practice**

- 3.1 Regional Planning in U.K.
- 3.2 Regional Planning in Russia
- 3.3 Regional Planning in France, The Netherlands, USA.
- 3.4 Regional Planning in Bangladesh.

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Theoretical Aspects of Regional Planning : The conceptual Basis of Regional Planning	12
Lecture Series 2	Regional Analysis	18
Lecture Series 3	Regional Planning in Practice	12



	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

Alonso, William and Friedman, John (1966)., Regional Planning and Development: A Reader (MIT Press, Cambridge, Mass.

Chadwick, George (1971), A Systems View of Planning: Towns Theory of Urban and Regional Planning Process (Pergamon) Press, Oxford.

Gillie, F.B. (1967), Basic Thinking on Regional Planning (Menton, The Hague)

Glasson, John (1974)., An Introduction to Regional Planning: Concepts, Theory and Practice. Government of Bangladesh, First Five Year Plan, 1973-78 (Planning Commission, Dhaka, 1973).

Government of Bangladesh, National Report on Human Settlements Habitat. (Ministry of Public Works and Urban Development, Dhaka 1976).

Hall, Peter (1975)., Urban, and Regional Planning, Joya Willey, New York.

Hilhorst, Jos G.M. (1972)., Regional Planning: A Systems Approach, Rotterdam University Press, The Hague.

### Extended Readings

Hufachmidt, Maynard M. (ed.) (1969)., Regional Planning, Charges and Development (Praeger, New York).

Hoyle, B.S. (Editr) (1974). Spatal Aspects of Development (Willey; Letchwarth)

Hasnath S.A. (1974)., The Concept of Growth Point and Planning for Viable Rural Urban Continuum (CUS Monograph. No. 3, Centre for Urban Studies. Dhaka University, Dhaka).

Isard, W. (1956), Methods of Regional Analysis (MIT Press, Cambridge, Mass)

Mcloughlin, J. Brian (1969). Urban and Regional Planning: A Systems Approach (Faber and Faber, London).

Meier, Richard L., Development Planning Ratcliffe, An Introduction to Regional Planning

Rao, Prakash (1963), Regional Planning Calcutta.

<b>Course Name</b>	<b>Urban Environmental Management and Planning</b>
<b>Course Code &amp; Number</b>	<b>GETh 534</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-2022</b>

### Course Information

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	The course intends to provide a basic background of urban environmental planning and management to the students. This course focuses on how to develop students' vision to include environmental issues into urban planning, management and development. Students are expected to learn the concepts, theories and legal aspects of urban environmental planning and management in respect of local to global urbanization phase. This course will help students gain knowledge how to

	reduce the risk of prioritized environmental crises in different types of cities through urban planning, management and development.
<b>Course Objectives</b>	<p>The major objectives of the course are to:</p> <ul style="list-style-type: none"> <li>● provide an overview of the terminologies, concepts and theories related to urban environmental planning and management.</li> <li>● prepare students how to conceptualize the urbanization, transformation of cities in different economic level and environmental problems.</li> <li>● familiar students with various types of urban environmental management systems available in cities of underdeveloped, developing and developed countries and how they deal with these management systems.</li> <li>● orient students with methods and survey techniques of urban environmental planning and management.</li> <li>● teach students to the guideline principles, rules, acts and regulations of urban environmental management.</li> <li>● develop students' knowledge on how to develop policy instruments and partnership building with different stakeholders to enhance environmental quality in different types of cities.</li> </ul>
<b>Learning Outcomes</b>	<p>After completing this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>● learn the fundamental concepts of urban environmental planning, management and sustainability.</li> <li>● be familiar with global and local urban growth and relationship between urbanization and environmental problems.</li> <li>● learn the urban environmental problems and their consequences on the human health and ecosystem.</li> <li>● learn the tools and techniques of studying urban physical, social and economic environments.</li> <li>● be acquainted with how to incorporate the issues of urban environment into land use planning and urban design.</li> </ul>

### ***Course Contents***

#### **Introduction**

- Definitions of Urban Environment and Management
- Cities and the Environment: Problems and Potential
- Cities and Sustainable Development

#### **Urban Growth, Environmental Transition and Management**

- Urban Growth and the Urban Environment
- Environmental Transition and Performance of Cities
- Urban Environmental Agenda and Management

#### **Urban Environmental Problems**

- Urban Density and Urban Sprawl
- Urban Design, Built and Natural Environment
- Environmental Problems in the Home, Workplace and Neighbourhood
- City Environmental Problems: Urban Climate and Air Pollution, Water Resources and Water Pollution, Toxic and Hazardous Wastes

#### **Urban Environmental Management and Planning: *Guiding Principles***

- Ecological Principles

- Economic Principles
- Social Principles
- Management Principles

**Role of Local Authorities in Urban Environmental Management and Planning**

- Issues for Local Actions
- Agenda 21, Good Governance and Urban Environmental Sustainability
- Local Environmental Action Planning (LEAP)

**Policy Instruments and Partnerships for Improving the Urban Environment**

- EIA – a mechanism for environmental protection
- Economic Policy Instruments
- Changing and Restructuring of the Shape and Form of Ideal Cities
- Role of Change Agents in Partnership Building and Collaborative Initiatives

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Introduction	05
Lecture Series 2	Urban Growth, Environmental Transition and Management	07
Lecture Series 3	Urban Environmental Problems	07
Lecture Series 4	Guiding Principles of Urban Environmental Management and Planning	06
Lecture Series 5	Role of Local Authorities in Urban Environmental Management and Planning	06
Lecture Series 6	Policy Instruments and Partnerships for Improving the Urban Environment	06
Lecture Series 7	Exercise: Preparation of an Urban Environmental Plan	06
Lecture Series 8	Tutorials	06
Total		48

**Essential Readings**

Marcotullio, P J and McGranahan, G (2007) *Scaling Urban Environmental Challenges: From Local to Global and Back*, Earthscan Publications Ltd , London and Sterling, VA

Hardoy, J, Mitlin, D and Satterthwaite, D (2006) *Environmental Problems in an Urbanizing World*, Earthscan Publications Ltd, London and Sterling, VA

Haughton, G and Hunter, C (2003) *Sustainable Cities*, Routledge, London and New York

**Extended Readings**

Pugh, C D J (ed.) (2000) *Sustainable Cities in Developing Countries: Theory and Practice at The Millennium*, Earthscan Publications Ltd, London, 2000

Gilbert, R, Stevenson, D, Girardet, H and Stren, R (1996) *Making Cities Work: The Role of Local Authorities in the Urban Environment*, Earthscan Publications Ltd, London

Rahman, M. M. (2011) *Urban Environmental Problems in Bangladesh: A Case Study of Chittagong City*, VDM Publications, Germany

## OPTIONAL COURSES

<b>Course Name</b>	<b>Natural Hazard, Disaster and Disaster Management</b>
<b>Course Code &amp; Number</b>	<b>GETh 560</b>
<b>Course Type</b>	<b>Theoretical (optional)</b>
<b>Session</b>	<b>2020-2021</b>

### Course Information

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	<p>The course "Natural Hazard, Disaster, and Disaster Management" provides students with a comprehensive understanding of the concepts, principles, and strategies related to disaster management. It explores the various types of disasters, their impacts, and the key elements involved in effective disaster management. Students will gain insights into disaster preparedness, response, communication, policy, legislation, long-term measures, vulnerability analysis, and common disasters in Bangladesh. The course equips students with the knowledge and skills necessary to contribute to disaster risk reduction and management efforts.</p>
<b>Course Objectives</b>	<p>The purpose of the course is to:</p> <ul style="list-style-type: none"><li>• Introduce students to the definition, scope, and objectives of disaster management.</li><li>• Familiarize students with the role of a disaster manager and the responsibilities of key personnel and specialists.</li><li>• Explain the elements of disaster management and their significance in mitigating and responding to disasters.</li><li>• Provide an understanding of the concepts and terms used in disaster management, including natural and man-made disasters and their effects.</li><li>• Explore the disaster management cycle and the tools, methods, and technologies employed in disaster management.</li><li>• Introduce students to disaster preparedness, including the formulation of policies and prerequisites for preparedness planning.</li><li>• Discuss general preparedness planning at the national and community levels.</li><li>• Examine disaster response, including myths, relief efforts, planning, and the roles and responsibilities of stakeholders.</li><li>• Explore effective disaster communication methodologies and the role of media in disaster situations.</li></ul>

	<ul style="list-style-type: none"> <li>• Discuss disaster management policy, legislation, and standing orders.</li> <li>• Explore long-term measures in disaster management, including prevention, mitigation, recovery, and risk insurance.</li> <li>• Conduct vulnerability analysis to understand the factors that contribute to vulnerability in disaster-prone areas.</li> <li>• Identify and analyze common disasters in Bangladesh, emphasizing their characteristics, impacts, and management strategies.</li> </ul>
<p><b>Learning Outcomes</b></p>	<p>By the end of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate a clear understanding of the concepts, scope, and objectives of disaster management.</li> <li>• Explain the role of a disaster manager and the responsibilities of key personnel and specialists.</li> <li>• Identify and apply the elements of disaster management in mitigating and responding to disasters.</li> <li>• Utilize the appropriate concepts and terms related to disaster management and understand the effects of different types of disasters.</li> <li>• Apply the disaster management cycle and utilize tools, methods, and technologies for effective disaster management.</li> <li>• Formulate disaster preparedness policies and prerequisites for preparedness planning.</li> <li>• Develop general preparedness plans at the national and community levels.</li> <li>• Analyze and contribute to disaster response efforts, including debunking myths and understanding the role of relief and planning.</li> <li>• Implement effective disaster communication methodologies and understand the interaction between disasters and the media.</li> <li>• Evaluate and analyze disaster management policy, legislation, and standing orders.</li> <li>• Propose and implement long-term measures for disaster management, including prevention, mitigation, recovery, and risk insurance.</li> <li>• Conduct vulnerability analysis and identify factors contributing to vulnerability in disaster-prone areas.</li> <li>• Apply appropriate management strategies for common disasters in Bangladesh.</li> </ul>

## Course Content

- 1. Introduction to Disaster Management**
  - 1.1 Definition, scope and objectives
  - 1.2 Disaster Manager and role of Disaster Manager
  - 1.3 Key personnel and specialists
  - 1.4 Elements of Disaster Manager
- 2. Concepts and terms in disaster management**
  - 2.1 Concepts and terms in disaster management
  - 2.2 Types disaster- Natural and Man-made disasters, effect of disaster
  - 2.3 Disaster management cycle
  - 2.4 Tools, methods and technologies of disaster management
- 3. Introduction to Disaster Preparedness**
  - 3.1 Definitions, disaster continuum and relationship of various time phases to each other
  - 3.2 Formulating policies for disaster preparedness
  - 3.3 Prerequisites for preparedness planning
- 4. General Preparedness Planning**
  - 4.1 National plan and plan elements
  - 4.2 Community plan
- 5. Disaster Response**
  - 5.1 Natural disaster response: Definition, scope and other issues
  - 5.2 Disaster myths
  - 5.3 Disaster and disaster relief
  - 5.4 Disaster response planning
  - 5.5 Disaster response role and responsibilities
- 6. Disaster Communication**
  - 6.1 Effective disaster communication
  - 6.2 Methodology for disaster communication
  - 6.3 Disaster and media
  - 6.4 Epidemiologic factors communication disaster
- 7. Disaster Management Policy, Legislation and Standing Orders**
  - 7.1 Disaster management national plan and policy
  - 7.2 Disaster management legislation
  - 7.3 Standing Orders
- 8. Disaster Management Long Term Measures**
  - 8.1 Prevention, mitigation and recovery
  - 8.2 Risk insurance
- 9. Vulnerability Analysis**
- 10. Common Disaster in Bangladesh**

### *LESSON PLAN*

Lecture sessions	Topics	Number of Classes
Lecture Series 1	<b>Introduction to Disaster Management</b>	03
Lecture Series 2	<b>Concepts and terms in disaster management</b>	04

Lecture Series 3	<b>Introduction to Disaster Preparedness</b>	05
Lecture Series 4	<b>General Preparedness Planning</b>	06
Lecture Series 5	<b>Disaster Response</b>	06
Lecture Series 6	<b>Disaster Communication</b>	05
Lecture Series 7	<b>Disaster Management Policy, Legislation and Standing Orders</b>	06
Lecture Series 8	<b>Disaster Management Long Term Measures</b>	05
Lecture Series 9	<b>Vulnerability Analysis</b>	04
Lecture Series 10	<b>Common Disaster in Bangladesh</b>	04
<b>Total</b>		<b>48</b>

### Essential Readings

Disaster Management Bureau, (2009): *Disaster Management Training Manual*, vol. I-III  
 Porag, Diwan, (2010): *A Manual on Disaster Management*, India  
 Carter, W. Nick, (1997): *Disaster Management: Disaster Manager's Handbook*, UK  
 CARE-BANGLADESH. (2009). *Disaster Manuals 1(Short) & 2 (Long)*, Dhaka.

### Extended Readings

Open University. (2009): *Disaster Manual*, Dhaka.  
 Cutter, Susan L.: (1999). *Environmental Risks and Hazards*: Prentice-Hall of India Private Limited, New Delhi.  
 Blaikie, Piers et al.: (1997). *At Risk: Natural hazards, people's vulnerability, and disasters*: Routledge, New York.  
 Sahni, Pardeep, Ariyabandu, M. M.: (2003). *Disaster Risk Reduction in South Asia*: Prentice-Hall of India Private Limited, New Delhi.  
 Singh, S. R. (2010). *Disaster Management*: A P H Publishing Corporation, New Delhi

<b>Course Name</b>	<b>Integrated Coastal Zone Management</b>
<b>Course Code &amp; Number</b>	<b>GETh-561</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-22</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	Integrated coastal zone management (ICZM) deals with the proper management of coastal environment, people and resources. It includes the sustainable utilization of coastal biotic and abiotic resources and challenges related to such uses..
<b>Course Objectives</b>	Major objectives are <ul style="list-style-type: none"> <li>To understand the concept of integrated coastal zone management.</li> </ul>

	<ul style="list-style-type: none"> <li>• To know about the characteristics and uses of coastal zones and coastal zone management issues.</li> <li>• To learn about the tools and techniques and administrative policy for ICZM.</li> </ul>
<b>Learning Outcomes</b>	<p>After the successful completion of this course the student will be able to</p> <ul style="list-style-type: none"> <li>• understand the concept of integrated coastal zone management particularly in the context of Bangladesh.</li> <li>• get familiar with different tools-techniques related to integrated coastal zone management.</li> <li>• know the importance of policy issues and major challenges related to coastal zone management.</li> </ul>

### *Course Contents*

1. Introduction and definitions of coast, coastal; classification, characteristics and Bangladesh coast
2. Introduction and definition of ICZM, views, approaches, historical development and global, regional and local context.
3. Multiple uses of coastal zone: urbanization, industrial use, port activities. Marine transport, tourism, fisheries & aquaculture. coastal agriculture etc
4. Tools and techniques of ICZM: Administrative tools, social tools and technical tools
5. Coastal planning: planning goals, strategic plan, action plan, plan formulation, plan monitoring and sustainable planning.
6. Management of coastal resources: definition of resource, resource classification, resource inventory and documentation
7. Management of coastal disaster: natural disaster, man-made disaster, coastal pollution, hard wear and soft wear solution
8. Coastal zone and climate change impact
9. Coastal engineering: coastal protection,
10. Institutional capacity and ICZM

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Introduction and definitions of coast, coastal; classification, characteristics and Bangladesh coast	4



Lecture Series 2	Introduction and definition of ICZM, views, approaches, historical development and global, regional and local context.	5
Lecture Series 3	Multiple uses of coastal zone: urbanization, industrial use, port activities. Marine transport, tourism, fisheries & aquaculture. coastal agriculture etc	5
Lecture Series 4	Tools and techniques of ICZM: Administrative tools, social tools and technical tools	4
Lecture Series 5	Coastal planning: planning goals, strategic plan, action plan, plan formulation, plan monitoring and sustainable planning.	4
Lecture Series 6	Management of coastal resources: definition of resource, resource classification, resource inventory and documentation	4
Lecture Series 7	Management of coastal disaster: natural disaster, man-made disaster, coastal pollution, hard wear and soft wear solution	4
Lecture Series 8	Coastal zone and climate change impact	4
Lecture Series-9	Coastal engineering: coastal protection,	4
Lecture Series-10	Institutional capacity and ICZM	4
	Tutorials	6
<b>Total</b>		<b>48</b>

#### **Selected Readings:**

D. Raffaelli and S. Hawkins Intertidal Ecology 1997  
 J. Pathick A. Introduction to Coastal Geomorphology 1986  
 E.C. Birds, Submerging Coast 1993  
 S.C. Snedakar and J.G. Snedakar, The Mangrove ecosystem 1984  
 MS Islam Sea-Level Changes of Bangladesh: Last Ten Thousand Years, 2001

<b>Course Name</b>	<b>Rural Settlements of Bangladesh</b>
<b>Course Code &amp; Number</b>	<b>GETh-562</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-22</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	Rural areas are considered as distinctive space than urban areas in terms of economy, culture, population and settlement. This course emphasizes on origin and development of rural settlements in Bangladesh, factors responsible for dynamism in settlement pattern and functions of rural areas.
<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• explain the fundamental ideas of rural settlements and its dynamics</li> <li>• offer suggestions for rural livelihoods.</li> <li>• depict the rural economic structure and functions</li> </ul>

	<ul style="list-style-type: none"> <li>• advance the notions of rural communities and rural housing.</li> </ul>
<b>Learning Outcomes</b>	<p>After completing this course, the students will be able to:</p> <ul style="list-style-type: none"> <li>• educate themselves on the fundamentals of rural settlement dynamics</li> <li>• familiarize themselves with the fundamental concepts about the various forms and patterns of rural settlement, with a focus on Bangladesh.</li> </ul>

### *Course Contents*

- 1. Origin and Development of Settlements in Bengal**
  - 1.1 Early Settlements of Bengal :. Location and Characteristics
- 2. The Village**
  - 2.1 Concepts and Characteristic
  - 2.2 Early Structure of Village
  - 2.3 Contemporary Village Society
- 3. Forms and Distribution of Rural Settlements**
  - 3.1 Distribution and Density
  - 3.2 Size and Spacing
  - 3.3 Physical and Social Forces of Shopping the pattern
- 4. House Types**
  - 4.1 Influencing Factors : Physical and Cultural
  - 4.2 Characteristics of Building Materials
  - 4.3 Roof Forms and Shed Types
  - 4.4 House Types Basis and Classification
  - 4.5 Internal Structure of House and Use of Space in Relation to Livelihood
  - 4.6 Rural Housings in Bar
- 5. Settlement Dynamics in the Riverine Areas**
  - 5.1 Flooding and Erosion : Coping of Settlements
  - 5.2 Settlement Process in the char Areas
- 6. Settlement Dynamics in the Coastal Areas**
  - 6.1 Farming Settlements
  - 6.2 Response to Natural Hazards
    - 6.2.1 Warning System
    - 6.2.2 Access to Safe Heaven, Embankment, Cyclone Shelter and Killa
  - 6.3 Fishermen Settlements
    - 6.3.1 Barrack Settlements, Factors and Seasonally
    - 6.3.2 Hazard and Way of Life
  - 6.4 Sea-Level Rise : Future Scenario and Strategies
- 7. Interventions for the Displaces**
  - 7.1 Involun Displacement
  - 7.2 Resettlement Schemes
  - 7.3 Settlement Reorganization An idealistic Frame work.
- 8. Rural Economic Structure**
  - 8.1 Daily Bazar : Location and Threshold
  - 8.2 Periodic Market Origin and Development
  - 8.3 Types and Classification

- 8.4 Periodicity and Synchronization
- 8.5 Commodity Flow and Marketing
- 8.6 Price Formation
- 8.7 Rural Market; as Growth Centres
- 8.8 Village Fair : Cultural and Economic Profile.

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Origin and Development of Settlements in Bengal	4
Lecture Series 2	The Village	2
Lecture Series 3	Forms and Distribution of Rural Settlements	4
Lecture Series 4	House Types	4
Lecture Series 5	Settlement Dynamics in the Riverine Areas	4
Lecture Series 6	Interventions for the Displaces	8
Lecture Series 7	Interventions for the Displaces	6
Lecture Series 8	Rural Economic Structure	10
	Tutorials	6
<b>Total</b>		<b>48</b>

**Essential Readings**

Chisholm. M, Rural Settlements and Landuse  
 Deniel, P. , The Geography of Settlement  
 Freestone. C. S., The South Asian Village  
 Glig, A., An Introduction to Rural Geograph)  
 Gordon, G. and Dick, W., Settlement Europe  
 Haq, M.A.Q.L., Reorganization of Rural Settlements in Bangladesh

**Extended Readings**

Houston, J. M., A Social Geography of Europe  
 Hudson F.S., A Geography of Settlement  
 Islam, Nazrul, Rural Housing in Bangladesh, Oriental Geographer, July 1993.  
 Kosinski, L. A & Elahi, K. M., Population Redistribution and Development in South Asia  
 Mandal R. B., Introduction to Rural Settlement  
 Perpillou, A.V., Human Geography  
 Rapoport, Amos, House Form and Culture  
 Singh, R.L. & Singh, K.N., Readings in Rural Settlement Geography  
 Smith, R.H.T., Periodic Markets in Asia, Africa and Latin America  
 Sultana, S., Settlement Pattern of Bangladesh  
 evKx, Ave`yj MÖvgxb emwZ, XvKv : e½ cÖKvkbx  
 ‡PŞayix, wmivRyj Bmjvg Av\_©bxwZK f~‡Mvj, XvKv : XvKv wek|we`vjq

<b>Course Name</b>	<b>Gender, Development and Environment</b>
<b>Course Code &amp; Number</b>	<b>GETh 563</b>
<b>Course Type</b>	<b>Theoretical (optional)</b>
<b>Session</b>	<b>2020-2021</b>

### Course Information

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	<p>The course "Gender, Development, and Environment" examines the complex interplay between gender, development, and environmental issues. It explores the multifaceted relationship between gender and the environment, the theoretical explanations of gender and development, and the various dimensions of gender vulnerability in the context of natural hazards, climate change, and globalization. Through this course, students will critically analyze the gendered aspects of development and environmental challenges and explore strategies for promoting gender equality, empowerment, and sustainable development.</p>
<b>Course Objectives</b>	<p>The purpose of the course is to:</p> <ul style="list-style-type: none"> <li>• Define and comprehend the scope of gender, and understand the methods and data sources used in gender studies.</li> <li>• Explore the gender-environment relationship, including ecofeminism, gender diversity, gender roles in forestry, agriculture, rural energy, and fishing.</li> <li>• Examine theoretical explanations of gender and development, including feminist perspectives and their relevance in the development discourse.</li> <li>• Analyze the intersection of gender, production, reproduction, and maintenance in different socio-economic contexts.</li> <li>• Understand the dynamics of gender inequality and explore strategies for empowerment and gender mainstreaming.</li> <li>• Investigate the gendered dimensions of livelihoods in both rural and urban settings.</li> <li>• Examine the gendered aspects of migration, including internal and international migration patterns and their implications.</li> <li>• Assess gender vulnerability in the face of natural hazards such as floods, cyclones, earthquakes, and urban environmental problems like pollution, waste disposal, health risks, and trafficking.</li> <li>• Analyze the gendered impacts of climate change, explore resilience strategies, and coping mechanisms adopted by different genders.</li> </ul>

	<ul style="list-style-type: none"> <li>• Examine the gendered implications of globalization and its influence on gender and development.</li> </ul>
<b>Learning Outcomes</b>	<p>By the end of the course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate a clear understanding of the concepts, methods, and data sources used in gender studies.</li> <li>• Analyze the gender-environment relationship and its implications in various sectors, including forestry, agriculture, energy, and fishing.</li> <li>• Evaluate theoretical explanations of gender and development and their relevance in addressing gender disparities.</li> <li>• Analyze the roles of gender in production, reproduction, and maintenance activities in different socio-economic contexts.</li> <li>• Critically assess gender inequality and identify strategies for empowerment and gender mainstreaming.</li> <li>• Examine and analyze the gendered dimensions of livelihoods in rural and urban settings.</li> <li>• Evaluate the gendered aspects of migration and understand the implications for individuals and communities.</li> <li>• Analyze gender vulnerability in the face of natural hazards and urban environmental problems.</li> <li>• Assess the gendered impacts of climate change and evaluate resilience strategies and coping mechanisms.</li> <li>• Examine the gendered implications of globalization and its influence on gender and development.</li> </ul>

### Course Content

1. Gender: Definition, scope, methods & data sources
2. Gender-environment relationship (Ecofeminism, gender and versity, gender and forestry, gender and agriculture, Gender and rural energy, Gender and fishing: aquaculture in Bangladesh)
3. Gender and Development: Theoretical Explanation
4. Gender, production, reproduction and maintenance
5. Gender, Inequality & Empowerment
6. Gender and Livelihood (Rural & urban)
7. Gender and migration (Internal & International)
8. Gender Vulnerability (natural hazards: floods, cyclones and earthquakes, urban environmental problems: pollutions, waste disposal, health risks, trafficking)
9. Gender and climate change: resilience and coping mechanism
10. Gender and Globalization

## LESSON PLAN

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Gender: Definition, scope, methods & data sources	03
Lecture Series 2	Gender-environment relationship	04
Lecture Series 3	Gender and Development: Theoretical Explanation	05
Lecture Series 4	Gender, Production, reproduction and maintenance	03
Lecture Series 5	Gender, Inequality & Empowerment	06
Lecture Series 6	Gender and Livelihood (Rural & urban)	05
Lecture Series 7	Gender and migration (Internal & International)	06
Lecture Series 8	Gender vulnerability	05
Lecture Series 9	Gender and climate change: resilience and coping mechanism	06
Lecture Series 10	Gender and Globalization	05
<b>Total</b>		<b>48</b>

### Essential Readings

Janet Henshell Momsen: *Geography of Gender in the Third World*, Routledge Introductions to Development Series, routledge London and New York, 2004.

Janet Henshell Momsen: *Women and Development in the Third World*, Routledge Introductions to Development Series, Routledge London and New York, 1991.

Gillian Rose: *Feminism and Geography – The limits of geographical knowledge*: University of Monesota Press, Minneapolis, 1993.

Mona Domosh and Joni Seager. *Putting Women in Place-Feminist Geographers make sense of the World*, The Guildford Press, New York, 2001.

Rezwana, N. and Pain, R. (2023). *Gender-Based Violence and Layered Disasters: Place, Culture and Survival*, The Routledge, Taylor & Francis Groups, UK.

Rezwana, N. (2018). *Disasters, Gender and Access to Healthcare: Women in Coastal Bangladesh*, The Routledge, Taylor & Francis Groups, UK.

Vandana Desai and Robert B. Potter (Eds), *The companion to Development Studies*, Arnold, London, 2002.

Ruth Bleier, *Science and Gender-A critique of Biology and its Theories on Women*. The Athene Series, Pergamon Press Inc, 1984.

### Extended Readings

Carolyn E. Sachs (ed), *Women working in the environment*. Taylor & Francis Publishers, Washington, DC, 1997.

*Explorations in Feminism : Geography & Gender : An Introduction to Feminist Geography*, Women & Geography Study group of the IBG, Hutchinson, London, 1984.

Janet Henshell Momsen Janet Townsend, *Geography of Gender in the Third World* Hutchinson, London, 1987.

*Women in the Third World : Gender Issues in Rural & Urban Areas*, Lyme

Brydon & Sylvia Chant, 1988. Irene Dankelman & Joan Davidson *Women & Environment in the Third World : Alliance For the Future*, Earth Science Publications Ltd.

Shirley Ardener (ed), *Women & Space: Ground Rules & Social Maps*, London: Croom Helm Ltd.

Rosi Braidotti, et.al. (ed), Women, the Environment & Sustainable Development: Towards A Theoretical Synthesis  
 Ben J.Wallace et. al, Westview, The Invisible Resource: Women & Work in Rural Bangladesh, Westview  
 Salma Khan, The Fifty Percent: University Press Limited 1988.  
 Shahnaz Huq Hussain, Female Migrant's Adaptation in Dhaka, USP, 1976.  
 Khaleda Salahuddin & Ishrat Shamim, Women in Urban Informal Sector: Employment Pattern Activity Types of Problems, Women for Women, 1992.  
 BGS, Disaster: Issues & Gender Perspective.  
 GSRC, Gender Atlas of Bangladesh.  
 Susan Buckingham-Hatfield, Gender and Environment, Routledge, 2000.  
 World Development Reports.

<b>Course Name</b>	<b>Geography of Health and Environment</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Course Code &amp; Number</b>	<b>GETh 564</b>
<b>Session</b>	<b>2020-2021</b>

#### Course Information

<b>Course Credit &amp; Marks</b>	<b>04 (Four): Full Marks-100</b>
<b>Course Introduction</b>	The course "Medical Geography of Health and Environment" provides an in-depth exploration of the interplay between health, environment, and geographic factors. It encompasses various aspects, including the development and scope of medical geography, the concept of human ecology as the foundation of medical geography, and different approaches to studying medical geography. Students will examine the relationships between ecosystems, environments, organisms, and communities, and their impact on health. The course delves into the classification of diseases, factors influencing disease transmission, and the role of host-agent-environment interactions. Case studies on diseases such as malaria, cancer, and STD/HIV/AIDS will be analyzed. Students will also learn about the epidemiological approach in medical geography, occupational health hazards, healthcare delivery systems, and policy implications in medical geography and environmental studies at global and national levels.
<b>Course Objectives</b>	This course aims to provide: <ul style="list-style-type: none"> <li>• A comprehensive understanding of medical geography, focusing on the spatial patterns and processes of health, disease, and healthcare delivery.</li> <li>• It explores the concept of human ecology as the foundation of medical geography, analyzing the interactions between humans and their environment and their impact on health outcomes.</li> <li>• Different approaches in medical geography, including disease ecology and health care geography, are examined to develop diverse perspectives.</li> <li>• The course emphasizes the importance of the environment in shaping health, mortality, and morbidity rates.</li> </ul>

	<ul style="list-style-type: none"> <li>• It investigates the complex relationship between environment, health, and disease, explores disease movement, and utilizes case studies to understand disease ecology.</li> <li>• Additionally, the course covers the epidemiological approach, occupational health hazards, healthcare delivery systems, and policy implications in medical geography and environmental studies.</li> </ul>
<b>Learning Outcomes</b>	<p>The outcomes of the course are following:</p> <ul style="list-style-type: none"> <li>• In-depth understanding of medical geography, its scope, development, and post-medical geography perspective.</li> <li>• Exploration of human ecology as the foundation of medical geography, focusing on interactions between humans and their environment.</li> <li>• Examination of diverse approaches in medical geography: disease ecology, health care geography, and reformist medical geography.</li> <li>• Emphasis on ecosystems, environments, organisms, and communities of organisms in relation to medical geography.</li> <li>• Recognition of the environment's critical role in shaping health outcomes.</li> <li>• Analysis of mortality and morbidity rates, including SMR and life tables, for assessing disease impacts.</li> <li>• Investigation of the complex relationship between environment, health, and disease.</li> <li>• Case studies on ecological factors contributing to disease emergence and spread, with emphasis on malaria, cancer, and STD/HIV/AIDS.</li> <li>• Application of the epidemiological approach in analyzing disease patterns.</li> <li>• Examination of occupational health hazards, specifically in relation to industrial workers in Bangladesh.</li> <li>• Comprehensive study of health care delivery systems, utilization patterns, financing mechanisms, and public health planning.</li> <li>• Consideration of policy implications in medical geography and environmental studies, including global and national health care policies, environmental laws, and health policy in Bangladesh.</li> </ul>

## Contents

1. Definition, Scope, Development, and Post-Medical Geography
2. Concept of Human Ecology as Base of Medical Geography
  - 2.1 Approaches to Medical Geography: Disease, Ecology and Health Care Geography, Reformist medical Geography perspective
3. Ecosystem, Environment, Organism and Communities of organism
4. The Environment as the Concept of Health Concern
5. Mortality, Morbidity Rates including Standard Mortality Rates (SMR) and Life Table.
6. Environment, Health and Disease
  - 6.1 Person-Place-Time Factors and Host-Agent-Environment Interactions
  - 6.2 Classification of Human Infections by Mode of Transmission
  - 6.3 Multiple Causation Disease
    - 6.3.1 Agents of Disease



- 6.3.2 Reservoir of Infection
- 6.3.3 Transmission of Infection
- 6.3.4 HOST Factors
- 6.3.5 Immunity and Herd immunity
- 7. Environment and Movement of Disease
- 8. Case Studies Disease Ecology
- 9. Special Emphasis of Malaria. Cancer and STD/HI/AIDS and other Selected Diseases
- 10. The Epidemiologic; Approach in Medical Geography General Purpose. Consents and Reasoning
  - 10.1 Scope of Epidemiology in Geo-Environmental Studies
  - 10.2 The Sequences of Epidemiological Reasoning
  - 10.3 Slops of Practical epidemiology in Geo-Enviromental Science
  - 10.4 Descriptive and Analytic Epidemiology
  - 10.5 Types /Classification of Epidemiological Study
  - 10.6 Nature of Epidemiological Research in Geo-Ervironmental Studies
  - 10.7 Spatial Epidemiological Reasoning to Specific Disease Problems
  - 10.8 Disep.se Diffusions System
- 11. Hazards in Occupational Health
  - 11.1 Health Problems Associated to Particular Occupations, Special Emphasis on Industrial Workers Health in Bangladesh
- 12. Health Care Delivery
  - 12.1 Different Types of Health Care Delivery Systems (Traditional & Western, Primary).
  - 12.2 Utilization of Health Care System
  - 12.3 Financing Mechanism
  - 12.4 Comprehension Planning for the Public Health
- 13. Policy Implication in Medical Geography and Environmental Studies
  - 13.1 Global Health Care Policy
  - 13.2 National Health Care Policy Including Environmental Laws and Health Policy in Bangladesh.

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Definition, Scope. Development, and Post-Medical Geography	2
Lecture Series 2	Concept of Human Ecology as Base of Medical Geography	2
Lecture Series 3	Ecosystem, Environment, Organism and Communities of organism	4
Lecture Series 4	The Environment as the Concept of Health Concern	4
Lecture Series 5	Mortality, Morbidity Rates including Standard Mortality Rates (SMR) and Life Table	3
Lecture Series 6	Environment, Health and Disease	5
Lecture Series 7	Environment and Movement of Disease	4
Lecture Series 8	Case Studies Disease Ecology	4
Lecture Series 9	Special Emphasis of Malaria. Cancer and STD/HI/AIDS and other Selected Diseases	4
Lecture Series 10	The Epidemiologic; Approach in Medical Geography General Purpose. Consents and Reasoning	4

Lecture Series 11	Hazards in Occupational Health	2
Lecture Series 12	Health Care Delivery	2
Lecture Series 13	Policy Implication in Medical Geography and Environmental Studies	2
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

Dubos, R. Man Adapting New Haven, Yale  
 Kormondly, E.J. concepts of Ecology Englewood Cliff, Prentice Hall  
 Report of the Task forces on Research Planning in Environmental Health Science. Man's Health and the Environment-Suine Research Needs, Nat. Inst. Envir. Health Sci.; Washington D.C.  
 Pyle G.F. Applied Medical Geography, New York. Juhn Wiley ax-td Sons. (1979).  
 McGh.sten, N.d. (ed.) , Medial Geography: Techniaues and field Studies, L'mdon: Methuen Co. (1972).

### Extended Readings

Meade M.S. John W. Floria and Wilibert and Wilbert and Wilbert M Gester, Medical Geography New York: The Gaiford Press.  
 Primary Health Care, Medicine into Place, J.J. Macdonald, Elhurscain Publication Ltd. London  
 Liliundfeld, Abrahan M. (1988) Foundation of Epidemiology, New York. U.S.A  
 MacMahon, Brain, Pugh, T.F. and Ipen, J. (1960) Epidemiological Methods, U.S.A  
 Holland W.W. (ed.) (1970) Data Handling in Epidemology, London. Oxford University Press.

<b>Course Name</b>	<b>Water Resource Management</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Course Code &amp; Number</b>	<b>GETh 565</b>
<b>Session</b>	<b>2020-2021</b>

### Course Information

<b>Course Credit &amp; Marks</b>	<b>04 (Four): Full Marks-100</b>
<b>Course Introduction</b>	The course will provide a comprehensive understanding of the management of water resources. It begins with an introduction to the hydrological cycle, explaining the movement of water through various stages. The course then delves into the phases of human interventions in the water cycle, including atmospheric, watershed, runoff, groundwater, and maritime interventions. The finite nature of water resources is emphasized, along with the supply scenario of surface and groundwater. The sectors of freshwater demand utilization, such as domestic,

	<p>agriculture, industry, fisheries, navigation, and ecology, are explored. The course also covers flood management, water power development including dams and reservoirs, water quality pollution and control strategies, water conservation and demand management, water policy and planning, transboundary water resources, hydropolitics, and environmental issues in water resource development.</p>
<p><b>Course Objectives</b></p>	<p>The objectives of the course are:</p> <ol style="list-style-type: none"> <li>1. Develop a comprehensive understanding of the hydrological cycle and its relevance to water resource management.</li> <li>2. Examine human interventions in the water cycle, including atmospheric, watershed, runoff, groundwater, and maritime phases.</li> <li>3. Recognize water as a finite resource and analyze supply scenarios for surface and groundwater.</li> <li>4. Explore the utilization of freshwater in various sectors, such as domestic, agriculture, industry, fisheries, navigation, and ecology.</li> <li>5. Study flood management strategies, including both structural and non-structural approaches.</li> <li>6. Understand water power development, considering environmental and population displacement concerns associated with dams and reservoirs.</li> <li>7. Analyze water quality pollution and control strategies to preserve and enhance water quality.</li> <li>8. Explore water conservation and demand management techniques, including sectoral prioritization, water pricing, and efficient irrigation methods.</li> <li>9. Examine water policy, planning, and regional frameworks for effective water resource management.</li> <li>10. Investigate challenges related to transboundary water resources and the political dynamics of hydropolitics.</li> <li>11. Address environmental issues associated with water resource development, considering sustainability and impacts on ecosystems.</li> </ol>
<p><b>Learning Outcomes</b></p>	<p>Participants will achieve the following outcomes:</p> <ol style="list-style-type: none"> <li>1. Comprehensive understanding of the hydrological cycle, including its components and phases: atmospheric, watershed, runoff, groundwater, and maritime.</li> <li>2. Ability to analyze the finite nature of water as a resource and assess the supply scenario of surface and groundwater.</li> <li>3. Knowledge of sectors utilizing freshwater, such as domestic, agriculture, industry, fisheries, navigation, and ecology.</li> <li>4. Familiarity with flood management strategies, encompassing both structural and non-structural approaches to effectively mitigate flood impacts.</li> <li>5. Understanding of water power development, including dams, storage, reservoirs, and consideration of environmental and population displacement concerns.</li> <li>6. Proficiency in analyzing water quality pollution and implementing control strategies to preserve and enhance water quality.</li> <li>7. Exploration of water conservation and demand management techniques, including sectoral prioritization, water pricing, and efficient irrigation methods.</li> </ol>

	8. Appreciation for the significance of water policy, planning, and regional frameworks in achieving effective water resource management. 9. Insight into the challenges and dynamics associated with transboundary water resources and the political dimensions of hydropolitics. 10. Awareness of environmental issues related to water resource development, with a focus on sustainability and the impacts on ecosystems.
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

## Content

- I. Overview of the Hydrological Cycle
2. Phases of Human Interventions in the Water Cycle
  - 2.1. Atmospheric
  - 2.2. Watershed
  - 2.3. Runoff
  - 2.4. Ground water
  - 2.5. Maritime
3. Water as a Finite Resource
  - 3.1. Supply Scenario of Surface and Ground Water
4. Sectors of Fresh Water Demand Utilization
  - 4.1. Domestic
  - 4.2. Agriculture
  - 4.3. Industry
  - 4.4. Fisheries
  - 4.5. Navigation
  - 4.6. Ecology
5. Flood Management
  - 5.1. Structural Approaches
  - 5.2. Non-Structural Approaches
6. Water Power Development
  - 6.1. Dams and Storage. Reservoirs
  - 6.2. Environmental and Population Displacement Concerns
  - 6.3. Multi-purpose Benefits.
7. Water Quality Pollution and Control Strategies
8. Water conservation and Demand Management (Sectoral prioritization: of water use, including water pricing and irrigation efficiency).
9. Water Policy and Water Planning Including Institutional Framework
10. Transboundary Water Resources and Hydropolitics
11. Environmental issues in Water Resource Development

## LESSON PLAN

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Overview of the Hydrological Cycle	2
Lecture Series 2	Phases of Human Interventions in the Water Cycle	2
Lecture Series 3	Water as a Finite Resource	4
Lecture Series 4	Sectors of Fresh Water Demand Utilization	4
Lecture Series 5	Flood Management	3

Lecture Series 6	Water Power Development	5
Lecture Series 7	Water Quality Pollution and Control Strategies	4
Lecture Series 8	Water conservation and Demand Management (Sectoral prioritization: of water use, including water pricing and irrigation efficiency)	6
Lecture Series 9	Water Policy and Water Planning Including national Framework	4
Lecture Series 10	Transboundary Water Resources and Hydropolitics	6
Lecture Series 11	Environmental issues in Water Resource Development	2
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

Abbas. B.M., The *Ganges* Water Dispute  
 Ahmad. M. (ed.) (1989), Flood in Bangladesh  
 Ahmed. Q.K. et al (eds.) (1994), Converting Water into Wealth  
 BANCID, (1995)., Non-structural Aspects of Flood Management in Bangladesh  
 DOB, (1992), Training Manual of Environmental Management in Bangladesh  
 Elahi, K.M. and Rogge J.R. (1990), Riverbank Erosion Flood and Population Displacement in Bangladesh

### Extended Readings

Gleick P.H. (ed.) (1993)., Water in Crisis  
 Haggart K. (ed.) (1994)., Rivers of Life  
 Huq S. et al (eds) (1990), Environmental Aspects of Agricultural Development in Bangladesh  
 ICID (1994), Management of International River Basins and Environmental Challenges  
 Miah M.Z. (1990), Floods in Bangladesh  
 MPO (1991), National Water Plan Phases I and II  
 Nishat, A. et al (1993), Freshwater Wetlands in Bangladesh: Issues and Approaches for Management  
 Ohisson, L. (199)., Hydropolitics  
 Bangladesh Flood Policy Study

<b>Course Name</b>	<b>Resource Management</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Course Code &amp; Number</b>	<b>GETh 566</b>
<b>Session</b>	<b>2020-2021</b>

### Course Information

<b>Course Credit &amp; Marks</b>	<b>04 (Four): Full Marks-100</b>
<b>Course Introduction</b>	The course "Resource Management" provides an introduction to the principles and practices of managing natural resources. It covers the nature and types of resources, including renewable and non-renewable resources. The course examines the impact of population growth on natural resources and emphasizes

	<p>the importance of conserving ecosystems. Resource appraisal, including supply and demand analysis, and the concept of ecological footprint are explored. The course also addresses resource allocation, cultural perspectives on resource management, and the role of resource management in disaster risk management. The concepts of sustainability, carrying capacity, and environmental impact assessment are discussed, along with environmental management principles. The course concludes with a focus on resource and environmental management issues in Bangladesh.</p>
<p><b>Course Objectives</b></p>	<p>The objectives of the course "Resource Management" are as follows:</p> <ol style="list-style-type: none"> <li>1. Introduce different types of resources and their classifications, including renewable and non-renewable resources.</li> <li>2. Explore the impact of population growth on natural resource management.</li> <li>3. Emphasize the importance of conserving ecosystems in resource management.</li> <li>4. Develop skills in resource appraisal, analyzing supply, demand, and global patterns of resource use.</li> <li>5. Introduce the concept of ecological footprint and its implications for resource management.</li> <li>6. Discuss effective resource allocation and decision-making strategies.</li> <li>7. Consider the cultural context of resource management, including perceptions and attitudes towards resources.</li> </ol>
<p><b>Learning Outcomes</b></p>	<p>By the end of the course "Resource Management," students will achieve the following:</p> <ol style="list-style-type: none"> <li>1. Comprehensive understanding of resource types, classifications, and the development of natural resource management studies.</li> <li>2. Awareness of the impact of global population growth on natural resources.</li> <li>3. Appreciation of ecosystems, including their significance and examples from Bangladesh.</li> <li>4. Proficiency in resource appraisal, including supply, demand, and global patterns of resource use analysis.</li> <li>5. Understanding of the ecological footprint concept and its implications for resource management.</li> <li>6. Ability to allocate limited resources effectively.</li> <li>7. Insight into the cultural context of resource management and its influence on perceptions, attitudes, and behaviors.</li> <li>8. Recognition of the importance of resource management in mitigating natural hazards and disaster risk.</li> <li>9. Comprehension of resource sustainability and the role of sustainable development in resource management.</li> <li>10. Knowledge of environmental impact assessment and its role in evaluating resource management decisions.</li> <li>11. Familiarity with the basic principles of environmental management and the relationship between population, environmental degradation, global warming, and population-resource disequilibrium.</li> </ol>

	12. Analysis of the natural resource base of Bangladesh, including resource use, allocation, and identification of management issues and challenges.
--	------------------------------------------------------------------------------------------------------------------------------------------------------

**Course Contents**

1. Introduction to Resource Management & Nature & types of resources  
(Definition of resources & natural resources, development of natural resources management studies, classification of natural resources- renewable/non-renewable resources, stock/fund resources, flow resources etc.)
2. Growth of Population and NRM (global trend of population growth, its impact on natural resources)
3. Resource Ecosystems (concept of ecosystems, example from BD, significance of conserving ecosystems etc.)
4. Resource Appraisal (supply & demand of resources, global pattern of resource use, demand and supply of natural endowments- global & national level)
5. Concept of ecological footprint
6. Resource Allocation (need for the allocation of limited resources)
7. Resource Management in a Cultural Context: Perception, Attitude & Behaviour (example from BD)
8. Natural Hazard & Resource Management (concept of hazards, significance of resource management in disaster risk management)
9. Resource Sustainability & the concept of carrying capacity in NRM (concept of sustainability, need for sustainable development in NRM)
10. Environmental Impact Assessment & Evaluation of Resource Management Decisions (evolution of EIA, types of EIA, significance and stages of EIA etc.)
11. Environmental Management (Basic Principles, population & environmental degradation, global warming and effects, population-resource disequilibrium)
12. Resource & Environmental Management in Bangladesh (Issues & Outlook) -natural resource base of BD, state of resource-use, allocation, management issues & challenges)

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Introduction to Resource Management & Nature & types of resources	2
Lecture Series 2	Growth of Population and NRM	2
Lecture Series 3	Resource Ecosystems	4
Lecture Series 4	Resource Appraisal	4
Lecture Series 5	Concept of ecological footprint	3
Lecture Series 6	Resource Allocation	5
Lecture Series 7	Resource Management in a Cultural Context: Perception, Attitude & Behaviour	4
Lecture Series 8	Natural Hazard & Resource Management	6
Lecture Series 9	Resource Sustainability & the concept of carrying capacity in NRM	4
Lecture Series 10	Environmental Impact Assessment & Evaluation of Resource Management Decisions	4
Lecture Series 11	Environmental Impact Assessment & Evaluation of Resource Management Decisions	2

Lecture Series 12	Resource & Environmental Management in Bangladesh	2
	Tutorials	6
<b>Total</b>		<b>48</b>

### Essential Readings

Mitchell, Bruce , Geography and Resource Analysis, London & New York: Longman  
 Simons, Ian,, The Ecology of Natural Resources

### Extended Readings

Plerce, J.T., The Flood Resource  
 Islam, M.A., Environment, Landuse and Natural Hazards in Bangladesh  
 Kabir, M.H. and Amin, S.M.N. (2007). Tanguar *Haor: A Diversified Freshwater Wetland*, Academic Press and Publishers Library, Dhaka.  
 Warrick and Ahmad (eds.) , The Implications of Climate and Sea Level for Bangladesh

<b>Course Name</b>	<b>Rural Development and Planning</b>
<b>Course Code &amp; Number</b>	<b>GETh-567</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-22</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	The world's rural areas are identifiable as distinctive physical, social, or economic spaces. The study of rural development is essentially important in the context of Bangladesh. This course is particularly important for understanding the spatiality of rural environment, problems and ways to resolve.
<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• explain rural problems, development strategies and tools, development measures and constraints of rural development</li> <li>• enable students to undertake comprehensive planning for integrated rural development</li> </ul>
<b>Learning Outcomes</b>	After completing this course, the students will be able to: <ul style="list-style-type: none"> <li>• learn about elements of rural development, rural problems, development tools</li> <li>• have good understanding on recent development measures and non-state actors</li> </ul>



## *Course Contents*

- 1. Concepts of Development, Anti-development Relevance to Geography.**
- 2. Elements of Rural Development;**
  - 2.1 Physical
  - 2.2 Social
  - 2.3 Economic
  - 2.4 Cultural
  - 2.5 Political
  - 2.6 Institutional etc.
- 3. A History of Rural Development**
  - 3.1 Rural Industrialization/cottage Industry
  - 3.2 Providing Basic Needs
  - 3.3 Integrated Rural Development
- 4. The Developing World**
  - 4.1 Development Theories (Modernization, Dependency Neo-classical)
- 5. Rural. Poverty**
  - 5.1 Definition
  - 5.2 Measurement
  - 5.3 Rural and Urban Poverty
  - 5.4 Famines
- 6. Tools of Rural Development**
  - 6.1 Empowerment -
  - 6.2 Controlling Population
  - 6.3 Improving Health
  - 6.4 Improving Education
  - 6.5 Improving Infrastructure
- 7. Rural De and A**
  - 7.1 Pros and Cams of Aid
  - 7.2 Aid to Bangladesh
- 8. Recent Rural Development Measures**
  - 8.1 Land Reform
  - 8.2 Green Revolution
  - 8.3 Decentralization/Devaluation
  - 8.4 Micro credit
  - 8.5 Growth and Service Centres
  - 8.6 Local Governments
  - 8.7 Human development
- 9. The Non-State Actors in Development**
  - 9.1 NGOs
  - 9.2. Civil Society
  - 9.3. New Social Movement
- 10. Rural Development in Bangladesh**
  - 10.1. VAID
  - 10.2. Comilla Co-operatives
  - 10.3. Swanirvar Movement
  - 10.4 Micro Credit
  - 10.5 TRDP/ BRDB
  - 10.6 Upazila System.
- 11. Rural Development in Bangladesh The Future Senario**

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Concepts of Development, Anti-development Relevance to Geography	2
Lecture Series 2	Elements of Rural Development	2
Lecture Series 3	A History of Rural Development	4
Lecture Series 4	The Developing World	4
Lecture Series 5	Rural Poverty	4
Lecture Series 6	Tools of Rural Development	4
Lecture Series 7	Rural De and A	4
Lecture Series 8	Recent Rural Development Measures	6
Lecture Series 9	The Non-State Actors in Development	4
Lecture Series 10	Rural Development in Bangladesh	6
Lecture Series 11	Rural Development in Bangladesh The Future Scenario	2
	Tutorials	6
<b>Total</b>		<b>48</b>

### **Essential Readings**

Hewes, L: Rural Development: World Frontiers, The Iowa State University Press, Iowa, 1974.  
Mabogunje, L. Akin.: The Development Process: A Spatial Perspective, Hutchinson University Press, London, 1980  
Siddiqui, Kamal: The Political Economy Of Rural Poverty In Bangladesh.  
Alamgir, M.: Development Strategy For Bangladesh, Centre For Social Studies, Dhaka, 1980.  
Abdullah, M.M.: Rural Development In Bangladesh, Dhaka, 1979.

### **Extended Readings**

Weitz, R.: Rural Development In A Changing World, MIT Press, Cambridge, Mass. 1971.  
Escap : Guideline For Rural Centre Planning, 1977  
Ban, S.H., Moon, P.Y.: Rural Development, Havard University & Perkins, D.H. Press, 1980.  
Ahmad, M. M. (2000). Donors, NGOs, the State and their clients in Bangladesh, Dhaka.  
Ahmad, M. M. (2001) Understanding the South : How Northern Donors and NGOs Understand the Problems of the South, Dhaka.  
evKx, Ave`yj MÖvgxb emwZ, XvKv : e½ cÖKvkbx

<b>Course Name</b>	<b>Population, Environment and Sustainable Development of Bangladesh</b>
<b>Course Code &amp; Number</b>	<b>GETh 568</b>
<b>Course Type</b>	Theoretical
<b>Session</b>	2021-2022

#### **COURSE & SECTION INFORMATION**

<b>Course Credit &amp; Marks</b>	<b>04 (Four); Full Marks: 100</b>
<b>Course Introduction</b>	The course introduces the various approaches being applied to study population, environment a sustainable development. At the same time, it explains as to how population, environment and sustainable development are linked. It also highlights human activities are influencing in the environment and overall development of a country like Bangladesh. The course also describes present practices and strategies to ensure the sustainable development goals.
<b>Course Objectives</b>	The course is intended to share with students the importance of understanding various phenomena on population, environment and sustainable development. In addition, it is also aimed to teach students as to how environmental issue became important to meet the sustainable development challenges.
<b>Learning Outcomes</b>	-students will be able to understand the population, environment and sustainable development issues. -Student will be familiar with the human interventions on environmental and development issues. -Students will be learning the various dimensions population, environment and sustainable development in Bangladesh.

#### **Course Contents**

1. Definition and Scope of Population, Environment a Sustainable Development
2. The Man-Environment Relationship Concept
3. Economic Activities and Non-Economic Activities
4. Effects on Natural Environment and Biological Environment
5. Structural Intervention of Man on Environment
6. Population, Environment and Sustainable Development in Bangladesh
7. Major National Environment Protection Strategies of Bangladesh
8. Relationship between Sustainable Development and Conservation of Natural Environment
9. Environmental Issues and Sustainable Development Challenges of Bangladesh
10. Sustainable Development Prospects for Bangladesh

#### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Definition and Scope of Population, Environment a Sustainable Development	04

Lecture Series 2	The Man-Environment Relationship Concept	04
Lecture Series 3	Economic Activities and Non-Economic Activities	04
Lecture Series 4	Effects on Natural Environment and Biological Environment	04
Lecture Series 5	Structural Intervention of Man on Environment	04
Lecture Series 6	Population, Environment and Sustainable Development in Bangladesh	06
Lecture Series 7	Major National Environment Protection Strategies of Bangladesh	04
Lecture Series 8	Relationship between Sustainable Development and Conservation of Natural Environment	04
Lecture Series 9	Environmental Issues and Sustainable Development Challenges of Bangladesh	06
Lecture Series 10	Sustainable Development Prospects for Bangladesh	04
Lecture Series 11	<i>Tutorial</i>	04
Total		48

### Essential Readings

Islam, Naznin. Sustainable Development in Bangladesh, A H Development Publishing House, Dhaka

Rasheed, K.B.S. Bangladesh: Resource and Environmental Profile, A H Development Publishing House, Dhaka

Samiya A. Selim, Shantanu Kumar Saha, Rumana Sultana, Carolyn Roberts, The Environmental Sustainable Development Goals in Bangladesh, Routledge, UK.

### Extended Readings

Sara Hsu, Routledge Handbook of Sustainable Development in Asia, Routledge, UK

Asayehgn Desta, Environmentally Sustainable Economic Development, Praeger

Hugh Brammer, Bangladesh: Landscapes, Soil Fertility and Climate Change, University Press Ltd.

<b>Course Name</b>	<b>Geography of Transport, Flows and Development</b>
<b>Course Code &amp; Number</b>	<b>GETh 569</b>
<b>Course Type</b>	<b>Theory</b>
<b>Session</b>	<b>2020-2021, 2021-2022</b>

### Course Information

<b>Course Credit &amp; Marks</b>	<b>04 (Four), Full Marks 100</b>
<b>Course Introduction</b>	The course "Geography of Transport, Flows, and Development" provides an in-depth exploration of the relationship between transport systems, geographical factors, and socioeconomic development. It examines the significance of transport in shaping regional, national, and global economies, and its impact on the

	environment. The course also investigates various transport modes, terminals, and their functions, along with their role in international trade, urban development, and sustainability.
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>• Understanding the issues and challenges of management aspects of different types of transport and related issues like business, communication, and communication management etc.</li> <li>• Analyze the interplay between transport systems and geography in the context of socioeconomic development.</li> <li>• Examine the role of transport in economic development and its implications as a factor of production.</li> <li>• Evaluate the impact of transport on urban development, international trade, and the environment, and propose sustainable solutions.</li> </ul>
<b>Learning Outcomes</b>	This course enables students to critically analyze and address the challenges and opportunities associated with transport systems, flows, and their connection to socioeconomic development in a well-rounded manner. They will gain a comprehensive understanding of the intricate relationship between transport systems and geography, exploring their significance in shaping regional, national, and global economies. Students will learn to identify factors influencing transport development, including strategies to overcome physical barriers. Additionally, they will evaluate the role of transport as a key driver of economic development, considering its impact on trade, investment, and market integration. The course equips students to apply economic models, make informed decisions, and provide policy recommendations. They will also explore the multidimensional impact of transport on urban development, international trade, and the environment, evaluating effects on urban form, land use, mobility, and proposing sustainable solutions for energy consumption, emissions, and resource depletion.

*Course Contents*

- 1. Transport and Geography**
  - 1.1 Significance of transport and geography
  - 1.2 Physical barriers in transport development
  - 1.3 Overcoming the physical barriers
  
- 2. Transport and the economy**
  - 2.1 Transport and economic development
  - 2.2 Models of transport and development
  - 2.3 Transport as a factor of production
  
- 3. Transport modes and terminals**
  - 3.1 Maritime, air and land transport
  - 3.2 Intermodal transport
  - 3.3 Functions of transport terminals
  
- 4. International trade and freight distribution**
  - 4.1 Transport, globalization and international trade

- 4.2 Commodity chains and logistics
- 4.3 Logistics and freight distribution

**5. Urban transport**

- 5.1 Transport and urban form
- 5.2 Urban land use and transport
- 5.3 Urban mobility
- 5.4 Urban transport problem

**6. Transport and environment**

- 6.1 Socio-economic impacts of transport on environment
- 6.2 Transport sustainability

**LESSON PLAN**

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Transport and Geography	6
Lecture Series 2	Transport and the economy	8
Lecture Series 3	Transport modes and terminals	8
Lecture Series 4	International trade and freight distribution	6
Lecture Series 5	Urban transport	8
Lecture Series 6	Transport and environment	6
	Tutorials	6
<b>Total</b>		<b>48</b>

**Essential Readings**

Knowles, R et. al. (2009): Transport Geographies Mobilitis, Flows and Spaces. Blackwell Publishing: Oxford  
 Jean-Paul Rodrigue et. al. (2006) The Geography of Transport Systems 2<sup>nd</sup> Routledge: London & New York.

**Extended Readings**

Hoyle, B and Knowles, R. (1998) Modern Transport Geography 2<sup>nd</sup> John Wiley and Sons: England.

<b>Course Name</b>	<b>Climate Change and Human Adaptation</b>
<b>Course Code &amp; Number</b>	<b>GETh 570</b>
<b>Course Type</b>	<b>Theoretical (Optional)</b>
<b>Session</b>	<b>2021-2022</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	The course intends to provide a basic background of global climate change and human adaptation to the impacts of climate changes to the students. This course focuses on how to develop students’ vision towards fundamental concepts of climate change and human adaptation. Students are expected to learn the concepts, theories and legal aspects of climate change in respect of local, regional and global contexts. This course will help students gain knowledge how to assess and reduce

	the risk of climate change impacts and to measures the human adaptation procedures.
<b>Course Objectives</b>	<p>The major objectives of the course are to:</p> <ul style="list-style-type: none"> <li>● provide an overview of the terminologies, concepts and theories related to climate change and human adaptation.</li> <li>● prepare students how to conceptualize the global warming and causes of climate change.</li> <li>● familiar students with various types of adaptation systems created by the human society throughout the globe.</li> <li>● orient students with methods and survey techniques of climate change impact assessments.</li> <li>● teach students to the climate change acts and regulations of local, regional and global contexts.</li> </ul>
<b>Learning Outcomes</b>	<p>After completing this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>● learn the fundamental concepts of weather, climate, climatic variability and climate change.</li> <li>● be familiar with global, regional and local impacts of climate change on various sectors.</li> <li>● learn the various procedures of human adaptation to climate change with different types of ecosystems.</li> <li>● learn the tools and techniques of assessing impacts of climate change on physical, social and economic environments.</li> <li>● be familiar with acts and policies of climate change framed at local, regional and global level.</li> </ul>

### Course Contents

1. **Climate Change:** Concept, Elements, Nature, Needs to study, Related Disciplines
2. **Climatic Variability:** Climatic Variability, Extreme Events and Their inter-linking
3. **Causes of Climate Changes:** Natural causes, man-made causes, theories and hypothesis
4. **Global Warming:** Definition, Concept, process, Extend, and human –interaction, global response
5. **Adaptation to Climatic Change:** Types, Principles and vulnerability
6. **Adaptation Capacity:** Types, exposure, sensitivity
7. **Impact Assessments:** Methodologies, Vulnerability-Adaptation Linkage
8. **Adaptation Strategies:** Key elements, types, Natural and human dimensions, spatial adaptation (local, regional, national and global), sectoral adaptation (agriculture, water resources, ecosystem and bio-diversity)
9. **Responses and Assessment:** Global and regional partnership, community responses
10. **International Participations:** Agenda-20, UNFCCC, IPCC, Kyoto Protocol, COP, CDM, Carbon Trade
11. **Climate Change and Bangladesh:** Case studies, climatic effect, extreme events, challenges and national strategies

### LESSON PLAN

Lecture sessions	Topics	Number of Classes
Lecture Series 1	Climate Change	02
Lecture Series 2	Climatic Variability	03

Lecture Series 3	Causes of Climate Change	03
Lecture Series 4	Global Warming	06
Lecture Series 5	Adaptation to Climate Change and Capacity	06
Lecture Series 6	Impact Assessments	06
Lecture Series 7	Adaptation Strategies	06
Lecture Series 8	Responses and Assessment	05
Lecture Series 9	International Participations	05
Lecture Series 10	Climate Change and Bangladesh	05
Lecture Series 11	Tutorials	06
Total		48

### Essential Readings

J.T. Houghton, G.J. Jenkins and J.J. Ephraums 1990 Climate Change, Cambridge University Press

S. Huq, Z. Karim M. Asaduzzaman and F. Mahtab 1999 Vulnerability Adaptation to Climate Changes for Bangladesh, Kluwer Academic Pub.

S.B. Smith (eds.) 1996 Adapting to Climate Change: Assessment and Issues, Springer.

<b>Course Name</b>	<b>Geography of Tourism</b>
<b>Course Code &amp; Number</b>	<b>GETh-571</b>
<b>Course Type</b>	<b>Theoretical</b>
<b>Session</b>	<b>2021-22</b>

<b>Course Credit and Marks</b>	<b>04 (Four); Full Marks 100</b>
<b>Course Introduction</b>	Geographical features and beauties of any territory opens up the opportunities for tourism industry development. However, recreational facilities provision must not interrupt the natural setting and existing human-environment relationship of the tourist attractions which this course aims to teach.
<b>Course Objectives</b>	The course will: <ul style="list-style-type: none"> <li>• increase students' knowledge on geographical analysis of tourism</li> <li>• develop concepts of uninterrupted synergies of human and environment with the promotion of tourism industry</li> </ul>
<b>Learning Outcomes</b>	After completing this course, the students will be able to: <ul style="list-style-type: none"> <li>• learn about tourism as industry, provision of facilities, geographical analysis of tourism</li> <li>• know about eco- tourism and constraints of tourism development</li> <li>• maintain human intervention to the minimum and sustainable while promoting tourism</li> </ul>



### *Course Contents*

1. Definition, nature scope and importance of tourism and leisure
2. Types of tourism and leisure:
3. Tourism as an industry
4. Tourism and related infrastructure
5. Recreational Facilities; Natural, Manmade their devilmnt and management
6. Geographical analysis of tourism: Approaches, methods, techniques
7. Development of Tourism: Policy guidelines, organizational setup Potential, eco-tourism
8. Constrains in Tourism Development: Natural, Social and economic
9. Tourism in Bangladesh: Problems and Prospect

### **LESSON PLAN**

<b>Lecture sessions</b>	<b>Topics</b>	<b>Number of Classes</b>
Lecture Series 1	Definition, nature scope and importance of tourism and leisure	4
Lecture Series 2	Types of tourism and leisure	4
Lecture Series 3	Tourism as an industry	4
Lecture Series 4	Tourism and related infrastructure	4
Lecture Series 5	Recreational Facilities; Natural, Manmade their devilmnt and management	6
Lecture Series 6	Geographical analysis of tourism: Approaches, methods, techniques	4
Lecture Series 7	Development of Tourism: Policy guidelines, organizational setup Potential, eco-tourism	6
Lecture Series 8	Constrains in Tourism Development: Natural, Social and economic	6
Lecture Series 9	Tourism in Bangladesh: Problems and Prospect	4
	Tutorials	6
<b>Total</b>		<b>48</b>