KHULNA UNIVERSITY

Learn, Lead and Live

OBE OUTCOME BASED EDUCATION

2021-22
and onwards

Undergraduate Curriculum

Urban and Rural Planning Discipline

Science, Engineering and Technology School

OUTCOME-BASED CURRICULUM

BACHELOR OF URBAN AND RURAL PLANNING

Urban and Rural Planning Discipline
Khulna University
August 2022

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OUTCOME BASED EDUCATION

01 Title of the Academic Program

Bachelor of Urban and Rural Planning

Program Overview

Degree	Bachelor of Urban and Rural Planning
Abbreviated form of the Degree	BURP
Discipline/Program Offering Entity (POE)	Urban and Rural Planning Discipline
School	Science, Engineering and Technology School
Awarding Institution	Khulna University
Location	Khulna, Bangladesh
Bangladesh National Qualifications Framework (BNQF) Level	7
International Standard Classification of Education (ISCED) Code	0731
Mode of Study	Full Time
Language of Study	English
Applicable Session	2021-22 and onwards

02 Name of the University

Khulna University

03 Vision of the University

Creation of global leaders who will contribute to make knowledge-based just society through accelerating inclusive and transformative growth of Bangladesh and the world. The university aims to achieve this vision through scholarly enquiry and contribution to the global knowledge pool.

04 Mission of the University

University Mission & Details

UM1	Explore human potential to the fullest extent and produce self-motivated, aspiring leaders to work for the betterment of the humankind based on wisdom, freethinking, creativity and unhindered intellectual exercises;
UM2	Ensure a transformative educational experience that enables creative learning, entrepreneurship and inquisitiveness among the students;
UM3	Create an inclusive research environment that enables graduates to make demonstrable economic and social impacts through translating knowledge and innovation into practice driven by moral values and professional ethics.

UM = University Mission

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UM = University Mission

05 Name of the Discipline/Program Offering Entity (POE)

Printmaking Discipline

06 Vision of the Discipline/POE

Producing knowledge and achieving professional aptitude in an artistic framework that leads the integrated endeavors toward developing a creative environment in Printmaking across the world.

07 Mission of the Discipline/POE

Discipline Mission & Details

M1	The program provides professional education and creates opportunities for creative exploration with the most advanced Printmaking techniques.
M2	Learners are enriched through the wide range of conversion and collaboration of conventional and unconventional Printmaking media.
M3	The program produces critical and competent graduates who implement the techniques of Printmaking for the development of the creative world.
M4	Learners are enriched through the wide range of conversion and collaboration of technologies and techniques; principal of aesthetics, basic knowledge of arts and humanities as well as social science.

M = Mission of the Discipline/POE

09 Name of the Degree

Bachelor of Urban and Rural Planning

10 Description of the Program

The Bachelor of Urban and Rural Planning program offered by the URP Discipline at Khulna University is a four-year degree that focuses on contemporary patterns of urban and rural development, and the processes that contribute to change across cities and rural areas. The degree program is rich in both theory and practice-based elements, including fieldwork/field visit. Most theoretical courses have their supplementary practical courses, which require them to do real world exercises involving field visits, collection of spatial and non-spatial data, processing, and analysis of data, and framing out the solutions. For BURP degree completion, each student has to earn a total 155 credits. Students have to take all the core courses. Bachelor level students have to complete some optional courses and total credits in optional courses are 21. In BURP program, 63.5 credits of general education courses (GED), which are 36.70% of total credits are offered considering the multi-disciplinary nature of the program. The multi-disciplinary courses are drawn on economics, geography, urban planning, transport planning, rural development planning, environmental planning and management, law, project planning and evaluation techniques, sociology etc.

The BURP program combines traditional lecture-based teaching with a variety of tutorials, seminars and workshop sessions to open up discussion and allow learners to work within smaller groups. Practical subjects, such as SPSS for statistical analysis, Geographic Information Systems (GIS), Remote sensing, Database Management and general computer skills, are taught primarily in the computer suites, with some accompanying group work and the occasional lecture session, giving learners an overall hands-on learning experience. Use of modern technologies and contemporary tools are one of the special features of the program. The Bachelor degree program includes computer application packages, e.g., R for stastistical analysis, ArcGIS for geographic information system, RTK GPS and total station for engineering surveying course, ERDAS IMAGINE for remote sensing, Microsoft Visio & SketchUp for computer aided design, MS Access for Database Management and Microsoft Project for project planning and management. Project-based learning, incorporating studio-based design work, field research and study visits, is integral to the courses in the program. Projects provide an excellent opportunity for the students to integrate their knowledge and skills and apply them to real situations. They also play a crucial role in the development of other skills, such as self-organization, initiative and independence, analysis, creativity, and presentation (particularly graphic and oral), and of course team working. Projects also provide the students with exposure to professional practice. In addition, the program also provides an opportunity for the students to acquire knowledge about professional practices before starting their professional career. This curriculum provides the opportunity for the students of BURP program to participate in a three-week internship in different planning and development agencies, different I-NGOs, and consulting firms in order to have exposures to professional practice.

11 Graduate Attributes

	Graduate Attributes	Domain
GA1	Planning knowledge: Graduates will understand how planning influences society and space in a variety of urban and rural contexts. This knowledge will be delivered through various teaching platforms, in the classroom and online. Students will also gain real world exposure to planning through a time span of professional attachment. Graduates will possess broad and coherent knowledge about urban and rural planning and its place in contemporary society nationally and internationally.	Fundamental
GA2	Application of tools and techniques: Graduates will be able to demonstrate application of varied tools and techniques in analyzing urban and rural phenomena. These tools will provide graduates a degree of confidence to justify their decisions rationally.	Fundamental
GA3	Problem solving: Graduates will possess skills to identify problems and develop solutions in urban and rural planning. This will include capacity to interpret urban and rural phenomena, their impacts, and to formulate autonomous and collaborative decision-making. The program will sharpen those skills using varied tools and techniques of urban and rural planning.	Thinking
GA4	Information literacy: Graduates will have the ability to identify information requirements in a variety of planning situations, and skills in sourcing, using, and representing that information for planning practice. This will include gathering information from primary and secondary sources and evaluating the significance of that information for a given context. These skills will be taught and exercised through a variety of guided assignment tasks.	Thinking
GA5	Ethical conduct and social responsibility: Graduates will have awareness of the professional and ethical responsibilities of the planning profession in urban and rural contexts. Graduates will have skills to engage appropriately with various participants in the planning discipline, and to be appropriately responsive to various social and cultural influences in planning interactions.	Social
GA6	Independence and collaboration: The various learning activities undertaken during the program will provide the graduate with skills to work independently and collaboratively in a variety of planning situations. Graduates will have confidence in their autonomous grasp of planning knowledge, and skills to inclusively negotiate planning outcomes with a variety of stakeholders. These skills will be developed through on-campus and online activities, ranging from self-directed learning to collaborative projects.	Social
GA7	Communication skills: Graduates will possess skills to communicate in various forms essential to the discipline. This will include the ability to communicate through oral communication, report writing, statistics, maps, plans and other graphical forms. It will also include skills to constructively engage with various practitioners in urban and rural planning. These skills will be taught and practiced in lectures, examination activities and assessment tasks throughout the course.	Personal
GA8	Lifelong learning: Skills and knowledge developed during the program will foster intellectual curiosity, creativity, and critical thinking among the graduates. Well-developed cognition of planning concepts and practices developed through the program will provide a foundation for lifelong intellectual engagement with the discipline.	Personal

GA = Graduate Attributes

12 Program Educational Objectives (PEOs)

The core areas of program objectives and learning outcomes of Bachelor of Urban and Rural Planning program are to achieve mastery of knowledge in the field of urban and rural planning; developing intellectual, transferable and professional skills; enhancing research ability and adoption of professional ethics.

	Program Educational Objectives	Domain
PEO1	To equip students with a broad understanding of theoretical foundations and contemporary issues in the field of urban and rural planning;	Fundamental, Thinking, Personal
PEO2	To enhance intellectual, transferable and professional skills for attaining sustainable and inclusive planning;	Thinking, Social, Thinking, Personal
PEO3	To develop advanced research ability for contributing to research-policy interface;	Thinking, Social, Thinking, Personal
PEO4	To provide knowledge on professional values and ethics in planning practice.	Thinking, Social, Thinking, Personal

PEO = Program Educational Objective

13 Program Learning Outcomes (PLOs)

After successful completion of the degree, the learners will be able to:

A. Fundamental Skills	
PLO1	Demonstrate a deep understanding of the discipline's underlying principles and concepts
PLO2	Exhibit the ability to conceptualize substantive and procedural discourses of planning
PLO3	Perform the role of a professional planner to deal with planning challenges of urban and rural context
B. Social Skills	
PLO4	Exhibit leadership and collaboration skills for organising teamwork, community mobilization and decision-making
PLO5	Comprehend professional aptitudes and demonstrate compliance to high ethical values
C. Thinking Skills	
PLO6	Manifest the ability to effectively use visual, oral, written communication techniques and methodological approaches for data analysis
PLO7	Conduct research through conceptual framing of urban and rural planning issues using varied research methods
D. Personal Skills	
PLO8	Disseminate and apply the principles, theories and concepts of urban and rural planning by integrating social, economic and environmental issues
PLO9	Demonstrate the ability to formulate and propose cogent policies, strategies and actions responding towards the sustainability challenges
PLO10	Plan, conduct and disseminate an independent research

PLO = Program Learning Outcome

14 Mapping Mission of the University with PEOs

PEOs \ Missions	UM1	UM2	UM3
PEO1	3	3	2
PEO2	3	3	3
PEO3	3	3	3
PEO4	3	2	3

Level of association: 3=High, 2=Medium, 1=Low

15 Mapping PLOs with PEOs

Program Learning Outcomes (PLOs)		Program Educational Objectives (PEOs)			
		PEO1	PEO2	PEO3	PEO4
Fundamental Domain	PLO1	●	●	●	
	PLO2	●	●	●	
	PLO3		●	●	●
Social Domain	PLO4		●	●	●
	PLO5		●		●
Thinking Domain	PLO6		●	●	
	PLO7	●	●	●	●
Personal Domain	PLO8	●	●	●	
	PLO9	●	●	●	
	PLO10	●	●	●	●

16 Mapping Courses with PLOs

Course Code and Course Title	Program Learning Outcomes (PLOs)									
	Fundamental Domain			Social Domain		Thinking Domain		Personal Domain		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
First Year First Term										
0731 04 URP 1121: History of Human Settlements	•		•					•		
0731 04 URP 1131: Geography for Planners	•	•	•		•	•	•		•	•
0731 04 URP 1132: Cartography (Studio/Project)	•	•	•	•	•	•	•	•	•	•
0731 04 Arch 1154: Architectural Drawings and Graphic Design (Studio)	•		•			•				
0311 04 Econ 1157: Principles of Economics	•	•	•					•	•	
0611 04 CSE 1162: Basic Computer Application for Planners (Lab.)			•	•	•	•				
0232 04 Eng 1171: Communicative English						•	•			
0541 04 Math 1173: Mathematics I	•					•	•			
0314 04 Soc 1175: Sociology for Planners	•	•		•	•	•		•	•	
First Year Second Term										
0731 04 URP 1221: Introduction to Urban Affairs and Planning	•	•	•					•	•	
0731 04 Arch 1254: Graphic Reproduction and Computer Aided Design (Studio/Project)	•		•	•	•	•				
0611 04 CSE 1262: Database Management (Lab./Project)		•	•		•		•		•	
0541 04 Math 1273: Mathematics II	•					•	•			
0542 04 Stat 1277: Statistics for Planners	•	•	•	•		•	•	•		•
0732 04 CE 1281: Engineering Survey	•	•	•	•		•		•	•	
0732 04 CE 1282: Engineering Survey (Fieldwork & Studio)	•	•	•	•		•		•	•	
0732 04 CE 1283: Introduction to Construction Engineering and Management	•	•	•			•	•	•	•	

Course Code and Course Title	Program Learning Outcomes (PLOs)									
	Fundamental Domain			Social Domain		Thinking Domain		Personal Domain		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
Second Year First Term										
0731 04 URP 2111: Rural Planning I	●		●		●		●	●		
0731 04 URP 2112: Rural Planning I (Fieldwork)		●	●		●	●	●	●		
0731 04 URP 2124: Site and Area Planning Technique (Fieldwork & Studio)	●	●	●	●	●	●	●	●	●	●
0731 04 URP 2125: Introduction to Landscape and Urban Design	●	●	●		●	●		●	●	
0731 04 URP 2126: Introduction to Landscape and Urban Design (Fieldwork & Studio)	●	●		●	●	●	●	●	●	
0611 04 CSE 2162: Programming Language (Lab./Project)	●			●		●			●	
0611 04 CSE 2164: Computer-Based Statistical Analysis (Lab./Project)			●			●	●	●		
0314 04 Soc 2175: Social Psychology	●	●	●	●	●	●	●	●	●	
0542 04 Stat 2177: Statistical Methods for Planning Research			●			●	●	●		
0314 04 Soc 2179: Population and Gender Studies	●	●	●	●	●	●	●	●	●	●
Second Year Second Term										
0731 04 URP 2221: Urban Analysis Techniques		●		●		●		●		●
0731 04 URP 2222: Urban Analysis Techniques (Fieldwork & Studio)		●		●		●		●		●
0731 04 URP 2231: Geographic Information System			●			●	●	●	●	
0731 04 URP 2232: Geographic Information System (Lab./Project)			●			●	●	●		
0731 04 URP 2235: Basic Environmental Studies	●	●	●			●	●	●	●	
0731 04 URP 2236: Basic Environmental Studies (Fieldwork & Studio)	●	●	●				●	●	●	●
0731 04 URP 2241: Fundamentals of Transportation Planning and Engineering	●		●			●	●	●		●
0731 04 URP 2242: Fundamentals of Transportation Planning and Engineering (Fieldwork & Studio)	●		●	●	●				●	●
0311 04 Econ 2257: Urban and Regional Economics	●	●	●			●		●	●	

Course Code and Course Title	Program Learning Outcomes (PLOs)									
	Fundamental Domain			Social Domain		Thinking Domain		Personal Domain		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
Third Year First Term										
0731 04 URP 3107: Research Methods for Planners	•	•	•	•	•	•	•	•	•	•
0731 04 URP 3108: Tools for Community Participation (Fieldwork & Studio)	•	•	•	•	•	•	•	•	•	•
0731 04 URP 3111: Rural Planning II	•	•	•	•	•			•	•	
0731 04 URP 3112: Rural Planning II (Fieldwork & Studio)	•	•	•	•		•	•	•	•	•
0731 04 URP 3125: Urban Design and Conservation		•	•	•	•	•		•	•	
0731 04 URP 3126: Urban Design and Conservation (Fieldwork & Studio)	•	•	•	•	•	•	•	•	•	
0731 04 URP 3135: Environmental Management and Planning	•	•				•	•	•	•	
0731 04 URP 3141: Transport Policy and Planning	•		•			•	•	•	•	
0731 04 URP 3142: Transport Policy and Planning (Fieldwork & Studio)	•		•			•	•	•	•	
0731 04 URP 3145: Land Administration and Real Estate	•	•	•	•		•		•	•	
0311 04 Econ 3157: Development Policy and Planning	•	•	•				•	•	•	
Third Year Second Term										
0731 04 URP 3221: Urban Development Planning	•	•	•	•	•	•	•	•	•	
0731 04 URP 3222: Urban Development Planning (Fieldwork & Studio)	•	•	•	•	•	•	•	•	•	•
0731 04 URP 3232: Spatial Analysis and GIS Programming (Lab./Project)	•		•	•			•			•
0731 04 URP 3233: Remote Sensing and Photogrammetry	•		•			•	•	•		•
0731 04 URP 3234: Remote Sensing and Photogrammetry (Lab./Project)	•	•		•		•	•	•		
0731 04 URP 3235: Disaster Planning and Management	•		•	•			•	•	•	
0731 04 URP 3236: Disaster Planning and Management (Fieldwork & Studio)	•		•	•	•	•	•	•	•	•
0731 04 URP 3245: Housing	•	•	•	•	•	•	•	•	•	
0731 04 URP 3246: Housing (Fieldwork & Studio)	•	•	•	•	•	•	•	•	•	•

Course Code and Course Title	Program Learning Outcomes (PLOs)									
	Fundamental Domain			Social Domain		Thinking Domain		Personal Domain		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
Fourth Year First Term										
0731 04 URP 4106: Thesis Proposal Development					●	●	●	●		●
0731 04 URP 4113: Regional Planning	●	●	●		●	●		●		
0731 04 URP 4121: Urban Governance	●	●	●		●			●	●	
0731 04 URP 4141: Sustainable Transport	●	●	●				●		●	●
0731 04 URP 4143: Municipal Services Planning	●	●	●			●	●	●	●	●
0731 04 URP 4144: Municipal Services Planning (Fieldwork & Studio)	●	●		●		●		●	●	
0421 04 Law 4153: Legal Aspects and Ethics of Planning	●	●		●	●		●	●	●	
0311 04 Econ 4157: Natural Resources Management	●	●		●				●	●	
Fourth Year Second Term										
0731 04 URP 4206: Thesis	●	●			●	●	●	●	●	●
0731 04 URP 4208: Seminar	●			●	●	●	●	●		●
0731 04 URP 4210: Professional Attachment	●	●	●	●	●	●	●	●	●	●
0731 04 URP 4235: Climate Adaptive Planning	●	●	●		●			●	●	
0731 04 URP 4249: Tourism Planning	●	●	●	●	●	●		●	●	
0413 04 BA 4251: Project Planning and Evaluation Techniques	●	●	●	●	●	●	●	●	●	
0413 04 BA 4252: Project Planning and Evaluation Techniques (Studio/Project)	●	●	●	●	●	●	●		●	●
0311 04 Econ 4257: Public and Local Government Finance	●		●					●	●	
0521 04 ES 4291: Coastal Zone Management	●	●	●	●			●	●	●	

17 Structure of the Curriculum

a)	Duration of the Program	04 Years	08 Terms
b)	Admission Requirements	The applicants having HSC or equivalent degree will be eligible for admission into this program. Other terms and conditions are set or revised periodically by the appropriate authority.	
c1)	Graduating Credits / Total Minimum Credit Requirement to Complete the Program	155	
c2)	Available Credits	173	
d)	Total Class Weeks in a Term*	14	
e)	Minimum CGPA Requirements for Graduation	2.50	
f)	Maximum Academic Years of Completion	07 Years	

*Term Duration

Teaching and Learning	Preparatory Leave	Term Final Examination	Term Break	Total
14 Weeks	2 Weeks	4 Weeks	2 Weeks	22 Weeks

g1) Area-wise Credit Distribution

Area	Course Type	Number of Courses	Credits	Total Credits
General Education (GED) Courses**	Theory	18	50	63.5
	Sessional	08	13.5	
Core/Compulsory Courses	Theory	22	66	88.5
	Sessional	15	22.5	
Optional/Elective Courses	Theory	03	09	13.5
	Sessional	03	4.5	
Capstone Courses***	Sessional	04	7.5	7.5
	Total	73	173	173

**36.70 % Courses of total 173 Credits are General Education (GED) Courses.

***0731 04 URP 4106: Thesis Proposal Development (03Credits); 0731 04 URP 4206: Thesis (03 Credits); 0731 04 URP 4208: Seminar (1.5 Credits); 0731 04 URP 4210: Professional Attachment (Non-Credit Course).

g2) Category of Courses

Area	Course Type	Course Title	Credits
General Education (GED) Courses	Theory	01. Principles of Economics 02. Communicative English 03. Mathematics I 04. Sociology for Planners 05. Mathematics II 06. Statistics for Planners I 07. Engineering Survey 08. Introduction to Construction Engineering and Management 09. Social Psychology 10. Statistical Methods for Planning Research 11. Population and Gender Studies 12. Urban and Regional Economics 13. Development Policy and Planning	50

Area	Course Type	Course Title	Credits
		14. Legal Aspects and Ethics of Planning 15. Natural Resources Management 16. Project Planning and Evaluation Techniques 17. Public and Local Government Finance 18. Coastal Zone Management	
	Sessional	01. Architectural Drawings and Graphic Design (Studio) 02. Basic Computer Application for Planners (Lab.) 03. Graphic Reproduction and Computer Aided Design (Studio/Project) 04. Engineering Survey (Fieldwork & Studio) 05. Database Management (Lab./Project) 06. Programming Language (Lab./Project) 07. Computer-Based Statistical Analysis (Lab./Project) 08. Project Planning and Evaluation Techniques (Studio/Project)	13.5
Core/ Compulsory Courses	Theory	01. History of Human Settlements 02. Geography for Planners 03. Introduction to Urban Affairs and Planning 04. Rural Planning I 05. Introduction to Landscape and Urban Design 06. Urban Analysis Techniques 07. Geographic Information System 08. Basic Environmental Studies 09. Fundamentals of Transportation Planning and Engineering 10. Research Methods for Planners 11. Rural Planning II 12. Environmental Management and Planning 13. Land Administration and Real Estate 14. Urban Development Planning 15. Remote Sensing and Photogrammetry 16. Disaster Planning and Management 17. Housing 18. Regional Planning 19. Urban Governance 20. Municipal Services Planning 21. Climate Adaptive Planning 22. Tourism Planning	66
	Sessional	01. Cartography (Studio/Project) 02. Rural Planning I (Fieldwork) 03. Site and Area Planning Technique (Fieldwork & Studio) 04. Introduction to Landscape and Urban Design (Fieldwork & Studio) 05. Urban Analysis Techniques (Fieldwork & Studio) 06. Geographic Information System (Lab./Project) 07. Basic Environmental Studies (Fieldwork & Studio) 08. Fundamentals of Transportation Planning and Engineering (Fieldwork & Studio) 09. Tools for Community Participation (Fieldwork & Studio) 10. Rural Planning II (Fieldwork & Studio) 11. Urban Development Planning (Fieldwork & Studio) 12. Remote Sensing and Photogrammetry (Lab./Project) 13. Disaster Planning and Management (Fieldwork & Studio) 14. Housing (Fieldwork & Studio) 15. Municipal Services Planning (Fieldwork & Studio)	22.5

Area	Course Type	Course Title	Credits
Optional/ Elective Courses	Theory	01. Urban Design and Conservation 02. Transport Policy and Planning 03. Sustainable Transport	09
	Sessional	01. Urban Design and Conservation (Fieldwork & Studio) 02. Transport Policy and Planning (Fieldwork & Studio) 03. Spatial Analysis and GIS Programming (Lab./Project)	4.5
Capstone Courses	Sessional	01. Thesis Proposal Development 02. Thesis 03. Seminar 04. Professional Attachment	7.5
		Total	173

18 Year/Term-wise Distribution of Courses

Course Code	Course Title	Course Status	Contact Hours/Week		Credits	Prerequisites
			Theory	Sessional		
First Year First Term						
0731 04 URP 1121	History of Human Settlements	Core	3.0	-	3.0	None
0731 04 URP 1131	Geography for Planners	Core	3.0	-	3.0	None
0731 04 URP 1132	Cartography (Studio/Project)	Core	-	2.25	1.5	None
0731 04 Arch 1154	Architectural Drawings and Graphic Design (Studio)	Core	-	2.25	1.5	None
0311 04 Econ 1157	Principles of Economics	Core	3.0	-	3.0	None
0611 04 CSE 1162	Basic Computer Application for Planners (Lab.)	Core	-	2.25	1.5	None
0232 04 Eng 1171	Communicative English	Core	3.0	-	3.0	None
0541 04 Math 1173	Mathematics I	Core	2.0	-	2.0	None
0314 04 Soc 1175	Sociology for Planners	Core	2.0	-	2.0	None
Total	Core Courses: 09, Optional Courses: 00, Theory Courses: 06, Sessional Courses: 03		16.0	6.75	20.5	
			22.75			
First Year Second Term						
0731 04 URP 1221	Introduction to Urban Affairs and Planning	Core	3.0	-	3.0	None
0731 04 Arch 1254	Graphic Reproduction and Computer Aided Design (Studio/Project)	Core	-	2.25	1.5	None
0611 04 CSE 1262	Database Management (Lab./Project)	Core	-	2.25	1.5	None
0541 04 Math 1273	Mathematics II	Core	2.0	-	2.0	None
0542 04 Stat 1277	Statistics for Planners	Core	3.0	-	3.0	None
0732 04 CE 1281	Engineering Survey	Core	3.0	-	3.0	None
0732 04 CE 1282	Engineering Survey (Fieldwork & Studio)	Core	-	4.50	3.0	None
0732 04 CE 1283	Introduction to Construction Engineering and Management	Core	3.0	-	3.0	None
Total	Core Courses: 08, Optional Courses: 00, Theory Courses: 05, Sessional Courses: 03		14.0	9.00	20.0	
			23.0			

Course Code	Course Title	Course Status	Contact Hours/Week		Credits	Prerequisites
			Theory	Sessional		
Second Year First Term						
0731 04 URP 2111	Rural Planning I	Core	3.0	-	3.0	None
0731 04 URP 2112	Rural Planning I (Fieldwork)	Core	-	2.25	1.5	None
0731 04 URP 2124	Site and Area Planning Technique (Fieldwork & Studio)	Core	-	2.25	1.5	None
0731 04 URP 2125	Introduction to Landscape and Urban Design	Core	3.0	-	3.0	None
0731 04 URP 2126	Introduction to Landscape and Urban Design (Fieldwork & Studio)	Core	-	2.25	1.5	None
0611 04 CSE 2162	Programming Language (Lab./Project)	Optional	-	2.25	1.5	None
0611 04 CSE 2164	Computer-Based Statistical Analysis (Lab./Project)	Core	-	2.25	1.5	None
0314 04 Soc 2175	Social Psychology	Core	2.0	-	2.0	None
0542 04 Stat 2177	Statistical Methods for Planning Research	Core	3.0	-	3.0	None
0314 04 Soc 2179	Population and Gender Studies	Core	3.0	-	3.0	None
Total	Core Courses: 09, Optional Courses: 01, Theory Courses: 05, Sessional Courses: 05		14.0	11.25	21.5	
			25.25			
Second Year Second Term						
0731 04 URP 2221	Urban Analysis Techniques	Core	3.0	-	3.0	None
0731 04 URP 2222	Urban Analysis Techniques (Fieldwork & Studio)	Core	-	2.25	1.5	None
0731 04 URP 2231	Geographic Information System	Core	3.0	-	3.0	None
0731 04 URP 2232	Geographic Information System (Lab./Project)	Core	-	2.25	1.5	None
0731 04 URP 2235	Basic Environmental Studies	Core	3.0	-	3.0	None
0731 04 URP 2236	Basic Environmental Studies (Fieldwork & Studio)	Core	-	2.25	1.5	None
0731 04 URP 2241	Fundamentals of Transportation Planning and Engineering	Core	3.0	-	3.0	None
0731 04 URP 2242	Fundamentals of Transportation Planning and Engineering (Fieldwork & Studio)	Core	-	2.25	1.5	None
0311 04 Econ 2257	Urban and Regional Economics	Core	3.0	-	3.0	None
Total	Core Courses: 09, Optional Courses: 00, Theory Courses: 05, Sessional Courses: 04		15.0	9.00	21.0	
			24.00			

Course Code	Course Title	Course Status	Contact Hours/Week		Credits	Prerequisites
			Theory	Sessional		
Third Year First Term						
0731 04 URP 3107	Research Methods for Planners	Core	3.0	-	3.0	None
0731 04 URP 3108	Tools for Community Participation (Fieldwork & Studio)	Core	-	2.25	1.5	None
0731 04 URP 3111	Rural Planning II	Core	3.0	-	3.0	0731 04 URP 2111
0731 04 URP 3112	Rural Planning II (Fieldwork & Studio)	Core	-	2.25	1.5	0731 04 URP 2112
0731 04 URP 3125	Urban Design and Conservation	Optional	3.0	-	3.0	None
0731 04 URP 3126	Urban Design and Conservation (Fieldwork & Studio)	Optional	-	2.25	1.5	None
0731 04 URP 3135	Environmental Management and Planning	Core	3.0	-	3.0	None
0731 04 URP 3141	Transport Policy and Planning	Optional	3.0	-	3.0	None
0731 04 URP 3142	Transport Policy and Planning (Fieldwork & Studio)	Optional	-	2.25	1.5	None
0731 04 URP 3145	Land Administration and Real Estate	Core	3.0	-	3.0	None
0311 04 Econ 3157	Development Policy and Planning	Core	3.0	-	3.0	None
Total	Core Courses: 07, Optional Courses: 04, Theory Courses: 07, Sessional Courses: 04		21.0	9.0	27.0	
			30.0			
Third Year Second Term						
0731 04 URP 3221	Urban Development Planning	Core	3.0	-	3.0	None
0731 04 URP 3222	Urban Development Planning (Fieldwork & Studio)	Core	-	2.25	1.5	None
0731 04 URP 3232	Spatial Analysis and GIS Programming (Lab./Project)	Optional	-	2.25	1.5	0731 04 URP 2232
0731 04 URP 3233	Remote Sensing and Photogrammetry	Core	3.0	-	3.0	None
0731 04 URP 3234	Remote Sensing and Photogrammetry (Lab./Project)	Core	-	2.25	1.5	None
0731 04 URP 3235	Disaster Planning and Management	Core	3.0	-	3.0	None
0731 04 URP 3236	Disaster Planning and Management (Fieldwork & Studio)	Core	-	2.25	1.5	None
0731 04 URP 3245	Housing	Core	3.0	-	3.0	None
0731 04 URP 3246	Housing (Fieldwork & Studio)	Core	-	2.25	1.5	None
Total	Core Courses: 08, Optional Courses: 01, Theory Courses: 04, Sessional Courses: 05		12.0	11.25	19.5	
			23.25			

*** Note: Optional courses have to take as pair, Pair 01: 0731 04 URP 3125 & 0731 04 URP 3126; Pair 02: 0731 04 URP 3141 & 0731 04 URP 3142

Course Code	Course Title	Course Status	Contact Hours/Week		Credits	Prerequisites
			Theory	Sessional		
Fourth Year First Term						
0731 04 URP 4106	Thesis Proposal Development	Core	-	4.50	3.0	None
0731 04 URP 4113	Regional Planning	Core	3.0	-	3.0	None
0731 04 URP 4121	Urban Governance	Core	3.0	-	3.0	None
0731 04 URP 4141	Sustainable Transport	Optional	3.0	-	3.0	None
0731 04 URP 4143	Municipal Services Planning	Core	3.0	-	3.0	None
0731 04 URP 4144	Municipal Services Planning (Fieldwork & Studio)	Core	-	2.25	1.5	None
0421 04 Law 4153	Legal Aspects and Ethics of Planning	Core	3.0	-	3.0	None
0311 04 Econ 4157	Natural Resources Management	Core	3.0	-	3.0	None
Total	Core Courses: 07, Optional Courses: 01, Theory Courses: 06, Sessional Courses: 02		18.0	6.75	22.5	
			24.75			
Fourth Year Second Term						
0731 04 URP 4206	Thesis	Core	-	4.50	3.0	0731 04 URP 4106
0731 04 URP 4208	Seminar	Core	-	2.25	1.5	None
0731 04 URP 4210	Professional Attachment	Core	-	-	NC*	None
0731 04 URP 4235	Climate Adaptive Planning	Core	3.0	-	3.0	None
0731 04 URP 4249	Tourism Planning	Core	3.0	-	3.0	None
0413 04 BA 4251	Project Planning and Evaluation Techniques	Core	3.0	-	3.0	None
0413 04 BA 4252	Project Planning and Evaluation Techniques (Studio/Project)	Core	-	2.25	1.5	None
0311 04 Econ 4257	Public and Local Government Finance	Optional	3.0	-	3.0	None
0521 04 ES 4291	Coastal Zone Management	Optional	3.0	-	3.0	None
Total	Core Courses: 07, Optional Courses: 02, Theory Courses: 05, Sessional Courses: 04		15.0	9.00	21.0	
			24.00			

*NC: Non-Credit Course

19 Course Description

First Year First Term			
Course Code: 0731 04 URP 1121		Year: First	Term: First
Course Title	History of Human Settlements		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course introduces the history of cities and settlements in planning in the recent past. It aims to trace the evolution of human settlements and the emergence of city planning. This course will help students to contextualise current urban development pattern in relation to historical context. The global and local history of settlement pattern taught under this course will foster the interest of the first year students to think critically about urban planning.		

	Course Contents	CLOs
	Section A	
1	The Context: Human settlements, civilization and planning, relation among planning, planners and history of human settlements.	1
2	Birth of Cities: Paleolithic, Mesolithic and Neolithic settlements, evolution: from clans to cities.	1, 2
3	Ancient Civilization: Locations, social structure and political structure, achievements, city planning concerning society and politics in the ancient civilizations (Egyptian, Mesopotamian, Indus civilization).	1, 2
4	Classic Civilization: Locations, social structure and political structure, achievements, city planning about society and politics in the classic civilizations (Rome and Greece).	1, 2
	Section B	CLOs
5	The Dark Age: Social, economic and political structure during dark age and their influence on the human settlements.	1, 2
6	Medieval Cities and Towns: The context, structure of cities, life in cities, urban planning and design during the medieval period.	1, 2
7	Industrial Revolution and Planning: The context, the transformation of human settlements and the consequences of the industrial revolution.	2, 3
8	Cities of Tomorrow: Growth and emergence of concepts of modern cities.	2, 3
9	History of Human Settlements in Bangladesh: Origin, location, political history, social structure, settlement pattern, city structure in the ancient and medieval settlements of Bangladesh (Mohasthangarh, Khalifatabad, Panam city, Dhaka).	2, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Identify the evolution of cities and settlements;	1, 3
	CLO2	Knowledge about how social, economic, political and other factors influenced the birth, flourishment and death of great human civilizations;	1, 3
	CLO3	Recognise the connection between urban planning and the history of human settlement.	1, 3, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Films	Written Exams
CLO2	Lecture, Group Discussions, Historical Site Visit	Written Exams and Presentation During the Historical Site Visit
CLO3	Lecture, Group Discussions, Historical Site Visit	Written Exams

Learning Materials

Recommended Readings	Eisner, S., Gallion, A., & Eisner, S. (1993). The urban pattern. John Wiley & Sons. Ralph, P. L., Lerner, R. E., Meacham, S., & Burns, E. M. (1991). World Civilizations 8th ed. Vol. 1. Ralph, P. L., Lerner, R. E., Meacham, S., & Burns, E. M. (1991). World Civilizations 8th ed. Vol. 2.
Supplementary Readings	Abbott, C. (2006). Urban history for planners. Journal of Planning History, 5(4), 301-313. Greed, C. (2004). Introducing planning. Bloomsbury Publishing. Uphill, E. P. (1988). Egyptian towns and cities (Vol. 8). Shire. Begum, N., & Halim, A. (1996). A history of mankind: ancient period. Agamee Prakashani, Dhaka Benevolo, L. (1971). The origins of modern town planning. MIT press. Keeble, L. B. (1969). Principles and practice of town and country planning. Estates Gazette. Korovkin, F. (1985). History of the ancient world. Progress Murtaza, M., G. (2012). A glossary of terms of urban, rural and regional planning. Centre for Urban Studies, Dhaka. Rangwala, S.C., Rangwala, K.S. & Rangwala, P.S. (2003). Town Planning. Charotar Publishing House. Bayly C. A. (2006). The new Cambridge history of India II: Indian society and the making of the British Empire. Cambridge University Press. Stearns, P. N. (2020). The industrial revolution in world history. Routledge. Hall, P. (2006). Seven types of capital city. In Planning twentieth century capital cities (pp. 24-30). Routledge.

Course Code: 0731 04 URP 1131		Year: First	Term: First
Course Title	Geography for Planners		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	The course introduces students to fundamental concepts and theories in geographic analysis, physical geography, population geography, cultural geography, political geography, human geography, and urban geography, as well as how to apply these concepts and theories in real-world planning problems. The course focuses on a variety of contemporary geographical issues and events having both spatial and temporal dimension. Throughout the course, a special emphasis will be placed on urban growth and the unique issues that cities in Bangladesh face from a geography perspective.		

Course Contents		CLOs
	Section A	
1	Introduction to Geography: Introduction to the course, Assessment strategy, Evolution of geography as a discipline, Scope, Importance, Subfields of geography, Core geographic concepts: Location, Direction, Distance, Size, Physical and cultural attributes.	1, 2
2	Techniques of Geographic Analysis: Maps as a tool of geography, Coordinates, Geographic grid, Land survey system, Map projections, Scale, Types of maps, Contemporary spatial technologies, GIS and RS.	1, 2, 3, 5
3	Physical Geography I (Landforms): Earth materials, Rocks, Geologic time, Movements of continents, Tectonic forces, Gradational processes, Landform regions.	2, 3
4	Physical Geography II (Weather and Climate): Air temperature, Air pressure, Winds, Ocean currents, Moisture and precipitation, Climate regions, Climate change.	2, 3
5	Economic Geography I (Agriculture and Primary Activities): Classification of economic activity and economics, Types of economic system, Stages of development, Primary activities, Subsistence and commercial agriculture, Other primary activities: fishing, forestry, mining, Trade in primary products.	4,6
6	Economic Geography II (Manufacturing and Services): Industrial location theory, World manufacturing patterns and trends, High-tech innovation, Transnational corporations, Tertiary activities, Consumer services, Business services.	4, 6
7	Geography of Bangladesh: Physical Geography, Human Geography, Climate, River Systems, Coastal Systems, Resources and Land Use, Environmental Concerns.	1, 2, 5
	Section B	CLOs
8	Population Geography: Population growth, Birth and death rates, Population pyramids, Demographic transition, Population relocation and migration, Population distribution, Overpopulation, Population data and projections, Population momentum, Aging.	1, 4
9	Cultural Geography: Components of culture, Subsystems of culture: technological, sociological, and ideological, People and environment, Innovation, Diffusion, Acculturation, Cultural diversity, Language, Religion, Ethnicity, Gender.	1, 4
10	Political Geography: National political systems, Evolution, characteristics, and challenges, Boundaries, Centripetal forces and centrifugal forces, Supranationalism, United Nations, Regional alliances, Political organization.	1, 4
11	Human Geography I (Human Interaction): Distance and human interaction, Barriers, Innovation, Activity space, Mobility, Contagious and hierarchical diffusion, Automobiles, Telecommunications, Migration, Globalization, Economic integration, Political integration, Cultural integration.	1, 4, 5

	Section B	CLOs
12	Human Geography II (Human Impact on the Environment): Ecosystems, Water availability and quality, Water pollution, Air pollution, Acid rain, Smog, Ozone layer depletion, Controlling water and air pollution, Excavation and dumping, Subsidence, Habitat loss or alteration, Mountaintop removal, Commercial exploitation, Poisoning and Contamination, Biodiversity, Waste management.	1, 4, 5
13	Urban Geography: Urbanization, Origins and evolution of cities, Functions of cities, Systems of cities, Land use, Urban form, Global urban diversity.	5, 6
14	Urban Planning and Geography: Development of Cities and Towns, Role of Planners, City Government, New Movements, Democratic Practices, Mixed-use Communities, Public Transit.	5, 6

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Determine the major themes and investigative concepts in geographical studies in Bangladesh in abroad;	1, 8
	CLO2	Demonstrate fundamental factual knowledge of geographical and theoretical ideas;	2, 7, 10
	CLO3	Describe the connection of human and physical geography;	3, 6, 7, 8, 10
	CLO4	Examine the globalization tendencies;	7, 9
	CLO5	Examine the impact of geospatial technologies on geography and its subsets;	6, 7
	CLO6	Apply a Postmodernist viewpoint to geographical challenges and difficulties.	2, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Class Lecture	Discussion Thread In Moodle, Class Test and Final Exam
CLO2	Class Lecture, Watching Videos, and Group Discussion	Presentation or Assignment and Final Exam
CLO3	Class Lecture and Problem-Based Learning	Assignment and Final Exam
CLO4	Workshop and Lecture	Assignment and Presentation
CLO5	Lecture	Open-Book Exam and Final Exam
CLO6	Lecture and Group Work or Problem-Based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Getis, A., Fellmann, J. D., Getis, J., & Barker, B. W. (2017). Introduction to geography (16th ed.). McGraw Hill. De Blij, H. (2012). Why geography matters: More than ever. Oxford University Press. Castree, N., Rogers, A., & Sherman, D. J. (Eds.). (2005). Questioning geography: fundamental debates. Oxford: Blackwell. Clifford, N., Cope, M., Gillespie, T., & French, S. (Eds.). (2016). Key methods in geography. Sage.
Supplementary Readings	Fouberg, E. H., Murphy, A. B., & De Blij, H. J. (2015). Human geography: people, place, and culture. John Wiley & Sons. De Blij, H. J., Muller, P. O., & Williams, R. S. (2004). Physical geography: the global environment (Vol. 2). Oxford University Press.

Course Code: 0731 04 URP 1132		Year: First	Term: First
Course Title	Cartography (Studio/Project)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course covers design principles and techniques for creating maps with contemporary mapping tools, including ArcMap 10.8.1 and ArcGIS Pro 2.x. Students will apply cartographic theory to practical problems, with a focus on making optimal design decisions during tasks such as selecting visual variables, classifying and generalizing data, applying principles of color and contrast, and choosing projections for maps. Students will be introduced to future-focused application topics such as augmented and virtual reality, mapping with multivariate glyphs, the visual depiction of uncertainty, interactive geo-visualization and (geo) visual analytics, and decision-making with maps and mapping products.		

	Course Contents/Tasks	CLOs
1	Introduction to Cartography: A brief overview.	1
2	Basemaps and Big Picture Design: Design Matters, Types of Maps, Communicating with Maps, Audience, Medium, and Purpose, Basemaps, Leveraging Location.	1, 2
3	Building a Map: Base Data, Symbol Design: Visual Order and Categories, Designing for Multiple Scales, Sharing Maps.	2, 3
4	Lettering and Layouts: Text on Maps, Typographic Design, Creating Symbols with Labels, Label Placement, Layout Essentials, Building a Legend, Marginalia Design.	2, 3, 4
5	From Data to Design 1: Thematic Maps, Visualizing Data, Geographic Phenomena: Spatial Dimensions, Models.	4, 5
6	From Data to Design2: Practical Mapping: What about the data? Geographic Data: Levels of measurement, Choosing Symbols for Maps, Visual Encoding: Examples for Reflection.	4, 5, 6
7	Color and Choropleth Maps: Color Overview, Specifying Colors, Types of color schemes, Visual perception constraints, Data Standardization, Making Choropleth Maps, Making Sense of Maps, Color and Data.	3, 4, 5
8	Map Projections: Modelling Earth, Geographic Coordinate Systems, Projecting the Earth, Characteristics of Projections, Projection Properties, Choosing a Projection, Popular Projections and Coordinate Systems.	1, 2, 5
9	Flow Mapping: Origin-destination Map, Distribution Map, Continuous/Mass flow Map, Weight Scaling, Linear Symbols, Linear Network, Flow Diagram, Proportional Size, Cartograms, Proportional Point Symbols.	3, 4
10	Terrain Visualization: Visualizing a Landscape, Oblique Views, Physical Models, Vertical Views, Building Terrain Layers, Terrain as a Basemap, Terrain through Scale.	5, 6
11	Multivariate Visualization: Multivariate Maps, Multivariate Choropleths, Multivariate Dot and Proportional Symbol Maps, Cartograms, Multivariate Glyphs, Comparing vs. Combining.	4, 5, 6
12	Uncertainty Visualization: Cluster Analysis, The Visualization of Uncertainty, Uncertainty and Decision-Making.	1, 5
13	Multiscale Web Mapping: Map Generalization, Generalization Operators, Dynamic Maps, Interactive Maps, Animated Maps, Viral Cartography, 3D Maps, Extended Reality.	1, 3, 4, 5
14	Beyond the Map: From Reader to User, Experimental Studies, Design Studies, Geo-visualization and Geo-visual Analytics, Data Journalism, When Not to Map.	1, 2, 5

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Attain actionable knowledge of cartography and geo-visualization;	1, 2, 7
	CLO2	Create professional and aesthetically pleasing maps through thoughtful application of cartographic conventions;	3, 4, 5
	CLO3	Design and construct maps for communicating map information to others;	3, 6, 8
	CLO4	Classify and generalize data, apply principles of color and contrast, and choose projections and scales for maps of varying purpose;	3, 6, 8, 9
	CLO5	Utilize a variety of thematic mapping and geo-visualization techniques using current trends in cartographic science & technology;	2, 4, 5, 6, 7, 9
	CLO6	Design maps for print and non-print reproduction and dissemination and demonstrate mastery in map production for research.	2, 3, 4. 5, 7, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Literature Review and Watching Documentaries/Movies	Quiz, Map Presentation, Map Critiques
CLO2	Hands-On Exercise, Group Discussion, Group Exercise	Cartographic Projects, Map Sheets, Map Critiques, Discussion
CLO3	Fieldwork and Problem-Based Learning, Group Exercise	Map Sheets, Map Critiques, Cartographic Projects
CLO4	Lecture, Fieldwork, Group Exercise and Problem-Based Learning	Quiz, Multimedia Presentation, Map Sheets, Assessment Reports
CLO5	Hands-On Exercise and Problem-Based Learning	Cartographic Projects, Map Sheets, Map Critiques, Discussion
CLO6	Lecture, Literature Review, Group Exercise	Poster Presentation, Map Sheets, Cartographic Projects

Learning Materials

Recommended Readings	Anthamatten, P. (2020). How to Make Maps: An Introduction to Theory and Practice of Cartography. Routledge. Maclin, E. (2017). Designing better maps: A guide for GIS users. Photogrammetric Engineering & Remote Sensing, 83(9), 603-604. Brewer, C. A. (1994). Cartography: thematic map design. Cartographic Perspectives, (17), 26-27. Ehrenberg, R. E. (2006). Mapping the world: an illustrated history of cartography. National Geographic Society.
Supplementary Readings	Aït-Touati, F., Arènes, A., & Grégoire, A. (2022). Terra Forma: A Book of Speculative Maps. MIT Press. Moore, A. B. (2022). Atlas of the invisible: maps and graphics that will change how you see the world: James Cheshire and Oliver Uberti, Particular Books (Dublin, Ireland), 2021, 216 pp., GBP 25 (hardback), ISBN 781846149719. Edney, M. H. (2019). Cartography: The ideal and its history. University of Chicago Press.

Course Code: 0731 04 Arch 1154		Year: First	Term: First
Course Title	Architectural Drawings and Graphic Design (Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	Professional planners must be able to communicate their design concepts through graphical means. To boost this communication knowledge and skills on graphics, this course will introduce undergraduate planning students to different concepts and techniques on use of graphic elements, colour and science of composition and student will gain competence in drawing conventional architectural drawings.		

	Course Contents/Tasks	CLOs
1	Graphics in Planning: Use of graphics in urban graphics, Graphics for effective communication with the people.	1, 3
2	The Elements and Principles of Graphic Design: The elements and the science of using the elements.	1, 2
3	Composition Basics: Composition techniques and principles of composition.	1, 2
4	Colour Basics: Colour wheel and colour scheme(s) for graphics.	1
5	Architectural Graphics for Planners: Urban graphics and its significance for planners, equipment and materials.	1, 2
6	Architectural Graphics: Architectural drafting, architectural drawing conventions, plan, section, elevation and perspectives at plot and site scale.	1, 3
7	Rendition of Value and Context: Values, Contexts.	1, 2, 3
8	Graphic Symbols and Lettering: Lettering, Use of graphic symbols.	1, 2
9	Freehand Drawing: Techniques of freehand drawing and its implications.	1, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Reproduce their knowledge of colour, composition and software skills;	1
	CLO2	Demonstrate their ability on architectural drafting;	1, 3
	CLO3	Draw and interpret the conventional architectural drawing at plot and site scale.	3, 6

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Workshop and Hands on Exercise	Presentation of Drawings
CLO2	Hands on Exercise	Presentation of Drawings
CLO3	Hands on Exercise	Presentation of Drawings and Oral Presentation

Learning Materials

Recommended Readings	Jefferis, A., Madsen, D. A., & Madsen, D. P. (2012). Architectural Drafting and Design (Book Only). Cengage Learning. Gill, R. W. (1984). Manual of Rendering with Pen and Ink. Thames and Hudson.
Supplementary Readings	Ching, F. D., & Juroszek, S. P. (2010). Design drawing. John Wiley & Sons.

Course Code: 0311 04 Econ 1157		Year: First	Term: First
Course Title	Principles of Economics		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	The purpose of this course is to provide student with basic understanding of the principles of microeconomics and macroeconomics. At its core, the study of economics deals with the choices and decisions that have to be made in order to manage scarce resources available to us. This course aims at providing planning students with the foundation to economic systems, theories and terminologies.		

Course Contents		CLOs
	Section A	
1	Thinking Like an Economist: Definition, Branches and Core Principles of economics, Relation with other social sciences and importance of studying with respect to urban and rural planning. Studying Choice in a World of Scarcity, Applying the Cost-Benefit Principle, Economic Surplus, Opportunity Cost, Individual decision pitfalls, Understanding of Graphs and Equations.	1, 6
2	Comparative Advantage: Exchange and Opportunity Cost, The Principle of Comparative Advantage, Comparative Advantage and Production Possibilities, The Production Possibilities Curve, A Production Possibilities Curve for a Many-Person Economy, Comparative Advantage and International Trade.	1, 6
3	Supply and Demand: What, How, and for Whom? The Law of Supply and Demand, The Demand Curve, The Supply Curve, Market Equilibrium, shifts in Demand, Shifts in Supply.	1, 2, 6
4	Elasticity: Basic concepts, Price Elasticity of Demand, Income Elasticity and Cross-Price Elasticity of Demand, The Price Elasticity of Supply, Determinants of Supply Elasticity.	1, 3, 6
5	The Law of Demand: Individual and Market Demand Curves.	1, 2, 6
6	Perfectly Competitive Supply: The Importance of Opportunity Cost, Individual and Market Supply Curves, Determinants of Supply, Supply and Producer Surplus.	1, 2, 6
7	Efficiency, Exchange, and the Invisible Hand in Action: Role of Economic Profit, The Invisible Hand Theory, Economic Rent versus Economic Profit, The Invisible Hand in Action, Market Equilibrium and Efficiency. Market Imperfections: Monopoly, Oligopoly, Monopolistic Competition, Imperfect Competition, Different Forms of Imperfect Competition.	1, 4, 6
	Section B	CLOs
8	Variables of Macroeconomics: Gross Domestic Production (GDP): Measuring the national output, The expenditure method for measuring GDP, Nominal GDP vs Real GDP, Consumer Price Index (CPI) and Inflation.	5, 6
9	Factors of Production and Economic Growth: Entrepreneurial Objectives in the Various Sectors, the theory of firm-Industrial structures, The Determinants of Average Labor Productivity, Promoting Economic growth, The Costs of Economic Growth, Recessions and Expansions of Economy.	5, 6
10	Aggregate Demand, Aggregate Supply and Business Cycles: Aggregate Demand Curve, Aggregate Supply Curve, Understanding Business cycles.	5, 6
11	Money and Banking: Banking and non-banking system in Bangladesh, the role of central bank, Monetary Policy set by the Central Bank: Interest rate, Inflation Fiscal Policy Set by the Government of Bangladesh: Tax Revenue, Budget, Personal savings, effects of personal savings on national development.	5, 6
12	Economics and Society: The True costs of Inflation, Wages and Unemployment, Supply and Demand in the labour market, Explaining the trends in real wages and Employment, Unemployment and Unemployment Rate, Types of Unemployment and their costs, Unemployment and crime. Short-term economic fluctuations: recessions and expansions.	5, 6

	Section B	CLOs
13	The state in the market economy: The role of state in the market economy. Types of state/countries and global economic interdependencies. Country studies 1: How China grew rich? Country studies 2: Bangladesh-success, challenges and opportunities Case studies: Why poor countries are poor?	5, 6

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Identify how individual economic agents make rational choices given scarce resources and will know how to optimize the use of resources at hand;	1, 8
	CLO2	Analyze and apply the mechanics of Demand and Supply for Individuals, Firms, and the Market;	2, 3, 8
	CLO3	Apply the concept of Elasticity as a measure of responsiveness to various variables;	6, 8
	CLO4	Analyze market imperfections and the remedies;	3
	CLO5	Explain economic problems at national context public policies to ensure economic development;	8, 9
	CLO6	Think economic context of urban and rural problems.	3, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Films	Written Exams
CLO2	Lecture and Group Discussions	Written Exams and Presentation
CLO3	Lecture and Group Discussions	Written Exams
CLO4	Lecture	Class Test and Final Exam
CLO5	Lecture and Problem Based Learning	Class Test, Assignment and Final Exam
CLO6	Lecture and Problem Based Learning	Class Test, Assignment and Final Exam

Learning Materials

Recommended Readings	Frank, R. H. and Bernanke, B. S. (2013). Principles of Economics (5th ed.). New York: McGraw-Hill/Irwin. Harford, T. (2010). The undercover economist. Hachette UK.
Supplementary Readings	Ministry of Finance (GoB), Budgeting and Planning process. Mobarak, M. et al. (2015). Social Incentives and Tax Compliance in Bangladesh. J-PAL South Asia, IPA. Levitt, S. D. (2017). The economics of crime. Journal of Political Economy, 125(6), 1920-1925.

Course Code: 0611 04 CSE 1162	Year: First	Term: First
Course Title	Basic Computer Application for Planners (Lab.)	
Course Status	Core	
Credit	1.5	
Prerequisite(s)	None	
Rationale	This course is designed to familiarize students with computer applications that a planner need in everyday life. This course also emphasizes the use of computers and technology throughout their BURP program and future careers. Students will learn fundamental concepts of hardware and software to familiar with variety of computer applications, including word processing, spreadsheets, databases, and multimedia presentations. Students will also investigate Internet-based applications, working with email and learn how to browse the web. Coursework includes activities that explore social and ethical issues related to computers.	

	Course Contents/Tasks	CLOs
1	Lab Session 01: Introduction and computer basics	1
2	Lab Session 02: Working with Office Suit	1
3	Lab Session 03: Structuring technical report	3, 7
4	Lab Session 04: Lab Test – 1	1, 3
5	Lab Session 05: Spreadsheet: The basics	4
6	Lab Session 06: Working with forms, multiple sheet	4
7	Lab Session 07: Data Analysis and pivot tables	4
8	Lab Session 08: Lab test -2	1, 4
9	Lab Session 09: Email and internet browsing	2, 5, 6
10	Lab Session 10: Powerpoint - presentation preparation	5
11	Lab Session 11: Power point - animation, info graphics, automation	5
12	Lab Session 12: Integrating Word, Excel and Presentation	1, 5
13	Lab Session 13: Review	1-7
14	Lab Session 14: Presentation	7

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Operate computer applications for everyday life;	3
	CLO2	Communicate with peers through email communications;	4, 5
	CLO3	Use word processing for technical report preparation;	3
	CLO4	Utilize worksheet application for data management, calculation, graph preparation;	3
	CLO5	Prepare presentation slides;	3, 4, 6
	CLO6	Search and utilize internet based resources;	5
	CLO7	Print and prepare technical reports and research papers.	3

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Lab Demonstration	Lab Test
CLO2	Lab Demonstration	Class Performance
CLO3	Lecture, Lab Demonstration	Lab Test
CLO4	Lecture, Lab Demonstration	Lab Test
CLO5	Lecture, Lab Demonstration	Presentation
CLO6	Lab Demonstration	Class Performance
CLO7	Lab Demonstration	Assignment

Learning Materials

Recommended Readings/ Materials	http://office.microsoft.com http://www.openoffice.org/ http://staroffice.com/

Course Code: 0232 04 Eng 1171		Year: First	Term: First
Course Title	Communicative English		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course has been designed to equip the students with skills of communication in an international standard. Students of this course are expected to learn the basics of communicative English to develop their skills for writing research papers in their professional career. As the medium of instruction of BURP program is English, therefore, this course has been designed as a foundation course for the first year students.		

	Course Contents	CLOs
	Section A	
1	Development of Vocabulary: Processes of Word Formation and Transformation, Proper use of parts of speech.	1, 2
2	Sentence Structure: Structures of Basic Sentences, Identification of Clauses and Phrases, Joining sentences, Transformation of Sentences, Framing W/H Questions.	1, 2
3	Reading in Communication: Perspectives on reading comprehension, Elements of reading: vocabulary, syntax and meaning, Reading strategies: intensive and extensive reading, scanning and skimming, prediction and inference.	1, 2
4	Understanding in Communication: Reader's expectation and interpretation, contextual understanding and understanding the whole text, effective note-taking.	1, 2
	Section B	CLOs
8	Development of Speaking Skills: Art of Good Speaking, Notions and Functions, Speaker-listener Rapport, Intonation and Stress.	2, 4
9	Development of Writing Skills: Process of writing, Understanding Academic Writing: features and elements, Mechanics in Writing: Capitalization and Punctuation, Generating ideas for a writing task, Drafting and Supporting ideas with evidence, Integrating data and graphics in texts, Modes of writing.	2, 3, 4
10	Writing Tasks: Paragraph, Essay, Summary, Précis, Report, Abstract, Letter of Application, Assignment, Examination Paper.	3
11	Development of Listening Skills: Guide Lines for Developing Listening Skills, Role of a Good Listener, Listening Comprehension.	2, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Comprehend the basic sentence structuring;	6
	CLO2	Summarize and synthesize ideas in reading, writing and speaking;	6, 7
	CLO3	Demonstrate the style of academic writing;	6, 7
	CLO4	Grasp the techniques of oral presentation.	6, 7

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Group Discussions	Written Exams
CLO2	Lecture, Workshop and Peer Learning	Assignment
CLO3	Lecture and Workshop	Assignment and Written Exams
CLO4	Lecture, Workshop and Showing Videos	Oral Presentation

Learning Materials

Recommended Readings	Nelson, G. (2019). English: An essential grammar. Routledge. Thomson, A. J., Martinet, A. V., & Draycott, E. (1986). A practical English grammar (Vol. 332). Oxford: Oxford university press. Pyle, M. A., & Page, M. E. M. (1995). TOEFL preparation guide. Nebraska: Cliffs Notes.
Supplementary Readings	Mn, T., & Taylor, G. (1975). English conversation practice. Tata McGraw-Hill Education. Thurstun, J., & Christopher, C. (1997). Exploring academic English: A workbook for student essay writing.

Course Code: 0541 04 Math 1173		Year: First	Term: First
Course Title	Mathematics I		
Course Status	Core		
Credit	2.0		
Prerequisite(s)	None		
Rationale	The course is designed for the first year students of Urban and Rural Planning Discipline as part of the foundation courses. Students of this course are expected to learn the application of mathematics in Urban and Rural Planning. This course has been designed to develop the analytical skill of the students to analyze and interpret data in the later stage of their degree program.		

	Course Contents	CLOs
	Section A	
1	Pair of Straight-line: Formation of pair of straight-line, angle, parallelism and perpendicularity, homogenous and non-homogenous equations.	1
2	General Equation of Second-degree: Relation between general equation of second-degree and pair of straight-line, homogenous and non-homogenous equations.	1, 2
3	Circle: General and standard equation, center and equation of radius.	1, 3
4	Parabola: Equation of parabola, types of parabola, equation of latus rectum, origin and center.	1, 3
	Section B	CLOs
5	Introduction to Calculus: Function, domain, range, and graphs of standard functions, limit, continuity.	2
6	Differentiation: The concept of derivatives, techniques of differentiation, exponential and logarithmic function, successive differentiation, tangent and normal, maxima and minima.	2, 4
7	Integration: Anti-derivatives; techniques of integration; standard integrals; reduction formulae; definite integrals and their properties.	2
8	Application of Calculus: Length, area and volume calculation.	3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain mathematical explanation of geometric features;	1
	CLO2	Differentiate appropriate mathematical equation for explaining physical features;	1, 6
	CLO3	Calculate length, area and volume of different geometric shape;	6, 7
	CLO4	Simulate geometrical attributes of different built form.	6, 7

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Group Discussions	Written Exams
CLO2	Lecture, Workshop and Peer Learning	Assignment
CLO3	Lecture and Workshop	Assignment and Written Exams
CLO4	Lecture and Workshop	Oral Presentation

Learning Materials

Recommended Readings	Bell, R. J. (1963). An elementary treatise on coordinate geometry of three dimensions. Macmillan. Stewart, J., Clegg, D. K., & Watson, S. (2020). Calculus: early transcendentals. Cengage Learning. Avez, A. (2020). Differential calculus. Courier Dover Publications. De Morgan, A. (1836). The differential and integral calculus. Baldwin and Cradock.

Course Code: 0314 04 Soc 1175		Year: First	Term: First
Course Title	Sociology for Planners		
Course Status	Core		
Credit	2.0		
Prerequisite(s)	None		
Rationale	This course aims to understand the groups, organizations, and societies around us interlinking the theoretical paradigms in sociology. It primarily focuses to unpack the key sociological discussions and their changes over time, and discuss the implications of these paradigmatic shifts for urban scholarship, social policy, and the planning practice.		

	Course Contents	CLOs
	Section A	
1	The Sociological Perspective: Broader social context, sociology and other sciences, origins of sociology, and importance of sociology and its relation with urban and rural planning.	1, 2, 6
2	Theoretical Perspectives in Sociology: Symbolic interactionism, functional analysis, conflict theory.	1, 2, 3, 6
3	Social Dynamics of Marriage and Family: Marriage and family in global perspective, marriage and family in theoretical perspective, family life cycle, two sides of family life, divorce and remarriage.	1, 2, 4
4	Understanding Religion from Sociological Perspective: Functionalist perspective of religion, symbolic interactionist perspective of religion, conflict perspective of religion, religion and the spirit of capitalism, types of religious groups, and future of religion.	1, 2, 4
5	Culture with Social Understanding: Components of symbolic culture, values, norms, sanctions, folkways, mores, taboos, subcultures, countercultures, cultural lag, cultural change, and cultural levelling,	1, 2, 5
6	Critical Perspective of Socialization: Agents of socialization, socialization through the life course, socialization into gender.	1, 2, 4
7	Social Structure and Social Interaction: Levels of sociological analysis, sociological significance of social structure, social interaction in everyday life, and necessity of macrosociology and microsociology.	1, 2, 6
	Section B	CLOs
8	Global Stratification: Systems of social stratification, determinants of social class, comparative social stratification, three worlds in global stratification.	2, 3, 5
9	Societies to Social Network and Social Class: Societies and their transformation, groups within society, group dynamics and leadership, sociological models of social class, consequences of social class, and social mobility.	2, 3, 4, 5
10	Race and Ethnicity: Myth and reality of race, prejudice and discrimination, theories of prejudice from sociological perspectives.	1, 2, 5, 6
11	Learning Dynamics in Societies: Development of modern education, education in the most industrialised nation, industrialising nation, and the least industrialised nation, functionalist perspective of education, conflict perspective of education, symbolic interactionist perspective of education.	1, 2, 4, 5, 6
12	Aging and Development Concern: Aging in global perspective, aging in symbolic interactionalist perspective, aging in functionalist perspective, and aging in conflict perspective.	1, 2, 4, 5
13	Social Movements: Collective behaviour, forms of collective behaviour, social movements, types and tactics of social movements, success and failure of social movements.	1, 2, 4, 6
14	Social Change: Social change, theories and processes of social change, forces of social change, technological impact on changing pattern of our lives.	1, 2, 4, 5, 6

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain the sociological concepts and theories to contextualise the social phenomena;	1, 2
	CLO2	Evaluate explanations of human behaviour, social phenomena, and social processes considering both the local and global contexts;	1, 2, 8
	CLO3	Communicate the perspectives of social issues in a clear and coherent manner in both written and oral communication to a broader audience;	4, 5, 6
	CLO4	Apply sociological understandings in connection with race, class, gender, sexual orientation, and age that shape the social institutions and ultimately bring social change;	1, 8, 9
	CLO5	Associate the different historical experiences, values, norms, and belief systems with specific cultures considering both the local and global contexts;	2, 4
	CLO6	Distinguish between macro level and micro level sociological perspectives and their applications using the theoretical components of each perspective.	1, 2, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Class Lecture and Problem-Based Learning	Assignment and Final Exam
CLO3	Lecture and Group Discussion	Presentation and Final Exam
CLO4	Lecture	Open-Book Exam and Final Exam
CLO5	Workshop and Lecture	Assignment and Presentation
CLO6	Lecture and Group Work or Problem-Based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Conerly, T. R., Holmes, K., Tamang, A. L., Griffiths, H., Hensley, J., Trost, J. L., Alcasey, P., McGonigal, K., Keirns, N., Strayer, E., Cody, S., Scaramuzzo, G., Sadler, T., Vyain, S., Bry, J., & Jones, F. (2021). Introduction to Sociology (3rd ed.). Rice University. https://openstax.org/details/books/introduction-sociology-3e Henslin, J. M. (2017). Sociology - A Down To Earth Approach (13th ed.). Pearson Education. Gould, K. A., & Lewis, T. L. (2017). Ten Lessons In Introductory Sociology (2nd ed.). Oxford University Press. Croteau, D., & Hoynes, W. (2017). Experience Sociology (3rd ed.). McGraw-Hill Education.
Supplementary Readings	Giddens, A., Duneier, M., Appelbaum, R. P., & Carr, D. (2018). Introduction to Sociology (11th ed.). W. W. Norton & Company. Ritzer, G. (2018). Introduction to Sociology (4th ed.). SAGE Publications.

First Year Second Term			
Course Code: 0731 04 URP 1221		Year: First	Term: Second
Course Title	Introduction to Urban Affairs and Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course introduces the issues of current urbanization and transformation pattern to provide a clear idea about how cities changes and whether these changes are playing positive roles in the development process of cities. In addition, an introductory knowledge about the urban planning process under this course can enable the students to jot ideas about how they can take action in attaining the development of cities in an organised manner.		

Course Contents		CLOs
Section A		
1	Terms and Definitions: Urban Area, Level of Urbanization, Rate of urbanization, Development, Growth.	1
2	Classification of Cities: Definition of town, Secondary cities, Municipalities, Metropolitan cities, Mega cities, and Global cities.	1
3	State of World Urbanization: A study of the state of world urbanization in the global South and the global North.	1, 2
4	Forces of Urban Changes in the Contemporary World: An exploration of vital forces of urban changes including demographic, economic, environmental and institutional.	1, 2
Section B		CLOs
5	Current Urban Challenges: Current urban challenges concerning Demography, Economy, Environment, Socio-Spatial, Institutional, Urbanization and Urban problems in Bangladesh.	1, 2
6	Introduction to Plan-making: Brief history of planning.	1, 2
7	Planning process: Non-participatory and participatory planning process.	2, 3
8	Planning Policy Framework: An understanding of different strata of planning documentation.	2, 3
9	The Emergence of Planning as a Technical Profession and its Approaches: Early forms of urban planning, emergence and spread of modernist planning, contemporary approaches to planning.	2, 3

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain urbanization and development challenges for cities;	1, 2, 3
	CLO2	Recognise critical urban issues in the global South;	1, 2, 3
	CLO3	Develop contents and process for a city plan.	1, 2, 3, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lectures, Documentaries, Group Discussions, Debate Sessions	Written Exams
CLO2	Lecture, Group Discussions, Visit to a Rapidly Urbanising City	Written Exams, Presentation
CLO3	Lecture, Group Discussions	Written Exams

Learning Materials

Recommended Readings	RTPI (2012). The Handy Guide to Planning. RTPI, London. Un-Habitat. (2012). State of the World's Cities 2008/9: Harmonious Cities. Routledge. Hall, P., & Tewdwr-Jones, M. (2010). Urban and regional planning. Routledge. Murtaza, M., G. (2012). A glossary of terms of urban, rural and regional planning. Centre for Urban Studies, Dhaka. Rahman, G. (2008). Town planning and the political culture of planning in Bangladesh. AH Development Publishing House. Thorns, D. C. (2017). The transformation of cities: urban theory and urban life. Bloomsbury Publishing. Un-Habitat. (2009). Planning sustainable cities: Global report on human settlements 2009. Earthscan. Un-Habitat. (2008). State of the World's Cities, 2010/2011: Bridging the Urban Divide. Earthscan. Ralph, P. L., Lerner, R. E., Meacham, S., & Burns, E. M. (1991). World Civilizations 8th ed. Vol. 2.
Supplementary Readings	Eisner, S., Gallion, A., & Eisner, S. (1993). The urban pattern. John Wiley & Sons.

Course Code: 0731 04 Arch 1254	Year: First	Term: Second
Course Title	Graphic Reproduction and Computer Aided Design (Studio/Project)	
Course Status	Core	
Credit	1.5	
Prerequisite(s)	None	
Rationale	Communicating ideas visually can be a powerful tool in helping planners to explain complex policies and proposals. Knowledge on reading urban graphics aids planners to take vital decisions on development. The course is designed for the first year undergraduate students so that they gain knowledge and skills for graphic communication, design and outreach. Students will gain the ability to draw, interpret and present urban graphics effectively and produce diagrams, presentations and reports in electronic format, and use physical models in their academic and professional life.	

	Course Contents/Tasks	CLOs
1	Graphical Production and Reproduction through Graphic Software: Introduction to graphic software for creating, editing, processing and printing raster graphics.	1
2	Graphical Production through Physical Models: Useful materials, tools and techniques for preparing models.	1, 2
3	Graphical Production in Planning: Report, exhibition, leaflets, presentation of drawing, posters, digital presentation, physical models.	2, 3
4	Managing Graphics Production: Critical issues of graphics production.	2, 3, 4
5	Computer aided Design: Use of graphic software for creating and editing Vector graphics.	4, 5
6	Architectural Presentation: Key principles of presentation and use of graphic software for architectural presentation.	4, 5, 6

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Draw the conventional architectural drawing utilizing their knowledge and skills in graphic software;	1, 6
	CLO2	Present urban raster and vector graphics;	6
	CLO3	Produce posters, pamphlets, reports, models and other graphical presentation materials appropriate for their future academic as well as professional life;	3, 6
	CLO4	Combine individual creativity and design choices of a teamwork.	4, 5

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Workshop and Hands on Exercise	Presentation
CLO2	Hands on Exercise	Presentation
CLO3	Hands on Exercise	Presentation and Oral Presentation
CLO4	Lecture, Workshop and Hands on Exercise	Presentation and Oral Presentation

Learning Materials

Recommended Readings	Jefferis, A., Madsen, D. A., & Madsen, D. P. (2012). Architectural Drafting and Design (Book Only). Cengage Learning. Gill, R. W. (1984). Manual of Rendering with Pen and Ink. Thames and Hudson.
Supplementary Readings	Ching, F. D., & Juroszek, S. P. (2010). Design drawing. John Wiley & Sons.

Course Code: 0611 04 CSE 1262	Year: First	Term: Second
Course Title	Database Management (Lab./Project)	
Course Status	Core	
Credit	1.5	
Prerequisite(s)	None	
Rationale	Knowledge on database in an essential for planners. Often planners are found to deal with huge data collected from field through questionnaire or observation or from secondary sources. These data they analyze to take inform decision about any locality or situation or group of people. Planners also need to design their database structure in such a way that data entry, processing and analysis become easy and efficient. This course has been designed to aid the planning student to prepare themselves for the forth coming professional career. In addition, knowledge on database will give added advantage for the GIS course. This is an introductory course in database and file management systems. It will help students to develop an understanding of the role of database development and management.	

	Course Contents/Tasks	CLOs
1	Lab Session 01: Introduction to DBMS	1
2	Lab Session 02: Database Design	1
3	Lab Session 03: Database Modelling and Form Design	3, 5
4	Lab Session 04: Lab test – 1	1, 3
5	Lab Session 05: Query Building	4
6	Lab Session 06: SQL	4
7	Lab Session 07: SQL	4
8	Lab Session 08: Lab test -2	1, 4
9	Lab Session 09: Form Design	2, 5
10	Lab Session 10: Report Generation	5
11	Lab Session 11: Connecting external and multiple database	5
12	Lab Session 12: Lab test -3	1, 5
13	Lab Session 13: Review	1-5
14	Lab Session 14: Presentation	5

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Demonstrate the understanding of the basic concepts that underlie database management systems;	2, 3
	CLO2	Create database and populate it in an efficient manner;	3
	CLO3	Design form for data entry and visualization;	5
	CLO4	Make query and learn SQL;	5, 9
	CLO5	Generate report from large database.	7, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Lab Demonstration	Lab Test
CLO2	Lecture, Lab Demonstration	Lab Test
CLO3	Lecture, Lab Demonstration	Lab Test
CLO4	Lecture, Lab Demonstration	Lab Test
CLO5	Lecture, Lab Demonstration	Presentation

Learning Materials

Recommended Readings/ Materials	http://office.microsoft.com http://www.openoffice.org/ http://staroffice.com/

Course Code: 0541 04 Math 1273	Year: First	Term: Second
Course Title	Mathematics II	
Course Status	Core	
Credit	2.0	
Prerequisite(s)	None	
Rationale	The course is designed for the first year students of Urban and Rural Planning Discipline as part of the foundation courses. Students of this course are expected to learn the application of mathematics in Urban and Rural Planning. This course has been designed to develop the analytical skill of the students to analyze and interpret data in the later stage of their degree program.	

	Course Contents	CLOs
	Section A	
1	Basic Concepts of ODEs: Definition and classification of ODEs, formation and solution justification.	1
2	Solutions of First-order First-degree Equation: Exact equation, separation of variables and Bernoulli's equation.	1, 2
3	Higher Order Linear Homogenous and Non-homogenous Equations: Solution with constant coefficient.	1, 2
4	Methods of Solving Non-homogenous Equation: Method of undetermined coefficients, operator method, method of variation of parameters.	1, 3
	Section B	CLOs
5	Basic Concepts of Matrix: Definition of various types of matrices, addition subtraction and multiplication of matrices, transpose.	2, 4
6	Matrix Operations: Adjoint and inverse of a matrix, rank and elementary matrix, transformation of matrix decomposition.	2, 4
7	Vector Analysis: Vector algebra, vector addition and multiplication (dependence and independence of vectors), dot and cross product of vectors.	4
8	Application of Vector: Gradient, divergence and curl.	4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain the formulation of differential equation;	1
	CLO2	Demonstrate appropriate mathematical equation for change determination of physical features;	6
	CLO3	Simulate the existing form of different physical features;	6, 7
	CLO4	Perform comparative analysis and distribute the forms of different objects.	6, 7

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture & Group discussions	Written exams
CLO2	Lecture, Workshop and Peer Learning	Assignment
CLO3	Lecture and Workshop	Assignment and Written exams
CLO4	Lecture and Workshop	Oral presentation

Learning Materials

Recommended Readings/ Materials	Narayan, S., & Mittal, P. K. (2010). A Textbook of Vector Analysis. S. Chand Publishing. Hartman, P. (2002). Ordinary differential equations. Society for Industrial and Applied Mathematics. De Morgan, A. (1836). The differential and integral calculus. Baldwin and Cradock.

Course Code: 0542 04 Stat 1277		Year: First	Term: Second
Course Title	Statistics for Planners		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	The course is designed for the first year students of Urban and Rural Planning Discipline as part of the foundation courses. Students of this course are expected to learn the application of mathematics in Urban and Rural Planning. This course has been designed to develop the analytical skill of the students to analyze and interpret data in the later stage of their degree program.		

Course Contents		CLOs
	Section A	
1	Introduction to Statistics: Introduction of the course, definition of statistics, its brief history, strength and weaknesses of statistics, distrust of statistics, classification of statistics, statistical methods, divisions and types of statistics, different sources of statistical data.	1, 2
2	Data types and Sources: Scales of measurement, classification of data, Simple and multivariate data types.	1
3	Data Collection and Presentation: Sample and population, different types of sampling, sampling for quantitative and qualitative survey, biasness, questionnaire preparation, different kinds of questionnaire, array formation, frequency distribution, variable & attribute, continuous & discontinuous series, construction of frequency distribution of variables, class interval, graphical representation- graph types, construction of graphs—frequency distribution graphs, histograms, frequency polygon, derivation of polygon from histogram, frequency curve, ogive, diagrams-simple bar, multiple bars, multidimensional diagrams, pictogram, cartogram-maps.	1
4	Measure of Central tendency: Introduction to measure of central tendency, mean, mathematical logic of mean, different kinds of mean, median, mathematical logic of median, mode, mathematical meaning of mode, relationship and difference among the central tendencies.	1, 3, 5, 7
5	Measure of Dispersion: The range-use, merits & demerits; the mean deviation -use, merits & demerits, calculation of mean deviation from median & mode, the standard deviation- use, merits & demerits, calculation of standard deviation from grouped & ungrouped data, the variance- calculation of various types of variance, the quartile deviation.	1, 3, 5, 7
	Section B	CLOs
6	Sample Size determination: Criteria for good sample size, strategies for determining sample size, significance of the sample size, effect size, estimated measurement variability, desired statistical power, significance criterion, one- or two-tailed statistical analysis.	5, 7
7	Distribution of Numbers: Essence of statistical distribution, relationship with the data types, conditions and properties of different kinds of numerical distributions conditions and properties of normal distribution, Z-score.	4, 5
8	Moments, Skewness, Kurtosis: The moments, moments from mean, skewness, the kurtosis.	4, 5
9	Correlation: Types of correlation, correlation vs. variance, computing test statistic.	5, 6, 7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Recognize, examine, and interpret the basic principles of describing and presenting data;	1, 2
	CLO2	Explain the role of statistics in different brunches of urban planning;	1, 2, 3, 4
	CLO3	Describe, and compute different measures of central tendencies and dispersion;	2, 4, 6
	CLO4	Describe and differentiate among different numerical distributions;	2, 7
	CLO5	Demonstrate ability to do almost all the calculations by hand using scientific calculator;	4, 7, 10
	CLO6	Establish the relationship among different data;	2, 4, 7, 8, 10
	CLO7	Determine data collection process from the field.	2, 4, 6, 7, 8, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture	Group Work and Final Exam
CLO3	Lecture and Problem-Based Learning	Group Work and Final Exam
CLO4	Lecture and Problem-Based Learning	Assignment and Final Exam
CLO5	Lecture and Group Work	Group Work and Final Exam
CLO6	Lecture and Group Work or Problem-Based Learning	Reading Assignment and Final Exam
CLO7	Lecture and Group Work or Problem-Based Learning	Individual Presentation and Final Exam

Learning Materials

Recommended Readings	Privitera, G. J. (2015). Statistics for the Behavioral Sciences (2nd ed.). SAGE. Salkind, N. (2013). Statistics for People Who (Think They) Hate Statistics (5th ed.). Thousand Oak, California: Sage Publications. Field, P. (2013). Discovering statistics using IBM SPSS statistics. London, England: SAGE.
Supplementary Readings	Wild, S. (1999). Chance Encounters: A First Course in Data Analysis and Inference (1st ed.), Wiley Pub. Gupta, S.P. and Gupta, M.P. (2009). Business Statistics (15th ed.). New Delhi;Sultan Chand & Sons.

Course Code: 0732 04 CE 1281		Year: First	Term: Second
Course Title	Engineering Survey		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Learners of this course will gain insight of the nature of calculations made with survey data, methods of data recording including errors and the need for error control, display, map preparation and storage.		

	Course Contents	CLOs
	Section A	
1	Basics of Surveying: Definition, scope and importance and its uses: types of engineering survey need to study engineering survey.	1, 2
2	Chain Survey: Definition, types, use of instruments, obstacles in chain survey, overcome technique of the obstacles, errors, method of chain survey, advantage and disadvantages.	1, 2, 3
3	Calculation of Area and Volume: Methods of measuring areas, Calculation of volume, errors and mistakes in determining areas and volume.	1, 2, 3
4	Plane Table Survey: Definition, use of instruments, operational procedure, errors and error correction, advantages and disadvantages	1, 2, 3
5	Levels and Levelling: Definition, types and use of levelling, instruments, methods of levelling, advantage and disadvantages of levelling, bench mark etc.	2, 3, 4
6	Contour and Contouring: Introduction, definition, uses of contour map, characteristics of contour line, methods of contour map preparation, interpolation of contour line.	3, 4
	Section B	CLOs
7	Traverse Survey: Definition, types, instruments, meridians, methods, uses, advantage and disadvantages, bearing calculation etc.	2, 3, 4
8	Linear Measurement: Types of linear measurement, instruments, types of readouts, field notes and field book, methods for linear measurement, taping method, stages of survey operation; electronic distance measurement, principles of Electronic Distance Measurement (EDM), different parts of EDM, errors in EDM	2, 3, 4
9	Total Station Survey: Instruments, function and operation, use in field, data record and use data in computer.	2, 3, 4
10	Global Navigation Satellite Systems (GNSS): Instruments, function, data collection, data entry, map preparation.	2, 3, 4
11	Topographic Survey: Planimetric and topographic maps, basic methods for topographic survey, map scale, control for topographic survey, field methods for locating topographic details, field-to-finish software, errors in topographic survey	2, 3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Learn rules for handling systematic errors, random errors and blunders;	1, 2
	CLO2	Learn elementary statistical methods to aid in error control;	1, 2, 3, 4
	CLO3	Recognise the range of calculations that can be made with survey data and its application;	1, 8
	CLO4	Compare the range of survey instrumentation and the appropriate uses of each class of instrument.	1, 6, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Problem-Based Learning	Presentation or Assignment and Final Exam
CLO3	Workshop and Problem-Based Learning	Group Work and Presentation
CLO4	Lecture and Group Work	Assignment and Presentation

Learning Materials

Recommended Readings	Agor, R. (2003). A text book of surveying and levelling. Khanna Publication. Aziz, M. A. & Shahjahan, M. (1982). A Text Book of Surveying. Barnali Printers, Dhaka. Roy, S. K. (2010). Fundamentals of surveying. PHI Learning Pvt.Ltd. Kavanagh, B. F., & Bird, S. J. (1992). Surveying: Principles and applications (No. 526.9 K21s). New Jersey, US: Prentice-Hall.
Supplementary Readings	Dewberry, S. O. (2008). Land development handbook: planning, engineering, and surveying. McGraw-Hill Education. Estopinal, S. V., & Lathrop, W. (2011). Professional Surveyors and Real Property Descriptions: Composition, Construction, and Comprehension. John Wiley & Sons. McKenzie, N. J., Grundy, M. J., Webster, R., & Ringrose-Voase, A. J. (Eds.). (2008). Guidelines for surveying soil and land resources. CSIRO publishing.

Course Code: 0732 04 CE 1282		Year: First	Term: Second
Course Title	Engineering Survey (Fieldwork & Studio)		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course will be conducted simultaneously with its theoretical counterpart 0732 04 CE 1281. Students of this course are expected to apply the acquired theoretical knowledge from 0732 04 CE 1281 in the field. Learners will gain hands-on experience on the usages of the survey equipment, data collection procedures, post-processing and map preparation.		

	Course Contents/Tasks	CLOs
1	Fieldwork 1 & 2 (Chain Survey): Orientation, operationalization of equipment, data collection and map preparation.	1, 2, 3
2	Fieldwork 3 & 4 (Plane Table Survey): Orientation, operationalization of equipment, data collection and map preparation.	1, 2, 3
3	Fieldwork 5 & 6 (Levels and Levelling): Orientation, operationalization of equipment, data collection and map preparation.	2, 3, 4
4	Fieldwork 7 & 8 (Traverse Survey): Orientation, operationalization of equipment, data collection and map preparation.	2, 3, 4
5	Fieldwork 9, 10 & 11 (Total Station Survey): Orientation, operationalization of equipment, data collection and download, processing data using software, preparation of maps for presentation.	2, 3, 4
6	Fieldwork 12, 13 & 14 (Global Navigation Satellite Systems): Orientation, operationalization of equipment, data collection and download, processing data using software, preparation of maps for presentation.	2, 3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Learn rules for handling systematic errors, random errors and blunders;	1, 2
	CLO2	Learn elementary statistical methods to aid in error control;	3, 4
	CLO3	Recognise the range of calculations that can be made with survey data and its application;	8
	CLO4	Compare the range of survey instrumentation and the appropriate uses of each class of instrument.	1

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Fieldwork, Group Work and Lab Work	Field Assessment, Group Submission and Viva Voce
CLO2	Lecture, Problem-Based Learning and Lab Work	Group Submission and Viva Voce
CLO3	Workshop and Problem-Based Learning	Group Work and Presentation
CLO4	Fieldwork, Group Work and Lab Work	Field Assessment, Group Submission and Viva Voce

Learning Materials

Recommended Readings	Agor, R. (2003). A text book of surveying and levelling. Khanna Publication. Aziz, M. A. & Shahjahan, M. (1982). A Text Book of Surveying. Barnali Printers, Dhaka. Roy, S. K. (2010). Fundamentals of surveying. PHI Learning Pvt.Ltd. Kavanagh, B. F., & Bird, S. J. (1992). Surveying: Principles and applications (No. 526.9 K21s). New Jersey, US: Prentice-Hall.
Supplementary Readings	Dewberry, S. O. (2008). Land development handbook: planning, engineering, and surveying. McGraw-Hill Education. Estopinal, S. V., & Lathrop, W. (2011). Professional Surveyors and Real Property Descriptions: Composition, Construction, and Comprehension. John Wiley & Sons. McKenzie, N. J., Grundy, M. J., Webster, R., & Ringrose-Voase, A. J. (Eds.). (2008). Guidelines for surveying soil and land resources. CSIRO publishing.

Course Code: 0732 04 CE 1283		Year: First	Term: Second
Course Title	Introduction to Construction Engineering and Management		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course aims to introduce fundamental concepts of civil engineering constructions to students. It discusses properties of commonly used construction materials and their roles in engineering construction, types and components of different civil engineering structures and fundamentals of construction management.		

Course Contents		CLOs
	Section A	
1	Construction Materials: Overview of various construction materials available in Bangladesh, properties of materials, mechanical, yielding, fracture, elasticity, plasticity, specifications and testing of different construction materials (sand, cement, brick, concrete, mortar etc.), understanding of how material properties are affected by chemical bonding, composition and microstructure.	1, 2
2	Concrete: Types, properties, composition and uses, concrete mix design, methods of proportioning concrete, workability of concrete and measurement of workability, factors controlling properties of concrete, placing and curing of concrete.	1, 2, 3
3	Soils Mechanics and Geotechnical Engineering: Fundamentals of soils mechanics, Soil properties and stresses, soil-water interaction, compressibility and shear strength, bearing capacity of soil, methods of determination of bearing capacity, field testing of bearing capacity.	2, 3
4	Foundations: Types of foundations, bearing capacity of shallow and deep foundations, settlement and distortion of foundations, design and construction of footings, rafts and piles, slope stability analysis.	2, 3
5	Civil Engineering Structures: Structural elements, Structural form, types and uses of buildings, roads, bridges, Irrigation flood control and drainage structures. Design codes and provisions in BNBC.	2. 3
	Section B	CLOs
6	Construction Planning and Scheduling: Planning, work/ project/ organizational breakdown structures, resource planning, time scheduling, Gantt charts, network and precedence diagrams, time-cost trade- offs, PERT, CPM, base lining and updating, using industry leading software.	4
7	Construction Management: Principles of management, principles of construction management, construction contracts and specifications, inspection and quality control, construction safety	5, 6
8	Construction Estimating and Cost Control: Conceptual and preliminary estimates and life-cycle decisions, detailed estimating, competitive bidding, estimate cost for small building, roads, irrigation and drainage structures.	5, 6
9	Construction Equipment: Construction equipment and operations, equipment and cost recovery, power and productivity, earth-moving operations, soil compaction, paving, hauling, trucking, concrete placement, cranes, tunnels and boring.	5
10	Financial Process of Construction: BoQ and other parts of the tendering process, tender and contract document preparation.	7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Demonstrate the use of different construction materials according to their Engineering properties and availability;	1, 2, 3
	CLO2	Interpreting different types building structure and apply other component of civil engineering structures;	1, 2, 3, 8
	CLO3	Describe the relationship between civil engineering design, technical requirements, and construction;	7, 8
	CLO4	Develop a simple construction schedule using the critical path method;	6, 9
	CLO5	Explain the basics of project monitoring, controls, and safety requirement;	6, 7
	CLO6	Differentiate the process of building a project estimation at different levels of details;	6, 7, 8
	CLO7	Prepare a BoQ and tender document for a construction project.	6, 7, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Workshop	Presentation or Assignment and Final Exam
CLO3	Class Lecture and Group Discussion	Assignment and Final Exam
CLO4	Lecture and Problem-Based Learning	Class Test or Assignment or Presentation and Final Exam
CLO5	Lecture and Group Discussion	Final Exam
CLO6	Lecture and Group Work or Problem-Based Learning	Reading Assignment and Final Exam
CLO7	Lecture and Workshop	Open-Book Exam and Final Exam

Learning Materials

Recommended Readings	Aziz, M. A. (1990). Engineering Materials. Dhaka: Hafiz Book Centre. Khan, A. F. (1986). Concrete Structure and Building Design, Dhaka: Sabdic Publisher. Khan, A. F. (1986). Estimating. Dhaka: Sabdic Publisher. Kumar, S. (1988). Building Construction. New Delhi: Standard Book House. Popoy, E. P. (1990). Engineering Mechanics of Solids. New Jersey: Pretice Hall. Singh, G. (1989). Building Construction Engineering. New Delhi: Standard Book House. Stewart, R. D. and Stewart, A. L. (1986). Micro Estimates for Civil Engineers. McGraw-Hill Book Company. Bowles, J. E. (1988). Foundation Analysis and Design. McGraw-Hill Book Company.
Supplementary Readings	Karim, H. (2016). Fundamentals of engineering geology. University of Technology Printing Press Department, University of Technology, Baghdad, Iraq Rajput, R. K. (2008). Engineering materials. S. Chand Publishing.

Second Year First Term			
Course Code: 0731 04 URP 2111		Year: Second	Term: First
Course Title	Rural Planning I		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	The course is designed for the second year students of Urban and Rural Planning Discipline. Students of this course are expected to learn and understand the basic concepts, theories of rural planning and development. This course has been designed as part of the rural planning package of the course curricula. It also helps students to develop knowledge about rural planning and development practices in Bangladesh.		

	Course Contents	CLOs
	Section A	
1	Introduction to Rural Planning: Defining Rural Planning, Rural Planning in the Development Decades, US Model in Rural Planning & The Third World Approach to Rural Planning. Concept on 'rural' and 'countryside', The role of planning in rural areas, Special challenges faced in rural areas of Bangladesh, The inter-connectivity of places: re-thinking urban and rural through strategic planning.	1, 4
2	Evolving Themes in Rural Development: Rural Development-Definitions, A Rural Development Timeline, Key Strands and Switches in Rural Development Thinking- Small Farm Focus, Process Approaches to Rural Development, Phases in Rural Development Practice and The livelihood Approach.	1, 3
3	Theories of Development: Linear Stage Theories (Rostow, Harrod-Domar model), Neo-Classical Structural Change Models (Lewis model), International Dependence Model, Dualism and Concept of Dual Society, Migration model (Todaro), Transforming Traditional Agriculture (Schultz Model) & Urban Bias Theory (Michael Lipton).	2, 3, 6
4	Theories of Rural Development: Meaning, Measure, Core Values and Objectives of Development.	2,3,6
	Section B	CLOs
5	Bangladesh Context of Rural Development: Historical perspective of rural planning and development, evolution of rural development planning in Bangladesh.	3, 4
6	Major Approaches during Pakistan and Bangladesh: Village Aid Programme, Comilla Model, Integrated Rural Development Programme, Swanirvar (Self-reliance) Bangladesh and Ideal Village Project, Non-Government Organizations' Approaches of Rural Development.	4, 5
7	Local Level Planning in Bangladesh: Local government & rural power structure, Village level plans (Contents, planning process and guidelines), Union level plans, Upazila level plans, District level plans.	5, 6
8	Rural Development in International Context: Examples of United Kingdom, United States, China, India, Thailand and Malaysia.	5, 6

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain what we mean by 'rural planning' as opposed to 'urban planning';	1
	CLO2	Analyze theories of development and also apply the theories to analyze rural development challenges in developing countries;	1, 5, 7
	CLO3	Develop basic understanding of rural development theories;	1, 7, 8
	CLO4	Think critically about issues in rural planning in Bangladesh;	3, 5, 7, 8
	CLO5	Analyze the spatial dimension of development;	3, 7, 8
	CLO6	Critically identify the theories and determinants of rural planning process.	1, 7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Rapport Building/Ice Breaking, Group Discussion and Lecture	Presentation or Assignment and Final Exam
CLO2	Lecture and Discussion	Class Test and Final Exam
CLO3	Class Lecture	Assignment/Open-Book Exam and Final Exam
CLO4	Class Lecture, Debate and Problem-Based Learning	Assignment and Presentation
CLO5	Lecture	Open-Book Exam and Final Exam
CLO6	Lecture and Workshop or Problem-Based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Mamun, S.M.M. (2014). Rural Development Planning in Bangladesh: Concept, Historical Perspective, Past Efforts, General Guidelines and Process. Khulna: Maria Press. Mamun, S.M.M. (2006). Origin and Evolution of Rural Development Planning in Bangladesh: An Analytical Review. Journal of Politics and Administration, 1(1): 119-142. ESCAP (1979). Guidelines for Rural Center Planning. New York: ESCAP. Hye, H. A. (1982). Local Level Planning in Bangladesh. Dhaka: NILG. Nwagboso, C.I. & Duke, O. (2012). Rural Development Programme Implementation in Developing Countries. Global Journal of Human Social Science, 12(11): 27-34. Quddus, M. A. (1996). Rural Development in Bangladesh: Strategies and Experiences. Cumilla: BARD.
Supplementary Readings	CIRDAP (1994). Rural Development in CIRDAP Countries, Dhaka: CIRDAP. . Ahmed, S. & Zahid, S. J. A. (1998). Strategies and Issues of Local Planning in Bangladesh. Cumilla: BARD. Baqee, A. (1998). Rural Settlement: Characteristics, Development and Planning Issues. 2nd ed. Dhaka: Presidency Press. Siddiqui, K. (1994). Local Government in Bangladesh. 2nd ed. Dhaka: UPL. GOB (2001). National Rural Development Policy, Dhaka: GOB. Thorburn, A. (1971). Planning Villages. London: Henry Burt & Son Limited. UNAPDI (1986). Local Level Planning and Rural Development. New Delhi: Concept Publishing Company. Carney, D. (1998). Sustainable Rural Livelihoods: What contribution can we make? London: DFID.

Course Code: 0731 04 URP 2112		Year: Second	Term: First
Course Title	Rural Planning I (Fieldwork)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	The course is designed as the sessional course for Course No. URP 2112. It is expected that upon completion of the course student will learn the basic characteristics of rural areas in planning perspective. Students of this course are expected to identify the theoretical concepts in the field. This course has been designed to introduce students with different infrastructure and landuse of rural areas in Bangladesh.		

	Course Contents/Tasks	CLOs
1	Block 1: Land Use Survey- Develop methodologies for land use survey, conduct survey & prepare a land use map.	1, 2, 3
2	Block 2: Socio-Economic Survey: Questionnaire survey, conduct survey & prepare a report.	4
3	Block 3: Infrastructure Survey: Develop a methodology for land use survey, conduct survey, prepare infrastructure map & develop a report.	3, 4
4	Block 4: Mapping of Rural Economic & Social Institution: Survey checklist, conduct survey & prepare a report.	4
5	Block 5: Rural Development Problem Analysis to Prepare a Village/ Union Level Plan: Survey checklist, conduct survey & prepare a report.	2, 3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain the landuse of rural areas;	2
	CLO2	Think critically about the interrelation between livelihood and landuse in rural areas;	3, 6
	CLO3	Analyze the spatial dimension of rural infrastructures;	5, 7, 8
	CLO4	Critically identify different social and economic institutions of rural Bangladesh.	5, 7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review and Workshop	Presentation
CLO2	Lecture, Workshop and Group Discussion	Group Presentation
CLO3	Workshop, Fieldwork and Problem-based Learning	Field Logbooks Preparation and Presentation
CLO4	Fieldwork, Group Discussion and Problem-based Learning	Assignment and Presentation

Learning Materials

Recommended Readings	Mamun, S. M. M. (2014). Surveying in Rural Development Planning, Khulna: Maria Press. Hye, H. A. (1982). Local Level Planning in Bangladesh. Dhaka: NILG.

Course Code: 0731 04 URP 2124		Year: Second	Term: First
Course Title	Site and Area Planning Technique (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	URP 2124 introduces site planning as a design activity and a nexus of urban planning ideas and concerns. Course lectures, readings, and discussion cover the basic techniques and norms of good physical design, as well as critical issues, regulations, and policy, and their place in the historical evolution of approaches to site layout. Students will learn site observation and analysis, fundamental topographical and hydrological analysis and manipulation, land subdivision, residential, mixed-use, and retail center layout, laying out roadways, parking, and pedestrian circulation, site furnishing, lighting, and planting.		

	Course Contents/Tasks	CLOs
1	Site Analysis and Mapping 1: Site planning process, Seeing spaces, Site impressions, Site inventory and evaluation, Range and process of different site development and design, Relation of program to design, Importance of slope, Learn to read a topographical map and relate it to natural systems.	1, 2
2	Site Visit 1: Site planning tour of KU campus, Identifying spaces, and places, User and space, Public and private spaces, Conduct a site analysis, Site analysis.	2, 3, 4
3	Site Analysis and Mapping 2: On-site reconnaissance and note-taking for site analysis, Sun angles, Shadow studies, Wind rose, Mapping, Principles of good graphics, Design elements/principles, Visualizing space, Site selection.	3, 4, 5
4	Drainage and Grading: Moving earth and water given different slopes, Soil types and ground cover, Strategies for minimising runoff and preserving natural vegetation and habitat.	2, 4
5	Land/Property Subdivision1: Site inventory, Physical and biological attributes, Land use, road and infrastructure layout, Learn the basics of conventional subdivision layout, Focus on road intersection standards and horizontal and vertical alignment principles.	3, 5
6	Land/Property Subdivision 2: Cultural and historic contexts, Regulatory context, Ecological and environment friendly design: Shared/controlled access, Green infrastructure.	4, 6
7	Land/Property Subdivision 3: Density and diversity, Residential area design, Given increased diversity of housing types, Enhanced pedestrian (pedestrian-friendly) and transit access.	4, 6
8	Housing, Houses and Communities: Private and public spaces, Residential area design, Given increased public/collective responsibility for on-site environmental conservation and public amenities.	5, 6
9	Housing, Houses and Communities: The "New" Urbanism, Class discussion of recent trends in site planning from a historical perspective.	5, 6
10	Site Visit 2: The "Ecological New Urbanist" neighbourhood Or the “New Urbanist Shopping Center".	2, 3, 4
11	Mixed Use and Commercial Sites 1: Layout and access, Densification/diversification of suburban malls.	3, 5
12	Mixed Use and Commercial Sites 2: Parking demand, Access and parking design.	3, 5
13	Site Details: Microclimate, Historical value, Preservation and Conservation, Planting, Furnishing and lighting.	5, 6

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Describe the processes required to generate a comprehensive and integrated site plan;	1, 2, 7, 9
	CLO2	Comprehend the duties of the interdisciplinary design team members and understand the fundamentals issues in site planning and design;	3, 4, 5, 8, 10
	CLO3	Carry out a site inspection and conduct a comprehensive site analysis and conceive the idea of a site plan;	4, 9, 10
	CLO4	Recognize the elements that must be included in the ideal site plans with the necessary schematics/sketches;	1, 2, 6, 7
	CLO5	Articulate drafting skills, develop CAD and 2D/3D graphics skills and operate, GEP, SketchUp, AutoCAD and Adobe Illustrator interchangeably;	3, 4, 6
	CLO6	List the elements that must be included in a report with detailed site analysis, estimated cost, site planning with design proposals.	3, 5, 6, 9, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Literature Review and Group Discussion	Quiz, Presentation, Flip Charts
CLO2	Fieldwork, Watching Documentaries/Movies and Group Discussion	Poster Presentation, Design Sheets, Design Critiques
CLO3	Fieldwork and Problem-Based Learning, Group Exercise	Design Sheets, Design Critiques, Assessment Reports
CLO4	Lecture, Fieldwork, Group Exercise and Problem-Based Learning	Quiz, Multimedia Presentation, Design Sheets, Assessment Reports
CLO5	Hands-On Exercise and Problem-Based Learning	Design Sheets, Design Critiques
CLO6	Lecture, Literature Review, Group Exercise	Poster Presentation, Design Sheets, Reports

Learning Materials

Recommended Readings	Booth, N. K. (1989). Basic Elements of Landscape Architectural Design (First Edition). Waveland Pr Inc. Hack, G. (2018). Site Planning: International Practice (The MIT Press) (Illustrated ed.). The MIT Press. Hamid, P. A. (1997). Subdivision Planning: APractical Guide. Dhaka. Jarvis, F. D. (1993). Site Planning and Community Design for Great Neighborhoods. Home Builder Pr. Listokin, D., & Walker, C. (2017). The Subdivision and Site Plan Handbook (1st ed.). Routledge. Lynch, K. (1960). The Image of the City (Harvard-MIT Joint Center for Urban Studies Series) (Illustrated ed.). The MIT Press. Lynch, K., & Hack, G. (1984). Site Planning, Third Edition (3rd ed.). The MIT Press. Tal, D. (2016). SketchUp for Site Design: A Guide to Modeling Site Plans, Terrain, and Architecture (2nd ed.). Wiley.
Supplementary Readings	American Planning Association, Steiner, F. R., & Butler, K. (2006). Planning and Urban Design Standards. Wiley. Calkins, M. (2012). The Sustainable Sites Handbook: A Complete Guide to the Principles, Strategies, and Best Practices for Sustainable Landscapes (1st ed.). Wiley. Chiara, D. J., &Koppelman, L. E. (1984). Time-Saver Standards for Site Planning (1st ed.). McGraw-Hill.

Course Code: 0731 04 URP 2125		Year: Second	Term: First
Course Title	Introduction to Landscape and Urban Design		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Urban design offers knowledge about the design dimensions of planning. This branch of knowledge provides an insight into how places can be designed to make them responsive. While conventional planning concentrates on policy directions, urban design guidelines provide clear and specific design codes for shaping plots, parcels, neighbourhoods and cities. This course will provide a knowledge base of design and landscaping for future planners to deliver sustainable urban space.		

	Course Contents	CLOs
	Section A	
1	Introduction to Urban Design and Its Scope: Where does Urban Design interfere? Relating planning and urban design, What is urban design, its context and significance?	1
2	Demystifying the Design Agenda: Principles and objectives of Urban Design, Aspects of urban quality, Aspects of development Form.	1
3	Criteria for Urban Design: Permeability, Variety, Legibility, Visual Appropriateness, Robustness, Richness, Personalization etc.	1, 2
4	Concepts in Urban Design: Mental and physical space, Aesthetics order and beauty, Extracted forms, vistas, views, Expressions, colour, space, geometry, human-scale etc.	1, 2
	Section B	CLOs
6	Introduction to Landscape and Its Scope: What is Landscape? Its context and significance.	1, 2
7	Elements of Landscape: Natural and man-made, soft cape, hardscape, trees, lawns, meadows, water bodies, land, climate, seating areas, lighting and fountains.	1, 2
8	Site Selection and Analysis: Selection of site, analysis of site and making application for approval.	3
9	Landscape Planning: Stewardships of landscape planning, dimensions of landscape planning, theories and principles of landscape planning and design, process of landscape planning, site analysis.	3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Understand the scope of urban design and landscaping in planning;	1, 2, 3
	CLO2	Appreciate urban design principles and landscape elements in analysing quality of urban space;	1, 2, 3, 5, 6, 8
	CLO3	Design space following urban design criteria and landscaping elements.	1, 2, 3, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Documentaries, Group Discussions, Debate Sessions	Written Exams
CLO2	Lecture, Group Discussions, Fieldworks	Written Exams & Presentation
CLO3	Lecture, Group Discussions	Written Exams & Design Workshop

Learning Materials

Recommended Readings	Bentley, I. (1985). Responsive environments: A manual for designers. Routledge. Simonds, J. O., & Starke, B. W. (2013). Landscape architecture: A manual of environmental planning and design. McGraw-Hill.
Supplementary Readings	Yeang, L. D. (2000). Urban design compendium. English Partnerships/Housing Corporation, London. Lynch, K. (1964). The image of the city. MIT press. Talen, E. (2009). Urban design reclaimed: Tools, techniques, and strategies for planners. American Planning Association, Planners Press.

Course Code: 0731 04 URP 2126	Year: Second	Term: First
Course Title	Introduction to Landscape and Urban Design (Fieldwork & Studio)	
Course Status	Core	
Credit	1.5	
Prerequisite(s)	None	
Rationale	The course is designed as the sessional course for Course No. URP 2125. It is expected that upon completion of the course student will be able to cater for building liveable space and ensuring quality urban life as a professional planner. This course will offer real life case studies to the students which will be diagnosed by the students with the learning of the theory course. It is expected that upon completion of the course, students will be able to apply urban design principles and landscape elements in analyzing quality of urban space.	

	Course Contents/Tasks	CLOs
1	Workshop 01: Appreciating the design of an urban space-learning to analyze space (Visual analysis, Archive analysis, Ped-Shed, Tissue analysis, building age profiling).	1
2	Project 01: Students will study different urban design criteria and design principle of the built environment through study of a commercial or residential area within a city. At the end of the practice they will put forward proposals in the form of poster presentations for improving the current responsiveness of the built environment.	1, 3
3	Project 02: Students will conduct archive analysis to study selected parks and open space and will identify the different design elements. Students will explore international cases and will rely on books, internet materials and reports to gain understanding about the design of their sites.	1, 2
4	Project 03: An existing site that has different elements of landscape will be selected for this project. Students will analyze the elements of existing landscape in analysis maps before forming a detailed 3 dimensional proposal for the site.	1, 2, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Study a site applying various urban design analysis technique;	1, 2
	CLO2	Develop skill to academically defend a design scheme;	4, 5, 6
	CLO3	Demonstrate and produce knowledge of policy documentation of an urban design scheme.	1, 2, 5, 7, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review and Workshop	Presentation
CLO2	Lecture, Workshop and Group Discussion	Group Presentation
CLO3	Workshop, Fieldwork and Problem-Based Learning	Field Logbooks Preparation and Presentation

Learning Materials

Recommended Readings	Bentley, I. (1985). Responsive environments: A manual for designers. Routledge. Simonds, J. O., & Starke, B. W. (2013). Landscape architecture: A manual of environmental planning and design. McGraw-Hill.
Supplementary Readings	Yeang, L. D. (2000). Urban design compendium. English Partnerships/Housing Corporation, London. Lynch, K. (1964). The image of the city. MIT press. Talen, E. (2009). Urban design reclaimed: Tools, techniques, and strategies for planners. American Planning Association, Planners Press.

Course Code: 0611 04 CSE 2162	Year: Second	Term: First
Course Title	Programming Language (Lab./Project)	
Course Status	Optional	
Credit	1.5	
Prerequisite(s)	None	
Rationale	This course provides some idea and thoughts to future planners about programming language. The purpose of this course is to study fundamentals concepts in programming languages and major tools and techniques to implement them. This includes syntax specification and informal semantic models; binding and scoping; types and type systems; control structures; data abstraction; procedural abstraction and parameter passing; higher-order functions; and memory management. Successful completion of this course will help the students to comprehend GIS courses specially the advanced one. It will also enhance their ability to learn other computer applications.	

	Course Contents/Tasks	CLOs
1	Lab Session 01: Introduction to programming	1
2	Lab Session 02: Structure of a computer program	1, 2
3	Lab Session 03: Graphical Interface	1, 3
4	Lab Session 04: Error, build, debugging, syntax	1, 2, 3
5	Lab Session 05: Variables, Keywords, data types	1, 4
6	Lab Session 06: Arithmetic operator	1, 2, 4
7	Lab Session 07: Relational and logical operator	4
8	Lab Session 08: Loop (While , Do While, for)	5
9	Lab Session 09: Decision Statements: if.. .. .. else	5
10	Lab Session 10: Switch	4, 5
11	Lab Session 11: Iteration Statement	5
12	Lab Session 12: Methods: creating, calling, parameters	4
13	Lab Session 13: Array and collection	5
14	Lab Session 14: Handling external file	3, 5

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain different terminologies and principles of computer programming;	1, 6
	CLO2	Explain the basic steps of programming;	1, 4, 6
	CLO3	Interpret simple programs;	1, 6
	CLO4	Build simple algorithm to solve some practical problems;	1, 6, 9
	CLO5	Solve simple algorithms using the language.	6, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Lab. Demonstration	Lab. Test
CLO2	Lecture, Lab. Demonstration	Lab. Test
CLO3	Lecture, Lab. Demonstration	Lab. Test
CLO4	Lecture, Lab. Demonstration	Lab. Test
CLO5	Lecture, Lab. Demonstration	Presentation

Learning Materials

Recommended Readings	Scott, M. L. (2000). Programming language pragmatics. Morgan Kaufmann. Liang, Y. D. (2013). For Introduction to Programming Using Python. displays, 8(8), 8.

Course Code: 0611 04 CSE 2164		Year: Second	Term: First
Course Title	Computer-Based Statistical Analysis (Lab./Project)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	The course's focus is the application of statistical tools for data analysis, hypothesis testing, and prediction. The aim of this course is to provide an introduction to SPSS and R for performing the theoretical statistical analysis in a computer-aided platform.		

	Course Contents/Tasks	CLOs
1	Session 01: Questionnaire preparation and introduction to SPSS environment.	1, 3
2	Session 02: Variable Declaration in SPSS	1, 3, 4
3	Session 03: Data visualization, Table preparation and Query.	1, 3, 4
4	Session 04: Central tendency and measure of dispersion, Test of normality of data, Non parametric tests.	1, 3
5	Session 05: Correlation (Bivariate correlation, partial and semi partial correlation, effect size).	1, 3, 4
6	Session 06: Regression: Linear regression.	1, 2, 3
7	Session 07: R Basics and Data Visualization in R	1, 2
8	Session 08: A Review of Statistics-I using R. • Estimation of unknown population parameters • Hypothesis testing • Confidence intervals	1, 2, 3
9	Session 09: Linear Regression in R.	1, 4
10	Session 10: Comparing Models: Unrestricted vs. Restricted models.	2, 4
11	Session 11: Exploring Probability in R	2, 3, 4
12	Session 12: PCA	3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Apply laws of probability to random processes;	3, 6, 7
	CLO2	Use sample data to estimate parameters governing these processes;	6, 7
	CLO3	Undertake tests of experimental hypotheses;	6, 7
	CLO4	Apply the basics of probability and statistics and to solve real-world urban planning problems.	6, 7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Lab. Demonstration	Lab. Test
CLO2	Lecture, Lab. Demonstration	Lab. Test
CLO3	Lecture, Lab. Demonstration	Lab. Test
CLO4	Lecture, Lab. Demonstration	Lab. Test

Learning Materials

Recommended Readings/ Materials	Hanck, C., Arnold, M., & Gerber, A. (2021). Introduction to Econometricss with R. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). An Introduction to Statistical Learning: with Applications in R. SalKind, N. J. (2014). Statistics for People Who (Think They) Hate Statistics. SAGE Publications, Inc.

Course Code: 0314 04 Soc 2175		Year: Second	Term: First
Course Title	Social Psychology		
Course Status	Core		
Credit	2.0		
Prerequisite(s)	None		
Rationale	This course offers the basic knowledge of psychological processes people have in common that make them susceptible to social influence. Importantly, the discussions on diverse socio-psychological topics including both the theoretical and practical aspects, this course develops an understanding to seek plausible explanations about social issues related to urban and rural planning discourses.		

Course Contents		CLOs
Section A		
1	Introduction to Social Psychology: Explaining our social world, understanding the importance if studying social psychology in urban and rural planning, the big ideas of social psychology, principles of social psychology, relation among social psychology, philosophy, science, and common sense.	1, 2, 3, 4, 5
2	Understanding the Social World: Social cognition, steps of forming impressions of people, automatic thinking, types of automatic thinking, use of schemas in decision making, self-fulfilling prophecy, controlled thinking, cultural differences in social cognition.	1, 2, 3, 4, 5
3	Reflected thoughts on Behaviour and Attitudes: Understanding the predictive nature of attitudes on behaviour, critical thoughts on affectedness of behaviour on attitude, types of behavioural change on attitude, the power of advertising for changing the attitude.	1, 2, 3, 5
4	Social Perception in Decision Making: Elements of social perception, nonverbal cues as method of communication, influence of initial impressions, relation of culture and social perception.	1, 2, 3, 4
5	Persuasion in Social Context: Understanding persuasion, elements of persuasion, strategies to restrict persuasion.	1, 2
6	Group Influence: Formation of group, social facilitation, social loafing, sense of deindividuation, polarization of group, decision making in group, influence of minority in group behaviour.	1, 2, 3, 4, 5
7	Cognitive Dissonance in Social Activities: Theory of cognitive dissonance, internal consequences of doings, relationship between narcissism and dangers of too much, ways to overcome dissonance.	1, 2, 3, 4, 5
Section B		CLOs
8	Prejudice in Social Context: Understanding prejudice, sources of prejudice, ways to detect hidden prejudice, effects of prejudice on victims, ways to reduce prejudice.	1, 2, 3, 4, 5
9	Aggression as an Expression: Sources of aggression, relation of culture and aggression, aggression in different social situations, roles of violence and media in contextualising aggression, ways to decrease aggression.	1, 2, 3, 5
10	Pro-social Behaviour in Everyday Activities: Motives of pro-social behaviour, relation of personal qualities with pro-social behaviour, situational determinants of pro-social behaviour, the bystander effects, ways to increase pro-social behaviour.	1, 2, 3, 4, 5
11	Interpersonal Attraction and Sensitivity: Understanding attraction, factors of liking- proximity, familiarity, similarity, and social matching.	1, 2, 3, 5
12	Relationship in Changing World: Understanding relationships as a social exchange, close relationships-love and romance, connection between love and marriage, relationship in digital world, assumptions of successful relationships.	1, 2, 3, 5
13	Conflict and Peacemaking: Understanding conflict, reasons of conflict, ways to achieve peace in conflict situation, strategies of conflict management in the context of peacemaking.	1, 2, 3, 4, 5
14	Social Psychology and the Sustainable Future: Psychology and climate change, enabling sustainable living, social psychology of materialism and wealth.	1, 2, 3, 5

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain the various types of social situations from socio-psychological aspects;	1, 2
	CLO2	Describe, discuss, and analyze major issues and concepts in the field of social psychology;	1, 2, 3
	CLO3	Explain the relationship between culture, social behaviour, and social thinking that can directly and indirectly result in different behaviours and attributions;	4, 7
	CLO4	Demonstrate the ability to illustrate the critical aspects of human social behaviour incorporating the cultural influences both the personal and groups perspective;	4, 6, 9
	CLO5	Apply social psychological principles to real-world issues.	3, 5, 7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Group Discussion	Presentation or Assignment and Final Exam
CLO3	Lecture and Problem-Based Learning	Assignment and Final Exam
CLO4	Workshop and Lecture	Assignment and Presentation
CLO5	Lecture and Group Work or Problem-Based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Aronson, E., Wilson, T. D., & Sommers, S. R. (2021). Social Psychology (10th ed.). Pearson Education Limited. Branscombe, N. R., & Baron, R. A. (2017). Social Psychology (14th ed.). Pearson Education Limited. Kassin, S., Fein, S., & Markus, H. R. (2016). Social Psychology (10th ed.). Cengage Learning. Myers, D. G., & Twenge, J. M. (2018). Social Psychology (14th ed.). McGraw-Hill Education.
Supplementary Readings	Deaux, K., & Snyder, M. (2012). The Oxford Handbook of Personality and Social Psychology. Oxford University Press.

Course Code: 0542 04 Stat 2177		Year: Second	Term: First
Course Title	Statistical Methods for Planning Research		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course is designed to introduce the basics of probability and statistics and its application to real-world problems, particularly in urban and rural planning. The course's focus is the application of probabilistic and statistical tools for data analysis, hypothesis testing, and prediction. It is expected that students will join this course after passing the course 0542 04 Stat 1277.		

Course Contents		CLOs
Section A		
1	Recap of Elementary Statistics: Distribution of numbers.	1, 4
2	Time series Analysis: Measurement of trend, seasonal variation, usages and importance of time series analysis.	2, 4
3	Test of Hypothesis: Level of significance, testing the significance of difference between sample mean and population mean. Test of significance for attributes, difference between two sample means, and co-efficient of correlation. Chi-square test, Fisher's test etc.	3, 4
4	Analysis of Variance: Definition, components, statistical assumption, F-distribution, usages and application of variance analysis, one-way, two-way, and three-way classification.	1, 3, 4
Section B		CLOs
5	Probability Theory: Random variables and probability distributions, Random sampling and distribution of sample averages, largesample approximations etc.	1
6	Correlation: Types of correlation, correlation vs. variance, computing test statistic, correlation vs causation, spurious correlation, outliers, reversing cause and effect, and confounders.	2, 4
7	Linear Regression with One Regressor: Simple linear regression, Estimating the coefficients, Measures of fit, Assumptions, Sampling Distribution of the OLS estimator.	2, 3, 4
8	Linear Regression with Multiple Regressor: Omitted variable bias, Multiple regression model, Measures of fit, OLS assumptions in multiple regression, Distribution of OLS estimator in multiple regression.	2, 3, 4
9	Principal Component Analysis (PCA): Scope and purpose of PCA, Objectives of PCA, Types of PCA, Steps of PCA.	1, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Apply laws of probability to random processes;	3, 6, 7
	CLO2	Use sample data to estimate parameters governing these processes;	6, 7
	CLO3	Undertake tests of experimental hypotheses;	6, 7
	CLO4	Apply the basics of probability and statistics to solve real-world problems.	6, 7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture	Presentation or Assignment and Final Exam
CLO3	Lecture	Class Test and Final Exam
CLO4	Lecture	Assignment and Final Exam

Learning Materials

Recommended Readings	Hanck, C., Arnold, M., & Gerber, A. (2021). Introduction to Econometricss with R. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2021). An Introduction to Statistical Learning: with Applications in R.
Supplementary Readings	SalKind, N. J. (2014). Statistics for People Who (Think They) Hate Statistics. SAGE Publications, Inc.

Course Code: 0314 04 Soc 2179		Year: Second	Term: First
Course Title	Population and Gender Studies		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course introduces the wide spectrum of population issues incorporating the basics of demography for understanding its importance in planning process. It also responses towards the gender dynamics in the development agenda including the theoretical and practical perspectives considering the growing popularity of gender discourses.		

Course Contents		CLOs
Section A		
1	Introduction to Demography: Understanding of demography, relationship of population to resources, relationship of population to social and political dynamics, population size and composition, population change, population problems.	1, 2
2	Demographic Data: Population censuses, Evolution of the Bangladesh census, registration and vital statistics, administrative data, sample surveys, spatial demography, applied demography.	1, 2, 3
3	Demographic Perspectives and Theories: Premodern population doctrines, the Malthusian perspective, the Marxian perspective, the theory of the demographic transition.	1, 2, 3
4	Age and Sex Structure: Describing age-sex structure, contrasts between more-developed and less-developed countries, influence of structure on the population processes, problems of young populations, problems of old populations, problems of fluctuations in cohort size.	2, 3, 4, 5
5	Population Projection: Understanding population projections and forecasts, population projection methodology, cohort component method, population forecasts, accuracy and uncertainty, alternative forecasting methods.	2, 3
6	Health and Mortality Transition: Defining the health and mortality transition, changes in health and mortality over time, life span and longevity, measuring mortality, sex differences in mortality, problems of mortality.	2, 3, 4, 5, 6
7	Fertility Transition: Understand the fertility transition, motivations for lower fertility levels, controlling measures to fertility, measures of changes in fertility, geographic variability in the fertility transition, fertility as problems, family-planning programs in the less-developed regions.	2, 3, 4, 5, 6
Section B		CLOs
8	Migration: Understand the migration transition, measuring migration, determinants of migration, forced migration, non-migration, migration problems and policies, impact of migration on society.	2, 4, 5, 6
9	Social Construction of Gender: Understanding the concept of gender, distinctions between sex and gender, ways of social construction of gender, interconnectedness of social constructions of gender with issues like race, class, age, ability, and sexual identity.	2, 3, 4, 5, 6
10	Identity and Gender: Gender identity and self-categorization, gender stereotypes, masculinities and femininities, gender identity and gender development, gender and academic achievement.	2, 3, 4, 5, 6
11	Introduction to Feminist Theories: Understanding the feminist theories, reasons of using theories, from Marxism to political economy, psychoanalysis, race theories, post-modernism and women, post-colonial theory.	1, 2, 3, 4, 5, 6
12	Theory to Practice of Feminism: Features of feminism, feminism and feminist ideas, radical feminism, socialist feminism, Marxist approaches, phenomenological and humanistic approaches.	4, 5, 6
13	Controversies and Citizenship Associated with Gender: Understanding the importance of citizenship of women, importance of classroom environment in relation to gender, features of consciousness and raising, contentious issues in classroom environment in understanding the gender discourse.	2, 3, 4, 5, 6
14	Gender Based Violence (GBV): Understanding GBV, attitudes to acceptability of GBV, association of GBV with women's earnings, relation of GBV with patriarchy, role of media in relation to GBV, intervention to reduce GBV.	4, 5, 6

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain the demographic concepts and theories linked to population dynamics;	1, 2, 3,
	CLO2	Exploration of population behaviour, age-sex dynamics in relation to reliable sources of data, and perspectives of gender in the form of population problems;	1, 2, 6,8
	CLO3	Use different demographic tools and techniques in understanding health, mortality, and fertility discourses responding towards sustainability challenges in Bangladesh;	2, 3, 4, 6, 8, 9
	CLO4	Apply demographic understandings in connection with migration, gender, and citizenship across a range of cultures and human experiences;	1, 5, 7, 8, 9, 10
	CLO5	Analyze and associate the different human interactions and social/political systems using the demographic and gender lens;	3, 4, 8, 9
	CLO6	Demonstrate a demographic understanding that intersects with future population, gender sensitivity, citizenship, and other critical social issues.	1, 2, 4, 6, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture	Presentation, Assignment and Final Exam
CLO3	Lecture and Problem-Based Learning	Assignment and Final Exam
CLO4	Workshop and Lecture	Assignment and Presentation
CLO5	Lecture and Group Discussions	Reading Assignment and Final Exam
CLO6	Lecture and Group Work	Presentation, Assignment and Final Exam

Learning Materials

Recommended Readings	Gove, J., & Watt, S. (2004). Identity and Gender. In K. Woodward (Ed.), Questioning Identity: Gender, Class, Ethnicity (2nd ed., pp. 43–78). Routledge. Hutchinson. (1984). Geography and Gender: An Introduction to Feminist Geography (1st ed.). Hutchinson & Co. (Publishers) Ltd. Launius, C., & Hassel, H. (2018). Threshold Concepts in Women's and Gender Studies: Ways of Seeing, Thinking, and Knowing (2nd ed.). Routledge. Lundquist, J. H., Anderton, D. L., & Yaukey, B. (2015). Demography: The Study of Human Population (14th ed.). Waveland Press. Preston, S. H., Heuveline, P., & Guillot, M. (2001). Demography: Measuring and Modelling Population Processes (1st ed.). Blackwell Publishing. Simister, J. (2012). Gender Based Violence: Causes and Remedies. Nova Science Publishers. Smith, B. G. (2019). Women's Studies: The Basics (2nd ed.). Routledge. Weeks, J. R. (2021). Population: An Introduction to Concepts and Issues (13th ed.). Cengage Learning.
Supplementary Readings	Poston, Jr., D. L., & Bouvier, L. F. (2010). Population and Society: An Introduction to Demography (1st ed.). Cambridge University Press.

Second Year Second Term			
Course Code: 0731 04 URP 2221		Year: Second	Term: Second
Course Title	Urban Analysis Techniques		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Students of this course are expected to learn the concepts and techniques that planners use to understand spatial, economic, social and morphological dynamics of urban and regional systems. Having the focus on the urban systems, the course aims at exploring various analytical techniques which have been developed and applied in urban and regional analysis in planning practice.		

Course Contents		CLOs
Section A		
1	Introduction: Introduction, Scope and importance of Urban Analysis, Urban Analysis in Urban Planning Process.	1
2	Land use Analysis: Definition of land use, purpose and importance of land use analysis, land use intensity, land use classification, determinants and actors of land use change, land use policy of Bangladesh, landuse forecasting etc.	2, 3
3	Land Value and Land Market Analysis: Theory of land rent and land use, welfare and ethical aspect of land rent, demand and supply properties of land market, effective and derived demand, formal and informal land market, institutionalization of urban land market, opportunity cost, bid rent theory, agglomeration economies, four segments of urban land market, Ricardian rent, competition and spatial separation, growth, rent and price nexus, Hedonic price model etc.	2, 3, 4
4	Urban Spatial Structure: Urban morphogenesis, internal structure of third world cities, generalized models for Latin American cities, African cities, Middle eastern and North African cities, South Asian, Southeast Asian and Chinese cities etc.	2
5	Urban Economic Analysis: Economic base theory-regional economy nexus, Economic base analysis techniques, evaluating regional economies using the economic base multiplier and shift-share analysis etc.	2, 3
6	Input-Output Analysis: Input-output analysis, household income multipliers, assumptions and extensions of input-output analysis etc.	2, 3, 4
Section B		CLOs
7	Forecasting Methods: Definition and importance of forecasting, typology, pros and cons, statistical forecasting methods etc.	1, 2
8	Employment Projection: Importance of employment projection, aggregate economic growth, industry output and employment, occupational employment and job openings, base-year employment, replacement needs, projected-year employment, assumptions, and accuracy.	1, 2, 3, 4
9	Study of Population: Essence of demographic analysis, trend interpolation method, share of growth method, shift-share method, linear population model, geometric population model, parabolic population model, logistic population model, cohort-component method.	1, 2, 3, 4
10	Threshold analysis: Appraisal of threshold theory, classification of threshold, advantages and disadvantages, techniques of threshold analysis and planning standards.	2, 3, 4

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Analyze and interpret contemporary social, economic, political and spatial urban issues and recognize appropriate methods for examining urban issues;	2, 8
	CLO2	Interpret quantitative data on urban complexities and analyze 'real' urban problems;	4, 6, 8
	CLO3	Validate reliable data compared to spurious or 'dodgy' data;	6, 10
	CLO4	Use a variety of software and analytical tools to analyze built environment and spatial and present findings.	4, 6

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Workshop	Class Test and Final Exam
CLO2	Lecture and Group Discussion	Presentation or Assignment and Final Exam
CLO3	Lecture and Problem-based Learning	Assignment and Final Exam
CLO4	Workshop and Lecture	Assignment and Presentation

Learning Materials

Recommended Readings	Aderamo, A. J. (1975). Threshold Analysis-A Quantitative Planning Method (Doctoral dissertation). Batty, M. (1976). Urban modelling: Algorithms. Calibrations, Predictions, Cambridge. Batty, M. (2008). Spatial Interraction. In Encyclopedia of geographic information science, ed. K. K. Kemp. California, USA: SAGE Publications, Inc. Batty, M. (2009). Urban Modelling. In International Encyclopedia of Human Geography, eds. R. Kitchin & N. Thrift, 52-58. New York: Elsevier. Bennett, R. J. (1960). Statistical Forecasting. In Concepts and Techniques in Modern Geography. Cambridge, UK: The Study Group in Quantitative Methods. The Institute of British Geographers. Fujita, M., & Thisse, J. F. (1996). Economics of agglomeration. Journal of the Japanese and international economies, 10(4), 339-378. McCann, P. (2013). Modern urban and regional economics. Oxford University Press. Anas, A. (2013). Modelling in urban and regional economics. Taylor & Francis. Pacione, M. (2009). Urban Geography: A Global Perspective. Routledge. Longley, P. A., & Batty, M. (Eds.). (1997). Spatial analysis: modelling in a GIS environment. John Wiley & Sons.
Supplementary Readings	Barkat, A., Ara, R., Taheruddin, M., Hoque, S., & Islam, N. (2007). Towards a feasible land use policy of Bangladesh. Human Development Research Centre, Dhaka. Iacono, M., Levinson, D., & El-Geneidy, A. (2008). Models of transportation and land use change: A guide to the territory. Journal of Planning Literature, 22(4), 323-340. Miller, H. J. (2004). Tobler's first law and spatial analysis. Annals of the association of American geographers, 94(2), 284-289.

Course Code: 0731 04 URP 2222		Year: Second	Term: Second
Course Title	Urban Analysis Techniques (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course will be conducted simultaneously with its theoretical counterpart. Students are expected to apply and interpret the models with field data from local context as well as they will use secondary data for simulating different scenarios of urban phenomenon. This course will provide a solid base for conducting urban spatial and aspatial analysis as a future urban planner.		

	Course Contents/Tasks	CLOs
1	Lecture Session One: Overview and importance of urban analysis in planning practices, Substantive and procedural part of planning.	1
2	Workshop one: Current Planning Practices in Bangladesh, Strengths and weakness.	1, 2
3	Task One: Land use analysis, data collection, procedure of classification, Review of land use regulation.	1, 4
4	Report Submission and Presentation: Findings of first task.	1, 4
5	Task Two: Land value analysis, Data collection from field, literature review, statistical analysis.	1, 4
6	Report Submission and Presentation: Findings of second task.	1, 4
7	Workshop Two: Procedural planning in Bangladesh.	1, 2, 3
8	Task three: Forecasting in planning, Data collection from secondary sources, Statistical analysis.	4
9	Lecture Session two: Selection of suitable projection methods.	4
10	Report Submission and Presentation: Findings of third task.	1, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Analyze and interpret contemporary social, economic, political and spatial urban issues and recognize appropriate methods for examining urban issues;	2, 8
	CLO2	Interpret quantitative data on urban complexities and analyze 'real' urban problems;	4, 6, 8
	CLO3	Validate reliable data compared to spurious or 'dodgy' data;	6, 10
	CLO4	Use a variety of software and analytical tools to analyze built environment and spatial and present findings.	4, 6

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Group Discussion and Workshop	Presentation or Assignment
CLO2	Workshop and Problem-based Learning	Presentation or Assignment
CLO3	Workshop and Problem-based Learning	Assignment
CLO4	Workshop and Problem-based Learning	Presentation or Assignment

Learning Materials

Recommended Readings	Aderamo, A. J. (1975). Threshold Analysis-A Quantitative Planning Method (Doctoral dissertation). Anas, A. (2013). Modelling in urban and regional economics. Taylor & Francis. Batty, M. (1976). Urban modelling: Algorithms. Calibrations, Predictions, Cambridge. Batty, M. (2009). Urban Modelling. In International Encyclopedia of Human Geography, eds. R. Kitchin& N. Thrift, 52-58. New York: Elsevier. Ewing, R., & Park, K. (Eds.). (2020). Basic Quantitative Research Methods for Urban Planners (1st ed.). Routledge. Longley, P. A., & Batty, M. (Eds.). (1997). Spatial analysis: modelling in a GIS environment. John Wiley & Sons. Sanchez, T.W. (Ed.). (2018). Planning Knowledge and Research (1st ed.). Routledge. Wang, X., & Hofe, R., (2007) Research Methods in Urban and Regional Planning, Springer Berlin, Heidelberg.

Course Code: 0731 04 URP 2231		Year: Second	Term: Second
Course Title	Geographic Information System		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course is to introduce the theory and practice of geographic information Science (GIS) that includes spatial data acquisition and management, cartography, applied spatial analysis etc. Focus of this course is the application of GIS to solving real-world problems. The course is designed in compliance with GIS&T Body of knowledge prepared by the University Consortium for Geographic Information Science (UCGIS).		

Course Contents		CLOs
Section A		
1	Spatial Thinking and Introduction to GIS: Mind mapping and spatial cognition, introduction to geographic information science and technology, elements and application of GIS, history of map mapping, application of GIS in planning, etc.	1
2	Representation of the Earth: Geographic Coordinate System, Projected Coordinate System, selection of suitable projection system etc.	1, 2
3	Acquisition of Spatial Data: Sources of spatial data, metadata. creating new data, emerging sources of spatial data, ethical issues of data collection etc.	2
4	Spatial Data Models and Structures: Spatial and attribute data types, data models, integration of raster and vector data, topology, logical models, spatial database management etc.	2, 4
5	Attribute Data Management and Relational Databases: Database concepts and issues in GIS, Structured Query Language (SQL), entity-relationship model, raster data query etc.	2, 4, 5
Section B		CLOs
6	Spatial Data Accuracy and quality: Location Error and accuracy standard, topological error, topological and non-topological editing etc.	2, 3, 5
7	Vector & Raster Data Analysis: Overlay and pattern analysis, distance measurement, local, zonal and neighbourhood operation, map algebra and other raster operation etc.	3, 4, 5
8	Spatial Data Interpolation: Elements of spatial interpolation, global and local interpolation, exact and approximate interpolation, stochastic and deterministic interpolation etc.	3, 4, 5
9	Applied Spatial Analysis: Accessibility analysis, build out analysis, built-environment metrics, equity analysis, large-scale mapping and analysis, indexes, scenario planning, suitability analysis etc.	3, 4, 5
10	Reporting Information: Principles of cartography and visualization, plot and print maps in hard and soft copy, prepare digital presentations, prepare data for export to other graphic formats etc.	3, 4, 5

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain the nature, components and applications of GIS;	6, 8
	CLO2	Demonstrate skills in sourcing, manipulating and interpreting spatial data;	6, 9
	CLO3	Discuss critically the applications of GIS in different fields of urban and rural planning;	6, 7
	CLO4	Enlighten a responsiveness of the underlying theory of spatial information science;	6, 8
	CLO5	Perform spatial analysis tasks and generate outputs using GIS software;	3, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Group Work	Presentation and Final Exam
CLO2	Workshop and Problem-based Learning	Presentation or Assignment and Final Exam
CLO3	Group Work and Workshop	Presentation and Final Exam
CLO4	Lecture and Group Work	Assignment and Presentation
CLO5	Lecture and Group Work	Final Exam

Learning Materials

Recommended Readings	Chang, K. T. (2018). Introduction to geographic information systems 9e. McGraw-Hill Education, New York. Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2005). Geographic information systems and science. John Wiley & Sons. McNamara, J. (2011). Geocaching for dummies. John Wiley & Sons.
Supplementary Readings	Albrecht, J. (2007). Key concepts and techniques in GIS. Sage. Fischer, M. M., & Getis, A. (Eds.). (2010). Handbook of applied spatial analysis: software tools, methods and applications (pp. 125-134). Berlin: Springer. Galati, S. (2006). Geographic information systems demystified. Artech. Konecny, G. (2014). Geoinformation: remote sensing, photogrammetry and geographic information systems. CRC Press.

Course Code: 0731 04 URP 2232		Year: Second	Term: Second
Course Title	Geographic Information System (Lab./Project)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course will be conducted simultaneously with its theoretical counterpart. This course is designed to provide students hands on experience so that they can professionally fulfil the goal of DA-09 and DA-33 of the GIS&T Body of knowledge prepared by University Consortium for Geographic Information Science (UCGIS). Through this course, the students will gain proficiency in GIS related software and hardware.		

	Course Contents/Tasks	CLOs
1	Session 01: Choosing software for geospatial operation, Workshop on spatial thinking and mind mapping.	1
2	Session 02: Understanding GIS data and cartographic representation.	1, 2
3	Session 03: Understanding Spatial properties and distortion of map; selection of appropriate coordinate systems, Spatial data creation.	1, 2
4	Session 04: Managing Vector data.	1, 2
5	Session 05: Managing Raster data.	1, 2
6	Session 06: Attribute Data Management and query.	3, 4, 5
7	Session 07: Editing and topology.	3, 4, 5
8	Session 08: Spatial Analysis-1 (Vector data).	3, 4, 5
9	Session 09: Spatial Analysis-1 (Raster data).	3, 4, 5
10	Session 10: MCA and Model builder.	4, 5
11	Session 11: Map visualization and reporting.	1, 2, 3, 4, 5
12	Session 12 and 13: Final project	1, 2, 3, 4, 5
13	Session 14: Submission and presentation on final project.	1, 2, 3, 4, 5

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain the nature, components and applications of GIS;	6, 8
	CLO2	Demonstrate skills in sourcing, manipulating and interpreting spatial data;	6
	CLO3	Discuss critically the applications of GIS in different fields of urban and rural planning;	6, 8
	CLO4	Enlighten a responsiveness of the underlying theory of spatial information science;	6, 8
	CLO5	Perform spatial analysis tasks and generate outputs using GIS software;	3, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Group Work	Presentation
CLO2	Demonstration and Group Work	Presentation or Assignment
CLO3	Demonstration, Group Work and Workshop	Presentation and assignment
CLO4	Demonstration, Group Work and Workshop	Assignment
CLO5	Group Work and Workshop	Final Project

Learning Materials

Recommended Readings	Chang, K. T. (2018). Introduction to geographic information systems 9e. McGraw-Hill Education, New York. Price, M. (2019). Mastering ArcGIS Pro (First edition).McGraw Hill. Price, M. (2015). Mastering ArcGIS (Eighth edition).McGraw Hill Law, M; Amy, C. (2021). Getting to Know ArcGIS Pro 2.8 (Fourth Edition). ESRI Press
Supplementary Readings	http://training.esri.com/gateway/index.cfm http://www.arcgis.com/home/ http://www.geographynetwork.com

Course Code: 0731 04 URP 2235		Year: Second	Term: Second
Course Title	Basic Environmental Studies		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course is aimed to equip students with basic understanding of causes and sources of different types of environmental pollution, types of pollutants and their environmental impacts, for designing appropriate environmental safeguards for any physical intervention. This course will provide the basic concepts of environmental ecology and ecosystem, environmental pollution, different types of pollutants, and their impacts in urban and rural areas in the broader spectrum of urban planning.		

Course Contents		CLOs
Section A		
1	Environment and Ecology: Definition of environment and ecology, definition, structure, and component of the ecosystem, the relationship between environment and ecology, environmental subsystems, environment, and ecological factors, biodiversity.	1
2	Introduction to Environmental Pollution: Definition and types of pollutant and pollution, movement, and persistence of pollutants, general adverse effects of pollution.	2, 3, 4, 7
3	Water: Water in nature, hydrological cycle, sources of water, water use, water problems, water quality (water pollution, sources water pollution, measuring water quality, towards a solution), characteristics of water–physical, chemical and biological, general adverse effects of water pollution, Water pollution situation in Bangladesh.	3
4	Wastewater Treatment: Purposes of wastewater treatment, the process of water treatment, primary treatment, pre-treatment, sedimentation, secondary treatment, trickling filter, active sludge process, sludge treatment and disposal, tertiary/advanced wastewater treatment, removal of suspended solids, removal of dissolved solids, recovery of materials from process effluent.	3
5	Energy and Environment: Definition, sources of energy, the environmental costs of using energy, options for the future.	5
Section B		CLOs
6	Introduction to Air Pollution: Definition and measure of concentration, types, and properties of air pollutants, a general classification of sources, number, and spatial distribution of air pollution sources, types and properties of emission, general adverse effect of air pollution.	2, 4
7	Meteorological Aspects of Air Pollution: Prerequisites of air pollution phenomena, variables that affect the severity of pollution, behavior, and fate of air pollutants, horizontal and vertical movements of air pollutants, dispersion of air pollutants, plume types, and behavior.	2, 4
8	Air Pollution Modelling and Control Methods: Air quality models, model application and tools, Control methods (source correction method, cleaning of gaseous effluent), particulate emission control, selection of a particulate collector, control of gaseous emission.	2, 4
9	Population, Consumption, and Environment: Population growth and consumption, how do population growth and consumption affect the environment? Understanding sustainable consumption, ecological footprint, and strategies for change.	6
10	Contemporary Environmental Issues: Causes and consequences of greenhouse effects, causes and consequences of ozone layer depletion, causes and consequences of acid rain, photochemical smog, and classical smog, towards solutions.	7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Analyze different components of the environment, ecosystem, and its subsystems;	1, 7, 8
	CLO2	Explore different causes and sources of environmental pollution;	1, 2, 3, 7, 8, 9
	CLO3	Evaluate the causes and consequence of water pollution and wastewater treatment techniques;	1, 2, 3, 7, 8, 9
	CLO4	Evaluate the causes and consequence of air pollution and air quality models;	1, 2, 3, 7, 8, 9
	CLO5	Estimate the environmental costs of using energy and the way forward;	1, 6, 7, 8
	CLO6	Relate population growth, consumption, and environment;	1, 6, 7, 8
	CLO7	Demonstrate contemporary environmental issues.	1, 6, 7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Quiz and Final Exam
CLO2	Lecture and Group work	Quiz and Final Exam
CLO3	Class Lecture and Problem-based Learning	Final Exam
CLO4	Class Lecture and Problem-based Learning	Assignment and Final Exam
CLO5	Class Lecture and Workshop	Final Exam
CLO6	Lecture and Group work or Problem-based Learning	Final Exam
CLO7	Lecture	Assignment and Final Exam

Learning Materials

Recommended Readings	Chhokar, K., Pandya, M., & Raghunathan, M. (Eds.). (2004). Understanding Environment. Sage. Chhatwal, G. R., Satake, M., Katyal, M., Mehra, M. C., Katyal, T., & Nagahiro, T. (1989). Encyclopaedia of Environmental Pollution and its Control, Vol. VI, Environmental Analysis.

Course Code: 0731 04 URP 2236		Year: Second	Term: Second
Course Title	Basic Environmental Studies (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course will be conducted simultaneously with its theoretical counterpart URP 2231. This course has been designed in a way that will help the students to understand environmental problems worldwide, especially the Bangladesh scenario. Students will also learn about the responsible organizations and their initiatives regarding air and water quality monitoring, noise, pollution, industrial pollution management, etc.		

	Course Contents/Tasks	CLOs
1	Lecture Session One: Overview on environmental air and water pollutions	1
2	Task One: Reviewing recent air and water pollution episodes worldwide and presenting the facts.	1, 2
3	Presentation One: Presenting the causes and consequences of reviewed air and water pollution episodes and their solutions through planning.	1, 2, 3
4	Lecture Session Two: Overview on mapping environmental air and water pollutant sources.	4
5	Task Two: Prepare and display local ward level maps indicating pollution sources and analysing the scenario.	1
6	Lecture Session Three: Overview on how to analyze Local and Regional Environmental Air Pollution Problems and their solutions	1
7	Task Three: Fieldwork/trip (if necessary) followed by a project report to analyze Local and Regional Environmental Air Pollution Problems. Students will learn about the air quality monitoring activities and responsible institutions in Bangladesh.	1, 2
8	Lecture Session Four: Overview on how to analyze wastewater treatment plants and projects in Bangladesh	1
9	Task Four: Fieldwork/trip (if necessary) followed by a project report to analyze wastewater treatment plants and projects in Bangladesh.	1, 2, 3
10	Lecture Session Five: Overview on how to analyze waste and e-waste management actions in Bangladesh	1
11	Task Five: Fieldwork/trip (if necessary) followed by a project report to analyze waste and e-waste management actions in Bangladesh.	1, 2, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Identify the various pollutants and pollution sources both locally and globally;	1, 2, 3
	CLO2	Analyze the causes and consequences of environmental air and water pollution and thy impact on contemporary planning;	1, 2, 7, 8
	CLO3	Carry out research on solid waste management;	7, 8, 9, 10
	CLO4	Use different kinds of environmental assessment and management techniques and tools to manage environmental quality.	1, 2, 3

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review and Workshop	Presentation
CLO2	Workshop, Fieldwork and Problem-based Learning	Group Presentation and Assignment
CLO3	Workshop, Fieldwork and Problem-based Learning	Group Presentation and Assignment
CLO4	Workshop, Fieldwork, and Problem-based Learning	Group Presentation and Assignment
CLO5	Lecture, Desktop Review and Workshop	Presentation

Learning Materials

Recommended Readings	Chhokar, K., Pandya, M., & Raghunathan, M. (Eds.). (2004). Understanding Environment. Sage. Chhatwal, G. R., Satake, M., Katyal, M., Mehra, M. C., Katyal, T., & Nagahiro, T. (1989). Encyclopaedia of Environmental Pollution and its Control, Vol. VI, Environmental Analysis.

Course Code: 0731 04 URP 2241		Year: Second	Term: Second
Course Title	Fundamentals of Transportation Planning and Engineering		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This is the foundation course which aims to provide solid understanding on transport sector as a whole. It covers basic engineering components of roads and rails with emphasis on roads. This course intends to make students familiarize with geometric design of roads and highway and with the fundamental transport planning process and procedure. It introduce students with modelling approach through traditional four-step model and trains students with real world data collection, model formulation and traffic estimation for the future.		

Course Contents		CLOs
Section A		
1	Introduction to Transportation Planning: Introduction, Classification of Roads.	1
2	Road and Highway Geometry: RHD and LGED design standard.	1
3	Geometric Design: Design Control, Horizontal Alignment, Vertical Alignment, Combination of Horizontal and Vertical Alignment, Sight Distance, Cross Sectional Elements.	1, 2
4	Traffic Survey: Total Vehicle count, turning vehicle count, AADT, seasonal variation, Peak Hour traffic, OD survey, intersection survey, parking survey, HH survey for travel behaviour.	4, 6
Section B		CLOs
5	Traffic Statistics: Level of Service, Traffic volume histogram, capacity of highway.	4, 5
6	Four Step Model: TAZ Design, Trip generation (estimation, HH Survey based, landuse category based, math), Trip distribution (gravity methods, math), Modal split, Network Assignment.	3, 5
7	Travel Demand Management: Landuse, economic activities, highway link, Toll, Travel Cost, personal vehicle control, public transport, multimodal integration	3, 6
8	Rail and Waterway Transport in Bangladesh: Nature, modes, types, challenges and polices of rail and waterway transport in Bangladesh.	1, 5

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Know the function and types of roads, rail and water way as a means of transport and Demonstrate understanding on the roads and highway geometric elements;	1, 3
	CLO2	Explain the key geometric elements of roads and rail;	3, 6
	CLO3	Model the traffic pattern to visualize future traffic scenario;	6, 8
	CLO4	Conduct different travel and transport survey;	3
	CLO5	Formulate a traffic demand model from scratch;	7, 10
	CLO6	Learn the key factors of transport sector development.	7, 8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture	Presentation or Assignment and Final Exam
CLO3	Lecture	Assignment and Final Exam
CLO4	Lecture	Class Test and Final Exam
CLO5	Class Lecture and Workshop	Assignment and Final Exam
CLO6	Lecture and Problem-based learning	Assignment and Final Exam

Learning Materials

Recommended Readings	Ortúzar, J. D. D., & Willumsen, L. G. (2002). Modelling transport. John Wiley & Sons. West Sussex, England. Papacostas, C. S., & Prevedouros, P. D. (1993). Transportation engineering and planning. Singh, G. (1991). Highway engineering. Standard Publishers Distributors. Boyles, S. D., Lownes, N. E., & Unnikrishnan, A. (2020). Transportation network analysis. First Public Beta Version. Meyer, M. D., & Miller, E. J. (1984). Urban transportation planning: A decision-oriented approach. McGrawHill.
Recommended Readings	Yu, J. C. (1982). Transportation Engineering - Introduction to planning, design and operations. Elsevier, New York.

Course Code: 0731 04 URP 2242		Year: Second	Term: Second
Course Title	Fundamentals of Transportation Planning and Engineering (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course ensures that students do hands on exercise on what they learn from the corresponding theory course. It familiarizes students with different types of survey commonly used in transport sector and teaches travel demand management techniques that they can apply in their professional career.		

	Course Contents/Tasks	CLOs
1	Lab. 01: Introduction to the course, types of assignments, assessment, fieldwork requirements.	1
2	Lab. 02: Geometric feature of roads and highway: carriageway, cumber, RoW, Super elevation, lane, shoulder.	1, 2
3	Lab. 03: Traffic count survey – fieldwork.	1, 2, 3
4	Lab. 04: visualizing traffic flow and identification of bottle neck.	4
5	Lab. 05: Creating micro-simulation.	1
6	Lab. 06: HH Travel behaviour survey – questionnaire design, mapping survey location, data entry and data analysis, revealing travel pattern.	1
7	Lab. 07: Presentation on Travel Behaviour result.	1, 2
8	Lab. 08: Introduction to TransCAD.	1
9	Lab. 09: TransCAD exercise with trip distribution.	1, 2, 3
10	Lab. 10: Labtest on TransCAD Skill.	1
11	Lab. 11: Travel Demand Model Development.	1, 2, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Know the function and types of roads, rail and water way as a means of transport and Demonstrate understanding on the roads and highway geometric elements;	1, 2, 3
	CLO2	Identify the key geometric elements of roads and rail;	1, 2, 7, 8
	CLO3	Conduct different types of travel and transport survey;	7, 8, 9, 10
	CLO4	Formulate a traffic demand model from scratch;	1, 2, 3

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lab.	Presentation and Assignment
CLO2	Lab.	Assignment
CLO3	Lab. and Fieldwork	Presentation and Assignment
CLO4	Lab.	Assignment

Learning Materials

Recommended Readings	Ortúzar, J. D. D., & Willumsen, L. G. (2002). Modelling transport. John Wiley & Sons. West Sussex, England. Papacostas, C. S., & Prevedouros, P. D. (1993). Transportation engineering and planning. Singh, G. (1991). Highway engineering. Standard Publishers Distributors. Boyles, S. D., Lownes, N. E., & Unnikrishnan, A. (2020). Transportation network analysis. First Public Beta Version. Meyer, M. D., & Miller, E. J. (1984). Urban transportation planning: A decision-oriented approach. McGrawHill.
Recommended Readings	Yu, J. C. (1982). Transportation Engineering - Introduction to planning, design and operations. Elsevier, New York.

Course Code: 0311 04 Econ 2257		Year: Second	Term: Second
Course Title	Urban and Regional Economics		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Urban and regional economics lies at the intersection of geography and economics. Urban economics explores the location decisions of utility-maximizing households and profit-maximizing firms, and it shows how these decisions cause the formation of cities of different size and shape. While regional economics discusses the economic relations among cities and the ways they form regions of different status and importance. As such the course deals with topics of the concentration of people and activities in cities and regions along with the resulting problems and patterns. The issues of locational dynamics, the market forces underlying the development of cities and regions are the focus area of the course. The course is essential for modern planners to plan sustainably when market forces are shaping every aspects of development.		

Course Contents		CLOs
	Section A	
1	Introduction and Axioms: Scope, Importance, Components, Axioms, Conceptual definitions of urban area, basic and non-basic activities.	1
2	Market Forces in the Development of Cities: A region without cities, Backyard production: scale of economies, Trading city: comparative advantage and trade, Trading cities in urban history, Factory city: locations of firms and cities, Industrial revolution and factory cities, Resource oriented firms and processing cities.	1, 2
3	Development of Cities in Economic Viewpoint: Why do firms cluster and city size? Benefits and costs of clustering, Localization economies and urbanization economies, Knowledge spillovers, City size, Utility and city size, System of cities, Specialized and diverse cities, Differences in city size.	1, 2, 3
4	Growth and Development in Cities: Economic Growth: Increase in Per-Capita Income, Human Capital and Economic Growth, The Urban Labor Market, Public Policy and Equilibrium Employment, Projecting Changes in Total Employment, Who Benefits from Increased Employment?	4
5	Land Rent and Land use Patterns: Urban Land Rent, Bid-rent curves for manufacturing and information sector, Bid-rent curves with factor substitution, Housing prices and residential bid-rent curve, Land-use patterns, Spatial distribution of employment and population, Rise and demise of mono-centric city, Urban sprawl, Skyscrapers, Mono-centric model, Neighbourhood choice, Diversity and segregation, Sorting for local public goods, Neighbourhood externalities, The roles of education and crime, Zoning and growth controls, Land-use zoning, Urban growth boundaries, A city without zoning.	1
6	Pricing and Delivery of Urban Services: Dimension of urban services, Efficiency of service delivery, Economic theory and pricing principles.	1, 2
	Section B	CLOs
7	Introduction: What is Regional Economics? Three Foundation Stones of Regional Economic Problems.	1, 2, 3
8	Regions: The Nature of a Region, Delimiting Functional Regions, Relations of Activities Within a Region, Regional Specialization.	1, 3
9	How Regions Develop: Some Basic Trends and Questions, What Causes Regional Growth? The Role of Demand, The Role of Supply, Interregional Trade and Factor Movements, Interregional Convergence, The Role of Cities in Regional Development, External and Internal Factors in Regional Development.	1, 3
10	Regional Objectives and Policies: The Growing Concern with Regional Development, Objectives, Regional Pathology: The Emergence of "Problem Areas", The Available Tools, Basic Issues of Regional Development Strategy, The Role of Growth Centers, Aspects of United States Regional Development programs.	1, 3, 4

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain and analyze the development of cities and most of the city problems from economic perspective;	1, 3, 8
	CLO2	Clarify locational aspects that determine land rent which in turn determine land use patterns;	1, 3, 6
	CLO3	Analyze economic aspects of zoning or other development control regulations;	2, 3, 8, 9
	CLO4	Demonstrate the causes and effects of lagging regions within national boundary;	3, 8, 9
	CLO5	Explain and analyze public policies to ensure regional convergence.	2, 3, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Group Discussion	Class Test, Final Exam
CLO2	Lecture, and Guided Group Discussion	Assignment, Group Presentation, Final Exam
CLO3	Lecture, Group Discussion on Concurrent Issues	Class Test, Final Exam
CLO4	Lecture	Class Test, Final Exam
CLO5	Lecture and Group Discussion on Related Policy Documents	Assignment, Final Exam

Learning Materials

Recommended Readings	O Hirsch, W. Z. (1973). Urban economic analysis. New York; Montreal: McGraw-Hill. O'sullivan, A. (1996). Urban economics (Vol. 3). Chicago: Irwin. Lean, W. (1969). Economics of land use planning: urban and regional. London: The Estates Gazette Ltd. Hoover, E., & Giarratani, F. (1999). An introduction to regional economics. Wholbk.
Supplementary Readings	Richardson, H. W. (1969). Elements of regional economics. Penguin. Gilbert, A., & Gugler, J. (1984). Cities, poverty, and development: Urbanization in the third world. Oxford University Press.

Third Year First Term			
Course Code: 0731 04 URP 3107		Year: Third	Term: First
Course Title	Research Methods for Planners		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course aims to introduce the foundations of social research to students. It discusses the philosophy of research, research design, the assumptions and approaches adopted in social research. It also familiarizes students with different theoretical, conceptual, and practical issues involved in conducting and completing social research. At the end of this course, students will be able to critically assess research projects and publications related to the urban and rural planning and able to develop professional research briefs or proposals, design research, and analyze quantitative and qualitative data independently.		

	Course Contents	CLOs
	Section A	
1	Social Research Strategies: Definition of research & social science research, Purposes of research, Formulation of research topics, Types of research, Theory in research, why is theory useful? How can theories be used in research? The cycle of theory construction and testing, Levels of theory (Grand theories, Middle range theories).	1
2	The Selection of a Research Approach: Common theoretical and epistemological starting points, Ontological considerations in research, Research paradigms, Philosophical worldviews, Research strategy, Research designs.	2, 3
3	Review of Literature: Importance of review of literature, different styles of review, searching the sources, processing the ideas, critique the literature, the traditional review, the systematic review, meta-analysis, write the review.	2, 3, 4
4	Plagiarism and Rules of Citation and Referencing: What is Plagiarism? Three steps to learning about plagiarism, Examples (Plagiarised vs Non-plagiarised), Forms of plagiarism, how can I avoid plagiarizing? Self-plagiarism: How much is too much, how to safely re-use your work, Is self-plagiarism acceptable? Rules of citation and referencing, how to use endnote, Mendeley.	2
5	Ethics and Politics in Social Research: Historical Cases of Unethical Research, Ethical principles, Ethics and the issue of quality, The difficulties of ethical decision-making, Ethics in the production and publication of scholarly work, Politics in social research.	2, 3
	Section B	CLOs
6	Quantitative research design: Steps in quantitative research, introduction to measurement, survey research, experimental research, quasi-experimental research, randomized experiment research, cross-section and longitudinal research design.	2, 3, 5, 6
7	Quantitative Data Collection and Data Analysis: Sampling, questionnaire design, structured interviewing, foundations of data analysis, data preparation, exploratory data analysis, inferential statistical analysis, time series data analysis, research communication.	3, 5, 6
8	Qualitative Research Design: Introduction of qualitative research tradition, philosophical assumptions and interpretive frameworks, designing a qualitative study, five qualitative approaches to inquiry.	2, 3, 4, 5, 6
9	Qualitative Data Collection and Data Analysis: Data collection circle, speech to text, methods of analysis, methods of describing, methods of ordering, methods of explaining, methods of predicting, data analysis and representation, writing a qualitative study.	2, 3, 5, 6
10	Development of a Research Proposal: Title of the research, research problem, research objectives, research questions, theoretical and conceptual framework, methodology, timetable, or work program.	3, 4, 5, 6

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Appreciate a variety of approaches to research;	1, 7, 8
	CLO2	Criticise research approaches, designs, results, and implications;	1, 2, 7, 8
	CLO3	Design and conduct social research using appropriate tools and procedures for data collection and analysis;	3, 5,7, 9
	CLO4	Find literature and explore databases on development, and correctly assess their quality and metadata information;	1, 2, 5, 7, 8
	CLO5	Explain issues of reliability and validity in quantitative and qualitative research;	6, 8, 9, 10
	CLO6	Compare and argument for/against different sorts of research methods (quantitative and qualitative methods).	4, 8, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Group Discussion	Presentation or Assignment and Final Exam
CLO3	Class Lecture and Problem-based Learning	Assignment and Final Exam
CLO4	Workshop and Lecture	Assignment and Presentation
CLO5	Lecture	Open-book Exam and Final Exam
CLO6	Lecture and Group work or Problem-based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Bryman, A. (2008). Social Research Methods (3rd ed.). Oxford: OUP. Creswell, J. W., & Poth, C. N. (2018). Qualitative Inquiry and Research Design: Choosing Among Five Approaches (4th ed.). SAGE Publications. Creswell J.W. (2003). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2nd ed.). London: SAGE Publications. Creswell, J. and Clark, V.P. (2010). Designing and Conducting Mixed Methods Research. SAGE Publications. IDPM (2008). How to Write Academic Text. Belgium: University of Antwerp IDPM (2008). Exploratory Data Analysis. Belgium: University of Antwerp Greetham, B. (2021). How to Write Your Literature Review (1st ed.). Macmillan Education Limited. Jesson, J. K., Matheson, L., & Lacey, F. M. (2011). Doing Your Literature Review: Traditional and Systematic Techniques (1st ed.). SAGE Publications. Kvale, S. (1996). Interviews: An Introduction to Qualitative Research Interviewing (1st ed.). SAGE Publications. Machi, L. A., & McEvoy, B. T. (2022). The Literature Review: Six Steps to Success (4th ed.). Corwin Press. Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative Data Analysis: A Methods Sourcebook (3rd ed.). SAGE Publications. Saldana, J. (2016). The Coding Manual for Qualitative Researchers (3rd ed.). SAGE Publications. Wheeldon, J. and Ahlberg, K.M. (2012).Visualizing Social Science Research. SAGE Publications.
Supplementary Readings	Bazeley, P., & Jackson, K. (2013). Qualitative Data Analysis with NVivo (2nd ed.). SAGE Publications Ltd. Crotty M. (1998). The Foundations of Social Research, Meaning and Perspective in the Research Process. SAGE Publications. Hammersley M. (1993). Social Research: Philosophy, Politics and Practice. SAGE Publications. Ridley, D. (2012). The Literature Review: A Step-by-Step Guide for Students (2nd ed.). SAGE Publications. Yin, R.K. (2003). Case Study Research, Design and Methods (3rd ed.). Sage Publications.

Course Code: 0731 04 URP 3108	Year: Third	Term: First
Course Title	Tools for Community Participation (Fieldwork & Studio)	
Course Status	Core	
Credit	1.5	
Prerequisite(s)	None	
Rationale	This course provides understanding of tools that provide a broad range of strategies to affirm community values, needs and aspirations, which become the drivers of plans that reflect and advance the community's vision for the future. This course has been designed in a way that will help the students to conduct participatory research.	

	Course Contents/Tasks	CLOs
1	Lecture Session One: Overview on Community Participation and Criteria for Community Participation.	1
2	Lecture Session Two: Techniques of Focus Group.	1, 2
3	Task One: Conducting Focus Group Discussion and Developing Discourse by Narrative Analysis.	1, 2, 3
4	Presentation One: Findings of Focus Group Discussion.	4
5	Lecture Session Three: Web of Institutionalization and Actor Mapping.	1
6	Task Two: Actor Mapping by analysing the role of Key Stakeholder in Contemporary Planning Process.	1, 2
7	Presentation Two: Actor Mapping.	1, 2, 3
8	Lecture Session Four: Tools for Participatory Action Plan Preparation (Forecasting, Back-casting, Fishbone Analysis, Cascade Analysis).	1, 3
9	Task Three: Participatory Action Plan Preparation by using Forecasting, Back-casting, Fishbone Analysis, Cascade Analysis.	1, 3
10	Presentation Three: Participatory Action Plan.	1, 3, 4
11	Lecture Session Five: Participatory Rapid Appraisals, Story Telling and Participatory Mapping.	1, 3
12	Task Four: Documenting Pictorial Information.	3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Identify the various techniques used in participation;	1, 2, 3
	CLO2	Analyze the role of stakeholders in contemporary planning process;	1, 2, 4, 5, 6, 7, 8
	CLO3	Use participatory research methods in analysing urban and rural problems;	7, 8, 9, 10
	CLO4	Carry out qualitative research in both urban and rural context.	10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review and Workshop	Presentation
CLO2	Lecture, Workshop and Group Discussion	Group Presentation
CLO3	Workshop, Fieldwork and Problem-based Learning	Field Logbooks Preparation and Presentation
CLO4	Fieldwork, Group Discussion and Problem-based Learning	Assignment and Presentation

Learning Materials

Recommended Readings	Bryman, A. (2016). Social research methods. Oxford university press. Chambers, R. (1994). The origins and practice of participatory rural appraisal. World development, 22(7), 953-969. Reed, M. S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., & Stringer, L. C. (2009). Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of environmental management, 90(5), 1933-1949. Levy, C. (1996). The process of institutionalising gender in policy and planning: The web of institutionalisation. Slocum-Bradley, N. (2022). Participatory Methods Toolkit: A Practitioner's Manual. Retrieved 1 June 2022, from https://cris.unu.edu/participatory-methods-toolkit-practitioners-manual.
Supplementary Readings	Varvasovszky, Z., & Brugha, R. (2000). A stakeholder analysis. Health policy and planning, 15(3), 338-345.

Course Code: 0731 04 URP 3111		Year: Third	Term: First
Course Title	Rural Planning II		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	0731 04 URP 2111		
Rationale	This course is designed to deepen our understanding of rural physical planning and major rural development issues in the Global South, including rural center planning, poverty, livelihoods, rural utilities and services, and rural-urban linkages. It explores the challenges to and opportunities for building thriving rural communities that foster well-being locally as well as sustainable development more broadly. It is expected to provide a comprehensive introduction to rural planning and development field for students preparing for vocations in spatial organizations, land evaluation and physical planning, and a solid foundation of rural development issues such as poverty, livelihoods, technology adoption and rural-urban interaction for those who wish to pursue further study and/or professional work specifically in rural studies and development.		

Course Contents		CLOs
Section A		
1	Rural Center Planning: Necessity of Rural Center Planning, Physical Planning of Rural centers, Planning Standards and Norms, Layout of Settlements, LGED's Growth Center Planning.	1
2	Planning in the Union Parishad of Bangladesh: Union Plan (UP) Book (Contents, Component Plans, Involved Institutions, Planning process, Field Operations, Village and Union Resource Book), Legal Obligation (De jure) for UP Plan, Real Practices (De facto) of Planning and Budgeting at UP, Reasons for partial or no planning at UP, Outline of a planning guideline for Union Planning, Experience of National level rural planning project in Bangladesh e.g., My Village My Town (Amar Gram Amar Shahar).	1, 3
3	Rural Utility Services: Transport and Communication (needs, systems, rural roads, types, roads projects, other types of transport and communication systems, road technology and design, road construction and maintenance, telecommunication and development of communication systems, and gender and human development aspects of rural transport system), Water Supply and Sanitation (nature, meaning, planning of water supply and sanitation programs/projects, planning and institutional aspects, design and technology, equity, inclusion and sustainability issues), and Rural electrification (rural electrification and development options, implementation of rural electrification, electricity generation options, demand assessment, demand forecast, system design, investment appraisal, and resiliency of rural electrification).	1, 3
4	Rural-Urban Interaction/Linkage: Town and Hinterland Interaction in Rural Areas of Developed Countries, Understanding the Rural-Urban Interface or Linkages and Understand Rural-Urban Nexus through Food, Natural flows, People, Ideas, and Finance.	4
5	Technology & Rural Development: Conceptual issues of Technology, Technology Transfer, The Role of Technology in Rural Development & Case Studies.	7
Section B		CLOs
6	Rural Livelihood Analysis: Holistic understanding of livelihoods, A framework for livelihood Analysis, Assets and Vulnerability, Role of social institutions, Mediating process: transformation of assets into livelihood strategy, Livelihood Profiling and Trajectory, Sustainability Issues, Livelihood Adaptation in a Changing Climate.	2, 5
7	Poverty and Inequality: Framework for understanding poverty, Relative versus absolute poverty, Conceptual and theoretical framework of poverty, inequality and marginality, Types and dimensions of inequality, Measuring poverty and inequality, Dimensions of poverty and characteristics of very poor/extreme poor, Construction of poverty lines, Poverty measures, Poverty traps.	2, 5
8	Conventional and Technical Planning Approaches: Resource surveys for planning, Land evaluation, Conceptual steps in land-evaluation, Approaches to land-evaluation, Economic and financial measures of rural development projects, and Strategic land evaluation.	1, 6

	Section B	CLOs
9	Understanding the Local Power Structure: Power & Government- a Governmentality Perspective, Power Structure in Bangladesh- Administrative Institutions, Political Institutions and Processes, Judiciary, Civil Society, Informal civil society, and social norms.	5
10	Territorial Approach for Sustainable Rural Development: Review of spatial planning theories (Central Place Theory, Growth Pole Theory), Theoretical orientations of territorial development, European perspective of territorial development, Opportunities for territorial development in Bangladesh.	1, 2, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain theoretical approaches of spatial organization and practices of physical planning in rural areas;	1, 2, 3
	CLO2	Apply that deeper understanding towards strategic thinking and policy making for alleviating poverty and inequality;	1, 3
	CLO3	Design rural utility services for diverse rural communities;	5, 8
	CLO4	Analyze rural-urban linkages for creating opportunities for rural people;	8, 9
	CLO5	Identify dynamics of rural power structure and its role on rural development;	3, 4
	CLO6	Develop a comprehensive understanding of land classification and evaluation approaches for landuse suitability analysis and rural development planning;	1, 2, 3, 8
	CLO7	Comprehend role of technology in rural development.	1, 2

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Group Work and Discussion	Class Test and Final Exam
CLO2	Lecture, Practice Sessions, and Problem-Based Learning	Class Test and Final Exam
CLO3	Lecture, Practice Sessions	Class Test and Final Exam
CLO4	Seminar and Lecture	Presentation and Assignment
CLO5	Seminar and Lecture	Individual Paper (or assignment) and Final Exam
CLO6	Lecture and Practice Session	Final Exam
CLO7	Lecture	Class Test and Final Exam

Recommended Readings	Chigbu, E.U. (2013). Territorial Development: Suggestions for a New Approach to Rural Development in Nigeria. PhD Thesis. Technical University Munich. CPRC (2008). The chronic poverty report 2008-9. Manchester: Chronic Poverty Research Centre. Dalal-Clayton, B., Dent, D. and Dubois, O. (2003). Rural Planning in Developing Countries. London: Earthscan. Hulme, D., Moore, K. and Shepherd, A. (2001). Chronic poverty: meanings and analytical frameworks. CPRC Working Paper 2. Manchester: Chronic Poverty Research Centre. Lynch, K. (2005). Rural–Urban Interaction in the Developing World. New York: Routledge. Mamun, S. M. (2014). Rural Development Planning in Bangladesh. Khulna, Bangladesh. Moore, K., Grant, U., Hulme, D. and Shepherd, A. (2008). Very poor, for a long time, in many ways…: Defining 'the poorest' for policymakers. Working Paper No. 124. Manchester: Chronic Poverty Research Centre. Santos, E. M. and Alkire, S. (2011). The Multidimensional Poverty Index (MPI): Training Material for Producing National Human Development Reports. Oxford: Oxford Poverty & Human Development Initiative (OPHI). Scoones, I. (2015). Sustainable Livelihoods and Rural Development. Blackpoint, Nova Scotia: Fernwood Books, Ltd. UNESCAP (1990). Guidelines for rural Centre Planning: rural industrialization, organizational framework for RCP. Thailand: UNESCAP World Bank Institute (2005). Introduction to Poverty Analysis. Washington D.C.: The World Bank.
Supplementary Readings	Banerjee, A.V. & Duflo, E. (2011). "Barefood Hedge-Fund Managers". In: Poor Economics; A radical rethinking of the way to fight global poverty. Public Affairs, New York, Chapter 6, p.133-156. Banerjee, A.V. & Duflo, E. (2011). "The Men from Kabul and the Eunuchs of India: The (Not So) Simple Economics of Lending to the Poor". In: Poor Economics; A radical rethinking of the way to fight global poverty. Public Affairs, New York, Chapter 7, p.157-182. Banerjee, A.V. & Duflo, E. (2011). "Saving Brick by Brick". In: Poor Economics; A radical rethinking of the way to fight global poverty. Public Affairs, New York, Chapter 8, p.183-204. CPRC (2004). The chronic poverty report 2004-5. Manchester: Chronic Poverty Research Centre. CPRC (2014). The Chronic Poverty Report 2014-15: The road to zero extreme poverty. Manchester: Chronic Poverty Research Centre, University of Manchester. Frank, E. (1992). Agricultural policies in developing countries. Cambridge University Press, Cambridge. DFID (2002). Sustainable Livelihoods Guidance Sheets. London. Riveira, I. and Maseda, C.R. (2006). A review of rural land-use planning models, Environment and Planning B: Planning and Design, 33, pp.165 -183.

Course Code: 0731 04 URP 3112		Year: Third	Term: First
Course Title	Rural Planning II (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	0731 04 URP 2112		
Rationale	The course provides students with several theoretical frameworks and practical approaches to problem solving in rural Bangladesh and international contexts. The course content introduces research project design in the rural context, data collection, analytical frameworks, and data analysis and presentation of research results that are appropriate to the practicing rural planner or development researcher. It views the roles of the researcher and research as interventionist and intervention in the rural community. Research methods are also discussed as an integral and supporting part of the planning and development process.		

	Course Contents/Tasks	CLOs
1	Quantitative Analysis of Poverty and Livelihood Profiles: Conceptual framework of poverty and livelihood profiles, Measuring multi-dimensional aspects of poverty, Poverty measures, Livelihood cluster analysis, Dynamics of vulnerability and coping strategies, Power, institutional dynamics, and livelihood.	1, 2, 5
2	Research Design for Poverty and Livelihood Analysis: Theory of change, Development of research methodology, Dimensions and indicators, Sampling, Questionnaire development.	1, 2, 5
3	Qualitative and Participatory Methods: Define scope of PRA in analysing rural development and local level planning, Selection of qualitative and participatory methods, Qualitative research design, Survey checklist development, Mock PRA exercises.	4, 5
4	Spatial Data Acquisition and Integration with Rural Settlement and Local Level Planning: Acquisition of spatial data, Spatial data analysis, define scope of integrating spatial analysis into settlement and local level planning.	2, 6
5	Rural Center Planning or Union Planning: Guidelines to plan development, develop strategies and focus for rural center planning or union level spatial planning, Selection of survey methods, engagement of team.	6
6	Teambuilding and Conducting Fieldwork in the Rural Context: Session for teambuilding and task orientation, conduct fieldwork.	7
7	Database Development: Quantitative database development, interview transcription, diagrams, or flow-chart development.	1, 2
8	Introduction to Statistics: Descriptive statistics, hypothesis testing, indexing, clustering, and regression analysis.	1, 2
9	Conducting Fieldwork using Quantitative and Participatory Methods: Situational analysis of rural center or rural landuse and utility services (roads, water and sanitation, rural market, electricity, social and recreational services), future demand analysis, problem analysis.	4
10	Spatial and Non-spatial Data Analysis for Union or Rural Center Planning: Spatial scenario building of rural landuse and utility services and facilities, population data analysis, identification of gaps, population forecasting and new demand analysis for the services, and new strategy building.	6
11	Rural Development Policy Analysis: Review of different lenses like pro-poor growth, welfare, capability development, neoliberalism, etc. Apply a lens to understand rural development policy in Bangladesh.	3
12	Quantitative Report Writing on Poverty and Livelihood Profiles: Quantitative data analysis, structuring the report, presenting quantitative analysis under different headings, discuss the results.	1, 2
13	Preparing Rural Center Plan or Union Development Plan: Landuse plan, sectoral policies, and aliment of policies with national development policies, spatial strategies, implementation, institutional and legal arrangements to implement the plan.	6, 7
14	Developing Poster of the Union Development Plan or Rural Center Plan: Structuring contents, develop the poster, circulate the poster for feedback.	6, 7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Use quantitative methods to analyze rural livelihood and poverty dynamics in rural area;	1, 7, 8
	CLO2	Write research reports on rural development issues or economic, social, cultural, and political dynamics in rural area by analysing quantitative data and performing statistical analysis;	3, 7, 10
	CLO3	Analyze rural development policies and strategies by applying different lenses;	3, 9
	CLO4	Apply qualitative or participatory methods to rural development, rural settlement, and local level planning;	2, 6
	CLO5	Apply theory of change in framing the impacts of rural development programs;	1, 2, 9
	CLO6	Design rural center plan or develop union level plan considering landuse suitability analysis, utility services and facilities, rural-urban interaction, and socio-economic development;	2, 9
	CLO7	Evaluate how collaboration, teambuilding, and leadership competency work at local level.	4

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Practice Session, Fieldwork	Group Research Report
CLO2	Lecture, Practice Session, Fieldwork	Group Research Report
CLO3	Lecture, Group Work, Discussion	Group Research Report
CLO4	Lecture, Problem-Based Learning, Fieldwork	Report and Presentation
CLO5	Lecture, Problem-Based Learning, Fieldwork	Individual or Group Report
CLO6	Lecture, Fieldwork, Practice Sessions	Planning Document Preparation, Poster of the Development Plan
CLO7	Lecture, Fieldwork, Role Assignment	Group Report, Effective Completion of Group Task, Poster Presentation

Learning Materials

Recommended Readings	Ansoms, A. and McKay, A. (2010). A quantitative analysis of poverty and livelihood profiles: The case of rural Rwanda. Food Policy, 35(6), pp. 584-598. Chigbu, E.U. (2013). Territorial Development: Suggestions for a New Approach to Rural Development in Nigeria, PhD Thesis. Technical University Munich. Dalal-Clayton, B., Dent, D. and Dubois, O. (2003). Rural Planning in Developing Countries. London: Earthscan. Lynch, K. (2005). Rural–Urban Interaction in the Developing World. New York: Routledge. Mamun, S. M. (2014). Rural Development Planning in Bangladesh. Khulna, Bangladesh. Santos, E. M. and Alkire, S. (2011). The Multidimensional Poverty Index (MPI): Training Material for Producing National Human Development Reports. Oxford: Oxford Poverty & Human Development Initiative (OPHI). Scoones, I. (2015). Sustainable Livelihoods and Rural Development. Blackpoint, Nova Scotia: Fernwood Books, Ltd. UNESCAP (1990). Guidelines for rural Centre Planning: rural industrialization, organizational framework for RCP. Thailand: UNESCAP World Bank Institute (2005). Introduction to Poverty Analysis. Washington D.C.: The World Bank.

Learning Materials

Supplementary Readings	Bebbington, A. (1999). Capitals and capabilities: a framework for analysing peasant viability, rural livelihoods, and poverty. World Development, 27(12), pp. 2021-2044. General Economics Division (GED, 2020a). Making Vision 2041 a Reality: Perspective Plan of Bangladesh 2021-2041. National Economic Council (NEC), Bangladesh Planning Commission. General Economics Division (GED, 2020b). Eighth Five Year Plan (July2020-June2025). National Economic Council (NEC), Bangladesh Planning Commission. DFID (2002). Sustainable Livelihoods Guidance Sheets. London

Course Code: 0731 04 URP 3125		Year: Third	Term: First
Course Title	Urban Design and Conservation		
Course Status	Optional		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Knowledge of urban design encourages planners and urban designers who influence and shape development decisions to think more deeply and sensitively about the living environment being created. This course offers students the theoretical background necessary to practice as an urban designer within the professional sphere. Students will be introduced to the fundamental urban design theories and explore the real-world implications of instigating these concepts. Once completed students will be able to manipulate space at the intermediate scale between architecture and planning. This course introduces techniques to enhance the qualities of places and responds to complex and often contradictory community aspirations. It improves the skills of the students in engaging in the urban design and delivery process, applying a well-defined theoretical position of their own.		

Course Contents		CLOs
Section A		
1	Theories of Urban Design: Modernist, formalist, Organic, Global, Neo-functional, Neo-traditional paradigms	1
2	Principles of Urban Design: Ensuring responsive environment, creating urban structure, connecting places, and detailed spaces.	1, 2
3	Place Making Process in Urban Design: Participatory and non-participatory process in urban design.	1, 2
Section B		CLOs
4	Steps for Establishing Design Rationale: The conceptual framework, analytical process of design rationale.	1, 3
5	Urban Design Policy Framework: Master plan, design guidelines, design codes, and techniques for developing holistic urban design policies.	1, 3
6	Urban Design Delivery Process: Introduction to management, institutional frame and implementation strategy for delivery of urban design guidelines/ policies.	1, 3

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Comprehend the urban design theories, principles and practices;	2, 3, 8
	CLO2	Design urban spaces creatively and think three-dimensionally;	4, 5, 6
	CLO3	Prepare urban design policy framework	3, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Written Exams
CLO2	Lecture, Group Discussions, Site Visit	Group Design Exercise
CLO3	Lecture, Group Discussions	Written Exams

Learning Materials

Recommended Readings	Lang, J. (2009). International urban design: Theory and practice. Proceedings of the Institution of Civil Engineers-Urban Design and Planning, 162(1), 7-17. Llewelyn, D., & Baxter, A. (2000). Urban design compendium-1. English Partnerships and The Housing Corporation, London. Llewelyn, D., & Baxter, A. (2007). Urban design compendium-2. English Partnerships and The Housing Corporation, London.

Learning Materials

Supplementary Readings	Bentley, I. (1985). Responsive environments: A manual for designers. Routledge. Dobbins, M. (2011). Urban design and people. John Wiley & Sons. Lynch, K. (1984). Good city form. MIT press. Spreiregen, P. D. (1965). Urban design: The architecture of towns and cities. New York: McGraw-Hill. Eisner, S., Gallion, A., & Eisner, S. (1993). The urban pattern. Wiley.

Course Code: 0731 04 URP 3126		Year: Third	Term: First
Course Title	Urban Design and Conservation (Fieldwork & Studio)		
Course Status	Optional		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course aims to provide students the skill and knowledge towards development of an urban design policy framework. This course intends to provide a clear understanding about the key urban design principles necessary to make responsive environment. Once completed the students will be able to think both creatively and critically taking a three dimensional perspective to resolve the built environment issues.		

	Course Contents/Tasks	CLOs
1	Project 01: Through a group work students will identify the key urban design criteria followed in an organically grown part of a city.	1
2	Project 02: In this group project students will identify the strengths and weaknesses of the present state of urban design criteria in an organically grown part of a city.	1, 2
3	Project 03: Students will be engaged in a group work to develop an urban design guideline including design rationale, master plan and design codes. The project submission will also include a 3D master plan of the site (A model and hard copy submission of the model).	1, 2, 3

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Study a site applying various urban design analysis technique;	1, 2, 3, 8
	CLO2	Develop skill to academically defend a design scheme;	1, 2, 3, 4, 5, 6
	CLO3	Demonstrate and produce knowledge of policy documentation of an urban design scheme.	1, 4, 6, 7, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review, Site Visit and Workshop	Presentation
CLO2	Workshop and Group Discussion	Group Presentation
CLO3	Workshop, Fieldwork and Problem-Based Learning	Assignment and Presentation

Learning Materials

Recommended Readings	Lang, J. (2009). International urban design: Theory and practice. Proceedings of the Institution of Civil Engineers-Urban Design and Planning, 162(1), 7-17. Llewelyn, D., & Baxter, A. (2000). Urban design compendium-1. English Partnerships and The Housing Corporation, London. Llewelyn, D., & Baxter, A. (2007). Urban design compendium-2. English Partnerships and The Housing Corporation, London.
Supplementary Readings	Bentley, I. (1985). Responsive environments: A manual for designers. Routledge. Dobbins, M. (2011). Urban design and people. John Wiley & Sons. Lynch, K. (1984). Good city form. MIT press. Spreiregen, P. D. (1965). Urban design: The architecture of towns and cities. New York: McGraw-Hill. Eisner, S., Gallion, A., & Eisner, S. (1993). The urban pattern. Wiley.

Course Code: 0731 04 URP 3135		Year: Third	Term: First
Course Title	Environmental Management and Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Environmental considerations are becoming more and more important in current approach of planning. Due to the rapid urban growth, industrialization and increased economic activities, it is imperative to examine the environmental problems from the planning perspective to ensure resilient and sustainable cities and communities. Students of this course are expected to learn and understand environmental planning process and tools, sustainability strategies, international conventions, environmental impact analysis, strategies and tools for the protection of natural and cultural landscapes which will facilitate them to be an environment sensitive planner.		

Course Contents		CLOs
Section A		
1	Basic Concepts on Environmental Management: Definition and purposes of environmental management, Urban Environmental Problems, Bundling Urbanization and Sustainable Development, Global Actions towards sustainability (Brundlant Commission, IPCC, Agenda 21, Kyoto Protocol, United Nations Climate Change Conference, Sustainable Development Goals etc.).	1, 2, 3
2	Sustainable Development and Environmental Conservation: Definition, objectives and policies for sustainable development, Component of national strategy for sustainable development, criteria for monitoring progress towards achievement of sustainable development, 'JUST' environmental sustainability, Design concepts of sustainable urban forms, Different types of sustainable urban forms, Compact city, Eco-city and SMART city.	3, 5
3	Environmental Impact Assessment: Definition of IEE and EIA, objectives and goal of EIA, environmental assessment and environmental inventory, environmental impact statement, methodologies for Environmental Impact Assessment of ambient air, water, ecological and socio-cultural resources, and Case studies on environmental impact assessment.	4, 5
4	Environment Risk Management: Environment risks, Types of risks, Risk management, Risk management framework and Steps in Risk Management.	4
5	Environmental Kuznets Curve and Environmental Externalities: Conceptual issues, Public characteristics, market goods/bads, Theories related to environmental externalities.	4
Section B		CLOs
6	Environmental Monitoring and Auditing: Definition and benefit of environmental monitoring and /or auditing, guidelines for environmental monitoring and /or auditing.	4
7	Material Flow and Risk Management: Water flow and wastage, solid waste generation and collection challenges, dismantlement of buildings and recycling, Risk assessment in urban environment.	1, 2, 3
8	Identification of Material Flow: Material flow analysis of solid waste/energy consumption/building materials/carbon emission from service provision of the mentioned services, Urban ecology and city's ecological imbalance, impacts of urbanization, urban form, GDP, income, land use and others on increasing consumption and waste generation.	2, 3
9	Organization and Politics: Actors and activities responsible for urban environmental problems (solid waste, wastewater, river and canal encroachment, water logging, urban deforestation and so on), Legal Instruments and the Politics of Environmental Management, Community-Based Environmental Management.	3, 4, 5
10	Strategies for Urban Environmental Management: Urban environmental priorities, public awareness and participation, enforcement and cost recovery, public-private partnership, ten best practices of urban environmental management.	3, 4, 5

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain urban environmental problems and thy reasons;	1, 2, 8, 9
	CLO2	Analyze environmental management approaches in Bangladesh and international perspective;	1, 2, 8, 9
	CLO3	Analyze environmental management in relation to the major principles of sustainable development;	1, 2, 6, 7, 8, 9
	CLO4	Explain the basic concepts of environmental impact assessment, environmental risk management and environment monitoring and auditing;	1, 2, 6, 7, 8, 9
	CLO5	Select methods and tools which can be applied for efficient environmental planning and management.	1, 2, 6, 7, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Quiz and Final Exam
CLO2	Lecture and Group Discussion and Problem-Based Learning	Quiz and Final Exam
CLO3	Lecture and Problem-Based Learning	Class Test or Assignment and Final Exam
CLO4	Lecture and Workshop	Assignment, Presentation and Final Exam
CLO5	Lecture and Group Work or Problem-Based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Chhokar, K., Pandya, M., & Raghunathan, M. (Eds.). (2004). Understanding environment. Sage. Petts, J. (1999). Handbook of environmental impact assessment. Wiley-Blackwell. Atkinson, G., Dietz, S., Neumayer, E., & Agarwala, M. (2014). Handbook of sustainable development (2nd ed.). Edward Elgar Publishing Atkinson, A., Dávila, J. D., & Mattingly, M. (2019). The challenge of environmental management in urban areas. Routledge. Hanaki, K. (ed.) (2008). Urban Environmental Management and Technology. Springer. Dalby, S. (2016). Framing the Anthropocene: The good, the bad and the ugly. The Anthropocene Review, 3(1), 33-51. Jacobi, P. R., & Peres, U. D. (2016). Urban Environmental Management and Governance: Challenges for the 21st Century. disP-The Planning Review, 52(2), 26-34.
Supplementary Readings	Brundtland, G. H., & Khalid, M. (1987). Our common future. Oxford University Press, Oxford, GB. Edelman, D. J., Schuster, M., & Said, J. (2017). Urban Environmental Management in Latin America, 1970-2017. Current Urban Studies, 5(3), 305-331. http://www.unpei.org/ http://www.newrepublic.com/article/118969/environmentalists-obsessaboutglobal-warming-ignore-poor-countries https://www.imdb.com/title/tt8147262/ https://www.imdb.com/title/tt4449576/

Course Code: 0731 04 URP 3141	Year: Third	Term: First
Course Title	Transport Policy and Planning	
Course Status	Optional	
Credit	3.0	
Prerequisite(s)	None	
Rationale	This course covers various aspects of urban and regional transportation system performance forecasting. By the end of this course, students should have a solid understanding of the theory and methods underlying the practice of urban and regional travel demand modeling and should be able to define and apply key elements of different modeling paradigms for aggregate and disaggregate approaches to city-wide and region-wide transportation system performance forecasts; and apply travel demand modeling techniques for system-wide forecasts of activity participation rates, destination and mode choices, traffic and travel time & cost outcomes.	

Course Contents		CLOs
Section A		
1	Introduction to Transport Planning and Modelling: Background, Models and their role, Characteristics of Transport problem, Transport demand, transport supply, Equilibration, Modelling and Decision making, Choosing modelling approaches, Issues in Transport Modelling: General modelling issues, Aggregate and disaggregate modelling, cross-section and time series, revealed and stated preferences data, Classic transport model.	1, 2, 4
2	Trip Generation & Attraction Models: Production and attraction zones, Zonation process, Trip production estimation methods: growth factor, linear regression, Category analysis. Landuse for trip attraction	2, 3
3	Trip-Distribution Models: Gravity model, link attributes.	2, 3
4	Discrete Choice Framework for Travel Choice: Use of disaggregate discrete choice models, application context, urban and intercity travel mode choice modelling.	2, 4
5	Elements of The Choice Decision Process: The Decision Maker, The alternatives, Attributes of Alternatives, The decision rule.	2, 4
Section B		CLOs
6	Utility-Based Choice Theory: Basic construct of utility theory, deterministic choice concepts, probabilistic choice theory, components of the deterministic portion of the utility function, specification of the additive error term.	2, 4
7	Mode Choice: Overview and functional form of the logit model, independence of irrelevant alternatives property, example: prediction with multinomial logit model, measures of response to changes in attributes of alternatives, measures of responses to changes in decision-maker characteristics, model estimation: concept and method.	1, 2, 3, 4
8	Network Assignment of Traffic: Network terminology, user equilibrium and system optimum, mathematical techniques, shortest paths, Beckmann's formulation, MSA and Frank-Wolfe.	2, 3, 4
9	Models for Freight Movements: Analysis of freight movements, determinants of freight route.	2, 3, 4

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Describe people's evolving travel choices, and their variations as a function of demographics and land use patterns;	1, 3
	CLO2	Define and apply key elements of different modeling paradigms for aggregate and disaggregate approaches to city-wide and region-wide transportation system performance forecasts;	6, 7, 8
	CLO3	Apply travel demand modeling techniques for system-wide forecasts of activity participation rates, destination and mode choices, traffic and travel time & cost outcomes;	6, 7, 8
	CLO4	Analyze the microeconomic concepts central to transportation systems – demand models, discrete choice analysis.	6, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Group Discussion and Problem-based Learning	Presentation or Assignment and Final Exam
CLO3	Lecture and Problem-based Learning	Assignment and Final Exam
CLO4	Lecture and Workshop	Class Test and Final Exam

Learning Materials

Recommended Readings	Ortúzar, J. D. D., & Willumsen, L. G. (2002). Modelling transport. John Wiley & Sons. West Sussex, England. Papacostas, C. S., & Prevedouros, P. D. (1993). Transportation engineering and planning. Koppelman, F. S., & Bhat, C. (2006). A self instructing course in mode choice modeling: multinomial and nested logit models. Boyles, S. D., Lownes, N. E., & Unnikrishnan, A. (2020). Transportation network analysis. First Public Beta Version. Meyer, M. D., & Miller, E. J. (1984). Urban transportation planning: A decision-oriented approach. McGrawHill.
Supplementary Readings	Kockelman, K., & Chen, T. D. (2013). A Transportation Economics Reference for Practitioners (No. FHWA/TX-12/0-6628-1). Texas. Dept. of Transportation. Research and Technology Implementation Office.

Course Code: 0731 04 URP 3142	Year: Third	Term: First
Course Title	Transport Policy and Planning (Fieldwork & Studio)	
Course Status	Optional	
Credit	1.5	
Prerequisite(s)	None	
Rationale	This is a practical, hands-on course fully supported by its theoretical concept. This course is aimed at making the students proficient in solving complex management problems in transport sector using theoretical knowledge. By the end of this course, students should have a solid understanding of the theory and methods underlying the practice of urban and regional travel demand modeling and should be able to define and apply key elements of different modeling paradigms.	

	Course Contents/Tasks	CLOs
1	Lab Session One: Trip Generation- Survey design for data collection.	1, 3, 4
2	Lab Session Two: TransCAD Lab- Trip Distribution.	1, 3, 4
3	Task One: Trip Generation and Trip Distribution Model.	1, 3, 4
4	Lab Session Three: Introduction to regression, simple linear regression.	2, 3
5	Lab Session Four: Multiple linear regressions.	2, 3
6	Task Two: Introduction to Public Transport System.	1, 4
7	Lab Session Five: Binomial Logistic regression for mode choice.	2, 3, 4
8	Task Three: Examining a Binomial Logistic Regression Model in Transportation Planning.	2, 3, 4
9	Lab Session Six: Multinomial Logistic Regression- I.	2, 3, 4
10	Lab Session Seven: Multinomial Logistic Regression- II.	2, 3, 4
11	Task Four: Developing a Multinomial Logit Model.	2, 3, 4
12	Lab Session Eight: Optimization and traffic assignment- I.	2, 3, 4
13	Lab Session Nine: Optimization and traffic assignment- II.	2, 3, 4
14	Task Four: Optimization and traffic assignment.	2, 3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Describe people's evolving travel choices and their variations as a function of demographics and land use patterns;	1, 3
	CLO2	Define and apply key elements of different modeling paradigms for aggregate and disaggregate approaches to city-wide and region-wide transportation system performance forecasts;	6, 7, 8
	CLO3	Apply travel demand modeling techniques for system-wide forecasts of activity participation rates, destination and mode choices, traffic and travel time & cost outcomes;	6, 7, 8
	CLO4	Analyze the microeconomic concepts central to transportation systems – demand models, discrete choice analysis.	6, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lab.	Presentation and Assignment
CLO2	Lab.	Assignment
CLO3	Lab. and Fieldwork	Assignment
CLO4	Lab.	Assignment

Learning Materials

Recommended Readings	Hanck, C., Arnold, M., Gerber, A., & Schmelzer, M. (2019). Introduction to Econometrics with R. University of Duisburg-Essen, 1-9. Ortúzar, J. D. D., & Willumsen, L. G. (2002). Modelling transport. John Wiley & Sons. West Sussex, England. Koppelman, F. S., & Bhat, C. (2006). A self instructing course in mode choice modeling: multinomial and nested logit models. Boyles, S. D., Lownes, N. E., & Unnikrishnan, A. (2020). Transportation network analysis. First Public Beta Version.
Supplementary Readings	Kockelman, K., & Chen, T. D. (2013). A Transportation Economics Reference for Practitioners (No. FHWA/TX-12/0-6628-1). Texas. Dept. of Transportation. Research and Technology Implementation Office. Meyer, M. D., & Miller, E. J. (1984). Urban transportation planning: A decision-oriented approach. McGrawHill.

Course Code: 0731 04 URP 3145		Year: Third	Term: First
Course Title	Land Administration and Real Estate		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course offers the students a clear understanding on the basic principles of land administration and real estate. This course will also discuss major challenges associated with land administration and real estate in Bangladesh. The course is designed in such a way that will help planning students to address the discourses associated with land development.		

Course Contents		CLOs
	Section A	
1	History of Land Administration: Mughal, British, Pakistan and Bangladesh period, Abolition of Jamindary system.	1, 2
2	Present Land Administration: Existing land administration in Bangladesh, Performance evaluation of land administration system, right related to land and land acquisition.	1, 2, 3
3	Basic Framework of Land Management: Land tenure, Land ownership, Land registration, Land transfer, Land subdivision, Land record, Land taxation.	1, 3, 4
4	Institutional Arrangement of Land Management: The Directorate of Land Record and Survey, The Land Reform Board, The Land appeal Board, Land Administration and Training Center, Land Registration Department.	1, 4, 5
5	Legal and Constitutional Framework of Land Management: Transfer of property Act 1882 (Amendment in 2004), The Registration Act 1908 (Amendment in 2004).	2, 4, 6
6	Land Management Function and Operational Framework: Legal and institutional arrangements, management of land tenure, land value, recent decisions on Khas lands.	3, 4, 6
	Section B	CLOs
7	Introduction: Definition, Concept of real estate, History of real estate development in Bangladesh, Scope and importance of real estate studying, Importance of real estate in the economy of Bangladesh, Problems and prospects of real estate development in Bangladesh, Causes of slow development of real estate in other district towns.	1, 2
8	Initial Environmental Examination (IEE), Environmental Impact Assessment (EIA): Definition of IEE and EIA, Feasibility study for Real Estate Project: IEE for a new project, , Stages of the EIA Process : Identifying and defining the project or activities, screening, scoping, preparing terms of reference, baseline survey, environmental impact evaluation mitigation measures, assessment of alternative measures, preparation of the final document, Feasibility study: market analysis, site selection and analysis, competitive market analysis, financial feasibility analysis. Taking decision of the project.	1, 2, 3
9	Real Estate Management: Project procurement, building design/ architectural drawing, land use and other clearances, plan approval, bill of quantities (BOQ) preparation, handover of possession of land, soil test, brochure preparation, detail working drawings, structural design Mechanical, electrical and plumbing design, construction work, registration and mutation.	1, 2, 4
10	Real Estate Cycle and Real Estate Inflation: Definition, types of real estate cycle, causes of changing real estate cycle, types of inflation, causes of inflation.	1, 3, 4, 5
11	Real Estate Instruments: Definition, Contract, Deed, Mortgage, Lease, Broker and brokerage, Real estate	1, 3, 5, 6
12	Real Estate and Economic Base of a City: Definition of economic base, relation of real estate and economic base of a city, Buyer and seller market of real estate.	1, 3, 5, 6
13	Planning Consideration in Real Estate Development: Real estate development and urban planning, Theoretical perspective of planning: satellite towns and new towns, smart growth, compact development, green building, subdivision, Development control mechanism: land use control, control of building construction, control of land development, Planning and implementation instruments.	2, 3, 4, 5, 6

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain the existing land administration system of Bangladesh;	1, 2, 3
	CLO2	Identify land management disputes of Bangladesh;	1, 2, 3, 8
	CLO3	Manage, monitor, and assess real estate projects;	4, 6
	CLO4	Carry out EIA for any real estate projects;	9, 6
	CLO5	Relate land administration and real estate aspects and issues with urban planning process.	1, 2, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Problem-based learning	Presentation or Assignment and Final Exam
CLO3	Lecture and Problem-based learning	Assignment, Class Test and Final Exam
CLO4	Workshop and Lecture	Assignment and Final Exam
CLO5	Lecture and Guided Group Discussion	Class Test and Final Exam

Learning Materials

Recommended Readings	Chowdhury, M. S. A. (2004). Land Administration and Agrarian Land. Urban Development Debates in the New Millennium: Studies in Revisited Theories and Redefined Praxes, 4, 13. Saleh, M. F. (2015). Drawback of land administration system in Bangladesh and some feasible solutions. Bangladesh Law Digest, August, 19. Aziz, A. (2004). Land Record System in Bangladesh: An Analysis of Problems and Possible Solutions. NDC E-JOURNAL, 3(1), 79-93. Hossain, M. (2015). Improving land administration and management in Bangladesh. Final Report. Bangladesh Institute of Development Studies (BIDS), Dhaka. Islam, S., Moula, G., & Islam, M. (2015). Land rights, land disputes and land administration in Bangladesh-A Critical Study. Beijing L. Rev., 6, 193. Shenkel, W. M. (1977). Modern real estate principles. Business Publications. Unger, M. A., & Karvel, G. R. (1979). Real Estate, Principles & Practices. South-Western Publishing Company. DiPasquale, D., & Wheaton, W. C. (1996). Urban economics and real estate markets (Vol. 23, No. 7). Englewood Cliffs, NJ: Prentice Hall. Ahmed, F., Uddin, R., & Rasel Ahammad, S. (2013). Future of real estate business (ready-made flat) in Khulna city. International Journal of Scientific and Research Publications, 3(12), 435. Seraj, T. M. (2015). Real estate development: Theoretical and practical issues in the context of Bangladesh. Pathak Shamabesh.
Supplementary Readings	Siddiqui, K. (1997). Land management in South Asia: a comparative study. Oxford. Brammer, H. (2002). Land use and land use planning in Bangladesh. University Press Ltd. Rahman, G. (2008). Town planning and the political culture of planning in Bangladesh. AH Development Publishing House.

Course Code: 0311 04 Econ 3157		Year: Third	Term: First
Course Title	Development Policy and Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course unpacks different development approaches both in global and developing country context. Understanding the discourses of different development theories will help the professional planner to justify any planning practices under different development theories. Therefore, planning practices will be contextualized with development policies.		

Course Contents		CLOs
Section A		
1	Introducing Economic Development: Traditional Economic Measures, The New Economic View of Development, Amartya Sen's "Capability" Approach, The Traditional Human Development Index, The New Human Development Index, Characteristics of the Developing World: Diversity within Commonality.	1, 2
2	Classical and Neoclassical Economics: Enlightenment Origins of Political Economy, The British Enlightenment, The Classical Economic Theory.	1, 2
3	Adam Smith's Theory: The Theory, A Critical Appraisal; Its Applicability to Underdeveloped Countries.	1, 2
4	The Marxian Theory: The Marxian Theory, The Marxian Process of Economic Development, The Marxian Process of Economic Development, Downfall of Capitalism: A Critical Appraisal, The Marxian Theory and Underdeveloped Countries.	1, 2
5	The Keynesian Theory: Summary of Keynes Theory, Applicability of Keynes' Theory to Underdeveloped Countries, Keynesian Assumptions and Underdeveloped Countries, Tools of Keynesian Economics and Underdeveloped Countries.	1, 2
6	Classic Theories of Economic Growth and Development: Development as Growth and the Linear-Stages Theories, The Neoclassical Counterrevolution: Market Fundamentalism, Classic Theories of Development: Reconciling the Differences.	1, 2
Section B		CLOs
7	Development Policymaking and the Roles of Market, State, and Civil Society: Development Planning: Concepts and Rationale, The Development Planning Process: Some Basic Models, The Market Economy, Development Roles of NGOs and the Broader Citizen Sector.	1, 2, 3
8	Globalization and Development: Economic, Social, Cultural and Political Globalization, Globalization and AID, Global Governance and Development.	2, 3
9	Impact of Different Development Approaches on Urbanization in the Global South: Development Approaches related to Urban Development, Planning in the Changing World.	3
10	Impact of Different Development Approaches on Housing: Development Approaches related to Housing, Housing and Human Settlements in the Changing World.	3
11	Review of Development Planning Process in Bangladesh: Development Project Planning Process of Eighth Five Year Plan and Bangladesh Delta Plan 2100, Development Planning in Bangladesh, Role and Structure of Planning Commission.	4

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Comprehend the meaning and nature of geography of development;	1, 2
	CLO2	Examine the conventional and non-conventional theories of development;	1, 2, 3
	CLO3	Analyze the impact of different development approaches on housing and urbanization in the Global South;	2, 3, 7, 9
	CLO4	Identify the development philosophies affecting the development planning in Bangladesh.	2, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Video Documentary and Desktop Studies	Class Test, Assignment and Final Exam
CLO2	Lecture and Workshop	Case Study Presentation, Assignment and Final Exam
CLO3	Lecture and Problem-based Learning	Class Test, Case Study Analysis
CLO4	Lecture, Workshop and Seminar	Assignment, Presentation and Final Exam

Learning Materials

Recommended Readings	Todaro, M. P., & Smith, S. C. (2020). Economic development. Pearson UK. Jhingan, M. L. (2011). The economics of development and planning. Vrinda Publications. Peet, R., & Hartwick, E. (2015). Theories of development: Contentions, arguments, alternatives. Guilford Publications. Jenkins, P., Smith, H., & Wang, Y. P. (2006). Planning and housing in the rapidly urbanising world. Routledge. Rahman, G. (2008). Town planning and the political culture of planning in Bangladesh. AH Development Publishing House. Hasnath, S. A. (1987). The practice and effect of development planning in Bangladesh. Public Administration and Development, 7(1), 59-75.
Supplementary Readings	Government of Bangladesh. (2020). Eighth Five Year Plan 2020-2025. General Economics Division, Bangladesh Planning Commission.

Third Year Second Term			
Course Code: 0731 04 URP 3221		Year: Third	Term: Second
Course Title	Urban Development Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course aims to introduce the theoretical underpinnings of different planning approaches. It discusses the major planning paradigms and issues in contemporary urban planning practices. This course also discusses different challenges associated with urban development in third world perspective. It also familiarizes students with different theoretical, organizational and practical issues involved in urban development.		

	Course Contents	CLOs
	Section A	
1	Content and Aim of Planning: Issues for planning practitioners, Theoretical discourses of development planning.	1
2	Planning Traditions involved in Urban Affairs: Physical, Applied and Transformative Planning Traditions.	1, 2
3	Theoretical Assumptions of Different Planning Approaches: Rational Comprehensive Planning, Advocacy Approach of Planning, Incremental Approach of Planning, Political Economy Approach of Planning, Entrepreneurial Approach of Planning, Communicative Planning Approach, Participatory Planning Approach.	1, 2
4	Evolution of Planning Practice and Institutions in Bangladesh: Historical Overview of Planning Practices in Bangladesh, Brief Profile of Different Institutions Involved in the Planning Practice in Bangladesh.	4
5	Planning Practice in Bangladesh: Concepts and Components of Master Plan, Structure Plan, Strategic Plan, Detailed Area Plan, Main Goals and Objectives of Different Plans, Planning Mechanism and Structure of Such Plans, Limitations of Such Planning Practice.	2, 3
	Section B	CLOs
6	Tools of Plan Preparation and Implementation: Plan Preparation: Participatory Planning, Actor Mapping, Negotiations and Conflict Management, Planning Standards, Development Control: Zoning (Use, height, Density), Building Code, Sub-Division Regulations.	1, 3
7	Development and Land Management: Approach to Fringe Area Development (Land Readjustment, Guided Land Development, Land Banking, Infrastructure-led Development Plan).	3, 4
8	Issues in Contemporary Urban Planning: Sustainable Urban Development, New Challenges for Planned Urban Intervention.	2, 4
9	Challenging Definitions of Urban Governance and Urban Poverty: Implications for Urban Policy, Planning and Management.	2
10	Urban Regeneration and Gentrification: Approaches of Urban Regeneration and Gentrification, Issues of Deindustrialization.	2, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain a variety of planning theories;	1, 2
	CLO2	Appraise different planning traditions and approaches;	1, 2, 9
	CLO3	Frame and develop different planning tools;	3, 5, 6, 9
	CLO4	Plan and implement urban development projects.	3, 4, 7, 8 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Desktop Studies	Class Test, Assignment and Final Exam
CLO2	Lecture and Workshop	Case Study Presentation, Assignment and Final Exam
CLO3	Lecture and Problem-based Learning	Class Test, Assignment and Final Exam
CLO4	Lecture, Workshop and Seminar	Assignment and Presentation

Learning Materials

Recommended Readings	Faludi, A. (2013). A reader in planning theory (Vol. 5). Elsevier. Jenkins, P., Smith, H., & Wang, Y. P. (2006). Planning and housing in the rapidly urbanising world. Routledge. UN-Habitat (2020). World Cities Report 2020: The value of sustainable urbanization. Nairobi, Kenya. Rahman, G. (2008). Town planning and the political culture of planning in Bangladesh. AH Development Publishing House. Fainstein, S. S. (2005). Planning theory and the city. Journal of planning education and research, 25(2), 121-130. Degen, M., & García, M. (2012). The transformation of the 'Barcelona model': an analysis of culture, urban regeneration and governance. International journal of urban and regional research, 36(5), 1022-1038.
Supplementary Readings	Rahman, M. A. U. (2016). Urban sustainability through strategic planning: A case of metropolitan planning in Khulna city, Bangladesh. Journal of Urban Management, 5(1), 16-22. Chowdhury, A. (2005). Urban liveability in Khulna city; Impact of Khulna city plan. Bangladesh: Urban and Rural Planning Discipline, Khulna University. Roy, S., Sowgat, T., Islam, S. T., & Anjum, N. (2021). Sustainability Challenges for Sprawling Dhaka. Environment and Urbanization ASIA, 12(1_suppl), S59-S84. RAJUK. (2015). Dhaka Structure Plan, 2016–2035. Rajdhani Unnayan Kartripakkha (RAJUK).

Course Code: 0731 04 URP 3222		Year: Third	Term: Second
Course Title	Urban Development Planning (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course aims to introduce the challenges associated with urban development planning in third world countries having special emphasis on Bangladesh context. Students of this course are expected to learn and understand the basics of urban development policy and planning. This course has been designed as part of the course 0731 04 URP 3221.		

	Course Contents/Tasks	CLOs
1	Task One: Reflection of theory in to practice, analyzing and reviewing different plans in the light of theoretical backgrounds (Presentation and Report).	1
2	Task Two: Reading the urban fabric, land-use analysis for appropriation of space for development control and management (Presentation and Preparation of a Plan).	1, 2
3	Task Three: Interviewing key personnel to identify the plan implementation process (Report).	1, 2, 4
4	Task Four: Revisiting the contemporary issues in planning (Presentation).	1, 2, 3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Assess issues and practices related to urban development;	1, 3
	CLO2	Apply different theoretical underpinning and tools of plan preparation and implementation in real life challenges;	6, 7, 8
	CLO3	Evaluate different urban development plans;	6, 7, 8
	CLO4	Conduct research on urban development issues.	6, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review and Workshop	Assignment and Presentation
CLO2	Workshop, Fieldwork and Problem-based Learning	Group Presentation and Assignment
CLO3	Workshop, Seminar and Fieldwork	Case Study Analysis and Assignment
CLO4	Fieldwork and Problem-based Learning	Assignment and Presentation

Learning Materials

Recommended Readings	Faludi, A. (2013). A reader in planning theory (Vol. 5). Elsevier. Jenkins, P., Smith, H., & Wang, Y. P. (2006). Planning and housing in the rapidly urbanising world. Routledge. UN-Habitat (2020). World Cities Report 2020: The value of sustainable urbanization. Nairobi, Kenya.
Supplementary Readings	Degen, M., & García, M. (2012). The transformation of the 'Barcelona model': an analysis of culture, urban regeneration and governance. International journal of urban and regional research, 36(5), 1022-1038.

Course Code: 0731 04 URP 3232		Year: Third	Term: Second
Course Title	Spatial Analysis and GIS Programming (Lab./Project)		
Course Status	Optional		
Credit	1.5		
Prerequisite(s)	0731 04 URP 2232		
Rationale	This course builds on solid understanding in GIS. This course will focus of the advanced tools and analysis techniques. Each of the topics will lead by a lecture or briefing and an instruction driven tutorial. This course will help students in gaining understanding and knowledge in advanced GIS analysis; network analysis; spatial modelling; spatial statistics; advanced Geo-processing; customizing GIS and web mapping.		

	Course Contents/Tasks	CLOs
1	Lab Session 01: Introduction to the key software.	1
2	Lab Session 02: ArcGIS Skill - Quick Brush.	1
3	Lab Session 03: Geo-processing and model builder.	2
4	Task 01: Assignment on Site selection [use of model builder, vector-raster, weightage, reporting].	2
5	Lab Session 04: Statistical Tools, Network Analysis- theory, algorithm, tools.	2
6	Lab Session 05: Network Analysis: setting the network, Routing, catchment area.	2
7	Task 02: Network Analysis Exercise.	2
8	Lab Session 06: Python Scripting for GIS.	2, 3
9	Lab Session 07: Python Scripting for GIS.	2, 3
10	Lab Session 08: Lab Test.	2
11	Lab Session 09: Web Mapping.	4
12	Lab Session 10: Web Mapping.	4
13	Task 03: Web GIS Development.	4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Acquiring skill on advanced feature of recent GIS software applications;	1, 3
	CLO2	Learning advanced analysis and spatial modelling;	6, 7, 8
	CLO3	Familiar with big data handling;	6, 7, 8
	CLO4	Introduce to web mapping.	6, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lab. and Assignment	Quiz and Assignment
CLO2	Lab. and Assignment	Quiz and Assignment
CLO3	Lab. and Assignment	Assignment
CLO4	Lab. and Assignment	Assignment

Learning Materials

Recommended Readings	Price, M. (2019). Mastering ArcGIS Pro (First edition). McGraw Hill. Price, M. (2015). Mastering ArcGIS (Eighth edition). McGraw Hill Law, M; Amy, C. (2021). Getting to Know ArcGIS Pro 2.8 (Fourth Edition). ESRI Press
Supplementary Readings	http://training.esri.com/gateway/index.cfm http://www.arcgis.com/home/ http://www.geographynetwork.com

Course Code: 0731 04 URP 3233		Year: Third	Term: Second
Course Title	Remote Sensing and Photogrammetry		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course offers remote sensing techniques and photogrammetry as the part of decision support system for planning. Students of this course are expected to learn and understand the basic concept and techniques associated with remote sensing. This course is designed to introduce most popular remote sensing techniques using multispectral and stereo satellite images, UAS based aerial photographs and LIDAR. Thus, this course will not only introduce 2D but also 3D remote sensing.		

Course Contents		CLOs
	Section A	
1	Introduction to Remote Sensing: Definition and history of remote sensing, advantage and limitation of remote sensing, process and characteristics remote sensing system, application of remote sensing in planning etc.	1
2	Electromagnetic Radiation: Energy sources and radiation principles, electromagnetic spectrum and its major division, laws of radiation, energy interaction with atmosphere and earth surface feature, Blackbody radiation, Radiation from real material.	1
3	Fundamentals of Aerial Photography: Fundamentals of aerial photograph, Basic characteristics of Digital image, Photographic sequence, Basics of camera and film, Spectral sensitivity, Color mixing process, electronic imaging, Airborne sensor platform, Flight planning, Ortho-photography.	2
4	Photogrammetry: Geometric characteristics of aerial photographs, Photo coordinate Measurements, Relief displacement, Height measurement, Image parallax, Ground control for aerial images.	2, 3
5	Mapping with Aerial Photographs: Mapping with aerial photograph, Stereoscopic Plotting Instruments, ortho-photo, Stereo-model.	2, 3
	Section B	CLOs
6	Remote Sensing Satellites: Characteristics of digital Image data, History of land observation satellite, orbit characteristics, different kinds of digital sensors and their characteristics.	2,3
7	Basics of Satellite Image: Purpose of image processing, Sources of geometric distortion, Image registration, Across track vs. along track scanning, Multispectral Imagery, Image enhancement, image quality assessment, pre-processing and processing techniques, thresholding and band algebra.	2,3
8	Image Segmentation: Purpose of Image classification, Sequences of image segmentation, selecting optimum bands for feature extraction, Selection of appropriate classification algorithms, Supervised and Unsupervised classification, Fuzzy classification, Change delectation.	3
9	Image Segmentation (Machine Learning): Artificial neural networks (ANN), support vector machines (SVM), self-organizing map (SOM), decision trees (DT), random forests, case-based reasoning, neuro-fuzzy (NF), genetic algorithm (GA), multivariate adaptive regression splines (MARS), Novel ML algorithms.	3
10	Accuracy Assessment: Sources of classification errors, error characteristics, measurement of map accuracy, error matrix, Interpretation of error matrix, quantitative assessment of error matrix.	3
11	LIDAR: Basics of LIDAR, Application of LIDAR in planning, 2D and 3D models, Volumetric analysis.	1, 3

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain how electromagnetic radiation is used in remote sensing and describe the usages of different wavelengths of the electromagnetic spectrum;	3, 8
	CLO2	Elucidate the considerations of flight planning for aerial photo acquisition, geometric characteristics of aerial photos, the concepts of spatial, spectral, radiometric and temporal resolution and their usages;	1, 8
	CLO3	Identify the basic elements of image analysis and interpretation;	1, 6, 7, 8, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Reading Assignment, Class Test and Final Exam
CLO2	Lecture and Problem-based Learning	Presentation or Assignment and Final Exam
CLO3	Lecture	Group Work and Presentation

Learning Materials

Recommended Readings	Campbell, J. B., & Wynne, R. H. (2011). Introduction to remote sensing. Guilford Press. Morgan, D., & Falkner, E. (2001). Aerial mapping: methods and applications. CRC Press. Jensen, J. R. (2004). Introductory digital image processing: a remote sensing perspective. Prentice-Hall Inc. Lillesand, T., Kiefer, R. W., & Chipman, J. (2015). Remote sensing and image interpretation. John Wiley & Sons. Paine, D. P., & Kiser, J. D. (2012). Aerial photography and image interpretation. John Wiley & Sons. Richards, J. A., & Jia, X. (2006). Multispectral transformations of image data. Remote Sensing Digital Image Analysis: An Introduction, 137-163.
Supplementary Readings	http://www.isprs.org/education/tutorials.aspx Home of many tutorials on GIS, RS, Photogrammetry etc. http://www.grss-ieee.org/education/tutorials/ List of RS tutorials http://landsat.gsfc.nasa.gov/education/tutorials.html RS tutorial by NASA (Landsat focused) https://www.fas.org/irp/imint/docs/rst/ Good tutorial by Earth Observing System of NASA http://www.crisp.nus.edu.sg/~research/tutorial/rsmain.htm Tutorial by National University of Singapore http://www.nrcan.gc.ca/earth-sciences/geography-boundary/remote-sensing/11810 Educational resources by Natural Resources Canada http://www.neodc.rl.ac.uk/tutorials/rstutorial/tutorialhome.htm Tutorial by National Center for Earth Observation, UK http://noaasis.noaa.gov/NOAASIS/ml/education.html Tutorial by NOAA Satellite and Information Service

Course Code: 0731 04 URP 3234		Year: Third	Term: Second
Course Title	Remote Sensing and Photogrammetry (Lab./Project)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This is the practical or hands-on course fully supported by its theoretical counterpart. This course is aimed at making the students proficient in using software related to remote sensing and aerial photography using theoretical knowledge acquired from 0731 04 URP 3233.		

	Course Contents/Tasks	CLOs
1	Session 01: Introduction to remote sensing data processing workflow, assessment of global image information.	1
2	Session 02: Image mosaicking, rectification and geometric correction, multispectral image enhancement.	1, 2
3	Session 03: Image classification and mapping techniques.	1, 2, 3
4	Session 04: Training sample collection techniques, supervised classification and accuracy assessment.	4
5	Session 05: Advanced methods in remote sensing,	1
6	Session 06: Analysis of post classification remote sensing data.	1, 2
7	Session 07: Explore properties of stereo satellite data, stereo visualization.	1, 2, 3
8	Session 08: Explore properties of UAS images and camera, IMU.	1, 3
9	Session 09& 10: Advanced photogrammetric operation	1, 3, 4
10	Session 11: Explore the properties of LIDAR data.	1, 3
11	Session 12: Map preparation from LIDARdata.	3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Develop understanding of software, and hardware commonly used in the planning;	1, 2
	CLO2	Think critically and solve problems using evidence-based reasoning;	6, 7, 8
	CLO3	To explain diversified application of different kinds of remotely sensed data and analytical procedures in urban planning;	6
	CLO4	Communicate effectively orally and through written text and graphics.	4

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Desktop Review, Group Work and Workshop	Report and Presentation
CLO2	Lab Work and Problem-Based Learning	Lab Test
CLO3	Group Work, Lab Work and Workshop	Presentation and Summary Report
CLO4	Group Work, Workshop and Presentation	Assignment and Presentation

Learning Materials

Recommended Readings	Campbell, J. B., & Wynne, R. H. (2011). Introduction to remote sensing. Guilford Press. Morgan, D., & Falkner, E. (2001). Aerial mapping: methods and applications. CRC Press. Jensen, J. R. (2004). Introductory digital image processing: a remote sensing perspective. Prentice-Hall Inc. Lillesand, T., Kiefer, R. W., & Chipman, J. (2015). Remote sensing and image interpretation. John Wiley & Sons. Paine, D. P., & Kiser, J. D. (2012). Aerial photography and image interpretation. John Wiley & Sons. Richards, J. A., & Jia, X. (2006). Multispectral transformations of image data. Remote Sensing Digital Image Analysis: An Introduction, 137-163.
Supplementary Readings	http://www.isprs.org/education/tutorials.aspx Home of many tutorials on GIS, RS, Photogrammetry etc. http://www.grss-ieee.org/education/tutorials/ List of RS tutorials http://landsat.gsfc.nasa.gov/education/tutorials.html RS tutorial by NASA (Landsat focused) https://www.fas.org/irp/imint/docs/rst/ Good tutorial by Earth Observing System of NASA http://www.crisp.nus.edu.sg/~research/tutorial/rsmain.htm Tutorial by National University of Singapore http://www.nrcan.gc.ca/earth-sciences/geography-boundary/remote-sensing/11810 Educational resources by Natural Resources Canada http://www.neodc.rl.ac.uk/tutorials/rstutorial/tutorialhome.htm Tutorial by National Center for Earth Observation, UK http://noaasis.noaa.gov/NOAASIS/ml/education.html Tutorial by NOAA Satellite and Information Service

Course Code: 0731 04 URP 3235		Year: Third	Term: Second
Course Title	Disaster Planning and Management		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Bangladesh is one of the most natural disaster-prone countries in the world and this presents a major and ongoing impediment to development. Besides, since the country is projected to experience rapid urbanization over the next several decades, it is imperative for the policy makers and urban managers to plan for new urban development with proper integration of disaster risk and pertinent risk management options into the urban and rural planning process. Considering the facts, this course is designed to meet the growing and recognised need that scientific and other technical knowledge must become more integrated in a systematic way into disaster risk management. Therefore, the course is expected to make students aware of the role science has to play in informing and improving disaster risk management and also equip them with the skills and knowledge to solve complex problems in disaster risk management.		

	Course Contents	CLOs
	Section A	
1	Theoretical Bases of Natural Disaster: The conceptual bases of the disaster field, Paradigms in Disaster Management, Conceptual issues related to hazard, disaster, and risk, What are cascading disasters? The naturalist perspective of risk, The constructionist perspective of risk, Constructionist analyzes of natural disaster, Anthropology and the Political Economy of Disasters, Disaster policies, risk, and knowledge.	1
2	Natural and Anthropogenic Hazards: Geophysical Hazards such as Earthquakes, Tsunami, Landslides, and Volcanoes, Meteorological events such as Cyclone, Windstorms, Tornadoes, Flood, and Drought, and Anthropogenic Hazards such as Pandemics, Terrorism, Cyber-crime.	1, 2
3	Vulnerability and Risk Assessment: Multiple meanings of vulnerability, Defining and Measuring Vulnerability, Different conceptual or theoretical framework for understanding disaster vulnerability or climate change vulnerability, Quantitative risk assessment, Dealing with uncertainty, including acceptable levels of risk and uncertainty.	1, 3
4	Disaster Management Cycle: Defining disaster management planning, Steps in planning process, Principles of good disaster management planning, Different phases of disaster management such as prevention, mitigation/preparedness, response, and relief & rehabilitation.	1, 4
5	Disaster Risk Reduction: From disaster management to disaster risk management, Conceptual framework of disaster risk reduction, Community Risk Assessment, Disaster Risk Reduction Action Plan.	1, 4, 5, 6
	Section B	CLOs
6	Disaster Resilience: Defining and measuring resilience, Community/City resilience framework, Qualities of resilience system, Co-existence of vulnerability and resilience, The geographies of community disaster resilience, Nexus between poverty, vulnerability, and resilience.	1, 5, 6
7	Disaster Risk Management in Cities: Disasters and Cities, Challenges of Managing Disaster and Climate Risk in Urban Areas, Integrated Urban Risk Assessment as a Tool for City Management, Reducing Disaster Risk through Land Use Planning, Reducing Disaster Risk in Urban Areas through Urban Redevelopment.	5, 6
8	Policy, Institutional and Legal Arrangements in Disaster Risk Management: Sendai Framework for disaster risk reduction, National Disaster Management Policies and Five-Year Plan, National Plan for Disaster management, National disaster management Acts and Disaster Management Rules, Standing Orders on Disaster (SOD) and National Framework for Disaster Management, Disaster management institutions, Disaster risk sensitivity in city planning of Bangladesh.	4
9	Humanitarian Intervention: What is humanitarian assistance? Humanitarian response and humanitarian action, Features of humanitarian intervention, Challenges of humanitarian assistance.	7
10	Emergency Planning and Management: Long term and short-term planning, Methodology for emergency planning, The emergency plan and its activation, The plan in practice.	8

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Develop understanding of the core issues concerning disaster risk management;	1, 3, 8
	CLO2	Explain origin, progressions, and impacts of different natural hazards;	1
	CLO3	Assess and quantify risks to reduce disaster risks, and manage emergencies effectively;	1, 7, 8
	CLO4	Analyze the legal, policy and institutional frameworks, which set the context for disaster prevention, preparedness, response, and recovery;	9
	CLO5	Critically evaluate the principles and practices of disaster risk reduction and management;	1, 7, 8
	CLO6	Explore and critically evaluate different approaches, to distil 'best practice' in terms of possible response/s to reduce vulnerability and also address different kind of emergencies;	3, 9
	CLO7	Build a critical understanding of the process and practises of humanitarianism;	3, 4
	CLO8	Assess the systems used in emergency response and the dynamics of emergency situations.	3, 4

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture, Video Lectures/Documentary, Reading and Class Presentation	Presentation
CLO3	Class Lecture and Problem-based Learning/Tutorial (Practice session)	Final Exam
CLO4	Lecture	Assignment or Individual Paper
CLO5	Lecture and Group discussion	Individual Paper (or assignment) and Final Exam
CLO6	Lecture and Seminar	Final Exam
CLO7	Lecture and Seminar	Individual Paper (or assignment) and Final Exam
CLO8	Lecture and Group work	Final Exam

Recommended Readings	Asian Development Bank. (2016). Reducing Disaster Risk by Managing Urban Land Use: Guidance Notes for Planners. Philippines: ADB. Aragón-Durand, F. (2009). Unpacking the Social Construction of Natural Disaster through Policy Discourses and Institutional Responses in Mexico: The case of Chalco Valley's Floods, State of Mexico. Doctoral Dissertation, University College of London, United Kingdom. Alexander, D. (2002). Principles of emergency planning and management, Sixth edition. London: TEFFA. Cretney, R. (2014). Resilience for Whom? Emerging Critical Geographies of Socio-ecological Resilience. Geography Compass 8(9), 627–640, 10.1111/gec3.12154. Coady, C.A.J. Dobos, N. and Sanyal, S. (2018) (eds.). Challenges for Humanitarian Intervention. Oxford, United Kingdom: Oxford University Press. Coppola, D.P. (2011). Introduction to International Disaster Management. Boston: Butterworth-Heinemann. Dickson, E., Baker, J. L., Hoornweg, D. & Tiwari, A. (2012). Urban Risk Assessments: Understanding Disaster and Climate Risk in Cities. Urban development series Washington, D.C.: World Bank Group. Government of Bangladesh. (2010). Community Risk Assessment and Risk Reduction Action Plan. Disaster Management Bureau, Dhaka. Government of Bangladesh. (2010). Standing Orders on Disasters. Disaster Management Bureau, Dhaka. Hehir, A. (2010). Humanitarian Intervention: An Introduction. First edition. London: Palgrave Macmillan. Twigg, J. (2015). Disaster Risk Reduction: Good Practice Review 9. ODI: London. Available at http://www.alnap.org/resource/21363.aspx. UNISDR. (2015). Sendai Framework for Disaster Risk Reduction 2015-2030. Geneva: UNISDR.
Supplementary Readings	Alexander, D. (2020). Building Emergency Planning Scenarios for Viral Pandemics: UCL-IRDR Covid-19 Observatory. Working paper, Institute for Risk and Disaster Reduction, University College London, London, UK. Alexander D, Pescaroli G. (2019). What are cascading disasters? UCL Open: Environment, (1):03. Birkland, T., (2006). Lessons of Disaster: Policy Change after Catastrophic Events. Georgetown University Press, New York, Cretney, R. (2014). Resilience for whom? Emerging critical geographies of socio-ecological resilience. Geography Compass, 8 (9): 627–40. Jones E.C and Murphy, A.D. (eds). (2009). The Political Economy of Hazards and Disasters (Society for Economic Anthropology Monograph Series). AltaMira Oress, New York. Pelling, M. (2003). The Vulnerability of Cities: Natural Disasters and Social Resilience. Earthscan, London. Pelling, M. (2007). Learning from others: the scope and challenges for participatory disaster risk assessment, Disasters, 31(4): 373–385. Shaw, R., Mallick, F. and Islam, A. (eds.). (2013). Disaster Risk Reduction Approaches in Bangladesh. Springer, Heidelberg. UNISDR. (2005). Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters. UNISDR, Geneva. Wamsler, C. (2006). Mainstreaming Risk Reduction in Urban Planning and Housing: A Challenge for International Aid Organisations. Disasters, 30(2). pp. 151–177. Perry, R. W. (2006). What is a Disaster? pp. 1-15 in Handbook of Disaster Research, Havidán Rodríquez, Enrico L. Quarantelli, and Russell R. Dynes (eds.). New York: Springer.

Course Code: 0731 04 URP 3236		Year: Third	Term: Second
Course Title	Disaster Planning and Management (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course will be conducted simultaneously with its theoretical counterpart. This course will equip students with tools for analysing quantitative, qualitative, and geospatial data relating to hazard, vulnerability, disaster risk and disaster reduction. The students will learn how to develop quantitative risk assessment methodology, use of statistical methods, fieldwork, and data analysis. In addition, students will be familiar with qualitative methods to understand social aspects of disaster risk. Additional geospatial skills will be developed to enhance quantitative and qualitative risk assessment process. Finally, students will develop disaster risk reduction strategies for urban or rural areas using knowledge from field research, and different tools introduced in the course.		

	Course Contents/Tasks	CLOs
1	Quantifying Disaster Risk: What is risk and how do we measure it? Components of risk: exposure, hazard, vulnerability.	1, 2, 3
2	Methodology Development for Hazard, Vulnerability, and Risk Assessment: Indicator selection, methodology development, planning and designing data collection (criteria for case study selection, samples and population, introduction to basic statistics), questionnaire development.	1, 2, 3
3	Understand Social Aspects of Disaster Risk: Risk perception, vulnerability, poverty, intersectionality lens to understand differentiated nature of vulnerability, evacuation behaviour, inequality in disaster responses, preparedness, and relief, and rehabilitation.	3, 5, 6
4	Planning and Designing Qualitative Research Design to Explore Social Aspects of Risk: Introduction to qualitative research design, qualitative methods, interview or focus group discussions (FGDs) checklist development or/and development of working methodology for participatory methods.	1, 3, 4, 5
5	Conducting Fieldwork in a Vulnerable Location: Mobilise team, team building, role playing, organise fieldwork and interviewing and apply other methods like focus group discussions, key informant interviews.	1, 3, 5, 6, 7
6	Quantitative Data Analysis: Introduction to database management, quantitative data analysis (indexing, probabilities, hypothesis testing, regression).	2, 3
7	Qualitative Data Analysis: Interview transcription, mapping or flow diagrams, coding and categories, and Thematic analysis, theory laden analysis.	2, 3
8	Disaster Risk Reduction Planning: Basics to disaster risk reduction, planning strategies, integration disaster risk into mainstream urban or rural planning, implementation of disaster risk reduction strategies.	4, 5
9	Poster Presentation on Quantitative and Qualitative Research Findings: Planning and structuring a poster, presentation, feedback from peers and faculties.	6, 7
10	Writing a Quantitative Report: Quantitative data analysis, quantitative risk scenario development, different severity imposed by different hazards (e.g., floods, cyclones, earthquake) with specific reference to their frequency, geographical extent, and socio-economic vulnerability, and factors that influence hazards and vulnerability.	1, 3, 5, 6
11	Social Aspects of Disaster Risk and Disaster Risk Reduction Strategies using Qualitative Methods: Anyone or several of the following issues might be highlighted in the report (risk perception, livelihood vulnerability and resilience, differentiated nature of vulnerability, evacuation behaviour & effectiveness of warning system, migration, or non-migration)	6
12	Develop Disaster Risk Reduction Plan for a Particular Urban or Rural Settlement: Risk scenario building, spatial database development using GIS, strategies fixation, expert opinion, disaster risk sensitive plan making, visualization of the plan, circulation of the plan.	4, 5, 6
13	Finalization of the Disaster Risk Sensitive Plan: Feedback collection and finalise the plan.	6, 7
14	3M Presentation on Disaster Risk and Risk Reduction Strategies: Planning for presentation, structuring the presentation, group work, team building and leadership development, development of a presentation, defend own risk sensitive plan or risk reduction strategies.	7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Plan, implement, present, and evaluate primary research relating to risk and disaster reduction;	1, 7
	CLO2	Compare and contrast the different severity imposed by such natural and anthropogenic hazards, with specific reference to their frequency, geographical extent, socio-economic vulnerability;	9, 10
	CLO3	Demonstrate how to use quantitative, qualitative, and geospatial methods in risk and disaster reduction research and also apply these methods in assessing hazard, risk and vulnerability;	6, 7, 9, 10
	CLO4	Demonstrate how to manage real emergencies in the field;	3, 5
	CLO5	Identify proper planning interventions for disaster risk reduction of urban or rural areas and their implementation strategy;	3, 5, 8
	CLO6	Analyze and provide solutions to complex risk and disaster resilience issues;	3, 5, 8
	CLO7	Develop audience-appropriate research communication and leadership competency.	4, 5

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Problem-Based Learning	Assignment, Group Report, Presentation
CLO2	Lecture, Practice Session, Fieldwork (Problem-Based Learning)	Fieldwork, Research Report
CLO3	Lecture, Workshop, Practice Session, Group Exercise	Fieldwork, Research Report
CLO4	Lecture, Fieldwork, Role Assignment	Group Report, Completion of Group Task, Poster Presentation
CLO5	Lecture, Fieldwork, Role Assignment	Group Report, Completion of Group Task, Poster Presentation
CLO6	Lecture, Fieldwork, Role Assignment	Group Report, Completion of Group Task, Poster Presentation
CLO7	Lecture, Fieldwork, Role Assignment	Development of A Plan, Presentation

Learning Materials

Recommended Readings	Asian Development Bank. (2016). Reducing Disaster Risk by Managing Urban Land Use: Guidance Notes for Planners. Philippines: ADB. Aragón-Durand, F. (2009). Unpacking the Social Construction of Natural Disaster through Policy Discourses and Institutional Responses in Mexico: The case of Chalco Valley's Floods, State of Mexico. Doctoral Dissertation, University College of London, United Kingdom. Alexander, D. (2002). Principles of emergency planning and management, Sixth edition. London: TEFFA. Cretney, R. (2014). Resilience for Whom? Emerging Critical Geographies of Socio-ecological Resilience. Geography Compass 8(9), 627–640, 10.1111/gec3.12154. Coady, C.A.J. Dobos, N. and Sanyal, S. (2018) (eds.). Challenges for Humanitarian Intervention. Oxford, United Kingdom: Oxford University Press. Coppola, D.P. (2011). Introduction to International Disaster Management. Boston: Butterworth-Heinemann. Dickson, E., Baker, J. L., Hoornweg, D. & Tiwari, A. (2012). Urban Risk Assessments: Understanding Disaster and Climate Risk in Cities. Urban development series Washington, D.C.: World Bank Group. Government of Bangladesh. (2010). Community Risk Assessment and Risk Reduction Action Plan. Disaster Management Bureau, Dhaka. Government of Bangladesh. (2010). Standing Orders on Disasters. Disaster Management Bureau, Dhaka.

Learning Materials

Supplementary Readings	Birkland, T., (2006). Lessons of Disaster: Policy Change after Catastrophic Events. Georgetown University Press, New York, Cretney, R. (2014). Resilience for whom? Emerging critical geographies of socio-ecological resilience. Geography Compass, 8 (9): 627–40. Jones E.C and Murphy, A.D. (eds). (2009). The Political Economy of Hazards and Disasters (Society for Economic Anthropology Monograph Series). AltaMira Oress, New York. Pelling, M. (2003). The Vulnerability of Cities: Natural Disasters and Social Resilience. Earthscan, London. Pelling, M. (2007). Learning from others: the scope and challenges for participatory disaster risk assessment, Disasters, 31(4): 373–385. Shaw, R., Mallick, F. and Islam, A. (eds.). (2013). Disaster Risk Reduction Approaches in Bangladesh. Springer, Heidelberg. UNISDR. (2005). Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters. UNISDR, Geneva. Wamsler, C. (2006). Mainstreaming Risk Reduction in Urban Planning and Housing: A Challenge for International Aid Organisations. Disasters, 30(2). pp. 151–177.

Course Code: 0731 04 URP 3245		Year: Third	Term: Second
Course Title	Housing		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course aims to introduce the challenges associated with housing in third world countries having special emphasis on Bangladesh context. It discusses the housing conditions, policies and organization. It introduces different tools and techniques to develop urban housing strategies. It also discusses the salient features of low income housing and possible options for securing the shelter of the urban poor.		

	Course Contents	CLOs
	Section A	
1	Introduction to Housing: Concepts, Definitions, Types / Classification, Components & Importance of housing.	2, 4
2	Design and Standard: Design of Residential Areas, Requirements of Residential Building, Unit Design, Infrastructure and Facilities, Form and Structure, Socio-Economic and Other Physical Parameters.	2, 4
3	Housing Production and Housing Finance: Producers, Production Requirements, Delivery Systems, Financing Systems, Roles of Private Sector, Civil Society and Government.	3, 4
4	Housing Strategy Design Process: Analysing Housing Stress, Analysing Economics of Housing, Analysing Housing Demand, Strategy Formulation.	1, 3
5	Theoretical Assumptions of Housing Approaches: Modernization, Keynesian Housing Policy, Self-Help Housing Approach.	2, 3
	Section B	CLOs
6	Housing and Livelihood: Impact of Housing in Urbanization Process and Livelihood.	1, 3
7	Housing Delivery System: Different Type of Housing Delivery System, Components of Delivery System, Determinants of Housing Delivery System.	2, 3, 4
8	Land, Housing & Markets: Housing Demand and Supply, Ownership and Rental, Market Segmentation, Formal and Informal Markets, Purchase Cost Affordability, Infrastructure Provision and Affordability.	3, 4
9	Housing for the Urban Poor: Designing & Financing Slum & Settlement Upgrading, Land Allocation, Sharing, Readjustment, Servicing and Banking.	1, 3, 4
10	Housing Policy and Programs in Bangladesh: Review of National Housing Policy, Housing Finance, Housing Situation in Bangladesh (challenges and organizational involvement).	2, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Demonstrate urban housing strategies;	1, 3, 7
	CLO2	Critique different housing approaches;	1, 2, 9
	CLO3	Develop different planning tools in different contexts;	3, 8, 9
	CLO4	Plan and implement urban housing projects.	3, 4, 5, 6, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Policy Review	Class Test, Assignment and Final Exam
CLO2	Lecture and Group Discussion	Presentation, Assignment and Final Exam
CLO3	Class Lecture and Problem-based Learning	Class Test, Assignment and Final Exam
CLO4	Workshop and Lecture	Assignment and Presentation

Learning Materials

Recommended Readings	Jenkins, P., Smith, H., & Wang, Y. P. (2006). Planning and housing in the rapidly urbanising world. Routledge. United Nations Human Settlements Programme. (2003). The Challenge of Slums - Global Report on Human Settlements 2003. UN-HABITAT. Clapham, D. (2018). Housing theory, housing research and housing policy. Housing, Theory and Society, 35(2), 163-177. Rahman, G. (2008). Town planning and the political culture of planning in Bangladesh. AH Development Publishing House. Rahman, M. (2012). Housing the urban poor in Bangladesh: A study of housing conditions, policies and organisations (Doctoral dissertation, Heriot-Watt University). Mallick, F. H. (1987). A local approach to urban housing design in Bangladesh (Doctoral dissertation, University of Newcastle upon Tyne). ESCAP, U. (2008). Housing the poor in Asian cities, No 2: Low-income housing: approaches to help the urban poor find adequate accommodation.
Supplementary Readings	Hardoy, J. E., & Satterthwaite, D. (2014). Squatter citizen: life in the urban third world. Routledge. Rahman, M. A. U., Hossain, M. Z., & Kabir, M. E. (2016). Operationalizing community-led housing in practice: Lessons from Bangkok, Thailand and Mumbai, India. International Journal of Sustainable Built Environment, 5(2), 564-578. Lloyd-Jones, T., & Rakodi, C. (2014). Urban livelihoods: A people-centred approach to reducing poverty. Routledge.

Course Code: 0731 04 URP 3246		Year: Third	Term: Second
Course Title	Housing (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course aims to introduce the tools and techniques to critically analyze the issues related to housing. This course provides a scope to replicate the theoretical notion of the course 0731 04 URP 3246 in the real life exercises. This course helps the students to synthesize housing design process and also helps them to identify the critical issues involved with housing of the urban poor.		

	Course Contents/Tasks	CLOs
1	Lecture Session One: Overview on Building Construction Rules and Bangladesh National Building Code.	1
2	Task One: Mapping the setback of existing infrastructures of planned and unplanned residential area.	1, 2
3	Presentation One: Setback of existing infrastructures of planned and unplanned residential area.	1, 2
4	Lecture Session Two: Overview on Private Residential Area Development Act.	1, 2, 3
5	Workshop One: Workshop on Private Residential Area Development Projects.	2, 3
6	Task Two: Feasibility analysis of residential area development projects.	1, 2, 3
7	Presentation Two: Feasibility analysis of residential area development projects.	1, 2, 3
8	Task Three: Analysing the options for pro-poor housing projects in low-income metropolitan cities.	1, 4
9	Workshop Two: Global plenary on best practices related to housing for the urban poor.	1
10	Presentation Three: Presentation on the research findings related to options for housing the urban poor.	1, 3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Assess issues, policies and practices related to housing;	1, 2, 6, 8, 9
	CLO2	Formulate urban housing strategy;	1, 2, 3, 5, 7, 9
	CLO3	Contextualise different statutes and standards related to housing development projects;	3, 4, 5, 6, 8
	CLO4	Conduct research on pro-poor housing issues.	10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Desktop Review and Workshop	Presentation
CLO2	Workshop, Seminar and Fieldwork	Group Presentation and Assignment
CLO3	Workshop, Seminar and Problem-based Learning	Case Study Analysis and Assignment
CLO4	Fieldwork and Problem-based Learning	Assignment and Presentation

Learning Materials

Recommended Readings	BNBC (2020) Bangladesh National Building Code, Part 6: Structural Design (In Press). Ministry of Housing and Public Works, Dhaka, Bangladesh. United Nations Human Settlements Programme. (2003). The Challenge of Slums - Global Report on Human Settlements 2003. UN-HABITAT. ESCAP, U. (2008). Housing the poor in Asian cities, No 2: Low-income housing: approaches to help the urban poor find adequate accommodation. GoB. (1996). Building Construction Rules, 1996. GoB. (2004). Private Housing Project Land Development Rule, 2004
Supplementary Readings	Rahman, M. A. U., Hossain, M. Z., & Kabir, M. E. (2016). Operationalizing community-led housing in practice: Lessons from Bangkok, Thailand and Mumbai, India. International Journal of Sustainable Built Environment, 5(2), 564-578.

Fourth Year First Term			
Course Code: 0731 04 URP 4106		Year: Fourth	Term: First
Course Title	Thesis Proposal Development		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Students of this course are expected to develop research proposal on their field of specialization. The course is designed to develop the students' ability to develop and present a theoretically informed research proposal related to a particular policy issue arising from a course or multiple courses of Urban and Rural Planning Discipline. The students will be assessed on two types of output and on some aspects of the process leading to these outputs: • The students are expected to write a complete research proposal; • The students are expected to assess on the quality of public presentations of their argument and on their ability to answer the questions asked by jury members; • Among the process aspects the supervisors as well, coordinator of this course can usefully distinguish between aspects of the student's learning attitude (commitment, independence, punctuality) and the significance of his/her learning process, i.e., the difference between the initial and the final understanding of the issue(s) each student has inquired into.		

	Course Contents/Tasks	CLOs
1	Lesson 01: Guidelines for identifying a suitable research topic and how to develop a good problem statement.	1
2	Submission 01: Research Interest and Preliminary research topic.	1
3	Lesson 02: Research Proposal Development [selection of topic and conceptualization, identification, and statement of research problem, setting of objectives & research questions, rationale or justification of the research, plagiarism, reference].	1, 2
4	Lesson 03: Writing a literature review, techniques, and process of developing a conceptual or theoretical framework, and how to develop literature-based article.	3
5	Lesson 04: Discussion regarding write-up of the research proposal and presentation techniques, Different modalities of research presentation, Presentation skill development sessions.	1, 2, 7
6	Submission 02: Writing up a preliminary proposal [Probable contents: Title, Problem statement, Objectives and research questions, Justification of the study, Literature Review (including Conceptual framework or Theoretical framework), and Expected Outcomes].	1, 2, 7
7	Presentation 01: Presentation of research proposal [Probable contents: Title, Statement of the Problem or Background, Objectives & Research Questions, Literature Review (conceptual/theoretical framework, if any) & Preliminary idea about research methodology].	8
8	Lesson 05: Research strategy formulation [knowledge regarding philosophical worldviews, selection of a research approach from Qualitative, Quantitative, and Mixed-methods research].	4, 5, 6, 7
9	Lesson 06: Quantitative research methods [reliability and validity issues in quantitative research, sampling, questionnaire design, household interviewing process].	5, 6, 7
10	Lesson 07: Qualitative research methods [Qualitative research, sampling in qualitative research, Reliability, and validity in qualitative research, The main preoccupations of qualitative researchers, data collection methods (interviewing, focus group discussions].	5, 6, 7
11	Lesson 08: Mixed methods research [ontological and epistemological considerations in mixed methods research, how to design mixed methods research? (e.g., concurrent, sequential, embedded design].	5, 6, 7
12	Lesson 09: Ethical principles, Ethics and the issue of quality, the difficulties of ethical decision-making, how to prepare ethics report and face ethical board.	9

	Course Contents/Tasks	CLOs
13	Writing the Final Research Proposal: Tile of the Research, Problem statement, Broad and Specific objectives, Research Questions, Expected Outcome, Justification of the study, Literature review (including conceptual or theoretical framework), Research methodology, Work plan, and References.	7
14	Presenting the Final Research Proposal: Tentative contents for the presentation [Title, Statement of the Problem/Background, Objectives & Research Questions, Literature Review & Research Strategy and Probable Outcome].	8

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Identify a good research topic/problem in urban and rural planning field;	7, 10
	CLO2	Formulate research questions and also assess its significance in relation to relevant scholarly literatures;	7, 10
	CLO3	Develop conceptual or theoretical framework to analyze empirical evidence;	7, 8
	CLO4	Identify philosophical worldviews and define basic ideas of that worldview;	6, 7, 8
	CLO5	Explain how the worldview shaped their approach to research;	7, 8
	CLO6	Design research methodology and detailed data collection and analysis methods;	6, 7, 10
	CLO7	Develop competency in framing, timetabling and development of a research proposal;	10
	CLO8	Develop skill to successfully communicate research proposal;	6
	CLO9	Appreciate the importance of applying ethical principles during the conduct of planning research.	5

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Group work	Individual Paper Submission
CLO2	Lecture and Practice Sessions	Individual Paper Submission
CLO3	Lecture and Practice Sessions	Individual Paper Submission and Presentation
CLO4	Lecture and Group Work	Individual Paper Submission
CLO5	Seminar or Lecture and Readings followed by Presentation	Individual Paper Submission
CLO6	Lecture and Practice Session	Individual Paper Submission
CLO7	Lecture, Videos	Individual Paper Submission
CLO8	Lecture, Videos and Practice Sessions	Individual Paper Submission and Presentation
CLO9	Lecture and Practice Sessions	Individual Paper Submission

Learning Materials

Recommended Readings	Bryman, A. (2008). Social research methods (3rd Edition). Oxford: OUP. Creswell J.W. (2003). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2nd edition). London: SAGE Publications. Creswell, J. and Clark, V.P. (2010). Designing and conducting mixed methods research. Sage. Trochim, W.M.K., Donnelly, J.P., and Arora, K. (2016). Research methods: The essential knowledge base. Boston, MA: CengageLearning. Yin, R.K. (2003). Case Study Research, Design and Methods (3rd Edition). London: Sage Publications.
Supplementary Readings	Crotty, M. (1998). The Foundations of Social Research, Meaning and Perspective in the Research Process. London: SAGE Publications. Hammersley, M. (1993). Social Research: Philosophy, Politics and Practice. London: SAGE Publications. Hammersley, M. (1995). The Politics of Social Research. London: SAGE Publications. Hart, C. (1998). Doing a Literature Review. London: SAGE Publications.

Course Code: 0731 04 URP 4113		Year: Fourth	Term: First
Course Title	Regional Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Students of this course are expected to learn and understand the basics of regional planning. This course offers a clear understanding of macro-level planning in regional perspective. It is expected that upon completion of the course student will learn the basic concepts of regional planning and associated techniques for preparing a regional plan.		

	Course Contents	CLOs
	Section A	
1	Introduction: Concept of region, planning and regional planning, types of region and regions in planning, levels of planning, nature and purpose of regional planning inter and intra-regional planning, regional planning and the management of regional development, strategies and factors in regional planning.	1
2	The Region and Regional Planning: Regional planning sequence, types of regional planning, regionalization and delineation of regions, regionalism and the administration of region.	1
3	Inter-Regional Analysis: Regional accounts, descriptive regional input-output tables, input-output data problems.	2
4	Application of Theories in Regional Planning: Connectivity theory, spatial allocation theory, Regional Change- economic base theory, inter-regional trade multipliers, regional input-output analysis, a comparative approach, Industrial location theory- least cost approach, market area analysis, profit maximization approach, general factors affecting industrial location, Central place theory, modification to the christaller hierarchy, problems of central place theory, central place theory and regional planning, Basic theory or growth theory, growth pole theory and regional planning, the transport factor in regional development, models of spatial interaction.	3, 4
	Section B	CLOs
5	Regional Growth: Growth from inside and outside, industrial structure analysis, regional growth - convergence or divergence, social and political factors in regional growth.	2
6	Regional Imbalance- Policy Issues and Problems: Concept of balance, approach to regional imbalance, strategies to achieve regional balance.	2, 4
7	Changing Focus of Development Planning and Its Implications for Settlement Planning: Redistribution through growth, basic needs approach, agro-politan development and selective territorial closure approach, accelerated growth approach.	3, 4
8	Regional Planning in Local & International Context: Bangladesh context- Strategies of Regional Development, National Planning and Regional Decentralization, Social Issues in Regional Policy and Regional Planning, Economic Zone Planning, International Practices.	3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Know the basic concepts of region and regional planning;	1, 2, 3
	CLO2	Think critically about regional growth;	1, 5
	CLO3	Analyze the spatial structure of regions;	6
	CLO4	Identify the regional planning process of Bangladesh in an international perspective;	8

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Group work/Discussion and Problem-based Learning	Presentation or Assignment and Final Exam
CLO2	Lecture and Discussion	Class test/Open-book exam and Final Exam
CLO3	Lecture and Group work	Presentation
CLO4	Lecture and Group work/Workshop or Problem-based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Glasson, J. (2005). An Introduction to Regional Planning, London: Hurchinson Ltd. Glasson, J. & Marshall, T. (2007) Regional Planning, New York: Routledge. GOB. (2008). A Strategy for Poverty Reduction in the Lagging Regions of Bangladesh. Dhaka: GOB. GOB. (2010). Outline Perspective Plan of Bangladesh 2010-2021: Making Vision 2021 A Reality. Dhaka: GOB. GOB. (2010). The Bangladesh Economic Zones Act. Dhaka: GOB.
Supplementary Readings	ESCAP. (1979). Guidelines for Rural Center Planning. New York: ESCAP. Hall, P. (2011). Urban and Regional Planning (5th ed.). New York: Routledge. Dimitriou, H.T. & Thompson. (2007). Strategic Planning for Regional Development in the UK. New York: Routledge. Bulchin, P. (2002). Regional Policy and Planning in Europe (2nd ed.). New York: Routledge.

Course Code: 0731 04 URP 4121		Year: Fourth	Term: First
Course Title	Urban Governance		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	The course is designed to explore the issues of governance of cities in the wider context of development and globalization. To better understand the challenges facing urban development, the roles, relations, and actions of actors in civil society and the public and private sectors will be examined in theory and practice. Therefore, this course is expected to increase both theoretical and practical knowledge and understanding of the economic, social, institutional, political, and physical aspects of urban planning and development process in ensuring efficient delivery system of urban services to the city and town dwellers.		

Course Contents		CLOs
Section A		
1	Basic Concepts of Urban Governance: What is Urban Governance? Governance Indicators, Principles, and themes of Good Governance (Participation, Accountability, Transparency, Effectiveness, Equity),International policy instruments around Good Urban Governance Agenda (New Urban Agenda, Global Campaign on Urban Governance), Concept of inclusive city, Toolkit of transparency, Assessing transparency in local government.	1, 2
2	Democracy, Governance and Development: Democratic waves, Politics and democracy, Modernization Theory and Democracy, Effective states, Developmental states, States of underdevelopment, Democracy and good governance, Urban governance in era of Globalization, Democratic Governance and Development.	3, 4
3	Theoretical Framework of Good Governance from Macro and Micro Perspective: Institutions and institutional change, Porter's Diamond Model, Conceptual issues related to new public management, The Just City- a theoretical approach justice relevant to twenty-first-century cities, incorporates three central concepts: diversity, democracy, and equity, The web of institutionalization.	1, 3
4	Decentralization and Service Delivery: Decentralization and the role of decentralization in service delivering process, What is public action and why do we need it? (Welfare theory and capability considerations), Accountable public action: framework of analysis, Accountability in formal and informal institutions.	3, 4, 5, 6
5	Informality of Urban Service Delivery Process: Urban informality in planning literatures, The concept of informal urban governance, Informal dynamics of public utility in Dhaka city of Bangladesh.	5, 6, 7
Section B		CLOs
6	Situational Analysis of Urban Governance in Bangladesh: A Brief History of urban governance in Bangladesh, Intergovernmental structure and functional assignments of City Corporations, Effective local political structures and leadership, Local administrative powers of City Corporations, Local fiscal autonomy of City Corporations, Reform policies to improve current situation of local government.	4, 5, 6
7	Coordination of Urban Planning Organizations for Achieving Socially Just Planning: Promoting social justice through better coordination, Coordination problems in urban planning organizations in Dhaka City & Policy options to promote coordination.	2, 5, 6
8	Community Participation in Metropolitan Planning & Governance: Unpacking participation models for planning, Local participation and accountability, Realities of community participation in urban or metropolitan planning, Barriers to enhanced citizen participation in South Asian Cities, Democratic decentralization, and promotion of accountability in City Corporations, Adapting community participation model for developing countries.	6, 7
9	Hybrid Governance and Urban Poor: Hybrid (or multi-actor) governance-conceptual issues, Impact of hybrid governance in building pro-poor service delivery or building nature-based solutions (or resilient city), Conditions that might improve justice-related outcomes of hybrid governance for poor or building resilience of city dwellers.	4, 5, 6, 7
10	Participatory Budgeting: Basic understanding of participatory budgeting, Citizen participation in budgeting: Prospects for developing countries, and Lessons learnt from Latin American and Asian countries.	4, 6, 7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Examine governance from legal, political, social, and economic perspectives;	1, 2, 3
	CLO2	Identify the most important problems and debates in the field of governance and development;	1, 9
	CLO3	Analyze theoretical and policy understandings of the role of the state and governance in development;	8
	CLO4	Examine an array of governance structures (centralized versus decentralized institutions; local versus national states; participatory budgeting, etc.) and political conditions that are relatively common to cities of the Global South;	2, 3, 5, 9
	CLO5	Analyze and evaluate the shifting nature of the role of the state in development;	3, 9
	CLO6	Analyze the nexus between public, private sectors, and civil society in planning for and managing cities;	2, 3
	CLO7	Identify the role of private sector and civil society in delivering and financing infrastructure and services.	2, 3

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Group Discussion	Class Test and Final Exam
CLO3	Lecture, Seminar, Video Lectures	Individual Paper (and/or Presentation) and Final Exam
CLO4	Lecture, Reading and Presentation	Individual Paper (and/or Presentation) and Final Exam
CLO5	Lecture and Problem-based Learning	Individual Paper
CLO6	Lecture and Group Discussion	Class Test
CLO7	Lecture and Field Trip	Presentation and Final Exam

Learning Materials

Recommended Readings	Ahmad, Z. (2005). Decentralisation and Service Delivery, World Bank Policy Research Working Paper 3603. Washington: The World Bank Arnstein, S. R. (1969). A ladder of citizen participation. Journal of the American Institute of planners, 35(4), 216-224. Devas, N., Amis, P., Beall, J., Grant, U., Mitlin, D., Nunan, F., & Rakodi, C. (2004). Urban governance, voice, and poverty in the developing world. Sterling, VA; London: Earthscan Publications. Fainstein, S. S. (2014). The just city. International journal of urban Sciences, 18(1), 1-18. Shafiei, Z. (2011). Contested understanding of urban governance (Doctoral dissertation, Newcastle University). Khan, S., & Swapan, M. S. H. (2013). From blueprint master plans to democratic planning in South Asian cities: Pursuing good governance agenda against prevalent patron–client networks. Habitat International, 38, 183-191. Leftwich, A. (2001). States of development: On the primacy of politics in development. Polity. Taylor, P. (2000). UNCHS (Habitat)-the global campaign for good urban governance. Environment and Urbanization, 12(1), 197-202. Hossain, S. (2011). Informal dynamics of a public utility: Rationality of the scene behind a screen. Habitat international, 35(2), 275-285. Hossain, S. (2012). The production of space in the negotiation of water and electricity supply in a bosti of Dhaka. Habitat International, 36(1), 68-77.

	North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge university press. Rahman, M. A. U. (2015). Coordination of urban planning organizations as a process of achieving effective and socially just planning: A case of Dhaka city, Bangladesh. International Journal of Sustainable Built Environment, 4(2), 330-340. Rahman, T. (2011). The Emergence of Informal Governance in Neighborhood Upgrading in Dhaka, Bangladesh. disP-The Planning Review, 47(187), 70-81. Shah, A. (Ed.). (2007). Participatory budgeting. World Bank Publications.
Supplementary Readings	Cornwall, A. (2008). Unpacking 'Participation': models, meanings and practices. Community development journal, 43(3), 269-283. Choguill, M. B. G. (1996). A ladder of community participation for underdeveloped countries. Habitat international, 20(3), 431-444. Haus, M., Heinelt, H., & Stewart, M. (Eds.). (2004). Urban governance and democracy: leadership and community involvement (Vol. 8). Routledge. Islam, N. (2012, June). Urbanization and urban governance in Bangladesh. In Background paper for the 13th Annual Global Development Conference on Urbanization & Development: Delving Deeper into the Nexus. Budapest. Institute of Governance Studies (IGS). (2012). State of cities: Urban governance in Dhaka. Kuppens, M. (2016). Exploring the social accountability concept: a literature review. Institute of Development, Policy, and Management. Leftwich, A. (1994). States of underdevelopment: the Third World state in theoretical perspective. Journal of Theoretical Politics, 6(1), 55-74. Leftwich, A. (2007). Governance, democracy, and development in the Third World. Third World Quarterly, 14(3), pp. 605-624. Levy, C. (1996). The process of institutionalising gender in policy and planning: The web of institutionalisation. Development Planning Unit, University College London. Satterthwaite, D., & Mitlin, D. (Eds.). (2013). Empowering Squatter Citizen:" Local Government, Civil Society and Urban Poverty Reduction". Routledge. Porter, M. E. (2011). Competitive advantage of nations: creating and sustaining superior performance. simon and schuster. Rahman, A. U., & Hossain, Z. (2021). Democratic decentralisation and promotion of accountability in urban development in Bangladesh. Journal of Social and Economic Development, 23(1), 59-80. Swapan, M. S. H. (2016). Who participates and who doesn't? Adapting community participation model for developing countries. Cities, 53, 70-77.

Course Code: 0731 04 URP 4141		Year: Fourth	Term: First
Course Title	Sustainable Transport		
Course Status	Optional		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Transport sector contributes a significant amount of emission to the environment. Sustainable transport seeks for alternative options in the transport system that can enable to reduce emission and offers a healthy community. This course focuses on the issue to make the transport system sustainable. It examines the policy domain, explores strategy and exercise pathways to incorporate sustainability in to the planning and implementation stage.		

Course Contents		CLOs
Section A		
1	Challenges in Urban Transport: Global trend, Situation in Bangladesh, Strategies for improvement, Good practices, policy intervention and practices.	1
2	Sustainable Transport Solution: Objectives, indicators, strategies.	1, 2
3	Public Transportation: Attributes, characteristics of different public transport options, Bus, BRT, LRT, MRT, Subway.	3
4	Non-motorized Transport: Benefit, integration with public transport.	3
5	Fare Structure: How is fare determined, fare collection system, comparison of different fare structure.	2, 4
6	Transport and Urbanization: Role of transport infrastructure and services in urbanization.	3
Section B		CLOs
7	Transport Policy: NLTP, Strategic Transport Plan, strategies in Five Year Plan.	2
8	TIA: Why transport impact assessment is needed, elements of a TIA, criteria of EIA for residential, commercial and industrial establishments.	3
9	Bus Rationalization: What is it and benefit, good practices, ticketing option, route and stop, management.	3
10	Economic Impact of Transport Sector: Tangible and intangible benefit of a transport project.	4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Identify threats to sustainable transport;	1
	CLO2	Comprehend national policy, global good practices for sustainable transport;	1, 2, 3
	CLO3	Exercise strategies to incorporate sustainability;	7, 9
	CLO4	Think themselves as a change maker by devising sustainable transport solution for Bangladeshi cities.	10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture	Assignment and Final Exam
CLO3	Lecture and Group Discussion	Assignment and Final Exam
CLO4	Lecture	Class Test and Final Exam

Learning Materials

Recommended Readings	Rodrigue, J. P. (2020). The geography of transport systems. Routledge. Tolley, R., & Turton, B. J. (2014). Transport systems, policy and planning: a geographical approach. Routledge. DTCA (Dhaka Transport Coordination Authority) and JICA (Japan International Cooperation Agency). (2015). Strategic Transport Plan for Dhaka.
Supplementary Readings	Yu, J. C. (1982). Transportation Engineering - Introduction to planning, design and operations. Elsevier, New York.

Course Code: 0731 04 URP 4143		Year: Fourth	Term: First
Course Title	Municipal Services Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Students of this course are expected to learn and understand the relationship between planning and other operational elements of municipality and local government. Students will also learn the basics of providing and planning different municipal services, like water supply, solid waste management, drainage and sewerage etc. It is assumed that the students will have already gained the fundamental knowledge about statistics and basics of urban analysis techniques. This course is supported by its sessional part.		

Course Contents		CLOs
Section A		
1	Municipal Service: Definition, scope, issues and importance of Municipal services, Social and Economic Aspects, Legal framework of Municipal services in Bangladesh, Nature of services provided by municipality and city corporations and relevant operational definition.	1
2	Community Service Facility Planning: Community Services, Nature of planning for community services, Need Assessment and Demand Analysis, Affordability, Standard and level of services, The role of infrastructure/services in improving human settlements.	1, 2
3	Water Supply System: Uses and Issues, Organizational structure, Water supply, Planning for Water Supply, Water quality, Floodplain management. Planning concerns, Planning Process, Surveillance and Monitoring, modeling.	3
4	Solid Waste and Wastewater System Planning: Waste generation and composition, evaluation, Long-range planning, Short-range planning, Waste management at the city level: NIMBYism, community and household level strategies. Selection of Collection Routes. Wastewater Treatment process, planning and plan development.	3
Section B		CLOs
7	Public Health Facilities: Four dimensions of planning for health, Health in all planning phases, Health appraisal, Urban and territorial planning contexts and health (pre-conditions)	2
8	Recreation and Open Space Planning: Definition of Terms, Functions of Open Space, Planning Process, Standard, Site selection, Implementation Strategy	3
9	Energy: Framework and Objectives, Energy Issues in planning, Energy Demand, Energy Supply and Alternative Images, Scenarios of Future Spatial Form, Energy Conservation, Landuse, Planning For energy management, Contingency Strategy,	3
10	Management of Utility Services: Planning in the face of power, Designing as Making Sense together, Services, accessibility and urban poor, Conflicts and Conflicts resolutions, Public-Private Partnership, Third sector. Social and economic Considerations: Cost-Benefit Analysis, Privatization of public services, Corruptions in Public service delivery.	4

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Identify legal obligations of the local governments of Bangladesh for providing municipal services for their jurisdiction;	1, 2, 7, 10
	CLO2	Gain understanding about the importance and functional relationship between physical planning and municipal services;	2, 3
	CLO3	Estimate spatially disaggregated demand of different kinds of municipal services;	3
	CLO4	Identify different techniques service quality assessment and can explain the socio-economic dynamics of service delivery;	6, 8
	CLO5	Provide solution of different kinds of problems related to municipal services from the planning and management perspective.	6, 9, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Team Teaching	Quiz and Class Test
CLO2	Lecture and Group Discussion	Quiz and Class Test
CLO3	Lecture and Group Discussion	Assignment
CLO4	Lecture, Group Discussion and Problem-based Learning	Class Test, Assignment and Final Exam
CLO5	Lecture, Group Discussion and Problem-based Learning	Class Test, Assignment and Final Exam

Learning Materials

Recommended Readings	ASCE. (1986). Urban Planning Guide. American Society of Civil Engineers. Ben-Joseph, E., & Szold, T. S. (Eds.). (2005). Regulating place: standards and the shaping of urban America. Psychology Press. World Health Organization. (2020). Integrating health in urban and territorial planning: a sourcebook. WHO. Zhongming, Z., Linong, L., Xiaona, Y., Wangqiang, Z., & Wei, L. (2021). Cities and Pandemics: Towards a more just, green and healthy future. UN-Habitat.
Supplementary Readings	Ahmed, M. F., & Rahman, M. M. (2000). Water supply and sanitation. ITN-Bangladesh, Centre for Water Supply and Waste Management, BUET, Dhaka, Bangladesh. Healey, P. (2017). Making better places: The planning project in the twenty-first century. Bloomsbury Publishing. Forester, J. (1982). Planning in the Face of Power. Journal of the american planning association, 48(1), 67-80. Un-Habitat. (2020). World cities report 2020: The value of sustainable urbanization. UN-Habitat.

Course Code: 0731 04 URP 4144		Year: Fourth	Term: First
Course Title	Municipal Services Planning (Fieldwork & Studio)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	Students will gather and analyze data under this course to acquire hands-on experience on exploring and assessing urban services in a city. With the theoretical knowledge, students will collect both the primary and secondary data on various urban services. Students will engage with the real life professional during the field visit, interview the relevant professionals to gain practical experiences on data collection, group work, and collaborative works. Finally, students will be able to suggest policy and practical suggestions to improve the services.		

	Course Contents/Tasks	CLOs
1	Session 01: Familiarization with the municipal services a city/municipality provides.	1
2	Session 02: Group discussion on essential municipal services, delivery mechanisms and inequality.	1, 2
3	Session 03: Field visit to municipal authority/city corporation to observe the service activities.	1, 2, 3
4	Session 04: Field visit to water supply/solid waste/energy/recreational facilities to assess the service condition, usage and problems.	4
5	Session 05: Prepare interview/questionnaire scripts to gather primary data to gain knowledge on user's perspective.	1
6	Session 06: Demonstration of available software to analyze data and making sense of the data.	1, 2
7	Session 07: Group activities on preparing table of contents of the report and report writing.	1, 2, 3
8	Session 08: Group activities on secondary data collection on water supply/solid waste/energy/recreational facilities.	1, 3
9	Session 09: Workshop on ensuring inclusiveness in service delivery: discussion on power structure, strategy development for litigation and conflict management.	1, 3
10	Session 10: Group discussion and workshop on designing a municipal service system.	1, 3, 4
11	Session 11: Review discussion on report preparation and submission.	3, 4

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explore the mechanisms of municipal service delivery,	1, 2
	CLO2	Analyze critically the efficiency and effectiveness of municipal services and ways to improve the situation;	2, 6
	CLO3	Apply knowledge from previous and current courses to collect and analyze primary and secondary data on municipal services;	4, 8, 9
	CLO4	Communicate effectively with the service provider and users to under the perspectives of different stakeholders and apply their own judgement to design a municipal service system.	4, 6, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Desktop Review, Group work and Workshop	Report and Presentation
CLO2	Discussion and Field visit	Assignment
CLO3	Group work, Lab work and Workshop	Presentation and Summary report
CLO4	Group work, Workshop and Presentation	Presentation and Report

Learning Materials

Recommended Readings	ASCE. (1986). Urban Planning Guide. American Society of Civil Engineers. Ben-Joseph, E., & Szold, T. S. (Eds.). (2005). Regulating place: standards and the shaping of urban America. Psychology Press. World Health Organization. (2020). Integrating health in urban and territorial planning: a sourcebook. WHO. Zhongming, Z., Linong, L., Xiaona, Y., Wangqiang, Z., & Wei, L. (2021). Cities and Pandemics: Towards a more just, green and healthy future. UN-Habitat.
Supplementary Readings	Ahmed, M. F., & Rahman, M. M. (2000). Water supply and sanitation. ITN-Bangladesh, Centre for Water Supply and Waste Management, BUET, Dhaka, Bangladesh. Healey, P. (2017). Making better places: The planning project in the twenty-first century. Bloomsbury Publishing. Forester, J. (1982). Planning in the Face of Power. Journal of the american planning association, 48(1), 67-80. Un-Habitat. (2020). World cities report 2020: The value of sustainable urbanization. UN-Habitat.

Course Code: 0421 04 Law 4153		Year: Fourth	Term: First
Course Title	Legal Aspects and Ethics of Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Students of this course are expected to learn and understand the issues related to legal aspects of planning and ethics. Students will learn about the laws and regulation related to urban planning practices. Students will also learn about the morals and ethics. Planners often face dilemma of preferences-should the planner follow the rules and regulations of the organization he/she work for, or should he consider the demand of the community/underprivileged groups? By increasing student's understanding on the ethics of different types of behaviour in different situations through this course, students will be able to become better human beings and better professionals.		

Course Contents		CLOs
	Section A	
1	Definition: Civil and planning laws, type and differences between civil law and planning law, concept of planning regulations, regulatory aspects and enforcement authorities of urban and rural development of Bangladesh.	1
2	History: evolution of planning regulations in India, UK and Bangladesh. Evolution of local government and planning organization in Bangladesh.	1
3	Planning Projects and Eminent Domain: definition, acquisition for public purpose, emergency acquisition, acquisition by local authorities and other organization, assessment procedures of compensation.	1, 2
4	Building Construction: regulations on building construction, setback rule, approval procedure of building plan, demolishing unauthorized construction, construction of government building, commercial building, housing and real estate development, slum formation and clearance. Building code	1, 2
5	Master Plan and Ancillary Development: regulations on master plan preparation, regulations and maintenance of garden and open spaces, hotel and restaurant, shops and establishment, factories and industries, regulations on the establishment & maintenance of urban market and rural market/hat and bazar.	1, 2, 3
	Section B	CLOs
6	Municipal and City Corporation Laws: regulations on construction, maintenance and facilities provided by the authorities, development of port, terminal, jetties, railway line and station, regulatory aspects for providing and maintenance of electricity, telephone, fire service, hospital/clinic, post office and water supply.	1, 2, 3
7 8	Environment and Forest: regulations on environment control of air pollution, water pollution and noise pollution, garbage disposal, drainage and sanitation, establishment and maintenance of urban forestry, village forestry, private forest, forest and wildlife preservation.	1, 2, 3
	Reflective and Reflexive Planning Practices: Morals and ethics, types of ethical values, Epistemology: knowledge, fact and value, Rights, Information, Knowledge, Values: how do planners synthesise competing claims?	2, 3
9	Planners, People and Nature: Planners and their clients, planning with respect for people, Planning with respect for nature, Professional bodies and code of conducts, The role of planners: Tick box or reflexive planning?	2, 3

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Know the basic laws related to building construction, preparation of master plan and designing different service provisions;	1, 2
	CLO2	Assess critically the laws and statutes related to urban planning and future planning laws to accommodate emerging issues;	1, 4, 7
	CLO3	Appreciate the ethical consideration as a planner and apply the moral and ethics knowledge to best serve the organization as well the people.	5, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Group work and Problem-based Learning	Presentation or Assignment and Final Exam
CLO2	Lecture and Discussion	Class Test/Open-book Exam and Final Exam
CLO3	Lecture, Group work and Problem-based Learning	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Ahmed, M. U. (2005). Legal Aspects of Planning. Khulna, Bangladesh. Rahman, G. (2008). Town planning and the political culture of planning in Bangladesh. AH Development Publishing House. Tewdwr-Jones, M. (2002). Personal dynamics, distinctive frames and communicative planning. Planning futures: New directions for planning theory, 2002, 65-92. Thomas, H. (1999). Social town planning and the planning profession. Social town planning, 15-28. Steele, W. (2009). Australian urban planners: Hybrid roles and professional dilemmas? Urban Policy and Research, 27(2), 189-203. Swain, C., & Tait, M. (2007). The crisis of trust and planning. Planning theory & practice, 8(2), 229-247. Campbell, H. (2012). 'Planning ethics' and rediscovering the idea of planning. Planning Theory, 11(4), 379-399. Lissandrello, E., & Grin, J. (2011). Reflexive planning as design and work: lessons from the Port of Amsterdam. Planning Theory & Practice, 12(2), 223-248. Evans, B. (1993). Why we no longer need a town planning profession. Planning Practice & Research, 8(1), 9-15. Durning, B., Carpenter, J., Glasson, J., & Watson, G. B. (2010). The spiral of knowledge development: Professional knowledge development in planning. Planning Practice & Research, 25(4), 497-516. Kitchen, T. (2017). Skills for planning practice. Bloomsbury Publishing.
Supplementary Readings	Ahmed, M. U. (2021). Legal Issues Related to Infrastructure Development in Bangladesh with Special Reference to Khulna City. Plan Plus, 1(1). Rydin, Y. (2011). The purpose of planning: Creating sustainable towns and cities. Policy Press. Campbell, H. (2012). Planning to change the world: Between knowledge and action lies synthesis. Journal of Planning education and Research, 32(2), 135-146.

Course Code: 0311 04 Econ 4157		Year: Fourth	Term: First
Course Title	Natural Resources Management		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Through this course, students will develop a critical appreciation of how economics, social factors, politics, and power shape natural resource management practices we propose and advocate, and how contextual factors affect the functioning of policy instruments and management practices. By analysing theories and practices of natural resource management, students will be able to identify key challenges and concerns in applying natural resource management policy instruments in different contexts.		

Course Contents		CLOs
	Section A	
1	Introduction to Natural Resources Management: Definitions, Importance of natural resources, Characteristics of natural resources, Present scenario of natural resources in Bangladesh, The nature of resources and historical approach of natural resources scarcity and natural resources and development, Concepts in Natural Resources Management.	1
2	Group of Theory I-Tragedy of the Commons & Logic of Collective Action: Basic concepts of common property, common pool resources, collective actions & common property regimes, Tragedy of the commons, Game theory, The Prisoner Dilemma & Nash equilibrium, Free riding & Logic of collective action.	2, 3
3	Group of Theory 2-Elinor Ostrom's Institutional Diversity: Conceptual issues of institutions, Elinor Ostrom's institutional analysis, Design principles & case studies, Application of IAD in research problem analysis.	2, 3
4	Group of Theory 3- The Institutional Bricolage: Critiques of CPRM Approach to Institutions, Institutional bricolage as a new perspective to analyze institutions, Case studies related to institutional bricolage, Critical institutionalism.	2, 3
5	Co-management-Principles and Complexities: Definitions of Co-Management, Different Aspects of Co-Management, WHY and WHEN Co-Management should be Considered, Benefits of Co-Management, Challenges in Co-Management, Evaluative framework for adaptive co-management, & Case study on co-management.	4
	Section B	CLOs
6	Ecosystem Services: Conceptual issues of ecosystem services and their Implications ecosystem services to global change, Ecosystem services in urban planning, The Ecological Footprint of cities and regions, Ecosystem services assessment.	5, 7
7	Wetland Preservation and Management: What are wetlands? Wetland Identification, Types of wetlands, Wetland Preservation Wetland Management, Participatory Wetland Resource Governance in Bangladesh.	3, 4
8	Integrated Coastal Zone Management: Definition of coastal zones, Coastal Zone Management and Ocean Management, Integrated Coastal Zone Management, Integrated Coastal and Ocean Management (ICOM), Coastal Zone Planning Approaches, Coastal Zone Management Practices of Bangladesh.	6
9	Participatory Forest Management: Issues of People and Forests, Political Ecological Approach to Forest Management, factors in facilitating or inhibiting the sort of PFM, Ecological impacts of PFM.	3, 4
10	Biodiversity, Bio-capacity and Development: Monitoring Biodiversity: The Living Planet Index, Measuring Human Demand, Biodiversity, Development and Human Well-being, Biodiversity and National Income, Modelling the Future, A Green Economy.	5

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Demonstrate basic concepts of natural resources and examine its importance in national economy;	1
	CLO2	Explain different theories of natural resource management;	2, 8
	CLO3	Identify role of the institutions and the actors in natural resource management;	2, 8
	CLO4	Demonstrate participatory and community based natural resources management;	4, 8, 9
	CLO5	Analyze the interactions between development and biodiversity conservation;	1, 2
	CLO6	Develop integrated coastal zone management policies, strategies, plan, and programs in Bangladesh;	9
	CLO7	Evaluate ecosystem services and ecosystem-based adaptation and develop ecosystem-based adaptation plan for the urban/rural settlements in Bangladesh.	2, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture, Group work and Discussion	Final Exam
CLO3	Class Lecture and Problem-based Learning	Class Test and Final Exam
CLO4	Seminar and Lecture	Presentation and Assignment
CLO5	Lecture and Group Discussion	Individual Paper (or assignment) and Final Exam
CLO6	Lecture and Practice Session	Final Exam
CLO7	Lecture and Problem-based Learning	Individual Paper (or assignment) and Final Exam

Learning Materials

Recommended Readings	Camp, W. G., & Heath-Camp, B. (2015). Managing our natural resources. Cengage Learning. Cleaver, F. (2006). Local institutions and participatory development, Lecture notes. University of Bradford. Cleaver, F., & De Koning, J. (2015). Furthering critical institutionalism. International Journal of the Commons, 9(1). Grover, V. I., & Krantzberg, G. (Eds.). (2013). Water co-management. CRC Press. Hardin, G. (1968). The tragedy of the commons: the population problem has no technical solution; it requires a fundamental extension in morality. Science, 162(3859), 1243-1248. Jahan, F., Hulme, D., Roy, M., & Shahan, A. (2011). Reframing the problem from climate change in urban areas to urban governance in an era of climate change. IGS Conference, Dhaka: BRAC. Khan, S. M. H. (2012). Participatory wetland resource governance in Bangladesh: an analysis of community-based experiments in Hakaluki Haor. University of Manitoba (Canada). Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge university press. Springate-Baginski, O., & Blaikie, P. (Eds.). (2013). Forests people and power: the political ecology of reform in South Asia. Routledge. Woodruff, S. C., & BenDor, T. K. (2016). Ecosystem services in urban planning: Comparative paradigms and guidelines for high quality plans. Landscape and Urban Planning, 152, 90-100.

Supplementary Readings	Cleaver, F. (2002). Reinventing institutions: Bricolage and the social embeddedness of natural resource management. The European journal of development research, 14(2), 11-30. Heltberg, R. (2002). Property rights and natural resource management in developing countries. Journal of Economic Surveys, 16(2), 189-214. Mancini, M. S., Galli, A., Coscieme, L., Niccolucci, V., Lin, D., Pulselli, F. M. & Marchettini, N. (2018). Exploring ecosystem services assessment through Ecological Footprint accounting. Ecosystem Services, 30, 228-235. Olson, M. (2009). The logic of collective action (Vol. 124). Harvard University Press. Plummer, R., & Armitage, D. (2007). A resilience-based framework for evaluating adaptive co-management: linking ecology, economics and society in a complex world. Ecological economics, 61(1), 62-74. Vellinga, P., & Klein, R. J. (1993). Climate change, sea level rise and integrated coastal zone management: An IPCC approach. Ocean & Coastal Management, 21(1-3), 245-268. Wong, S. (2009). Climate change and sustainable technology: re-linking poverty, gender, and governance. Gender & Development, 17(1), 95-108. Bond, I., Davis, A., Nott, C., Nott, K., & Stuart-Hill, G. (2006). Community-based natural resource management manual. WWF-SARPO.

Fourth Year Second Term			
Course Code: 0731 04 URP 4206		Year: Fourth	Term: Second
Course Title	Thesis		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	0731 04 URP 4106		
Rationale	Students of this course are expected to conduct individual research on their field of specialization. The second part of the thesis course is designed to develop the students' ability to conduct theoretically informed research related to a particular policy issue arising from a course or multiple courses of Urban and Rural Planning Discipline. The students will be assessed on two types of output and on some aspects of the process leading to these outputs: • This course expects the students to collect and analyze quantitative or qualitative data or both and write a theoretically informed dissertation; • The students will also be assessed on the quality of public presentations of their argument and on their ability to answer the questions asked by jury members; • Among the process aspects the supervisors of this course can usefully distinguish between aspects of the student's learning attitude and the significance of his/her learning process, i.e., the difference between the initial and the final understanding of the issue(s) each student has inquired into.		

	Course Contents/Tasks	CLOs
1	Planning for Data Collection: Review of questionnaire or survey checklist and Guidelines for fieldwork and database development.	1, 2, 7
2	Lesson 01: Exploratory data analysis and interpretation, Bivariate (inferential statistics) analysis.	1, 2, 3
3	Lesson 02: Indexing (methods, selection of indicators, normalization, and measurement process, Analytical Hierarchical Process for weightage) or Multi-criteria Decision Analysis.	1, 2, 3
4	Lesson 03: Multivariate analysis or GIS-RS based spatial analysis.	1, 2, 3
5	Lesson 04: Transcription of the interviews, FGDs, and any other qualitative methods, Content analysis, Coding, and Thematic analysis.	1, 2, 3
6	Lesson 05: NVivo-assisted data analysis (Open a project, bring your material into NVivo, Coding and making nodes, Memos, annotations, and links, summarise your data in framework matrices, Visualize your project).	1, 2, 3
7	Development of Data Analysis Chapters: Prepare a table of contents for finding and analysis; Data visualization and interpretation; Summary and Conclusion (including recommendations).	1, 5, 6, 7
8	Presentation on Draft Findings and Analysis: Title, Objectives, Research questions and RQ wise findings and analysis, Conclusion.	5, 6
9	Lesson 06: Guidelines to write up the final Thesis/Dissertation.	6, 7
10	Writing up Qualitative, Qualitative or Mixed methods research: Introduction, Literature Review Chapters, Methodology, Study Area, Chapters related to Findings and Analyzes, Conclusion & Recommendations, References and Annexes.	5, 6, 7
11	Final Thesis Writing: Tile of the Research, Problem statement, Broad and Specific Objectives, Research Question, Expected Outcome, Justification of the Study, Literature review, Research methodology, Chapters related to Findings and Analysis, Conclusion, Recommendations, References and Annexes.	1, 4, 5, 6, 7
12	Lesson 07: Training on the improvement of presentation skills (i.e., how to present final thesis- both national and international experiences).	5
13	Final Thesis Presentation: Title, Statement of the Problem or Background, Objectives & Research Questions, Literature Review & Research Strategy, Findings & Analyzes, Conclusion and Recommendation.	5, 6, 7
14	Revision of Final Thesis or Dissertation: Official guidelines for Thesis submission, Copyright claims, plagiarism check and application for copyright.	1, 4, 5, 6, 7

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Demonstrate a capacity for in-depth critical thinking through research;	1, 2
	CLO2	Discern the value of information and knowledge from a wide variety of sources and experiences and reflect on and evaluate their application in Dissertation/Thesis;	6, 10
	CLO3	Apply a range of social science research methods to conduct research and undertake policy development that consider theoretical, historical, local and international contexts for decision making;	6, 7, 10
	CLO4	Draw on available theory and debates, submit them to a critical analysis based on primary and/or secondary data and on a review of the literature, and from this draw conclusions and offer recommendations;	7, 8, 10
	CLO5	Communicate ideas using diverse formats and strategies to academic audiences within and external to the discipline;	6
	CLO6	Reflect on the interconnectedness of environmental, social, economic systems both locally and nationally and apply in professional practice or further study;	7, 8, 9, 10
	CLO7	Consider ethical principles while collecting and analysing data.	5

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Group work	Individual paper submission
CLO2	Lecture and Practice sessions	Individual paper submission
CLO3	Lecture and Practice sessions	Individual paper submission
CLO4	Lecture and Group work	Individual paper submission
CLO5	Seminar or Lecture	Presentation
CLO6	Readings followed by Presentation and Lecture	Individual paper submission and Presentation
CLO7	Lecture and Fieldwork	Individual paper submission

Learning Materials

Recommended Readings	Bryman, A. (2008). Social research methods (3rd Edition). Oxford: OUP. Creswell J.W. (2003). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2nd edition). London: SAGE Publications. Creswell, J. and Clark, V.P. (2010). Designing and conducting mixed methods research. Sage. Trochim, W.M.K., Donnelly, J.P., and Arora, K. (2016). Research methods: The essential knowledge base. Boston, MA: CengageLearning. Yin, R.K. (2003). Case Study Research, Design and Methods (3rd Edition). London: Sage Publications.
Supplementary Readings	Crotty, M. (1998). The Foundations of Social Research, Meaning and Perspective in the Research Process. London: SAGE Publications. Hammersley, M. (1993). Social Research: Philosophy, Politics and Practice. London: SAGE Publications. Hammersley, M. (1995). The Politics of Social Research. London: SAGE Publications. Hart, C. (1998). Doing a Literature Review. London: SAGE Publications.

Course Code: 0731 04 URP 4208		Year: Fourth	Term: Second
Course Title	Seminar		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	Students of this course are expected to conduct individual research on their field of specialization by following the format of seminar presentation. It is expected that upon completion of writing the articles student will learn the process to write a scientific paper and presenting this paper into an international seminar.		

	Course Contents/Tasks	CLOs
1	3 Minute Thesis (3 MT) Presentation Rules and Preparation: Rules of 3 MT competition, Contents, and structure of 3MT, how to design slides, Presentation skills and reflections.	1, 3, 6
2	Poster Presentation-Design and Delivery: What are Poster Presentations? Purpose, Poster presentation pros &cons, Poster planning steps, Poster negatives, Think visually, Poster presentation design, Design principles, Poster templates, Ethical considerations, Communication skills, Audience considerations, Professional behaviour tips.	1, 3, 6
3	Introducing PRISMA or Bibliometric tools to Perform Systematic Literature Review: Techniques of using software, how to develop methodology, database, and perform systematic review.	2, 3, 6
4	Writing a Literature-based Journal Article: How to plan a journal article, Academic writing skills, Tips for developing journal article.	2, 3, 6
5	3 MT Mock Presentation: Planning a topic for presentation, presenting research findings in three minutes.	1, 3
6	Planning the article: Formulating a title, creating an abstract, Writing the article, Structuring the article, Create the argument, Errors in argumentation: bias and poor reasoning.	4
7	Planning of a Draft Poster: Planning of a poster, review of the poster, and feedback from peers and faculties.	3, 5, 6
8	Systematic Review and Build a Literature-based Article: Structure of the article, writing the article and submission of the article.	2, 4
9	Feedback to Literature-based Article: Feedback from faculties.	2, 4
10	Development of a Draft Journal Article from Thesis/Project: Structure of the article and submission for supervisors' feedback.	3, 4
11	Feedback to Journal Article: Feedback and revision of the article.	3, 4
12	Undergraduate Students' Conference: Presenting the research through posters.	3, 5, 6
13	Submission of a Journal Article: Structuring the journal article by using Plan Plus journal or any other journal's author guidelines; Submit for review.	3, 4, 6
14	3MT Presentation Competition: Presentation of Thesis or students' research in the competition and feedback to improve students' 3MT presentation skills.	3, 5, 6

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Apply the key components of a logically consistent and convincing argumentation;	1, 7, 10
	CLO2	Use bibliometric tools or others to perform systematic literature reviews and also develop literature review-based article;	4, 6, 7, 10
	CLO3	Evaluate critically seminal contributions in urban and rural planning and present esoteric areas of research to others less specialised in the area;	6, 7
	CLO4	Write a journal article from students' own Thesis/Dissertation findings;	8, 10
	CLO5	Present research findings or scientific article in the conference;	6
	CLO6	Demonstrate awareness of ethical issues in writing and presenting research.	5

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Group work and Practice sessions	Individual paper submission
CLO2	Lecture, Practice sessions	Individual paper submission
CLO3	Workshop and Practice sessions	Individual paper submission, Presentation and Competition
CLO4	Lecture and Group work	Individual paper submission
CLO5	Seminar or Lecture	Conference and Competition
CLO6	Lecture and Problem oriented learning	Individual paper submission and Presentation

Learning Materials

Recommended Readings	Berg, J., & Hicks, R. (2017). Successful design and delivery of a professional poster. Journal of the American Association of Nurse Practitioners, 29(8), 461-469. McGill University (2022). 3M Thesis Presenter's Guidebook. Monash University (2022). Planning the article. Monash University (2022). Writing the article. Monash University (2022). Presenting effectively. Newcastle University (2019). 3 Minute Thesis (3MT) Presentation Rules and Preparation. Randolph, J. (2009). A guide to writing the dissertation literature review. Practical assessment, research, and evaluation, 14(1), 13. Taylor & Francis (2022). How to write a journal article - Tips and Structure Guide - Author Services.
Supplementary Readings	Ming, K. E. (2006). How To Write A Journal Article? Malaysian Family Physician: the Official Journal of the Academy of Family Physicians of Malaysia, 1(2-3), 86. Miller, J. E. (2007). Preparing and presenting effective research posters. Health services research, 42(1p1), 311-328.

Course Code: 0731 04 URP 4210		Year: Fourth	Term: Second
Course Title	Professional Attachment		
Course Status	Core		
Credit	Non-Credit		
Prerequisite(s)	None		
Rationale	Employers require graduates who have knowledge and skills that will enable them to cope more readily with the demands of the workplace today. Key skills or employability skills therefore need to be taken seriously within degree programs. Therefore, the main purpose of this Professional Attachment course is to familiarise students with practical and field-based problems and planning initiatives concerning urban and rural areas of Bangladesh.		

	Course Contents/Tasks	CLOs
1	Students will be placed in an organization for the entire attachment period (3 week) and will undertake work assignments and/or projects in the organization. It is through such work in the real-world environment where student will learn and develop the competencies and experiences relevant to the learning outcomes of this course.	1, 2, 3, 4, 5, 6, 7

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Apply knowledge and skills relevantly and appropriately in the workplace;	1, 2, 3
	CLO2	Develop personal skills;	1, 2, 4, 5, 6, 7, 8
	CLO3	Evaluate resources and develop insights to make informed judgements and recommendations;	7, 8, 9, 10
	CLO4	Identify competency gaps at the attachment workplace;	6, 7, 8, 9, 10
	CLO5	Assimilate into the work environment (people, team, hierarchy) and function effectively;	4 5
	CLO6	Establish network for future employment opportunities;	4 5
	CLO7	Demonstrate responsibility, integrity and professionalism in the fulfilment of all workplace and attachment requirements.	1, 2, 3, 8, 9, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning and Assessment Strategy
CLO1	• This is a 0-credit course evaluated with satisfactory/ unsatisfactory grade and the final outcome determined collectively by an assigned faculty member and allocated Organization Supervisor. • The assessments will be based on the course learning outcomes (CLOs) as written above and students should familiarise with CLOs as they will be focused throughout the attachment. • Attached Organization Supervisor will assess the performance of students at the attachment workplace through an evaluation form "Assessment of Work in the Organization" (AWO) provided from the discipline. He /She will complete this evaluation at the end of the attachment. • The assigned faculty member for professional attachment will serve to facilitate the learning and progress through interactions via logbook submissions, email, phone, and/or visits. Assigned teacher will also be the first point of contact for any matters arising from the attachment.
CLO2	
CLO3	
CLO4	
CLO5	
CLO6	
CLO7	

Learning Materials

Recommended Readings	Callanan, G., & Benzing, C. (2004). Assessing the role of internships in the career-oriented employment of graduating college students. Education and Training. Kouzes, J. M., & Posner, B. Z. (2006). The leadership challenge (Vol. 3). John Wiley & Sons.

Course Code: 0731 04 URP 4235		Year: Fourth	Term: Second
Course Title	Climate Adaptive Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	Climate change became major agenda in the urban and rural/regional planning disciplinary debates. Nonetheless, planning professionals in the Global South are still slow to join the debate and contribute to new conceptual models to address the complexity of climate change. Climate change knowledge in planning is essential to responding effectively to climate change and climate extremes as well as planners' expertise and capacity building also need to be enhanced in addressing climate change issues. This course has huge implications for Bachelor level planning education for developing competencies to adapt to rural and urban challenges that are compounded by climate change.		

	Course Contents	CLOs
	Section A	
1	Weather and Climate: Weather and Climate change, Climate Systems, Components of Climate System, Greenhouse gases, Greenhouse gas effect, Human induced climate variation, Sea level rise, El Nino, La Nina	1, 2
2	Climate Change and Climate variability: Climate change, Climate variability, Global climate system, Global heat and water balance, Atmospheric circulation, Ocean circulation, Coupled Ocean and atmospheric processes, Extreme climatic events, and their impacts (heat wave, flooding, cyclone, tidal surge, tsunami)	1, 2
3	Climate Extreme Indices: Climate indices for extreme climate, Standard climate indices, calculating climate indices, R-ClimIndex tool for calculating indices, Information on the Climate extremes.	1, 2
4	Climate Change Modeling & General Circulation Model (GCM): Climate Change Modeling, General Circulation Model (GCM), Heart of Climate Model, Complexity of GCM, Limitations of Climate models, Changes in global mean surface temperature.	2, 3, 4
5	Regional Climate Change Modeling (RCM): Regional Climate modeling, Regional details of Climate Change, Regional Climate change modeling in Bangladesh.	2, 3, 4
6	Statistical Downscaling Techniques: Approach of downscaling, General Approach to Downscaling, Types of downscaling, Techniques of downscaling, Limitations of RCM, Advantages of RCM, Statistical downscaling, Types of transfer functions, Strength, and weakness of transfer function.	2, 3, 4
	Section B	CLOs
7	Climate Change Adaptation: Conceptual issues related to adaptation, Types of adaptation, Adaptive Capacity, The role of values and culture in adaptation, Toward Justice in Adaptation to Climate Change, Case studies related to adaptation to climate change.	3, 6
8	Climate Change Mitigation: Conceptual issues related to mitigation to climate change, Mitigation responses and low-emissions development, Mitigation-Adaptation interface or synergies, and Urban form and climate change.	4, 5
9	The Climate-Development Nexus: Theoretical framework of the climate-development nexus, Climate change-poverty Nexus, Nexus between climate change adaptation, disaster risk reduction, and poverty, Pro-poor asset adaptation, Asset based community development approach, Asset planning for climate change adaptation.	3, 4, 5
10	Sustainable Pathways for the Cities and Regions: Compare and contrast between Conventional or High Carbon Support Systems and Resilient or Low-Carbon Support Systems, Challenge of planning within planetary boundaries(PPB) in an urban world, The challenge of implementing sustainable urban plans and strategies, Sustainable pathways for the cities and regions, Sustainable Plan-Making.	5, 6
11	Review of Climate Resilient Plan: Moving forward on climate change planning - Lessons from Orissa, Climate Resilient City Action Plan – Narayanganj, Mainstreaming risk reduction in urban planning and housing, Climate change adaptation in the Australian Region-Emerging issues in the context of regional planning, Planning for Adaptation in a Megacity: A Case Study of the Mexico City Metropolitan Area.	3, 4, 5, 6, 7

	Section B	CLOs
12	Climate Change Policy and Finance Streams: Review of climate change mitigation and adaptation strategic policy framework[e.g., National Adaptation Program of Action (NAPA) 2005, 2009 Bangladesh Climate Change Strategy and Action Plan (BCCSAP), Nationally Determined Contribution (NDC), National Adaptation Program of Action (NAPA)], Mainstreaming CCMA in National Development Planning Framework (Delta Plan, Perspective Plan, Five Year Plan, 2017 Climate Investment Plan), Mainstreaming Climate Change into Urban-Related Policies, Institutiaonal arrangements, Climate finance, Review of national budgets, External funding CCMA projects.	6, 7

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Explain the basic functioning of the global climate system and how human impact on the system has generated climate change;	1, 2
	CLO2	Demonstrate the fundamentals of climate change science that determine historical climate change, modeling of future climate change and potential local and regional impacts;	1, 2
	CLO3	Examine the process of adaptation and its links to development social justice and poverty reduction;	1, 3, 8
	CLO4	Assess, find alternatives, and deliver development options for low carbon and climate resilient development;	1, 3, 8
	CLO5	Analyze alternatives that are consistent with low emissions and climate resilient development;	1, 3, 8
	CLO6	Evaluate global challenges of urbanization and climate change and delineate sustainable pathways for the cities and regions;	5, 8, 9
	CLO7	Present the international and national climate change legal and policy framework and explain key issues around climate finance.	9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture, Video recordings, Group work, Practice sessions	Class Test and Final Exam
CLO3	Lecture and Problem-based Learning	Individual Paper (and/or Presentation)and Final Exam
CLO4	Lecture	Class Test and Final Exam
CLO5	Lecture and Group discussion	Class Test and Final Exam
CLO6	Lecture and Problem-based Learning	Individual Paper (and/or Presentation) and Final Exam
CLO7	Lecture	Final Exam

Recommended Readings	Adger, W. N., Paavola, J., Huq, S., & Mace, M. J. (2006). Toward justice in adaptation to climate change. Fairness in adaptation to climate change, 1(4). Davoudi, S., Crawford, J., & Mehmood, A. (Eds.). (2009). Planning for climate change: strategies for mitigation and adaptation for spatial planners. Earthscan. Goosse, H., Barriat, P. Y., Loutre, M. F., & Zunz, V. (2010). Introduction to climate dynamics and climate modeling. Centre de recherche sur la Terre et le climat Georges Lemaître-UCLouvain. Moser, C. (2011). A conceptual and operational framework for pro-poor asset adaptation to urban climate change. Cities and climate change: responding to an urgent agenda. In: Hoornweg D, Freire M, Lee JM, Bhada-Tata P, Yuen B, editors. Cities and climate change, urban development series.Washington (D.C.): The World Bank; p. 225–253. Norman, B. (2018). Sustainable pathways for our cities and regions. In Sustainable Pathways for our Cities and Regions (pp. 126-154). Routledge. Persson, G., Bärring, L., Kjellström, E., Strandberg, G., & Rummukainen, M. (2007). Climate indices for vulnerability assessments. SMHI. Santikayasa, I. P. (2015). Climate change indices. Technical Report, Water Engineering and Management (WEM). School of Engineering and Technology (SET), Asian institute of Technology (AIT). Smith, J. B., Huq, S., & Klein, R. J. (2003). Climate change, adaptive capacity and development. Imperial College Press. Stocker, T. (2011). Introduction to climate modelling. Springer Science & Business Media. Tanner, T., & Horn-Phathanothai, L. (2014). Climate change and development. Routledge. Wamsler, C. (2004). Managing urban risk: perceptions of housing and planning as a tool for reducing disaster risk. National Emergency Training Center. Wamsler, C. (2006). Integrating risk reduction, urban planning and housing: lessons from El Salvador. Open house international.
Supplementary Readings	Alam, K., Shamsuddoha, M., Tanner, T., Sultana, M., Huq, M. J., & Kabir, S. S. (2011). The political economy of climate resilient development planning in Bangladesh. IDS Bulletin, 42(3), 52-61. Hossain, M. Z., & Rahman, M. M. (2021). Climate change vulnerability and resilience of urban poor in Khulna, Bangladesh: the role of asset-based community development approach. International Journal of Urban Sustainable Development, 13(2), 131-147. General Economics Division (GED, 2020a). Making Vision 2041 a Reality: Perspective Plan of Bangladesh 2021-2041. National Economic Council (NEC), Bangladesh Planning Commission. General Economics Division (GED, 2020b). Eighth Five Year Plan (July2020-June2025). National Economic Council (NEC), Bangladesh Planning Commission. Ministry of Environment and Forests (2005). National Adaptation Programme of Action. Government of the People's Republic of Bangladesh. Ministry of Environment and Forests (2009). Bangladesh Climate Change Strategy and Action Plan 2009. Government of the People's Republic of Bangladesh. Ministry of Environment, Forests and Climate Change (2021). Nationally Determined Contributions (NDCs) 2021. Government of the People's Republic of Bangladesh. Ministry of Environment, Forests and Climate Change (2022). National Adaptation Plan of Action (NAPA) Zero Draft. Government of the People's Republic of Bangladesh. Pervin, M. (2013). Mainstreaming climate change resilience into development planning in Bangladesh. IIED Country Report. IIED, London. Sarker, A.M. (2020). Bangladesh Delta Plan (BDP) 2100 (Bangladesh in the 21st Century). General Economics Division Bangladesh.

Course Code: 0731 04 URP 4249		Year: Fourth	Term: Second
Course Title	Tourism Planning		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	The preparation of master plan is carrying out for sustainable tourism development in Bangladesh with the aim to make tourism the third largest foreign exchange earner of the country. The course is designed for the fourth year students to introduce the fundamentals of tourism planning to them so that they can contribute to planning and development of tourism in Bangladesh.		

Course Contents		CLOs
Section A		
1	Introduction: Definition and types of Tourism, Tourist and Tourist Attraction, Components of Tourism, Theories of Tourism Development.	1, 2
2	Impacts of Tourism: Major influences on Tourism Impacts, Economic Impacts: Economic Multiplier, Economic Linkage and Leakage, Socio-cultural Impacts, Environmental Impacts.	1, 2, 3
3	Demand and Supply of Tourism: Demand side of Tourism, Supply side of Tourism, Conducting Market Demand studies, Analysing the Supply, Quality and Quantity of Tourism Product.	3
4	Marketing of Tourism: Motivation and Mass-marketing Tourism, Direct Marketing, National Tourism Marketing Plans, E-commerce in tourism, E-marketing Techniques.	3
5	New Concepts in Tourism: Eco-tourism, Pro-poor Tourism, Community based Tourism, Sustainable Tourism	4
Section B		CLOs
6	Tourism Planning and Management: Key Players in Tourism Planning and Management: The Tourists themselves, The Host Community, The Tourism Industry, Government Agencies.	2, 5
7	Planning Tourism Development: When is Planning necessary for assisting Tourism development, Can Market and Planned Tourism Growth Coexist?, Levels of Planning Tourism Development: International, National, Local.	5
8	Tourism planning and Development in Bangladesh: Tourism Policy in Bangladesh, Legal framework of tourism in Bangladesh: Organizations involved, laws and regulations, plans and policies, role of Bangladesh Tourism Board.	2, 5
9	Developing a tourism service in Bangladesh: Tourism Facility Design Standards and Development in Bangladesh, Factors of site selection, design and user preferences, use of ICT in tourism development, impediments of tourism development in Bangladesh, city level tourism development, rural and regional level tourism-the case of growing resort development in Bangladesh, Future directions for Tourism Policy and Planning in Bangladesh.	5

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Demonstrate the fundamental knowledge of tourism planning and development;	1, 2, 3
	CLO2	Analyze the prospects of tourism by identifying economics of tourism;	6, 8
	CLO3	Identify the policy issues related to tourism planning in Bangladesh;	1, 2, 3, 9
	CLO4	Assess the status of tourism planning and practice in Bangladesh;	6, 9
	CLO5	Participate and lead in any tourism planning and development projects;	4, 5, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Group Work	Presentation or Assignment and Final Exam
CLO3	Lecture and Group Discussion	Class Test and Final Exam
CLO4	Lecture and Group Discussion	Class Test and Final Exam
CLO5	Lecture and Problem based Learning	Assignment and Final Exam

Learning Materials

Recommended Readings	Kastarlak, B. I. and Barber, B.K. (2014). Fundamentals of Planning and Developing Tourism (Pearson New International Edition). Harlow: Pearson Education Limited. Mason, P. (2008). Tourism Impacts, Planning and Management. Tailor and Francis. Edgell, D. L. (2008). Tourism Policy and Planning: Yesterday, Today and Tomorrow. Oxford: Elsevier Shoeb-Ur-Rahman, M. and Hasan, A. (Eds) (2020). Tourism Policy and Planning in Bangladesh. Springer.
Supplementary Readings	Phillips, R. and Roberts, S. (Eds) (2013). Tourism, Planning, and Community Development. London and New York: Routledge. Dredge, D and Jenkins, J. (Eds) (2011). Stories of Practice: Tourism Policy and Planning. ASHGATE e-Book.

Course Code: 0413 04 BA 4251		Year: Fourth	Term: Second
Course Title	Project Planning and Evaluation Techniques		
Course Status	Core		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course aims to introduce the basics of project planning, management, and appraisal mechanisms. Students are expected to develop an understanding of the application of different tools and techniques associated with project planning and evaluation. At the end of this course, the students will be able to describe a project life cycle, and can skilfully map each stage in the cycle, including involved stakeholders, cost, risks, and supplementary materials and resources.		

	Course Contents	CLOs
	Section A	
1	Introductory Understanding of Project Planning: Definition of project and program, difference between project and program, drivers of project management, project governance, project life cycle, strategic management process, and portfolio management system.	1, 2, 6
2	Understanding the Structure and Culture of Organization: Project management structure, appropriate project management structure, organizational culture, implications of organizational culture for project management.	1, 2, 6
3	Project Formulation and Development: Defining the project scope, establishing project priorities, creating the work breakdown structure (WBS), integrating the WBS with the organization, coding the WBS for the information system, responsibility matrices, and project communication plan.	3, 4, 5
4	Estimation of Project Time and Cost: Influencing factors of quality estimation of a project, estimating guidelines for times, costs and resources, methods for estimating project times and costs, types of costs, creating a database for estimating.	3, 4, 5
5	Development of a Project Plan: Development of a project network, constructing a project network, activity-on-node (AON) fundamentals, network computation process, level of details for activities, and practical considerations.	4, 5
6	Risk Management in Projects: Introduction to risk management process, risk identification, risk assessment, risk response development, contingency planning, opportunity management, risk response control, and conflict management.	3, 4, 5
7	Contract Management: Understanding the public procurement rules of 2008 for procurement, procurement plan, types of contracts, contact administration, contract closure, proposal-contractual interaction.	2, 3, 4, 5
	Section B	CLOs
8	Project Planning in Bangladesh: Types of organizations involved in formulating projects, functions and planning process of those organizations, understanding the activities and importance of NEC, ERD, and Bangladesh Planning Commission.	1, 5, 6
9	Guidelines of Project Formulation in Bangladesh: Understand the guidelines and formulation process of Five-year plans of Bangladesh, and the Annual Development Plan (ADP) of Bangladesh; strategic alignment of project with SDGs and Delta Plan of Bangladesh, types of different project proformas/structure used in different projects- TAPP, PP.	3, 4, 5
10	Project Appraisal: Different aspects of project appraisal- technical aspect, managerial aspects, social aspects, economic aspects, and financial aspects, time value of money and discounted cash flow, comparing IRR, NPV, and payback.	4, 5, 6
11	Project Performance Metrics: Project management information systems, project metrics, key performance indicators, value-based metrics, dashboards and scorecards, and project intelligence.	3, 5, 6

	Section B	CLOs
12	Project Monitoring: Understanding the importance of project monitoring, monitoring mechanisms, monitoring tools, participatory monitoring, project audit, types of project audits, project audit life cycle, and activities of IMED.	3, 5, 6
13	Project Evaluation: Understanding the importance of evaluation, types of evaluation, evaluation approach, evaluation steps, pre-implementation assessment, process implementation evaluation, impact evaluation, meta evaluation, relationship between monitoring and evaluation, and key features of implementation monitoring versus results monitoring.	4, 5, 6
14	Project Governance: Links between projects and strategy, strategic management, corporate governance, strategic governance, program governance, and project governance for efficient management.	3, 6

	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
Course Learning Outcomes (CLOs)	CLO1	Design project, project life cycle, and project strategic management as a way of working;	1, 3, 4, 8
	CLO2	Identify the resources needed for project formulation and development in each stage, including involved stakeholders, tools, and supplementary materials;	1, 2, 3, 9
	CLO3	Analyze projects effectively including the management of scope, time, costs, resources, quality, and risks and conflicts;	1, 2, 4, 7
	CLO4	Application of project management tools and techniques for successful completion of a project, considering factors such as task dependencies, roles of stakeholders, and task lengths;	7, 9
	CLO5	Explain the importance of project appraisal to analyze, monitor and control, and to coordinate the elements of the project;	1, 3, 5, 6
	CLO6	Interpret the challenges and analyze interpersonal skills to manage the human resources of a project including organising, managing and leading the project team, and establish governance.	3, 4, 5, 6, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Presentation or Assignment and Final Exam
CLO2	Lecture and Group Discussion	Class Test or Assignment and Final Exam
CLO3	Class Lecture and Problem-based Learning	Assignment and Final Exam
CLO4	Lecture	Presentation or Assignment and Final Exam
CLO5	Lecture and Group work	Class Test or Assignment and Final Exam
CLO6	Lecture and Workshop	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Gardiner, P. D. (2005). Project Management: A Strategic Planning Approach (1st ed.). Palgrave Macmillan Ltd. General Economics Division (GED). (2014). Development Project Proforma/Proposal (DPP) (1st ed.). Planning Commission, Ministry of Planning. Gudda, P. (2011). A Guide to Project Monitoring and Evaluation (1st ed.).Author House. Kerzner, H. (2017). Project Management: A Systems Approach to Planning, Scheduling, and Controlling (12th ed.). John Wiley & Sons. Larson, E. W., & Gray, C. F. (2018). Project Management: The Managerial Process (7th ed.). McGraw-Hill Education.
Supplementary Readings	Grit, R. (2022). Project Management: A Practical Approach (5th ed.). Noordhoff Uitgeversbv. Phillips, J. (2022). PMP: Project Management Professional (1st ed.). McGraw Hill.

Course Code: 0413 04 BA 4252		Year: Fourth	Term: Second
Course Title	Project Planning and Evaluation Techniques (Studio/Project)		
Course Status	Core		
Credit	1.5		
Prerequisite(s)	None		
Rationale	This course aims to offer hands-on experience of the preparation of development project proposal from the perspectives of government and non-government sectors. Students are expected to explore the current needs of the annual development programs of different organizations/ sectors and to proficiently use the tools and techniques of project management while developing the proposals. At the end of this course, the students will be able to formulate a complete project proposal including project budgeting, time-line, activities, and required resources addressing the real-life needs related with planning and development.		

	Course Contents/Tasks	CLOs
1	Lecture Session One: Overview on Project Planning and Management in Bangladesh.	1, 2
2	Lecture Session Two: Identification of potential sectors/ issues aligned with organizational objectives, ADP, Five-year Plan, SDGs, Delta Plan, and Vision 2041 of Bangladesh.	1, 2, 3
3	Task One: Development of project screening matrix, responsibility matrix, and sectoral contribution matrix using the lecture pervious lecture sessions.	1, 2, 3
4	Presentation One: Thematic discussions of aligned project development matrix for project screening and project formulation.	1, 2
5	Lecture Session Three: Understanding of a real-world construction project implemented by an agency.	1, 2, 3
6	Task Two: Identify the different stages of project life cycle, including involved stakeholders, cost, risks, materials, and resources.	1, 2, 3
7	Presentation Two: Project life cycle stating different phases including the stakeholders, budgeting, risks, and resources.	1, 2
8	Lecture Session Four: Understand the guidelines and formulation process of different type of project proformas/structure used in different government projects.	1, 2, 3, 4
9	Task Three: Development of a project concept note (PCN) using the PCN structure of government and non-government organizations.	1, 2, 3, 4
10	Assignment One: Presentation of PCN.	3, 4
11	Lecture Session Five: Understanding of project components including background study, logframe, network analysis, financial analysis, impact analysis, and monitoring and evaluation plan.	1, 2, 3, 4
12	Task Four: Preparation of a complete project proposal for government organization and/or non-government organization in Bangladesh.	1, 2, 3, 4
13	Assignment Two: Presentation of a complete project proposal.	3, 4
14	Lecture Session Six: Discussion with project management experts working in both government and non-government sectors and feedback analysis on the complete proposal.	1, 2, 3

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Identify the components of a project proposal, its structure, and formulation process;	1, 3, 4, 6, 9
	CLO2	Apply different tools and techniques of project planning, management, and evaluation techniques;	2, 5, 6, 9
	CLO3	Interpret the challenges and analyze interpersonal skills to manage the human resources of a project including organising, managing and leading the project team, and establish governance;	2, 3, 4, 5, 6, 9
	CLO4	Formulate a project proposal related with urban and rural issues.	1, 3, 4, 7, 9, 10

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture, Fieldwork, and Workshop	Presentation
CLO2	Lecture, Workshop, and Group Discussion	Group Presentation
CLO3	Lecture, Workshop, and Problem-based Learning	Assignment and/or Presentation
CLO4	Workshop, and Problem-based Learning	Assignment and/or Presentation

Learning Materials

Recommended Readings	Gardiner, P. D. (2005). Project Management: A Strategic Planning Approach (1st ed.). Palgrave Macmillan Ltd. General Economics Division (GED). (2014). Development Project Proforma/Proposal (DPP) (1st ed.). Planning Commission, Ministry of Planning. Gudda, P. (2011). A Guide to Project Monitoring and Evaluation (1st ed.).Author House. Kerzner, H. (2017). Project Management: A Systems Approach to Planning, Scheduling, and Controlling (12th ed.). John Wiley & Sons. Larson, E. W., & Gray, C. F. (2018). Project Management: The Managerial Process (7th ed.). McGraw-Hill Education.
Supplementary Readings	Grit, R. (2022). Project Management: A Practical Approach (5th ed.). Noordhoff Uitgeversbv. Phillips, J. (2022). PMP: Project Management Professional (1st ed.). McGraw Hill.

Course Code: 0311 04 Econ 4257		Year: Fourth	Term: Second
Course Title	Public and Local Government Finance		
Course Status	Optional		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course is designed to examine status of public and local government's income and expenditure. The course emphasises to find out the source of revenues and item of expenditure of the local government and thereof critical issues for ensuring local development process financially sustainable.		

Course Contents		CLOs
	Section A	
1	Introduction to Public and Local Government Finance: Public Finance, Local Government Finance, Scope, dimensions, subject matter, Differences between Public Finance and Private Finance, Differences between Public and Local Government Finance, Role of Public Finance in a developing country, Importance of studying in context of urban and rural planning.	1
2	The Context for Public and Local Government Finance: Rapid urban growth, Political decentralization, Democratization, Increasing role of local government in poverty reduction strategies and meeting the Millennium Development Goals, Raising demand for basic services and housing, Spending need of local government to meet the rising demand, Other sources of capital financing.	1
3	Principles of Revenue/Taxation: Context, Sources, Categories/Typologies, Canons of taxation, Objectives of taxation, Characteristics of a good tax system, Incidence of taxation.	1
4	Public Expenditure: Meaning, Nature and Kinds, Principles, Concepts of Government Expenditure and Transfer Payments Multiplier, Consequences of Multiplier Effect, Effect of Government Expenditure on Income Distribution and Economic Stabilization.	1
5	Public Budget: Definition, Necessity, Preparation Process, Classification of Budget - Balanced and Unbalanced Budget, Analysis of Budget of Bangladesh.	1
6	Deficit Financing and Public Debt: Concept, Types, Methods of Deficit Financing, Impact of Budget Deficit, Burden of Public Debt, Debt Redemption and Debt Management.	1, 3
	Section B	CLOs
7	Local Government Finance Frameworks: Review, Key Lesson and Challenges: Local financial autonomy, Matching expenditure and revenue, Setting local budget, Local government revenue, Intergovernmental transfers, Legislative framework for local government finance.	1, 3
8	Innovative Resourcing for Financing Local Government: Resources available for local government, Capital market borrowing, The case for local government borrowing, Constraints to local government capital market borrowing, Accessing capital market, Conditions for a successful local government finance system, A policy framework for local government (municipal) borrowing, Non-financial resources available to local government to generate additional revenue, Financial management expertise.	3, 4
9	Participatory Budgeting: Concepts, Trends, Operational Procedure, Case Studies.	3, 4
10	Fiscal Transfer to Local Government in Bangladesh: Introduction, Aim of fiscal transfer, An ideal fiscal transfer model, Annual Development Plan, Fiscal transfer to local government (fiscal transfer formula, the management of formula, fiscal transfer and expenditure guidelines, fiscal transfer to different tiers of local government, release of funds, fiscal transfer to urban local government).	4
11	Budget of Local Government in Bangladesh: Budget cycle, Budget format, Budget process, Structures, Budget – bases of taxes, Budget – expenditure aspects, Merits and demerits of budget, Rationale of people's participation in budgetary process, Stakeholders, Annual Development Program (ADP).	4

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Analyze the financial mechanism of public and local government institutions;	1, 3
	CLO2	Comprehend public revenues, budgeting and taxation system;	1, 3
	CLO3	Contextualise innovative mechanisms for financing local government;	3, 8
	CLO4	Identify the financial sustainability issues of local government.	3, 8, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture and Desktop Studies	Class Test, Assignment and Final Exam
CLO2	Lecture	Assignment and Final Exam
CLO3	Lecture and Case Study	Class Test, Case Study Analysis
CLO4	Lecture, Workshop and Seminar	Assignment, Presentation and Final Exam

Learning Materials

Recommended Readings	Siddiqui, K. (Ed.). (1994). Local government in Bangladesh. University Press. ADB (2018). Public Financial Management Systems of Bangladesh: Key Elements from a Financial Management Perspective. Dalton, H. (1994). Principles of Public Finance, 4th edition, Rutledge & Kegan Paul, London. GOB (2010). 'The Local Government (Municipality) Act, 2009', Legislative and Parliamentary Affairs Division, Ministry of Law, Dhaka. GOB (2010). 'The Local Government (City Corporation) Act, 2009', Legislative and Parliamentary Affairs Division, Ministry of Law, Dhaka.
Supplementary Readings	Musgrave, R.A. (1959). The Theory of Public Finance – A Study in Public Economy, McGraw-Hill Book Company, Inc, New York.

Course Code: 0521 04 ES 4291		Year: Fourth	Term: Second
Course Title	Coastal Zone Management		
Course Status	Optional		
Credit	3.0		
Prerequisite(s)	None		
Rationale	This course aims to introduce the fundamental concepts and issues in coastal zone management to the fourth-year level students. It deliberates an integrated understanding of the biophysical and socio-economic processes in the coastal zone. Moreover, this course will enable the students to understand the resources, hazards and infrastructures in the coastal zone, and the ability to relate those to the lives and livelihoods of the coastal population.		

Course Contents		CLOs
Section A		
1	Introduction & CZM Concept: Coastal Zone, Coastal Zone Estuary, Coastal Zone - Land adjacent to Sea, Coastal Zone - Continental Slope, High ecological diversity, Critical economic importance, Territorial Sea, Exclusive Economic Zone (EEZ), Boundaries of Exclusive Economic Zone, Bangladesh Coastal Zone.	1, 2
2	CZM Concept & Development of CZM: Coastal Zone Management, CZM Concept-1: Resource, CZM Concept-2: Opportunity and Option, CZM Concept-3: Maximizing Resource in Multi-resource system, CZM Concept-4: Dynamic System, Development of Coastal Zone.	1, 2, 3
3	Functions in CZ: Characteristics of Functions in Coastal Zone, Issues in CZM, Prospects and Opportunities, Sustainability, Resource Depletion, Conflicts in Functions.	3
4	Issues, Prospects and Sustainability: Population Density, Number of Bridges, Culvert, Poverty Rate, Cyclone Shelter, Literacy Rate, Polder Area, Water Supply.	3, 4
5	Coastal Systems: Coastal systems, Natural Subsystem, Socioeconomic Sub system, Physical Infrastructure Subsystem, Buffer Zone, Institutional Subsystem, Linkage among Coastal Subsystems.	5
Section B		CLOs
6	Delineation of CZ, Coastal Boundary & Bangladesh Coast: Delineation of Coastal Zone, Coastal Zone of Bangladesh, Types of Coastal Districts, Characteristics of Bangladesh Coast.	2, 4, 6
7	Socio Economic Characteristics of Coastal Zone: Coastal Population and Livelihood, Local Resource Base.	4, 5, 6
8	Livelihood in Coastal Area: Coastal livelihood, Issues of Livelihood Options, Livelihood Groups, Profiles of Livelihood Groups, Factors Affecting Livelihood, Poverty, Vulnerability, Gender.	2, 5, 6
9	Coastal Policy: Policy Framework, Economic Growth, Development Opportunity, Livelihood, Reduction of Vulnerability	6
10	Case Study: GOA, INDIA, (Uniqueness of the coast, Issues of the coastal zone of the Indian coast, Coastal landforms, coastal erosion, Coastal ecosystems, coastal resources, Coastal regulation zone, Coastal regulatory framework).	4, 5

Course Learning Outcomes (CLOs)	Upon successful completion of the course, the students will be able to:		Mapping with PLOs
	CLO1	Explain the fundamental concepts and issues related to coastal zone management;	1, 2
	CLO2	Integrate the understanding of the biophysical and socio-economic processes in the coastal zone;	1, 2, 3
	CLO3	Identify the process of protect and conserve the coast's important cultural, ecological and natural values;	7, 8
	CLO4	Plan the coastal zone by understanding the resources, hazards and infrastructure, and the ability to relate those to the lives and livelihoods of the coastal population;	8
	CLO5	Explore the linkage among the national level, sub-national level and local community approaches that could ensure safety, security and sustainability for the coastal communities;	4, 8
	CLO6	Develop policy briefs for implementing sustainable development strategy in Coastal zone of Bangladesh.	7, 9

Mapping CLOs with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Lecture	Class Test and Final Exam
CLO2	Lecture and Group Discussion	Presentation and Final Exam
CLO3	Lecture and Problem-based Learning	Assignment and Final Exam
CLO4	Lecture and Workshop	Assignment and Presentation
CLO4	Lecture	Final Exam
CLO6	Lecture and Group Discussion	Reading Assignment and Final Exam

Learning Materials

Recommended Readings	Clark, J.R. (1995). Coastal Zone Management Handbook. Lewis Publishers. Moksness, E., Dahl, E., Stottrup., J. (2009). Integrated Coastal Zone Management. Blackwell Publishing Ltd. Beatley, T.,Brower, D., Anna K. Schwab , A. K. (2002). An Introduction to Coastal Zone Management. Island Press. Berkes, F. (2015). Coasts for People: Interdisciplinary Approaches to Coastal and Marine Resource Management. Routledge. Haslett, S.K. (2009). Coastal Systems. Routledge.
Supplementary Readings	Ministry of Water Resources (2005). Coastal Zone Policy. Government of the People's Republic of Bangladesh. WARPO (2005). Integrated Coastal Zone Management Plan (ICZMP) Project.

20 Grading and Evaluation

20.1 Grading Scale

a) Letter Grades and corresponding Grade Points will be awarded following provisions shown below:

Numerical Grade	Letter Grade	Grade Point
80% or above	A+ (A plus)	4.00
75 to less than 80%	A (A regular)	3.75
70 to less than 75%	A- (A minus)	3.50
65 to less than 70%	B+ (B plus)	3.25
60 to less than 65%	B (B regular)	3.00
55 to less than 60%	B- (B minus)	2.75
50 to less than 55%	C+ (C plus)	2.50
45 to less than 50%	C (regular)	2.25
40 to less than 45%	D	2.00
Less than 40%	F	00
Incomplete	I	
Withdrawn	W	
Continuation (for the project, thesis design, etc. course)	X	

20.1.1 Evaluation of Theory Courses

a) All theory courses will be evaluated out of 100 marks, the distribution of which is given below:

Sl. No.	Items	Marks
1	Attendance and Class Participation	10
2	Continuous Assessments	30
3	Term Final Examination	60
	Total	100

b) The basis for awarding marks for class attendance and participation will be as follows:

Attendance & Participation	Marks
90% or above	10
85 to below 90%	9
80 to below 85%	8
75 to below 80%	7
70 to below 75%	6
65 to below 70%	5
60 to below 65%	4
Below 60%	0

c) The continuous assessments of the theory courses may be conducted in the form of class tests, assignments, homework, presentation, quiz, viva voce, etc. The course teacher(s) will evaluate every continuous assessment and share the result with the students within 2(two) weeks of conducting that continuous assessment.

d) The duration of a class test may be 20-45 minutes, and it will preferably be given during class hours.

e) If a student does not attend the class test for reasons satisfactory enough to the course teacher, the course teacher may allow the student one more chance for such assessment during the term; however, it must be held before the term final examinations. A student who has been absent for a short period, up to a maximum of three weeks due to illness, should approach the course teacher(s) or Coordinator(s) for make-up of quizzes/class tests or assignments, etc.,

immediately on returning to the classes. Such request should be supported by a medical certificate endorsed by the Chief Medical Officer of the University. The medical certificate issued by a registered medical practitioner (with the registration number shown explicitly on the certificate) and endorsed by the Chief Medical Officer of the University will also be acceptable only when the student has valid reasons for his/her absence from the University.

f) The number of Continuous Assessments (CAs) in each course will be as follows:

No. of credit(s)	Total no. of CA required	CAs to be consideredfor grading
3 – 4	4 (2 in each section)	Section best assessments shall be averaged for grading
1.5 – 2	3 (at least one in each section)	

g) If two teachers teach a course, both the teachers will conduct continuous assessments individually.

h) Answer scripts of the continuous assessment may be shown to the students to identify their strengths and weaknesses, but those would not be returned to them. The concerned teacher would submit the evaluated continuous assessment answer scripts and attendance register to the Head of the Discipline/Program Offering Entity (POE). The final score of attendance and class participation (out of 10) and continuous assessment (out of 30) should be displayed on the Discipline's notice board/ Discipline website/ Course web page before starting the term final examination.

i) The course teachers must submit the continuous assessment mark sheets to the Chair of the Examination Committee before the starting of the term final examination.

j) The Term Final Examination will carry 60 marks. There will be two separate answer scripts for Section A and Section B in the Term Final Examination.

k) When a student repeats a course in which he/she previously obtained an F grade, he/she will be given just an immediate lower grade that he/she obtained in the repeated course. However, in case he/she obtains a D grade, that will be maintained, and this grade will be shown in the transcript. If a student has to repeat a course due to punishment on him/her, the grade obtained will be maintained. If a student obtains a grade other than an F in a course, he/she will not be allowed to repeat the course for grade improvement.

l) If a student obtains an 'F' grade in any Core course in any term, this 'F' grade will not be counted for Grade Point Average (GPA) but will be shown on the grade sheet, and in such case, he/she will have to retake the course for grade improvement.

m) While registering for a retake/re-retake theoretical course, a student must be given an option to decide whether s/he intends to sit for continuous assessment of the course. If s/he opts to sit for continuous assessments, his/her fresh mark will be counted to prepare the result. However, the class attendance and participation marks will be taken from the previous record.

n) A student has to register for the backlog/retake/re-retake core courses first followed by the fresh courses offered by the Discipline for the term s/he is going to enrol subject to the compliance with: (i) completion of prerequisite courses (if any) and (ii) maximum registration limit of 25 credits per term. However, s/he may not choose to register the optional backlog/retake/re-retake courses first.

o) In addition, a student may be allowed to register for advance course(s) in a term subject to: (i) his/her all backlog/retake/re-retake and offered core courses are either clear or registered, (ii) his/her current terms' offered all core courses are registered, (iii) completion of corresponding prerequisite courses (if any), (iv) compliance with a maximum registration limit of 25 credits per term, and (v) the desired advance courses are offered by the Discipline/POE in the current term. However, such advance course registration option will not be applicable for capstone courses like Thesis/Project/ Internship/ Research study/ Monograph/ Portfolio, and so on.

p) A Special Term may be offered for the final year students who have retake/re-retake course(s). In this case, the maximum credit limit for a student will be 15 credits. This will be a Non-Taught Term. The Examination of Special Term will start 4 (four) weeks after publishing 4th-year 2nd Term results and will continue not more than 2 (two) weeks. The continuous assessment marks (40%) will be carried over from previously registered theory course(s), and Special Term Final Examination will carry the remaining (60%) marks. Final Year Term Thesis/Dissertation/Design or Core Sessional(s) supervisor(s)/course teacher(s) in consultation with the Head may allow the student(s) to re-submit the Thesis/

Dissertation Design or Core Sessional(s) within the Special Term schedule. However, it must be within the allowed limits of the Special Term credits.

20.1.2 Evaluation of Sessional Courses

a) All sessional courses will be evaluated out of 100 marks, the distribution of which is given below:

Sl. No.	Items	Marks
1	Attendance/Class Participation/Contact with teachers	10
2	Sessional Evaluation/Internal criticism/Observation	60
3	Viva Voce/ Final Jury	30
	Total	100

b) Sessional evaluation would be done through a laboratory test, class test, quiz, assignment, assigned project, report, oral test, performance/behaviour of the students, etc. The course teacher(s) will complete every sessional evaluation and share the result with the students within 2(two) weeks of conducting that item. Attendance and sessional evaluation mark sheets (out of 10+60=70) will be displayed on the Discipline's notice board/Discipline website/Course web page before starting the term final examination.

c) Viva Voce of each sessional course will usually be conducted by the course teacher(s). The senior most among the course teachers (if any) will be the Chair of the viva board. However, such viva voce/final assessment of a sessional course can also be done through jury board in applicable cases. The jury board will be headed by the Head of the Discipline or any other senior teacher of the Discipline/POE not below the rank of Assistant Professor. The Chairman of the viva/jury board may appoint other teacher(s) as a board member if necessary. A student must attend a sessional evaluation and viva voce. In case of absence in any component, he/she will get an F grade in that course.

d) The course teachers must submit the continuous assessment mark sheets to the Chair of the Examination Committee before the starting of the term final examination.

e) A student may register sessional courses as retake/re-retake (if applicable) on the Discipline Head's written approval. For retake/re-retake sessional courses, no previous records/marks will be counted.

20.1.3 Evaluation of Capstone Courses

a) The distribution of marks for a Capstone (Thesis/ Monograph/ project paper/ etc.) course will be as follows:

Sl. No.	Description	Marks
1	Contact/Discussion/Communication with the Supervisor	10
2	Evaluation	60
3	Oral presentation and/or Viva voce	30
	Total	100

b) There will be two examiners (including the Supervisor) to examine the Thesis. Each examiner will evaluate the Thesis separately, and the average marks will be considered for grading. However, if the marks given by the First and Second Examiners vary 20% or more, a Third Examiner to be appointed by the concerned Examination Committee from the outside the University will evaluate the Thesis Monograph/Project paper. Among these numbers, the average of the closest two numbers will be considered for grading. However, if the marks given by the Third Examiner happen to stand at the middle of the marks given by the first two Examiners, the average of the three marks will be considered for grading.

c) For the thesis/dissertation/final project/other projects like the thesis of the final year students, there will be a presentation and defense session before the defense board. If deemed necessary to the concerned defense board, these sessions might be arranged online. A three-member defense board will evaluate the presentation and defense session. The Supervisor of the thesis/ project/ internship/ research study/ monograph/ portfolio courses will normally be the Chairman of the board while the second examiner and one member nominated by the Head of the Discipline/POE will be the members of the defense board. Every member of the defense board will evaluate individually and the final marks will be calculated by averaging all the marks given by the three members. The defense board members will be remunerated individually as per the approved rate of the university. For Jury board or in other special circumstances, the Head of the Discipline/POE might include additional member(s) in the board for justifiable reasons.

d) A Discipline might allow some students to register for an Internship program/ Project paper/ Monograph/ Research study according to the course curriculum of the respective Discipline. Such an internship program/ Project paper/Research study course might be considered as the substitute of Thesis for those students. The evaluation and related activities of such Internship program/ Project paper/ Research study courses will be similar to Thesis. Usually, a Thesis will carry double weight in terms of credit compared to other alternatives like Project/ Internship/ Research study/ Monograph/ Portfolio and so on.

e) A Discipline might allow splitting the thesis/similar course into more than one term. 'X' grade may be assigned for continuing the same course in multiple terms to assign a complete grade in the last term. Alternatively, multiple courses under thesis/similar course might be assessed by providing complete grades at the end of each term. The curriculum of the concerned Discipline/Entity will clarify all such issues.

20.1.4 Evaluation of Viva Voce

a) There might be a grand viva voce in each term. A student will not usually be allowed to register for more than one course of this type bearing 01 (one) credit in a term. The concerned Examination Committee of that Term will conduct the viva and assess the students. The distribution of marks for viva voce will be as follows:

Description	Marks
Viva voce	100

20.2 Grades

Grade related issues are reported in section 20.1.

20.3 Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA)

a) Grade Point Average (GPA) is the weighted average of Grade Points obtained in all the courses passed/completed by a student. For example, if a student has passed/completed five courses in a term having credits of C1, C2, C3, C4, and C5 and his/her points in these courses are G1, G2, G3, G4, and G5, respectively, then,

$GPA = \sum CiGi/\sum Ci$

b) A Numerical Example: Suppose a student has completed five courses in a term and obtained the following grades:

Course	Credit	Grade	Grade Point
A	3	A+	4.00
B	3	C+	3.00
C	3	A	3.75
D	2	B	3.25
E	1	B+	3.50

Then his/her GPA for the term will be computed as follows:
GPA= 3(4.0) + 3(3.0) + 3(3.75) + 2(3.25) + 1(3.5) /(3 + 3 + 3 + 2 + 1) = 3.52

c) A student's performance will be evaluated in terms of three indices- Term Grade Point Average (TGPA), Yearly Grade Point Average (YGPA), and Cumulative Grade Point Average (CGPA). The TGPA is computed by dividing the total points earned in a Term by the number of credits taken in the Term. The YGPA is computed by dividing the total grade points earned in two Terms in a year by dividing the number of credits taken in that year. The CGPA is computed by dividing the total grade points accumulated till date by the total completed credits. Thus a student who has earned 275 grad points in attempting 100 credits of courses would have an overall CGPA of 2.75.

20.4 Course Withdrawal

a) 'W' is the corresponding grade for withdrawn of a course, as mentioned in section 20.1.

b) If any student cannot complete the Term Final Examination due to severe illness or serious accident, he/she may apply to the Dean through the Head of the concerned Discipline for total withdrawal from the Term within eight working days after the Term Final Examination. However, he/she may choose not to withdraw from any sessional course if the grade obtained in such a course is C or better. A medical certificate endorsed by the Chief Medical Officer of the University must support the application. The Dean of the concerned School will decide on such an application and inform the Academic Council. If a student is allowed to withdraw from a Term, he/she will have to register as fresh from the Term he/she has withdrawn. However, he/she may be allowed to register for backlog courses, if offered.

20.5 Incomplete (I) Courses

'I' is the corresponding grade for an incomplete course, as mentioned in section 20.1.

20.6 Retake

Retake related issues are reported in sections 20.1.1 and 20.1.2.

20.7 Grade Improvement

Grade improvement related issues are reported in section 20.1.1.

20.8 Dropout/Cancellation of Studentship

a) A first-year first term student's admission will stand cancelled if he/she fails to complete course registration by ten working days from the beginning of the classes.

b) A first-year first term student's admission will stand cancelled if he/she fails to attend at least 50 percent of classes during ten working days from the beginning of the classes. However, in case of severe illness/accident this provision may be relaxed subject to submission of a medical certificate issued by a registered medical practitioner (with the registration number shown explicitly on the certificate) and endorsed by the Chief Medical Officer of the University.

c) A student's studentship will stand cancelled if he/she fails to comply with registration of minimum credit requirements under article 12.2 of the latest (July 2022) 'Ordinance for Undergraduate Program' of Khulna University. According to that article, a student must register for at least 15 credits per term and may be allowed to register for up to a maximum of 25 credits if recommended by his/her Discipline Head. The Discipline/POE might offer less than, greater than or equal to 25 credits per term as per the approved curriculum. The student will enjoy the option of choosing backlog, re-take, re-retake, advance courses (subject to compliance with applicable requirements/restrictions, as reported in other articles of the Ordinance) in addition to fresh courses to comply with the restriction of maximum 25 credits per term. If any student fails to register, in any way, for minimum credits (15 credits), his/her studentship at the University will stand cancelled. This minimum 15-credit registration limit may be relaxed if: (i) the student requires less than 15-credit to complete his/her graduation, or (ii) the sum of applicable (for the student) credits offered by the Discipline is less than 15-credit in the corresponding term for any valid reason.

d) A student's studentship will stand cancelled if he/she fails to earn minimum credits under article 12.5.2 of the latest (July 2022) 'Ordinance for Undergraduate Program' of Khulna University. According to that article, when a student is going to register for his/her courses in the 3rd year 2nd term, his/her earned credits up to 2nd year 2nd term must be at least 36. Otherwise, his/her studentship at the University will stand cancelled.

Approval Records	
Approving Authority	Date of Approval
Curriculum Committee of the Discipline	September 07, 2022
Executive Committee of the School	September 11, 2022
BOAS (if applicable)	
Academic Council	October 12, 2022
Syndicate (if applicable)	October 20, 2022

Appendix 01: Summary of Major Changes in the OBE Format Curriculum

Program : Bachelor of Urban and Rural Planning
Discipline : Urban and Rural Planning
School : Science, Engineering and Technology School

Sl. No.	Criteria	Existing Curriculum	OBE Curriculum
1	Duration of the Program (in Year)	04	04
2	Total Available Credits	188	173
3	Minimum Credit Requirement to Complete the Degree	161	155
4	Available Credits from GED Courses	18	63.5
5	Credits from GED Courses (% of Total Credits)	9.57	36.70
6	Credits from GED Courses (% of Required Credits)	11.18	40.96
7	Available Credits from Core Theory Courses*	107	109
8	Available Credits from Core Sessional Courses*	42	33
9	Available Credits from Optional Theory Courses*	27	16
10	Available Credits from Optional Sessional Courses*	12	7.5
11	Available Credits from Capstone Courses	00	7.5
12	Term Duration (in week)	21	22
13	Credits from Newly Introduced Courses	N/A	00
14	Number of Newly Introduced Courses	N/A	00
15	Number of Omitted Courses	N/A	05
16	Change in Course Title (Number of Courses)	N/A	02
17	Change in Course Status (Number of Courses)	N/A	02
18	Inter-term Shift (Number of Courses)	N/A	05
19	Change in Course Contents (Number of Courses)	N/A	69
20	Name of Majors (if Applicable)	N/A	N/A
21	Name of Modes (if applicable)	N/A	N/A

Appendix 02: Contributors and Attendees in the Dissemination Workshop

Sl. No.	Name	Affiliation
01	Dr. Md. Rezaul Karim	Professor, Urban and Rural Planning Discipline, Khulna University
02	Dr. Md. Ashraful Alam	Professor, Urban and Rural Planning Discipline, Khulna University
03	Dr. Md. Ahsanul Kabir	Professor, Urban and Rural Planning Discipline, Khulna University
04	Dr. Sheikh Md. Mursalin Mamun	Professor, Urban and Rural Planning Discipline, Khulna University
05	Dr. Kazi Saiful Islam	Professor, Urban and Rural Planning Discipline, Khulna University
06	Dr. Md. Ashiq Ur Rahman	Professor, Urban and Rural Planning Discipline, Khulna University
07	Dr. Md. Zakir Hossain	Professor, Urban and Rural Planning Discipline, Khulna University
08	Dr. Tanjil Sowgat	Professor, Urban and Rural Planning Discipline, Khulna University
09	Dr. Fawzia Farzana	Professor, Urban and Rural Planning Discipline, Khulna University
10	Md. Salauddin	Associate Professor, Urban and Rural Planning Discipline, Khulna University
11	Md. Mostafizur Rahman	Associate Professor, Urban and Rural Planning Discipline, Khulna University
12	Dr. Shilpi Roy	Associate Professor, Urban and Rural Planning Discipline, Khulna University
13	Rabeya Sultana Leya	Associate Professor, Urban and Rural Planning Discipline, Khulna University
14	Dr. Mohammed Shariful Islam	Assistant Professor, Urban and Rural Planning Discipline, Khulna University
15	Maitry Biswas	Assistant Professor, Urban and Rural Planning Discipline, Khulna University
16	Mahmud-Uz-Zaman	Assistant Professor, Urban and Rural Planning Discipline, Khulna University
17	Mostaq Ahmed	Assistant Professor, Urban and Rural Planning Discipline, Khulna University
18	Lopa Islam	Assistant Professor, Urban and Rural Planning Discipline, Khulna University
19	Dr. Afroza Parveen	Dean, Science, Engineering and Technology School, Khulna University
20	Dr. Md. Nasif Ahsan	Dean, Social Science School, Khulna University
21	Dr. Md. Mustafa Saroar	Professor and Head, Urban and Regional Planning Discipline Khulna University of Engineering and Technology
22	Dr. Md. Shafiqur Rahman	Professor, Urban and Regional Planning Discipline, Jahnagnirnagar University
23	Dr. Md. Akter Mahum	Professor, Urban and Regional Planning Discipline, Jahnagnirnagar University
24	Dr. Md. Ghulam Murtaza	Vice-President, Centre for Urban Studies
25	Dr. Md. Ziaul Haider	Director, IQAC, Khulna University
26	Dr. Md. Matiul Islam	Additional Director, IQAC, Khulna University
27	Dr. Jagadish Chandra Joarder	Additional Director, IQAC, Khulna University
28	Md. Asif Ahmed	National Consultant, World Head Organization
29	Md. Tanvir Ahmed	Planning Officer, Khulna Development Authority
30	Fazle Reza Sumon	President, Bangladesh Institute of Planners
31	Aamanur Rahman	President, Khulna University Planners Alumni
32	Md. Fazlul Haque	Senior Planner, Urban Development Directorate
33	Md. Mosheur Rahman	Town Planner, Sydney Municipality, Australia

Appendix 03: Program Self Assessment Committee (PSAC)

Sl. No.	Name	Affiliation	Designation
01	Dr. Md. Ashiq Ur Rahman	Professor, URP Discipline, KU	Chairman
02	Dr. Kazi Saiful Islam	Professor, URP Discipline, KU	Member
03	Dr. Md. Zakir Hossain	Professor, URP Discipline, KU	Member

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OBE
OUTCOME
BASED
EDUCATION

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