

Booklet 2019

**DEPARTMENT OF URBAN AND
REGIONAL PLANNING**



KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Khulna University of Engineering & Technology (KUET)
KUET at a glance

| | | |
|-----|--|--|
| 1. | Year of Establishment of Khulna Engineering College | 1967 |
| 2. | Initiation of Academic activities | 03 June, 1974 |
| 3. | Year of Establishment of BIT Khulna | 01 July, 1986 |
| 4. | Year of Establishment of Khulna University of Engineering & Technology | 01 September, 2003 |
| 5. | Campus Area | 101 acre |
| 6. | Institutes | 03 |
| 7. | Number of Faculties | 03 |
| 8. | Number of Departments | 20 |
| 9. | Degrees Offered | BSc Eng, BURP, BArch, MSc Eng, MURP, MSc/MPhil and PhD |
| 10. | Number of Residential Halls | Boys-6, Girls-1 |
| 11. | Number of Students | Undergraduate: 4954 & Postgraduate: 1138 |
| 12. | Number of Teachers | 343 |
| 13. | Number of Officers | 163 |
| 14. | Number of Office Staffs | 290 |
| 15. | Number of Laboratories | 40 & English Language Lab-1 |
| 16. | Number of Libraries | Central Library-1, Departmental Library-14 |
| 17. | Number of Computer Centers | Central Computer Center-1 Departmental Computer Center-12 |
| 18. | Transport | Bus-8, Microbus-4, Car-1, Ambulance-2, Pajero-2 |
| 19. | PABX & Information Technology | PABX with 450 Line Capacity, Campus Wide Optical Fiber, Backbone Network with 301 Mbps Bandwidth, E-mail, Internet facilities |
| 20. | Auditorium | Auditorium with sound system |
| 21. | Extracurricular activities | Central & Hall-wise extracurricular activities run by DSW office |
| 22. | Leisure/Recreation | Student's Play Ground, Tennis Court, Gymnasium, Debating Society, Teachers Club & Employees Club |
| 23. | Water Treatment Plant | A water treatment Plant for KUET campus |
| 24. | Campus Facility | Central Mosque-1, Hall Mosque-3, Hall Mondir-1, Medical Center, University Club & Guest House, Bank, Post Office, Cafeteria, Ponds, Departmental Store, Mukto Mancha |
| 25. | Stipend | RamijuddinSreeti Trust, Dr. Nasim Uddin Waqf Trust, KUET Excellence Foundation Hashimato Scholarship, KCC-FSM Scholarships |
| 26. | Schools | Primary Schools, High School |



INAUGURATION OF URP BUILDING



Department of Urban and Regional Planning

Urban and Regional Planning (URP) is the process by which communities attempt to control, design and develop their physical environments. It has been practiced under many names i.e. town planning, city planning, community planning, land use planning and physical environment planning. The objective of planning is the “physical environment,” which is taken to mean land and its uses, along with everything that has tangible existence on or beneath the land surface. Planning also includes the manner and style by which buildings are laid out in a city, and the design of public places.

A variety of issues falls within the scope of URP, depending partly on the geographical scale of the planning area. Regional planners are concerned with such matters as the protection of farmland or other valued resource sites (e.g. forests, mineral deposits, seashores, lakeshores); the preservation of unique natural or historical features; the locations of highways and other transport facilities, such as pipelines or airports; and the growth prospects of communities located throughout the region. If the region is organized around a large city, the planners must take into account the problems caused by city’s expansion, and its impact on surrounding countryside and nearby towns.

The importance of URP for a developing country like Bangladesh can hardly be over emphasized. Bangladesh has a shortage of planner. With its limited land capacity and high population density, all the cities of Bangladesh show rapid urbanization. Moreover, during the last few years, urban growth rates and the number of municipality have increased noticeably. Without proper planning, this growth trends and newly established municipalities will create more serious social, environmental and other problems, which may lead to the urban areas inhabitable for the city dwellers. To promote development of physical environment of this country/region increased number of planners should be produced.

The Department of Urban & Regional Planning (URP) has started its’ academic programme in February 10, 2011 with two teachers and 60 students under the Faculty of Civil Engineering for offering the degree of Bachelor of Urban & Regional Planning (BURP).

Department of Urban and Regional Planning at a Glance


| | |
|-----------------------|---|
| Established | 10-02-2011 |
| Head | Prof. Dr. Md. Mustafa Saroar |
| Location | URP Building, KUET |
| Phone | +88041-774050, +88041-769468-75, Ext: 650 |
| Fax | +88041-774403 |
| E-mail | headurp@kuet.ac.bd |
| Website | www.kuet.ac.bd/URP |
| No. of Faculty member | 17 |
| Number of Students | BURP (240), MURP (28), PhD (1) |
| Degree offered | BURP, MURP & PhD |
| Laboratory (Lab) | (i) GIS, Remote Sensing and PhotogrammetryLab, (ii) Engineering Surveying and Cartography Laboratory Lab (iii) Urban Planning and Transport |






Simulation Lab (iv) Urban Environmental Engineering and Planning Laboratory (v) Planning Information System (PIS) Lab

URP has also been introduced in Bangladesh University of Engineering & Technology (BUET), Rajshahi University of Engineering & Technology (RUET), Chittagong University of Engineering & Technology (CUET), Pabna University of Science and Technology (PUST), Jahangirnagar University (JU) and Khulna University (KU).

Faculty Members of KUET URP

| Profile | Name & Contact | Position | Major Degree | Area of Research Interest |
|---|---|---------------------|-----------------------------|--|
|  | Dr. Md. Mustafa Saroar <i>saroar.mustafa@yahoo.com</i> | Professor | PhD | Climate Change Adaptation & Disaster Risk Reduction Sustainable Livelihood & Food Security Multifunctional Wetland & Coastal Management Ecosystem Services & Sustainable Urban Environmental Management Resilient Socio-ecological System Planning |
|  | Tusar Kanti Roy <i>tusarkroy@urp.kuet.ac.bd,</i> <i>tusarpln@yahoo.com</i> | Associate Professor | PhD (ongoing) | Urban area planning, Environmental planning and management Climate change, Urban green space, Landscaping, Solid waste management, Water and sanitation |
|  | Muhammad Salaha Uddin <i>msupavel@urp.kuet.ac.bd,</i> <i>msupavel@yahoo.com</i> | Assistant Professor | PhD (ongoing-on leave) | Transportation and environmental policy and planning, Urban and social policy, Application of GIS in urban planning. |
|  | Momtaj Bintay Khalil <i>momtaj@urp.kuet.ac.bd,</i> <i>moon.nusha@gmail.com</i> | Assistant Professor | PhD (ongoing-on leave), MUD | Climate change adaptation in coastal context, Indigenous knowledge and grassroots technology in coastal settlements, Disaster risk reduction, Urban Village, Urban regeneration and transportation policy. |

| Profile | Name & Contact | Position | Major Degree | Area of Research Interest |
|---|---|---------------------|------------------------|---|
|  | Dr. Md. Manjur Morshed <i>mmorshed@urp.kuet.ac.bd,</i> <i>manjurmorshedkhan@gmail.com</i> | Assistant Professor | PhD | Informality, Civil Society, Land and Housing, Coastal Landuse, Urban and Regional Planning |
|  | Md. Esraz-Ul-Zannat <i>esraz@urp.kuet.ac.bd,</i> <i>esrazuz@gmail.com</i> | Assistant Professor | MURP | Disaster Management, Geospatial Applications in Water, Environment and Climate Change |
|  | Saima Rahman <i>rahman.saima@urp.kuet.ac.bd,</i> <i>rahman.saima@yahoo.com</i> | Assistant Professor | MURP | Unplanned Urbanization & Disaster Management, Environmental Studies, Urban Economy and Social Policy Management |
|  | Md. Mokhlesur Rahman <i>mrahman03@urp.kuet.ac.bd,</i> <i>mrahman_urp@yahoo.com</i> <i>mrahman.buet03@gmail.com</i> | Assistant Professor | PhD (ongoing-on leave) | Transport Planning and Engineering, Climate Change and Disaster Risk Management, Econometric Modeling, Application of Geospatial Technologies in Transportation and Environment |
|  | Palash Chandra Das <i>pcdas@webmail.kuet.ac.bd,</i> <i>chandra.palash46@gmail.com</i> | Assistant Professor | BURP | Geospatial Applications in Transport and Environment |
|  | Md. Sabbir Sharif <i>mssharif.kuet@yahoo.com,</i> <i>mssharif@urp.kuet.ac.bd</i> | Lecturer | PhD (ongoing-on leave) | Transportation planning and management, Land use planning and management, Application of GIS in urban Planning |
|  | Tanmoy Chakraborty <i>tanmoy.chakraborty@webmail.kuet.ac.bd,</i> <i>tanmoy.ch.55@gmail.com</i> | Lecturer | MSc (ongoing-on leave) | Climate Change, Geospatial Applications in Planning |
|  | Ms. Azmeri Ferdous <i>azmery@urp.kuet.ac.bd,</i> <i>azmerimomi@gmail.com</i> | Lecturer | BURP | Land Use Planning and Management, Rural Development Planning, Urban Housing, Environmental Planning |

| Profile | Name & Contact | Position | Major Degree | Area of Research Interest |
|---|---|----------|--------------|--|
|  | Mr. Khondaker Md. Mohiuddin Ekram <i>mohiuddinekram@urp.kuet.ac.bd,</i> <i>mohiuddinekram@gmail.com</i> | Lecturer | BURP | Public Health, Urban Policy. |
|  | Mr. Showmitra Kumar Sarkar <i>showmitrasarkar@urp.kuet.ac.bd,</i> <i>mail4dhrubo@gmail.com</i> | Lecturer | BURP | Geospatial Applications in Water and Environment |
|  | Ms. Shuvra Sikder <i>shuvrasikder12@gmail.com</i> | Lecturer | BURP | Environmental Planning, Disaster Management. |
|  | Mr. Md. Nazmul Haque <i>nhaque.kuet13@gmail.com</i> | Lecturer | BURP | Environmental Planning and Management; Disaster Management; Solid Waste Management. |
|  | Mr. Sharfan Upaul <i>u.sharfan5050@gmail.com</i> | Lecturer | BURP | Transportation planning and management, Environmental Planning and Disaster Management |

Education

Undergraduate Programme

Department of Urban and Regional Planning has been offering 4 years Bachelor of Urban and Regional Planning (BURP) degree in the field of urban and regional planning. The object of this programme is to equip students with diversity of skills required for urban and regional planning. The admission requirements for BURP programme are as per the specified standard of the university admission. The students are admitted into the BURP programme following the undergraduate admission procedure of the university. At least 160 credit hours and the entire requirement to fulfil this degree must be completed within 4 academic years. Under this programme there is provision of 60 seats for each batch. One advisor is appointed for each student who advises the student for his/her academic programme. There is an Academic Committee of Undergraduate Studies (ACUG) of this department which is responsible for monitoring, evaluation and upgrading the performance of the overall course system.

Besides, this department offers MURP and PhD as well.

Postgraduate Programme

Masters of Urban and Regional Planning (MURP) degree in the field of urban and regional planning is also offered by the department. It takes 3 semesters to complete the theory courses of the MURP Programme. A student needs to complete 36 credits in terms of theory courses and thesis combined. The objective of this programme is to equip students with diversity of skills required for urban and regional planning. The admission requirements for MURP programme are as per the specified standard of the university admission. The students are admitted into the MURP programme following the undergraduate admission procedure of the university. Under this programme there is provision of 10 seats for each batch. One supervisor is appointed for each student who supervises the student for his/her academic programme. There is an Academic Committee of Postgraduate Studies (ACPG) of this department which is responsible for monitoring, evaluation and upgrading the performance of the overall course system.

Major Field of Studies

The basic concentration of the undergraduate programme covers the following functional areas: Urban, physical and land use planning, Rural and regional planning, Transportation studies and planning, Environmental, natural resource planning and disaster management, Housing, real estate development and project planning, GIS, remote sensing and photogrammetry, Urban and social policy development and development planning, Strategic and statutory planning. Besides, some functional areas of the course curriculum also covers some technical aspects to improve student's technical skills like communication skills, analytical skills, cartography and programming skills.

Academic Support Facilities

Since the opening of the department the authority is committed and continuously working to develop facilities for the students. The department already has its very own 5-storied building established in the year of 2015. Several numbers of labs and studios along with the necessary equipments and instruments have been developed. Class rooms are also equipped with audio-visual/multimedia facilities.

Physical Facilities in the URP Building

| Facilities Name | Location | Student Capacity | Use | Components |
|------------------------|-----------------|------------------|--|---|
| Classroom cum Studio 1 | 1st Floor (209) | 60 persons | <ul style="list-style-type: none"> ▪ Classroom for 1st year student ▪ Studio for Basic Design in Architecture; Communication and Presentation Techniques | <ul style="list-style-type: none"> ▪ Typically equipped with a whiteboard, adequate desks and chairs for students ▪ Visual capabilities (i.e., projector, computer) and Internet access |

| Facilities Name | Location | Student Capacity | Use | Components |
|---|--------------------|------------------|---|--|
| Classroom cum Studio 2 | 1st Floor (210) | 60 persons | <ul style="list-style-type: none"> Classroom for 2nd year student Studio for Social and Physical Surveys; Landscape Planning and Design; Site and Area Planning | |
| Classroom cum Studio 3 | 3rd Floor (407) | 60 persons | <ul style="list-style-type: none"> Classroom for 3rd year student Studio for Urban Planning; Transportation Planning; Rural Planning | |
| Classroom cum Studio 4 | 3rd Floor (408) | 60 persons | <ul style="list-style-type: none"> Classroom for 3rd year student Studio for Environmental Planning and Management; Regional Planning; Project Planning; Participatory Planning | |
| Engineering Surveying and Cartography Laboratory | Ground Floor (101) | 60 persons | <ul style="list-style-type: none"> Demonstrating survey equipment | <ul style="list-style-type: none"> Survey equipment (i.e., Differential GPS, Handheld GPS, Total Station, Auto-Level, Theodolite, Plane table, Prismatic compass, Engineer's chain etc.) Visual capabilities (i.e., projector, computer) and Internet access |
| GIS, Remote Sensing and Photogrammetry Laboratory | 3rd Floor (409) | 60 persons | <ul style="list-style-type: none"> Studio for GIS, Remote Sensing and Photogrammetry; Computer Applications in Planning Training and Workshop on GIS and RS | <ul style="list-style-type: none"> 60 Computer for Students with LAN connection Visual capabilities (i.e., projector, base computer) and Internet access Scanner |

| Facilities Name | Location | Student Capacity | Use | Components |
|---|--------------------|------------------|---|--|
| | | | <ul style="list-style-type: none"> Research work related to spatial tools and technology Image Processing Spatial Statistical Analysis Modelling and Simulation | <ul style="list-style-type: none"> Plotter Printer and A4 Color printer Authorized ArcGIS 10.1 and ERDAS Imagine Software |
| Urban Planning and Transport Simulation Lab | Ground Floor (102) | | <ul style="list-style-type: none"> Research work related to simulation and modelling on transportation planning | <ul style="list-style-type: none"> Visual capabilities (i.e., projector, computer) and Internet access Computer with authorized simulation software |
| Urban Environmental Engineering and Planning Laboratory | Ground Floor (103) | 10 persons | <ul style="list-style-type: none"> Research work related to Environmental planning and management | <ul style="list-style-type: none"> Environment quality measuring equipment (i.e., air pollutant meter, water quality meter, noise level meter, temperature meter, soil salinity meter etc.) |
| Planning Information System (PIS) Lab | (to be announced) | | | |
| Multipurpose Room | 3rd Floor (406) | 120 persons | <ul style="list-style-type: none"> Studio for Graphics for Planners; Cartography; Drawing Training and Workshop Seminar and Meeting | <ul style="list-style-type: none"> 60 drawing table for Students Visual capabilities (i.e., projector, computer) and Internet access |
| Departmental Rental Library | 1st Floor (204) | 15 persons | <ul style="list-style-type: none"> Printed and online materials covering a wide variety of academic fields related to urban and regional planning | <ul style="list-style-type: none"> Well-furnished library Around 500 books and journals Modern computers and Internet access |

| Facilities Name | Location | Student Capacity | Use | Components |
|--------------------|-------------------------|--------------------|---|--|
| Departmental Lobby | 1st Floor and 3rd Floor | 10 persons in each | <ul style="list-style-type: none"> Group discussion and lab work | <ul style="list-style-type: none"> Equipped with adequate desks and chairs for students and Internet access |

Research and Development Activities of the Department

The department is relatively young; within a decade of establishment, the department has organized some successful events related to Research and Development. The department has advance instruments and equipment with laboratories for study different aspects of urban and regional planning, particularly transportation supply and demand analysis, disaster management, salinity problems in coastal areas, housing demand, water supply and sanitation problems, solid waste management, natural resources management etc.

Research Projects

| Project Title | Funding Authority | Investigators |
|---|--|---|
| Response of Natural Disasters through Resilience: Addressing Extreme Climatic Disasters to Annihilate the Insecurity of Food, Nutrition and Livelihood – A Study on Disaster Affected Communities in Bangladesh | DFID (in collaboration with University College London) | Dr. Md. Mustafa Saroar, Md. Esraz-UI-Zannat, Md. Mokhlesur Rahman |
| Water as Leverage for Resilient Cities in Asia | RVO-Netherland Government | Dr. Md. Mustafa Saroar Showmitra Kumar Sarkar |
| Country Study: Disaster, Climate Change and Poverty in Bangladesh | Food and Agriculture Organization (FAO) | Dr. Md. Mustafa Saroar Md. Esraz-UI-Zannat |
| Salt-water Shrimp Induced Salinity and Its Effect on Rice Farmers: An Evidence from Satkhira, Bangladesh | South Asian Network for Development and Environmental Economics (SANDEE) | Dr. Md. ManjurMorshed |
| Detailed GIS Mapping for LIC Units in Some Selected Slums (eight slums) in Dhaka City | WSUP (Water and Sanitation for the Urban Poor), UK | Md. Esraz-UI-Zannat |
| Pro-Poor Market-Based Solutions for Fecal Sludge Management | SNV (Netherlands Development Organization) | Md. Esraz-UI-Zannat |

| Project Title | Funding Authority | Investigators |
|--|--|--|
| Preparation of Detailed Area Development Plan for Khulna City | Govt. of Bangladesh | Tusar Kanti Roy |
| Studying the Cause of Water Logging at MatshyaBhaban Campus, ArabpurJashore with Proposed Design and Drawing of the Structures for Removing Water Logging And Preparation of Design, Drawing, Estimate & Supervision of Fish Fry and Fingerling Sale Center at Chanchra, Jashore | A project of the Government of Bangladesh | TusarKanti Roy, Md. Esraz-UI-Zannat |
| Collection and Review of Secondary Information for Formulation Phase of the FSM (Faecal Sludge Management) Project in Bangladesh | SNV (Netherlands Development Organization) | Tusar Kanti Roy |
| Topographic Survey for Rampal 1320MW Thermal Power Plant (Second | A project of the Government of Bangladesh | Muhammad Salaha Uddin, Md. Esraz-UI-Zannat |
| Layout Planning and Design for New Campus, KUET | KUET | Department of URP, KUET |
| Exploring Plantation-Microclimate Convergence in the Planned High Income and Unplanned Low Income Residential Areas of Climate Change Vulnerable Khulna City | University Grant Commission (UGC), Bangladesh | Tusar Kanti Roy |
| Assessment of Demand and Supply of Public Transport Services in Khulna City | University Grant Commission (UGC), Bangladesh | Muhammad SalahaUddin |
| Soil Salinity Change in Different Time Period and Its Impact on Land Use Change in Southern Coastal Area of Bangladesh | CASR (University Grant Commission, Bangladesh), KUET | Dr. Md. ManjurMorshed |
| Compact Township titled as PalliJanapath is a Remedy against Environmental Challenges and Sluggish Economy in Bangladesh | University Grant Commission (UGC) | Md. Esraz-UI-Zannat |

| Project Title | Funding Authority | Investigators |
|--|--|--------------------------------------|
| Building Khulna as Water Resilient City through proper Urban Planning and Smart Water Management Technology | University Grant Commission (UGC), Bangladesh | Md. Esraz-UI-Zannat |
| Savings Mayur River and its Connected Canals of Khulna City | Transparency International Bangladesh (TIB) | Tusar Kanti Roy, Md. Esraz-UI-Zannat |
| Causes, Consequences and Remedies of Water Logging in Khulna City | Bangladesh Institute of Planners (BIP) | Tusar Kanti Roy |
| Developing a Waterbody Management Tool, Waterbody Management Guidebook and Training for City Corporation Officials | GIZ Bangladesh Barisal City Corporation (BCC) | Md. Esraz-UI-Zannat |
| Preparation of Development Plan for Fourteen Upazilas | Development Directorate (UDD) | Md. Esraz-UI-Zannat |
| Forecast based Preparedness – a new finance mechanism for improved disaster preparedness in Bangladesh | Bangladesh Red Crescent Society (BDRCS) and German Red Cross (GRC) | Md. Esraz-UI-Zannat |
| Consultancy Assignment on Slum-based Citizen Action Network (SCAN) Project | Solidarités International | Md. Esraz-UI-Zannat |

Several students are employed as Research Assistants (RAs) in these projects. Also, several research project proposals are being submitted to national and international organisations, which are currently under consideration for funding.

Rationale for Urban and Regional Planning

Khulna University of Engineering & Technology (KUET) is situated in the third largest industrial and second largest port city of Khulna. Khulna city, after 1990s has been showing its potential physical growth and expansion in the South and Western part with the influence of Rupsha Bridge connected to Mongla seaport and capital city Dhaka via the Mawa point of the Padma. Now a days, Khulna city is getting special attention at national and international level due to development and planning of some mega projects in this area like Padma Bridge at Mawa point, coal based thermal power plant in Rampal-Mongla, a large grain silo in Mongla, re-opening of big jute industries of Khalishpur-Daulatpur-Atra area, emerging new jute industries centering Khulna City bypass Road, shrimp

and fish processing industries in Rupsha-Labonchara area, Ship-building industry in Labonchara and Mongla area etc. Due to proximity and significance, Khulna city is an opportunity for taking into consideration for analysis and study related to URP issues. The establishment of the Department of Urban and Regional Planning (DURP) at KUET is a prompt attempt to meet the increasing demand of planners and to make an academic research ground to address the URP issues of the Southern part as well as of Bangladesh.

On successful completion of the undergraduate programme, the planners are expected to serve in public and private organizations consulting firms, NGOs and international development agencies. Job opportunities are also available for graduate planners in Universities and Research Institutes.

Future Plan of URP Department

The department is still working to ensure the academic excellence of current BURP programme. So, the special focus will be given to the proper setup of the department with adequate facilities. The department has future plan to develop the capacity and facilities for supporting quality education and research.

KUET is one of the reputed engineering universities in Bangladesh. As a new department the challenge of this department is to provide the high excellence education to the future graduate planners. The overall activities of the department are planned to meet the demand for skilled manpower in human settlement planning, development management and other related professional fields by providing a set of widely applicable training and experience and their application to the urban, rural and regional planning.

Scope of Work for a Planner in Bangladesh

Planners can work to bridge the gap between engineers and sociologists working in the development sectors. BURP/MURP graduates are expected to serve both public and private organizations.

They function in the public sector within federal/central, state/national, and local governments; also work in non-profit organizations and within the private sector in real estate development companies and planning or multi-disciplinary consulting firms.

City Corporations and Municipalities

There are several posts for planners in Ministries of Works, Planning, Agriculture, Communication, Local Government and Rural Department (LGRD) and other government agencies where planners can work. The President of BIP stated that in 2005 around 40 planners and again in 2009 – 2010 about 32 planners started their planning career in local government (e.g., municipality).

Urban Development Agencies

Planners can also start their career working in the different development authorities of Bangladesh such as Rajdhani Unnayan Karttripakkha (RAJUK), Chittagong Development Authority (CDA), Khulna Development Authority (KDA), Rajshahi Development Authority (RDA) and Urban Development Directorate (UDD).

Real Estate and Housing Development

Real estate sectors can incorporate planners while preparing housing schemes. Planners prepare feasibility report and development proposal for Real Estate Development, evaluate real estate projects cost estimation, implementation, monitoring and management. Some renowned housing and real estate firms are Eastern Housing Ltd., Bangladesh Development Group, and Building for Future etc.

Research Organizations

In Bangladesh, there are various research institute where planners can work such as DURP (BUET), IWFM (Institute of Water and Flood Management) (BUET), and JIDPUS (BUET) etc. Planners who are in teaching profession at various universities such as BUET, KUET, RUET, CUET, KU, JU also do research work.

NGOs and Donor Agencies

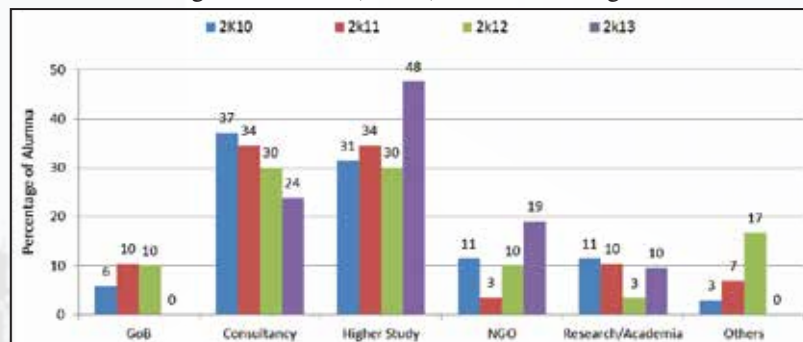
The majority of new planning students start work in the private sector or non – profit sector especially with NGOs and international aid organizations. Some NGOs where planners work are BRAC (Bangladesh Rural Advancement Committee), CARE (Cooperative for Assistance and Relief Everywhere), Oxfam, Save the children etc. Planners also take part in different international projects financed by WB (World Bank), ADB(Asian Development Bank), JICA (Japan International Cooperation Agency) , USAID (The United States Agency for International Development) etc.

URP Alumni in Professional Field

Public Organizations: Rajdhani Unnayan Kartripakkha (RAJUK), Rajshahi Development Authority (RDA)

Private Organizations: Development Design Consultants Ltd. (DDC), Rural Electrification Board (REB), Dhaka Transport co-ordination Authority (DTCA), Sheltech Pvt. Limited, Global Survey Consultant (GSC), Housing Consultants Limited, Engineering Consultants & Associates Limited, Land Survey Limited, EQMS Consulting Limited, Kazi IT, Inspira Advisory and Consultancy, Troyee Associates Ltd., Fiber @ Home and others.

NGOs: GIZ Bangladesh, Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP), Bangladesh Rural Advancement Committee (BRAC), Rangpur Dinajpur Rural Services (RDRS), Image Research and Consultancy Ltd., Disaster Management Watch (DMW), Internews Bangladesh.



URP Alumni in Higher Study

Bangladesh:

KUET URP Alumni are doing Masters (related fields of planning) in Bangladesh University of Engineering & Technology (BUET), Dhaka University, Jahangirnagar University (JU) and Khulna University of Engineering & Technology (KUET).

Abroad:

KUET URP Alumni are studying in some of the following universities which are very renowned worldwide for their global academic performance ranking.

1. University of IOWA, USA
2. University of Texas, Austin, USA
3. Texas State University, USA
4. University of Alabama, USA
5. Illinois State University, USA
5. Western Sydney University, Australia
6. Royal Melbourne Institution of Technology, Australia
7. University of Technology Sydney, Australia
8. Brock University, Canada
9. Technical University Berlin, Germany
10. Leibniz University Hannover, Germany

Students Activities

Student Associations

Urban and Regional Planning Students' Association (URPSA): The association organizes different events and cultural programs regularly. The head of the department is the president of the executive committee and one teacher is selected as the treasurer of this association. The other members of this committee are elected representatives of the students.

Design Integrated Society of KUET (DISK): This club regularly organizes trainings and workshops on Geographical Information System (GIS), Google SketchUp, AutoCAD and related software in spatial analysis and design sector. The aim of this club is to empower students with technical skills to boost up their confidence and problem solving capability both in personal and professional life.



SketchUp Training 2016

Regular Events

Plannation-2018: The event was organized by URPSA last year. This nation-wide program brought together 218 participants from 19 universities of Bangladesh and distinguished innovative minds engaged in the planning profession.



Plannation 2018

Cultural Program: The students of DURP spontaneously participate in the cultural programs organized by different cultural groups and organize regular events like cultural night, camp fire etc.



Camp Fire 2016



Cultural Programme 2016

Study Tour: The third year students of DURP arrange annual 2-3 day tour in different spots of Sundarbans or Kuakata sea beach. Final year students arrange “Country Tour” where they visit different parts of Bangladesh. Students also visit several other sites of their academic interest.



Sundarbans Tour 2015



Tungipara Tour 2014



Kuakata Tour 2016



Rag Tour 2016

Sports: Students also take part in different inter-department tournaments including football, cricket etc.



Departmental Cricket Team



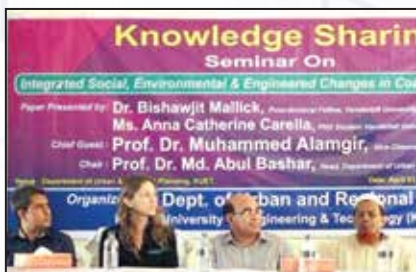
Football Team of 2K13 Batch

Special Day Observation: Department of URP regularly organizes rally and discussion sessions for celebrating special days like World Town Planning Day, World Habitat Day, and World Environment Day etc.



World Habitat Day 2018

Knowledge Sharing Seminar and Workshop: Department of URP organizes knowledge sharing seminars and workshops on a regular basis to share experiences and expertise of resource persons in the field of URP.



Knowledge Sharing Seminar 2014

Remarkable Achievements of the Student

- Champion in the poster competition (2012) organized by Bangladesh Institute of Planners (BIP).
- Runner-up in debate competition (2012) organized by BIP on the occasion of Young Planners Day.
- First runners-up in 4th Inter-Department Debate Competition, KUET (2013) both in Bangla and English version.
- Champion, 1st Runner-up and 2nd Runner-up in Undergraduate Planning Students' Case Study Competition arranged by BUET-URP (2014).
- Runner-up in "Brainstorming: IT based Business Idea Contest" in "DUITS 4th National Campus IT Fest" (2015).
- Champion in "Case Study Analysis" in "Cenovation-2015" at Islamic University of Technology (IUT) campus
- First Runner-up in the Inter-University Undergraduate Planning Students' Competition on Planning and Design of Compact Township in 2016.
- Champion in the Inter-University Poster Presentation Competition in "WRE Festival, 2017."
- Champion and 1st Runner-up in GIS Contest at the celebration of GIS Day 2018, organized by: Bangladesh Institute of Planners (BIP).
- Champion (2016), 1st Runner-up and 2nd Runner-Up (2018) in Undergraduate Thesis Competition organized by BIP on World Town Planning Day.



GIS Contest Team 2018



Debate Competition Team 2012

Undergraduate Course Contents

Course identification instructions

Each course is designated by 2 to 4 letters identifying the department, which offers the courses, followed by a 4-digit's number. The four digits of the URP course numbers have the following connotation:

- The first two-digits correspond to the year and term in which the course will be normally offered.
- The third digit identifies broad fields within the URP department namely
 - 1 for Urban, Physical and Land Use Planning
 - 2 for Rural and Regional Planning
 - 3 for Transportation Studies and Planning
 - 4 for Environmental, Natural Resources Planning and Disaster Management
 - 5 for Architectural
 - 6 for Housing, Real Estate Development and Project Planning
 - 7 for Urban, Social Policy Development and Development Planning
 - 8 for Surveying, Cartography, GIS and Remote Sensing.
 - 9 for Analytical, Research Methods and Computer Applications.
- The last digit is odd for theoretical and even for sessional or studio courses.

Distribution of courses

| Category of the Courses | Credit Hours | Percentage |
|-------------------------|----------------------|----------------|
| Humanities (Hum) | 14.5 Credits | 8.95% |
| Science (Math, Ch) | 10.5 Credits | 6.48% |
| Civil Engineering(CE) | 19.5 Credits | 12.04% |
| URP | 117.5 Credits | 72.53% |
| Total | 162.0 Credits | 100.0 % |

Summary of Undergraduate Courses and Credit Distribution

| Year | Term | Theory Courses | | Sessional Courses | | Total Number of Courses | Total Credit |
|------|------|----------------|---------|-------------------|---------|-------------------------|--------------|
| | | No. of Courses | Credits | No of Courses | Credits | | |
| 1st | 1st | 5 | 14 | 3 | 6 | 8 | 20 |
| | 2nd | 5 | 14 | 3 | 7.5 | 8 | 21.5 |
| 2nd | 1st | 5 | 15 | 3 | 4.5 | 8 | 19.5 |
| | 2nd | 5 | 14 | 3 | 7.5 | 8 | 21.5 |
| 3rd | 1st | 5 | 14 | 2 | 6 | 7 | 20 |
| | 2nd | 5 | 14 | 3 | 7.5 | 8 | 21.5 |
| 4th | 1st | 5 | 14 | 3 | 6 | 8 | 20 |
| | 2nd | 5 | 12 | 3 | 6 | 8 | 18 |

Summary of Undergraduate Courses

| Year | Term | Course Code | Course Title | Contact Hours | | | |
|--------------|--|--------------|---|---------------|-------------------------|-------------|-----------|
| | | | | Theory | Sessional | Credit | |
| 1st Year* | 1st Term* | Ch 1117 | Environmental Chemistry | 3 | 0 | 3 | |
| | | Hum 1117 | Functional English | 2 | 0 | 2 | |
| | | Math 1117 | Mathematics-I | 3 | 0 | 3 | |
| | | URP 1111 | History/Evolution of Human Settlements | 3 | 0 | 3 | |
| | | URP 1113 | Fundamentals of Planning Process | 3 | 0 | 3 | |
| | | Ch 1118 | Environmental Chemistry Lab | 0 | 3 | 1.5 | |
| | | Hum 1118 | English Skills Practices | 0 | 3 | 1.5 | |
| | | URP 1152 | Basic Design in Architecture | 0 | 6 | 3 | |
| | | Total | | | 14 | 12 | 20 |
| | | 1st Year* | 2nd Term* | Hum 1217 | Principles of Economics | 3 | 0 |
| Math 1217 | Mathematics-II | | | 3 | 0 | 3 | |
| URP 1211 | Urban Planning Principles | | | 3 | 0 | 3 | |
| URP 1251 | Introduction to Architectural History | | | 2 | 0 | 2 | |
| URP 1281 | Surveying and Cartography | | | 3 | 0 | 3 | |
| URP 1282 | Surveying and Cartography | | | 0 | 6 | 3 | |
| | Workshop | | | | | | |
| URP 1292 | Communication and Presentation Techniques Studio | | | 0 | 3 | 1.5 | |
| URP 1254 | Graphics for Planners | | | 0 | 6 | 3 | |
| Total | | | | 14 | 15 | 21.5 | |
| 2nd Year | 1st Term | CE 2107 | Construction Technology and Materials | 3 | 0 | 3 | |
| | | Hum 2117 | Sociology For Planners | 3 | 0 | 3 | |
| | | URP 2115 | Urban Planning Techniques | 3 | 0 | 3 | |
| | | URP 2113 | Site and Area Planning | 3 | 0 | 3 | |
| | | URP 2191 | Statistics for Planners-I | 3 | 0 | 3 | |
| | | CE 2108 | Construction Materials Lab | 0 | 3 | 1.5 | |
| | | URP 2182 | Social and Physical Surveys | 0 | 3 | 1.5 | |
| | | URP 2192 | Programming Techniques for Planners | 0 | 3 | 1.5 | |
| Total | | | 15 | 9 | 19.5 | | |
| 2nd Year | 2nd Term | CE 2241 | Principles of Environmental Engineering | 3 | 0 | 3 | |
| | | Hum 2217 | Public and Local Government Finance | 3 | 0 | 3 | |
| | | URP 2251 | Landscape Planning and Design | 2 | 0 | 2 | |
| | | URP 2281 | GIS and Remote Sensing | 3 | 0 | 3 | |
| | | URP 2291 | Statistics for Planners-II | 3 | 0 | 3 | |

| Year | Term | Course Code | Course Title | Contact Hours | | | | |
|--------------|--|--|--|---------------|--|-----------|-------------|-----|
| | | | | Theory | Sessional | Credit | | |
| | | URP 2252 | Landscape Planning and Design Studio | 0 | 6 | 3 | | |
| | | URP 2214 | Site and Area Planning Studio | 0 | 3 | 1.5 | | |
| | | URP 2292 | Computer Applications in Planning | 0 | 6 | 3 | | |
| | | Total | | | 14 | 15 | 21.5 | |
| | | 3rd Year | 1st Term | CE 3107 | Elements of Solid Mechanics | 3 | 0 | 3 |
| CE 3151 | Fundamentals of Transportation Engineering | | | 3 | 0 | 3 | | |
| Hum 3117 | Accounting and Auditing for Planners | | | 2 | 0 | 2 | | |
| URP 3161 | Housing and Real Estate Development | | | 3 | 0 | 3 | | |
| URP 3121 | Rural Development Planning-I | | | 3 | 0 | 3 | | |
| URP 3112 | Urban Planning Studio | | | 0 | 6 | 3 | | |
| URP 3182 | GIS and Remote Sensing Studio | | | 0 | 6 | 3 | | |
| Total | | | | 14 | 12 | 20 | | |
| 3rd Year | 2nd Term | | | CE 3207 | Elements of Civil Engineering Structures | 3 | 0 | 3 |
| | | | | CE 3261 | Water Resources Planning | 3 | 0 | 3 |
| | | URP 3231 | Transportation Planning | 3 | 0 | 3 | | |
| | | URP 3223 | Regional Development Planning | 3 | 0 | 3 | | |
| | | URP 3241 | Environmental and Natural Recourses Planning and Management (Optional) | 2 | 0 | 2 | | |
| | | URP 3211 | Neighborhood Plan and Community Development (Optional) | 2 | 0 | 2 | | |
| | | URP 3251 | Urban Design and Conservation (Optional) | 2 | 0 | 2 | | |
| | | URP 3291 | Operations Research and Systems Analysis (Optional) | 2 | 0 | 2 | | |
| | | URP 3232 | Transportation Planning Studio | 0 | 6 | 3 | | |
| | | URP 3222 | Rural Planning Studio | 0 | 6 | 3 | | |
| | | URP 3294 | Research Methodology | 0 | 3 | 1.5 | | |
| | | (One optional course to be taken in this term) | | | | | | |
| | | Total | | | 14 | 15 | 21.5 | |
| | | 4th Year | 1st Term | URP 4000 | Project/Thesis | 0 | 3 | 1.5 |
| | | | | URP 4161 | Project Planning and Management | 3 | 0 | 3 |
| URP 4171 | Legal Basis of Planning | | | 3 | 0 | 3 | | |
| URP 4141 | Environmental Planning and Management | | | 3 | 0 | 3 | | |

| Year | Term | Course Code | Course Title | Contact Hours | | |
|----------|--|--|---|---------------|-----------|--------|
| | | | | Theory | Sessional | Credit |
| 4th Year | 1st Term | URP 4111 | Utility Services and Infrastructure Planning | 3 | 0 | 3 |
| | | URP 4175 | Resettlement Planning (Optional) | 2 | 0 | 2 |
| | | URP 4113 | Tourism Planning (Optional) | 2 | 0 | 2 |
| | | URP 4121 | Rural Development Planning-II (Optional) | 2 | 0 | 2 |
| | | URP 4142 | Environmental Planning and Management Studio | 0 | 3 | 1.5 |
| | | URP 4124 | Regional Planning Studio | 0 | 6 | 3 |
| | | URP 4100 | Internship (Non Credit) | - | - | - |
| | | (One optional course to be taken in this term) | | | | |
| | | Total | 14 | 12 | 20 | |
| | 2nd Term | URP 4000 | Project/Thesis | 0 | 6 | 3 |
| | | URP 4273 | Urban Governance | 2 | 0 | 2 |
| | | URP 4275 | Development Planning | 3 | 0 | 3 |
| | | URP 4223 | Urban and Regional Economics | 3 | 0 | 3 |
| | | URP 4217 | Coastal and Special Zones Planning (Optional) | 2 | 0 | 2 |
| URP 4215 | | Land Development and Management (Optional) | 2 | 0 | 2 | |
| URP 4277 | | Introduction to Policy Planning and Development (Optional) | 2 | 0 | 2 | |
| URP 4243 | | Hazardous and Disaster Management | 2 | 0 | 2 | |
| URP 4262 | | Project Planning Studio | 0 | 3 | 1.5 | |
| URP 4272 | | Participatory Planning Studio | 0 | 3 | 1.5 | |
| | (One optional course to be taken in this term) | | | | | |
| | Total | 12 | 12 | 18 | | |

Grand Total = 162

Detail Outlines of Undergraduate Courses

(Effective from Session 2012-2013)

FIRST YEAR, FIRST TERM

Ch 1117:Environmental Chemistry 3.00 credits; 3 Hours/week, Theory
Group Chemistry: properties of alkaline metals, alkaline earth metals, transition metals.

Radioactivity: theory of radioactivity, radioactive decay, Neutron Proton ration, Binding energy, Mass defect, Nuclear force.

Chemical bonding: VBT, MOT, H-bonding, Vander waal's force.

Properties of solutions, acids and bases.

Organic Compounds:organic reactions and their mechanisms, chemistry of polymers.

Introduction to environmental science and scope, environmental segments, Lithosphere, Hydrosphere, Biosphere and atmosphere, Composition of atmosphere.

Industrial hazards, air and water pollutants, sources and different kinds of pollutants, toxicity of pollutants.

Discussion on the properties of water and waste water, Characteristics of wastewater, Transformation processes of pollutants, Corrosion

Hum 1117:Functional English

2.00 credits; 2 hours/week,Theory

General Discussion: Introduction, Mastering Various Approaches to Learning English.

Grammatical Problem: Construction of Words and Sentences, Grammatical Problems, Sentence variety and style, Conditionals, Grammar and Usages, Vocabulary and Diction, Clauses, Prefixes & suffixes, Synonyms and Antonyms.

English phonetics: The Phonetics systems and correct English Pronunciation.

Reading Skill: Discussing Readability, Scan and Skim Reading, Generating Ideas through Purposive Reading, The reading of Selected Stories.

Writing Skill: Principles of Effective Writing, Organization in writing, Planning and Development, Composition, Precis writing, Paragraph writing, Amplification, Free Composition.

General Strategies for the Writing Process: Generating Ideas, Identifying Audiences and Papooses, Constructing Arguments, Stating Problems, Drafting and Finalizing.

Approaches to Communication: Communication Today, Business Communication, Organization and organizational Behavior, Developing Intra-personal Interpersonal Relationship, Introducing Dialogue.

Specific Applications of Tenders and Quotations, Resumes and Job Letters, Journal Articles, Technical and Scientific Presentation.

Math 1117:Mathematics-I

3.00 credits; 3 Hours/week, Theory

Algebra: Functions: Explicit, implicit, hyperbolic and logistic functions with their graphical representations.

Spherical Trigonometry: Spherical triangle; Relations between sides and angles of a spherical triangle; solution of Spherical triangle (right and oblique).

Matrix: Definition of a matrix, algebra of matrices, transpose of a matrix, types of matrices, elementary transformation of matrices , inverse of matrix, rank , formation and solution of linear equations.

Geometry: Coordinate geometry in two dimensions: Change of axes, General equation of second degree; Coordinate geometry in three dimensions: Systems of coordinates and their relations; distance between two points, Direction cosines and direction ratios, Angle between two lines, Distance of a point from a line; Plane: , equations of plane in different forms; distance of a point from a plane; angle between two planes; Straight line: Equations of straight line, plane containing a line, coplanar lines, shortest distance between two lines.

URP 1111: History/Evolution of Human Settlements 3.00 Credits; 3 hours/week, Theory
The importance and significance of the study of history; Human settlements as the physical expression of a civilization; Origin and evolution of Human settlements during the early civilization period.

History and growth of Human settlements during the ancient periods: the Nile, the Mesopotamian, the Greek, and the Roman and Indus civilizations.

Historical background and growth of Human settlements during the medieval and pre-industrial revolution periods: the roles of churches, guilds and castles, guilds and mercantilism.

The Effects of the Dark Age and the Renaissance: gunpowder, congestion and slums. The Industrial Revolution and its impact on Human settlements and public health: inventions and use of machines, transportation and communication.

The growth of factory towns and its effects.

Growth and emergence of concepts of modern cities: the garden city, city beautiful movement, linear city, Victorian city, etc.

The growth and development of the Human settlements/towns in Bangladesh: the city site – Pundravarddhan, Vanga, Samata, Harikela, etc.

URP 1113: Fundamentals of Planning Process 3.00 credits; 3 hours/week, Theory
The basic generic concepts of planning: definition of planning, dimensions of planning, spatial versus sectoral planning, the variants of spatial and physical planning.

The planning process: the different stages in the continuous and cyclical process. Roles of planners, decision makers and stakeholders in the planning process.

Concepts of planning theory: rational approach, advocacy planning, adaptive planning, systems approach, Incremental Approach of Planning Mixed Scanning of Planning. Radical Planning

Planning process in Bangladesh: sectoral and perspective planning at the national level, integrated area development planning at regional level and spatial planning at the local level.

Ch 1118:Environmental Chemistry Lab 1.5 credits; 3 hours/week, Sessional
Sessional classes based on Ch 1113.

Hum 1118:English Skills Practices 1.5 credits; 3 hours/week, Sessional
Grammar: Tense, Article, Preposition, Subject Verb Agreement, Clause, Conditional and Sentence Structure.

Vocabulary Building: Correct and Precise Diction, Affixes, Level of Appropriateness; Colloquial and standard, Informal and Formal.

Developing Reading Skill: Strategies of Reading-Skimming, Scanning Prediction, Inference; Analyzing and Interpreting Variety of Texts; Practicing Comprehension from Literary and Non Literary Texts.

Developing Writing Skill: Sentences, Sentence Variety, Generating Sentences; Clarity and Correctness of Sentences; Linking Sentences to Form Paragraphs. Writing Paragraph, Essays, Reports, Formal and Informal Letters.

Listening Skill and Note Taking: Listening to Recorded Texts and Class Lectures and Learning to Take Useful Notes Based on Listening.

Developing Speaking Skill: Oral Skills Including Communicative Expressions for Personal Identification, Life at Home, Giving Advice and Opinion,

Instructions and Directions, Requests, Complaints, Apologies, Describing Peoples and places, Narrating events.

URP 1152:Basic Design in Architecture 3.00 credits; 6 hours/week, Sessional
Design in nature, their understanding and evaluation; Elements of Design; point, line plane, volume, form and space. Composition: two dimension and three dimension Principles of design; balance, harmony, emphasis, propagation, proportion, scale axis, symmetry, asymmetry etc.

FIRST YEAR, SECOND TERM

Hum 1217:Principles of Economics 3.00 credits; 3 Hours/week, Theory
Introduction: definition, scope, subject matters, relation with other social sciences and importance of studying with respect to urban and rural planning.

Theories of demand and supply and production: related concepts, types, cost and revenue curves, equilibrium analysis, factors of production, returns of scale.

Theories of firm: various market conditions, determination of equilibrium.

Theories of income distribution: rent, wage, profit and interest, investment and employment, inflation.

National income: definition, types, measuring method.

Principles of banking: evolution of banking system, central, commercial and specialized banking system, credit policy.

Welfare economics: definition, Pareto optimality, social welfare maximization.

Linear programming and input-output analysis: concepts, use, techniques, Leontief matrix

Math 1217: Mathematics-II 3.00 credits; 3 hours/week, Theory
Differential Calculus: Limit, continuity and differentiability, successive differentiation, maxima and minima of functions of single variable.

Integral calculus: Integration by substitution and by parts, standard integrals, definite integrals, area under plane curves.

Differential Equation: Solution of 1st order differential equation by various methods, solutions of general linear equations of 2nd and higher order.

URP 1211: Urban Planning Principles 3.00 credits; 3 hours/week, Theory
Definition, objective and scope of urban planning; Urban functions and Urban Systems: activities and land use components. Modern principles of planning-town centre, residential area, recreational area, industrial area, commercial area, transportation network, metropolitan region, satellite town, new town, special areas like airport, seaport, railway station, bus terminal.

URP 1251: Introduction to Architectural History 2.00 credits; 2 hours/week, Theory
Introduction to architecture and architectural Design.

Evaluation and History of Architecture: Ancient, Classical, Roman, Gothic Renaissance, Baroque, Rococo, modern and contemporary periods. Art, culture and social movement and their impact in Architecture. Environmental and regional influences on architecture. Trend of architecture in Bangladesh.

URP 1281: Surveying and Cartography 3.00 credits; 3 hours/week, Theory
Definition and Scope of Engineering Survey: definition, scope, importance and its uses.
Different types of engineering survey: reconnaissance survey; plane table
survey; traverse survey; leveling and contouring; route surveying; land
surveying. Area and volume calculation.

Cartographic surveying; introductions to photogrammetry; remote sensing and
global positioning system. Types of maps; types of maps commonly used in
Bangladesh. Uses of scales and scale conversion. Elements of Map: scale,
communication objectives, subject matter and function. Mapping techniques:
physical models, photomaps, sketch maps, cartograms. Map analysis and map
interpretation. The coordinate system and map scale. Relative and absolute
position methods/Map Projections: Local grids, Geographical grids, Lambert's
methods, Universal Transverse Mercator Grid, Land partitioning systems. Map
projection techniques: planar, cylindrical, conical, etc. Terms and words related
with land surveying in Bangladesh (CS, RS, Mouza, Sheet, Dag No, alluvion
and dilluvion land etc.)

URP 1254: Graphics for Planners 3.00 credits; 6 hours/week, Sessional
Line drawing quality, study of scale, lettering.

Free hand drawing and mechanical drawing; plan, section, elevation, isometric
drawings of simple objects. One and two point perspectives; shade and shadow
of 3 dimensional drawings.

Introduction to the application of Computer Aided Design (CAD).

URP 1282: Surveying and Cartography Workshop* 3.00 credits; 6 hours/week, Sessional
*2 weeks of field survey related to course URP 1281 will be arranged after First
Year, Second Term or any other suitable time.

The cartography studio classes will be conducted on every week.

URP 1292: Communication and Presentation Techniques Studio 1.5 credits; 3 hours/week, Sessional

Techniques for communicating via different media - oral presentations, reports,
posters, broadcasting, film, multimedia, Websites. Techniques of visual
presentation - figures, diagrams, charts, maps, cartograms, photographic
compositions, multimedia presentation etc. Students will be required to prepare
several presentations on different planning problems.

SECOND YEAR, FIRST TERM

CE 2107: Construction Technology and Materials 3.00 credits; 3 hours/week, Theory
Types, preparation, properties and uses of materials-such as stone, brick,
cement, sand, concrete, timber, soil, ferrous and non-ferrous metals and plastics;
Specifications and quality control.

Building Construction Technology: timbering trenches, types of foundations,
brick work, cavity wall construction, masonry, centre of arches and lintels, ground
and upper floors, Single Roofs, states and tiled roofs, built up roof and caddling,
windows and doors, partitions and plastering, plumbing and electrical installation.
Bridge construction technology; road construction technology.

Hum 2117: Sociology for Planners 3.00 credits; 3 hours/week, Theory
Introduction: definition, scope, importance of sociology and its relation with
urban and rural planning in particular.

Basic Concepts: society, community, association, institution, customs, family
kinship, social structure, social stratification, group.

Culture: elements of culture, subculture, counterculture, cultural relativism,
ethnocentrism, cultural lag.

Industrialization and Urbanization: Industrialization and its impact,
pre-industrial, industrial and post industrial city, urbanization, urban growth,
suburban and urbanism.

Urban social problems: urban crime, juvenile delinquency, vagrancy, blighted
area, poverty, beggary, prostitution, leadership, social values, social control.

Social Organization: family, marriage, kinship, stratification, social structure.

Environment and Society: major environmental issues, ecology, urban ecology,
population and environment

Migration: causes and consequences of migration, urbanization and migration,
measurement and analysis regarding migration.

Sociology of Bangladesh: people, religion, power, structure, leadership pattern,
culture and social structure of Bangladesh.

The fundamental characteristics of welfare system: The social and Institutional
basis of economic development and Community welfare; Therole of social
capital in local and community development; globalisation and its major impacts
on community and local development.

URP 2115: Urban Planning Techniques 3.00 credits; 3 hours/week, Theory
Functions, forms and contents of urban development plan, strategy plan,
structure plan, master plan local area plan, action plan, subject plan.

Data and information need for planning, planning techniques applied in different
stages of the urban planning process, techniques for urban renewal and
upgrading (conservation, improvement and redevelopment),

Participatory area planning/ land development techniques: land pulling, land
banking, land sharing, land readjustment, guided land development.

Planning standards for different urban functions, types of planning standards and
their importance.

Urban planning studies and techniques of analysis of population, employment,
economic functions, shopping, housing, leisure and recreation.

Implementation tools and development control: urban density, urban structures
and forms, urban design Aspects, FAR/building bulk, Transport Oriented
Development (TOD) etc.

URP 2113: Site and Area Planning 3.00 credits; 3 hours/week, Theory
Introduction to site and area planning; types of site development.

Site selection and analysis: natural factors, cultural factors, and aesthete factors;
land use and circulation; site drainage, grading and earthworm alignment of
horizontal and vertical curves.

Site layouts and development for residential, institutional, industrial, shopping
and other types of development.

Subdivision planning, landscape and plantation.

Key concepts in recreation planning. Recreation needs and resources. Functions and classification of open space, parks, and recreation areas. Analyses of demand, supply and use pattern. Parks and open space standards-approaches to developing standards. Selection of sites. The recreation space master plan and its components. Implementation strategies.

URP 2191: Statistics for Planners-I 3.00 credits; 3 hours/week, Theory
Summarizing data: Frequency distribution and graph presentations, statistical descriptions-samples and population. Measures of central tendency-mean, median, mode. Measures dispersion-range, mean deviation, variance and standard deviate moments, skewness and kurtosis.

Basic probability distributions: discrete and continuous probably distributions-Binomial, Poisson and Normal distribution. Sampling and sampling distributions.

CE 2108: Construction Materials Lab 1.50 credits; 3 hours/week, Sessional
Lab works related to course 2107: Physical and mechanical properties testing of different construction materials (sand, cement, brick, concrete, rod etc.).

URP 2182: Social and Physical Surveys 1.5 credits; 3 hours/week, Sessional
Meaning of survey, types of surveys, purpose of surveys and their applications in planning.

Elements of social survey-units, subjects and spatial coverage. Social survey methods. Household survey and questionnaire preparation.

Social survey data analysis methods. Students will be required to work on a topic which would involve elements of social survey, i.e., questionnaire design and preparation, coding, data collection and analysis as part of their studio work. Physical survey: secondary survey on topography, land level, natural drainage and slope. Primary survey of land uses, transportation network, access ways, utilities and services network, types of structures, age of structures, land values, population density distribution etc.

URP 2192: Programming Techniques for Planners 1.5credits; 3 hours/week, Sessional
Exercises for developing algorithms for simple computer programmes for data analysis and solving planning problems; programming exercise in a high level language like C/C++ involving, inter alia, reading data from files, using different data types, interactive and conditional processing and producing formatted outputs.

SECOND YEAR, SECOND TERM

CE 2241: Principles of Environmental Engineering 3.00 credits; 3 hours/week, Theory
Water Supply: objectives and basic elements of water supply system; water requirements; population prediction and water demand assessment; fire demand; planning of water supply systems: sources, abstraction, transmission, treatment and distribution of water; water quality assessment.

Sanitation: urban and rural sanitation; low-cost sanitation technologies; elements of conventional water borne system - collection, transportation, treatment and disposal; planning of sanitation systems.

Storm drainage; Solid waste management.
Environmental pollution: air, water and soil, and noise pollution.

Hum 2217: Public and Local Government Finance 3.00 credits; 3 hours/week, Theory
Introduction: definition, scope and importance studying in context of urban and regional planning.

Principles of Expenditure and Revenue/Taxation: types, principles and effects/incidence.

Public Debt: meaning, types, role, and effects.

Public Expenditure: meaning, nature, different theories, effects. Deficit Financing: meaning, importance, role, and effects.

Public Budget: meaning, necessity, classification, and preparation process.

Local Government Structure in Bangladesh: definition, types, nature, functional domains.

Local Government Finances: sources of revenues and items of expenditures and emerging issues, problems and potentialities of Zilla, Thana and Union Parishads; Pourashavas and City Corporations.

URP 2251: Landscape Planning and Design 2.00 credits; 2 hours/week, Theory
Introduction to landscape planning and its scope. Historical references landscape planning and design. Basic methods and approaches of ecological systems and climatic elements. Landscape conservation in macro and regional level. Landscape planning in urban scale for residential, recreational and commercial environments. Site development objectives and design principles. Plantation, site planning and design.

URP 2281: GIS and Remote Sensing 3.00 credits; 3 hours/week, Theory
Meaning of GIS and its application in planning. Essential elements GIS. Data structures: raster data structures, vector data structures. Data acquisition: existing data sets, developing new data sets, data entry. Data management. Data manipulation, analysis, Modeling and 3D GIS.

Remote sensing and image analysis: Basic Concepts, satellite and sensors, aerial photogrammetry, application of aerial photogrammetry, processing of remotely sensed digital data. Integrate of remote sensing with GIS. Applications of GIS in planning

URP 2291: Statistics for Planners-II 3.00 credits; 3 hours/week, Theory
Decision Making: Statistical inference- hypothesis testing, inference about means, standard deviations and proportion;
Analysis of variance: Chi-Square test. Measurement scales. Non-parametric tests.

Simple correlation and linear regression: Least-squares equation, goodness-pf-fit criteria, standard errors, significance tests for coefficients. Simple curvilinear regression by variable transformation.

Forecasting methods-time series analysis, causal and probabilistic methods.

Population forecasting methods: arithmetic, geometric, decreasing rate of increase, logistic, ratio and correlation, trend projection and cohort survival.

URP 2252: Landscape Planning and Design Studio 3.00 credits; 6 hours/week, Sessional

Application of design and planning principles and techniques of landscape developments.

Site analysis and study of landscape elements. Application of landscape conservation principles and strategies on regional level development process.

URP 2214 Site and Area Planning Studio 1.5 credits; 3 hours/week, Sessional
Studio works related to course URP 2113. Practical and field works relating to site, area and land subdivision planning.

URP 2292: Computer Applications in Planning 3.00 credits; 6 hours/week, Sessional
Application of statistical techniques in urban and regional analysis through the uses of application software such as SPSS, Excel etc.

Important planning techniques: Population Projection, Economic Base Analysis, Industrial Structure Analysis, Input-Output Analysis etc.

Statistical techniques: Frequency Distribution including Cross Tabulation, Graphical Presentation, Test of Independence, Analysis of Variance, Correlation and Regression Analysis etc.

THIRD YEAR, FIRST TERM

CE 3107: Elements of Solid Mechanics 3.00 credits; 3 hours/week, Theory
Force, resultants and components, moments and parallel coplanar forces, centroids, moment of inertia. Fundamental concepts of stress and strain.

Mechanical properties of materials: Stress and strain in members subject to tensile, compressive and shear forces; bending moment and shear force diagrams for statically determinate structures.

CE 3151: Fundamentals of Transportation Engineering 3.00 credits; 3 hours/week, Theory

Elements of transportation system.

The land use and transport interaction. Fundamentals of land use-transport planning. Fundamentals of transport demand and supply analysis.

Urban transportation study: defining the study area and the network, volume study, O-D survey, parking survey, public transport survey, goods/freight traffic survey, employment survey, inventory of physical infrastructure, characteristics of different modes, concepts of roadway capacity, hierarchy of roads, concept of environmental area; pedestrian traffic, cross-sectional elements of roadway, Geometric design elements Highway, parking types, parking solution and parking capacity. Planning standards for physical facilities.

Traffic management, concepts of travel demand management.

Hum 3117: Accounting and Auditing for Planners 2.00 credits; 2 hours/week, Theory

Introduction to Accounting; Accounting equation, Business data processing Transaction, Double entry mechanism, Journal, Ledger. Trial balance. Preparation of financial statement. financial statement analysis.

Long-term investment decision-Capital budgeting: Decision under uncertainty.

Cost concept and classification: Cost-volume-profit analysis, Break-Even-Point & sensitivity analysis.

Taxation-Definition of tax; types of tax; Cannons of tax: Tax administration in Bangladesh; Tax holiday; Capital allowance; corporation tax; Tax credit.

Basic Concepts of Internal Audits, Planning of introduction to internal auditing, internal control, techniques of internal auditing, scientific methods, report-writing, information technology, risk-based auditing, operational auditing
URP 3161: Housing and Real Estate Development 3.00 credits; 3 hours/week, Theory
Social, physical, economic and cultural aspects of housing. Typology of housing.

URP 3161: Housing and Real Estate Development 3.00 credits; 3 hours/week, Theory
Nature of housing problems in Bangladesh and scopes for housing development (including real estate development). Types and forms of ownership (single, multiple, tenancy in common, joint tenancy, general and limited partnership, syndicate, investment trust, condominiums, cooperatives etc.).

Accessibility to housing by different income groups. Process of housing development. Housing finance and resource mobilization, housing package, credit facilities. Housing development and management in both public and private sectors. Role of various professional groups in housing sector development.

Housing policies in Bangladesh and other developing countries. Social programme and public policy for low income housing. Role of private formal sector in the housing sector of Bangladesh.

Definition of Real Estate, Real Estate Development Principles, Real estate market analysis and market development techniques, Real estate trade cycle (both long term and short term). Real estate instruments: contract, deed, lease, mortgage, broker and brokerage. Planning considerations for real estate development. Evaluation of real estate projects-cost estimation, feasibility study, environmental impact statement, implementation, monitoring and management. Regulatory measures to guide and monitor housing development and the developers.

URP 3121: Rural Development Planning-I 3.00 credits; 3 hours/week, Theory
Distinction between urban and rural areas. Analysis of rural settlement patterns. Social and cultural characteristics of rural communities.

Meaning of rural development. The concept, nature and scope of integrated rural development. Integration of functional and spatial aspects in the context of rural development. Planning procedures for integrated rural development.

Resources for rural development-land, water, Human, forest, livestock etc. Policies for rural resources development. Rural industrialization and rural centre planning.

Rural development programs in Bangladesh-past and present. Governmental and non-governmental organizations involved in rural development activities. Problems and issues in local level rural planning in Bangladesh.

Agricultural development program and policy: World and Bangladesh Perspective

URP 3112: Urban Planning Studio 3.00 credits; 6 hours/week, Sessional
Case studies in urban studies and planning. Studio works related to course plan 2215 practical and field works on urban planning.

URP 3182: GIS and Remote Sensing Studio 3.00 credits; 6 hours/week, Sessional
Individual or group projects to analyze planning problems with the help of GIS and Remote sensing (RS) techniques.

THIRD YEAR, SECOND TERM

CE 3207: Elements of Civil Engineering Structures 3.00 credits; 3 hours/week, Theory
Structural forms and systems for buildings, bridges, communication and transmission loads on structures, types of foundation, concept of bearing capacity and settlement.
Introduction to design in reinforced and pre-stressed concrete.
Design codes and provisions in BNBC.

CE 3261: Water Resources Planning 3.00 credits; 3 hours/week, Theory
Hydrologic cycle, precipitation stream flow, evaporation and transpiration, rainfall-runoff relationship, hydrograph analysis, groundwater occurrence and wells. Behaviour of alluvial rivers, bathymetry survey, navigation and dredging, river training and bank protection works.
Irrigation; flood mitigation approaches; mitigated water resource management-economic, social environmental and institutional aspects.

URP 3231: Transportation Planning 3.00 credits; 3 hours/week, Theory
Transportation system in Bangladesh. The key issues in urban and national transport policy and implementation of transport plans and programmes. Policy options in urban transportation, Features and principles of major transportation planning (i.e STP, DUTP) in Bangladesh.
The role of different modes, cost structure.
The transportation planning process at national, regional and urban levels. Fundamentals of transportation economics. Transportation and environment. Local area transportation planning. System modeling and strategy development. Planning of transport infrastructure. Planning for urban public transportation. NMT planning and management. Travel Demand management.

URP 3223: Regional Development Planning 3.00 credits; 3 hours/week, Theory
Definition and types of regions. Regionalization and the delineation of planning regions.
Levels of planning-national, regional, sub-regional and local. Need and scope of regional planning.
Regional analysis: regional data base, income measures and regional social accounting, input-output analysis, industrial structure analysis, interregional trade multiplier analysis.
Theories and models of regional growth: Aggregate growth models, industrial location theory- central place theory, growth pole theory, agropolitan growth. Regional growth-convergence or divergence.
Regional development policies at home and abroad.
Policy issues: Place prosperity vs. people prosperity, economic development vs. regional growth. Regional distribution of public investment-dispersal vs. concentration, balance vs. imbalance, growth vs. welfare, efficiency vs. equity. Policy instruments.

URP 3241: Environmental and Natural Resources Planning and Management (Optional) 2.00 credits; 2 hours/week, Theory

An introduction to welfare economics examining basic concepts including consumer surplus, Pareto optimally, externalities and the welfare of future generations.

Valuing the Environment: concepts, methods, property rights, externalities and environmental problems.

Sustainable Development: defining the concept, the population problem. The Allocation of Depletable and Renewable Resources: An overview. Energy: Transition from Depletable (oil, gas, coal, uranium, etc.) to Renewable Resources (solar, wind, etc.), Recyclable Resources: minerals, paper, bottles, and e-waste. Replenishable but Depletable Resources: Water, Land and Forest.

Common-Pool Resources: Fisheries and other Species. Economics of Pollution Control: An overview, Stationary-Source Local Air Pollution. Corporate social responsibility and corporate environmentalism. Regional and Global Air Pollutants: Acid Rain and Atmospheric Modification.

The issue of climate change and economics.

URP 3211: Neighborhood Planning and Community Development (Optional) 2.00 credits; 2 hours/week, Theory

Concept of neighbourhood; the physical, spatial, social, economic, political and cultural aspects of neighbourhood planning; neighbourhood functions, service facilities and their standards; upgrading of service facilities; functional and environmental improvement; spatial organization.

The issues in community development; problems in urban communities of Bangladesh; Community Based Organizations (CBOs); public and community participation in community development, community revitalization, service management and economic development in low-income urban communities especially in the slums and squatter settlements.

URP 3251: Urban Design and Conservation (Optional) 2.00 credits; 2 hours/week, Theory

Definition of urban design, its aims and objectives.

Evolution: Development of urban spaces through history- from tree dwelling to Renaissance.

Elements of design- unity and space, proportion and scale, balance, uniformity and contrast, etc, and their application in urban design.

Analysis of urban physical pattern. Urban aesthetics. Urban spaces and their types and perception. City planning and design according to artistic principles, approaches and levels of analysis.

Introduction to conservation; various sets of values; and to some of the principles of practice.

Early and pre-modern ideas about restoration, Architectural restoration in the 19th century.

National and international charters, Practical Tools for Conservationists.

URP 3291: Operations Research and Systems Analysis (Optional) 2.00 credits; 2 hours/week, Theory
Introduction to operations research. Techniques for analyzing interconnected policy decision areas. Optimization techniques in the decision making process. Elements of mathematical programming: linear programming, graph theory, network analysis; fundamentals of simulation techniques, queuing theory. Systems approach in planning.

URP 3232: Transportation Planning Studio 3.00 credits; 6 hours/week, Sessional
Case studies in transportation studies and planning. Workshops on local area transport planning. Vehicular and pedestrian circulation plan for residential area, shopping complex, precinct and other practical and field works related to courses CE 3131 and URP 3231.

URP 3222: Rural Planning Studio 3.00 credits; 6 hours/week, Sessional
Individual or group projects involving application of planning techniques for analysing problems related to rural development planning.

URP 3294: Research Methodology 1.50 credits; 3 hours/week, Sessional
Research idea generation through discussion, research outline development, research planning, data collection, research methods and tools, data analysis and interpretation, report writing and referencing

FOURTH YEAR, FIRST TERM

URP 4000: Project/Thesis 1.5 credits; 3 hours/week
Major individual studies on real world topics related to planning, development, implementation or policy issues. The objective is to develop initiative, self reliance, creative ability and some planning experience for the students. The outcomes of the study must be submitted in a comprehensive report following a standard format of presentation acceptable to the Department along with appropriate drawings, maps, charts etc.

URP 4161: Project Planning and Management 3.00 credits; 3 hours/week, Theory
Project cycle-designing, implementation and monitoring.
Project evaluation: the efficiency versus equity criteria, economic versus financial evaluation; methods of evaluation.
The welfare basis of social evaluation: consumers surplus, producers surplus, Pareto optimality, transfer payments, intangible items, shadow pricing, externalities, equity problem; concept of social cost benefit analysis, time value of money, discounting technique, choice of discount rate and social time preference, investment criteria, basic concepts of financial accounting, dealing with risk and uncertainty.
Introduction to other techniques of evaluation. Appraisal requirements by national and international financing agencies.
Concept of project management, introduction to different management techniques.

URP 4171: Legal Basis of Planning 3.00 credits; 3 hours/week, Theory
Legal aspects of planning and its importance. Enabling legislation process. Planning laws in different countries. The Development Plan (structure and local) process and need for legislation. Development control-planning permission, development orders, special forms of control. New town development laws. Compensation and betterment problems. Urban renewal practice.
Planning laws in Bangladesh: Pourashava Ordinance, Town Improvement Act, East Bengal Building Construction Act-Building Construction Rules, Building Regulations of RAJUK, BNBC, private residential land development rules, Land acquisition and compensation rules and regulations.
The meaning of development the control of development including planning permission, development orders, purchase notice, the enforcement of planning controls, compensation and betterment problems with reference to Bangladesh.

URP 4141: Environmental Planning and Management 3.00 credits; 3 hours/week, Theory
Theories of natural systems. Importance of environmental planning. The environmental impacts of human actions.
The environmental planning procedures: Defining planning area, inventory of environmental resources, assessment of environmental impacts-impact identification, impact measurement and impact evaluation. Mitigation of environmental impacts, impact prevention measures, impact management measures.
Case studies in environmental management.

URP 4111: Utility Services and Infrastructure Planning 3.00 credits; 3 hours/week, Theory
Nature of urban and rural services. Comparison between physical and social infrastructure services.
Needs for services according to age groups: population pyramids and needs for social services.
Planning, funding, provision, management and maintenance of basic utility services in urban areas: water supply, sewerage, drainage, electricity supply, gas and telephone, and associated problems.
Under-funding, under-investment, cost recovery, inadequate maintenance, lack of coordination and ineffective management.
Participation and partnership in urban services management.
Types of municipal services: transport infrastructure, street lighting, water supply, solid waste management, parks and open spaces, graveyards, markets, slaughter house, basic services for slums, public health and education. Revenue sources of city corporations and municipalities, and problems faced in the delivery of services and collection of taxes.
National and regional infrastructure planning: Population and demand forecasting, planning of infrastructure networks-water supply and drainage, transportation, power supply.
Advanced application tools for infrastructure planning: GIS, GPS, remote sensing methods.
Infrastructure project financing.

URP 4175: Resettlement Planning (Optional) 2.00 credits; 2 hours/week, Theory
Introduction: key Concepts, causes for resettlements, Resettlements and Development

Resettlement Planning Guidelines: Introduction, Resettlement Plan in the Project Cycle, Key Planning Concepts, Consultation and Participation, Socio-economic Information, Relocation, Income Restoration, Institutional Framework, Monitoring and Evaluation.

Resettlements System Analysis, Resettlements Policy, Resettlements Regulations,

Resettlements Economics, Resettlements Management.

Resettlement Policy and Legal Frameworks in Bangladesh, Involved Institutions in Resettlement and Rehabilitation in Bangladesh. Institutional and legal Aspects of Resettlements Planning: The Acquisition of Immovable Property Ordinance, 1982. Resettlement Practices in Bangladesh. Case Studies of various Countries on Resettlements Practices.

URP 4113: Tourism Planning (Optional) 2.00 credits; 2 hours/week, Theory
Introduction: definition, scope and importance of studying as a student of planning, its spatial dimensions

Tourism supply: components of supply, matching supply with demand.

Tourism Demand: importance of demand measurement, estimating demand to a destination, demand measurement and projection methods.

Economics of Tourism: optimization, economic multipliers, compliments and substitutes.

Impact of Tourism: effects of tourism on environment, ecology culture, society.

Tourism Marketing: marketing concept, marketing mix and segmentation, product planning and development, promotion. Attractions: classification, resource foundation, ownership, location and land use. Tourism Planning Practice and Process: planning techniques and tools, problems and issues.

Tourism Policy of Bangladesh: goal, objectives, components, strategies, etc.

Tourism Master Plan of Bangladesh. Problems of Tourism Development in Bangladesh. Potential Tourism Development sites in Bangladesh: location, historical accounts, attractions, present condition, problems, potentialities, suggestive measures for tourism development.

URP 4121: Rural Development Planning-II (Optional) 2.00 credits; 2 hours/week, Theory

Rural-urban disparities: rural-urban linkages and rural-urban migration; people's participation and rural development; Rapid Rural Appraisal and Participatory Rural Appraisal; rural services and utilities development (transport, water supply, sanitation, electrification and extension services): rural economic and social sectors development-agriculture, rural non-farm activities, community development, women's empowerment, health and nutrition, education; rural growth centre development in Bangladesh; strengthening local level institutions and rural development in Bangladesh; NGOs and rural development: rural poverty and micro credit programs for rural poverty alleviation; disaster management planning in rural areas; practices and experiences of rural development in developed and developing countries.

URP 4142: Environmental Planning and Management Studio 1.50 credits; 3 hours/week, Sessional

Studio works (Initial Environmental Assessment, Environmental Impact Assessment, Different types of Pollution and their impact on living environment) related to course URP 4141.

URP 4124: Regional Planning Studio 3.00 credits; 6 hours/week, Sessional
Individual or group projects involving application of planning techniques for analysing problems related to regional development planning.

URP 4100: Internship/Professional Attachment (Non Credit)

4 weeks of Internship/Professional Attachment in a planning and development related organization/firm prescribed by the department. Performance will be evaluated based on report submitted by the intern and evaluation of the reporting officer at the organization/firm. Grade awarded shall be 'S' for satisfactory and 'U' for unsatisfactory.

FOURTH YEAR, SECOND TERM

URP 4000: Project/Thesis 3.00 credits; 6 hours/week
Continuation of the work of previous term

URP 4273: Urban Governance 2.00 credits; 2 hours/week, Theory
Introductory of Urban Governance: Understanding the concept/conceptual framework, Definition, Characteristics, Good characteristics, Involved actors. Measuring good governance towards setting/determination of indicators; Impact assessment indicators, Issues to set indicators.

Conflicts and relationships: Government verses governance, Urban development verses governance, Urban decentralization verses governance, Urban management verses governance.

Urban Governance and local government-central government relations: Introduction, Intergovernmental relations, Local government agreement, Decentralization/control.

Governance and issues for local actions: Introduction, A decentralization framework, A stable institutional framework, The importance of inclusiveness, Effective local leadership and policy setting, Challenges for implementation, Capacity, Expanding capacity through collaboration, Actions and initiatives to secure sustainability.

The global campaign on urban governance: Why campaign/need, How the campaign works, Conclusions.

Gender issue: Why matters, Linking urban governance with gender, Women in urban local government structures, Existing status, Gender and norms of good urban governance, Participation, Policy options.

State of Affairs of Urban Governance in Bangladesh: Status of urbanization, Emerging issues, arisen problems, Challenges, Recommended policy options, measures.

Importance of governance in Bangladesh, Experiences of Application of Urban Governance in Bangladesh.

URP 4275: Development Planning 3.00 credits; 3 hours/week, Theory
The nature of development planning. The rationale for planning in developing economies. Phases of development plan-the macro phase (national), the middle phase (regional), and the micro phase (micro regional). Aims, objective and procedures of planning at different phases, relationships among the macro, middle and the micro phase. Development Strategies: i.e: Import substitution strategy, export promotion strategy, Balanced Growth Strategy, Unbalanced growth strategy etc. Theory of Absolute, comparative and Consumption. Formulation of development plans: Use of models in planning aggregate models, sector models, and inter-sectoral models. Important considerations in choosing particular models. Some problems of development planning: The concept of capital-output ratio, the choice of technique; investment criteria. Development planning Bangladesh: Organizations involved in national, regional and local level planning. Types of national plans. The process of approval of plans. Processing of development projects and the use of standard proforma. Political factors in development planning in Bangladesh. Assessment of development plans of Bangladesh.

URP 4223: Urban and Regional Economics 3.00 credits; 3 hours/week, Theory
Urban economics: nature and functions of cities. Urban spatial structure: models of urban spatial structure, models of intra-urban location decisions. Urban growth: the economic base and urban growth, the human ecological approach to urban growth, communication theory and urban growth, city size and urban growth. Nature of urban problems: land use, housing, urban transportation, urban environment and urban poverty. The urban public sector: urban fiscal problems, methods of financing urban government expenditures. Regional economics: the region as a concept, regional structure- systems of cities, industrial location patterns, transportation and the spatial organization of economic activities. Measurement and change in regional economic activity: regional accounts, interregional theory of income and trade, regional economic growth. Regional policy: the national interest and regional objective, aggregate efficiency and interregional equity, alternative strategies for problem regions.

URP 4217: Coastal and Special Zones Planning (Optional) 2.00 credits; 2 hours/week, Theory
Coastal Zone Planning: Definitions/concepts of coastal zone, characteristics of the coastal zone (location, climate, geomorphology, hydro-morphology, ecology, vulnerability, natural disasters, people and livelihood, infrastructure, resources etc.). Issues addressed by CZ planning and management: principles/approaches, resource use conflict, population growth and poverty, illegal activities, climate change, pollution, biodiversity conservation, policy and institutional gaps and conflicts. Coastal zone management and planning: involved organizations, pertinent laws and regulations, national policies. Study cases of planning/management on mangrove forest, coral reef, coastal fisheries/aquaculture.

Industrial Area Planning, Mining Area Planning, Hill Area Planning, Port Area Planning: Concepts; physical, socio-economic, environmental and other considerations; case studies.

URP 4215: Land Development and Management (Optional) 2.00 credits; 2 hours/week, Theory
Land management in Bangladesh: land records, transfer, taxation, legal aspects. Urban and rural land policies in Bangladesh and other neighboring countries. Urban land development techniques: land bank, excess condemnation, guided development, land readjustment, land subdivision. Land market in Bangladesh. Land Information System (LIS): essential elements, planning and designing an LIS, data acquisition, data management, data manipulation and analysis applications for planning. Land development control and management purposes.

URP 4277: Introduction to Policy Planning and Development (Optional) 2.00 credits; 2 hours/week, Theory
Policy Planning and Development Practices, Understanding the Roles of different actors (i.e levels of government, governance structure, citizens and residents, NGOs) in policy planning and development. Environmental, social and cultural influences on policy and planning; economic, legal and administrative influences on policy and planning. History, theory and process of policy making, policy evaluation technique and policy implementation, politics of policy and planning (conflict management)

URP 4243: Hazards and Disaster Management 2.00 credits; 2 hours/week, Theory
Definition and meaning of hazards and disaster, types of hazards, assessment of hazards, vulnerability analysis, risk assessment, traditional and new disaster threats, basic characteristics of common disasters. Disaster Management Cycle, Response: definition and some relevant aspects, general disaster management factors, special evacuation factors, problems related with effective response. Recovery: definition, problem areas of recovery, major requirements of effective recovery, human factors in recovery, resources relevant to recovery programmes. Prevention: definition, problem areas of prevention, approach and resources required for prevention. Mitigation: definition, guiding principles of mitigation, problem areas, major requirements of mitigation, major mitigation components (structural and non-structural), resource relevant to mitigation. Preparedness: definition, problem areas of preparedness, preparedness needs, funding, warning aspects, and precautionary, measures prior to disaster impact and relevant resources. Disaster Management Plans: need for counter disaster plans, general considerations, format of a plan, critical areas, aspects for consideration. Disaster and National Development: impact of disaster on national development, disaster management policy and national development.

Disasters of Bangladesh: types, impacts and mitigation measures.
People's Perception and Response to Disaster. Institutional Framework for Disaster Management in Bangladesh.

URP 4262: Project Planning Studio 1.50 credits; 3 hours/week, Sessional
Case studies in project evaluation. Project formulation practices and approval procedure in Bangladesh. Preparation of project documents: PCP, PPs and TAPPs; workshops related to course Plan 4161.

URP 4272: Participatory Planning Studio 1.50 credits; 3 hours/week, Sessional
Local level planning and its importance. Contexts of local level planning. Approaches to local level planning. Guidelines for local level planning. People's participation in planning-meaning and types of participation. Approaches to participation-organizational and functional. Problems of participation. Group projects involving application of participatory approach to planning for the preparation of local level plans.

Summary of Courses for the Degree of Master of Urban and Regional Planning

First Year First Term

A. Compulsory Courses

| Course No. | Course Title | Contact Hour | Credit Hours |
|------------|--------------|--------------|--------------|
| URP 6000 | Thesis | 36-0 | 18.0 |
| URP 6000 | Project | 18-0 | 9.0 |

B. Elective Courses

| Course No. | Course Title | Contact Hour | Credit Hours |
|------------|--|--------------|--------------|
| URP 6101 | Planning Process and Theories | 3-0 | 3.0 |
| URP 6103 | Housing and Resettlement Planning | 3-0 | 3.0 |
| URP 6105 | Transportation Policy, Planning and Management | 3-0 | 3.0 |
| URP 6107 | Environmental Policy, Planning and Management | 3-0 | 3.0 |
| URP 6201 | Research Methodology | 3-0 | 3.0 |
| URP 6203 | Planning Sustainable Cities and Regions | 3-0 | 3.0 |
| URP 6205 | Advance in GIS, Remote Sensing and Photogrammetry | 3-0 | 3.0 |
| URP 6207 | Sustainable Planning and Management of Natural Resources | 3-0 | 3.0 |
| URP 6209 | Project Planning and Management | 3-0 | 3.0 |
| URP 6211 | Urban Governance and Planning Administration | 3-0 | 3.0 |
| URP 6213 | Urban Ecology and Landscape Planning | 3-0 | 3.0 |
| URP 6215 | Climate Change and Disaster Management | 3-0 | 3.0 |

A student must complete a Thesis/Project study under the guidance of a supervisor.

Detail Outlines of Postgraduate Courses

| Course No.: URP 6101 | Credit Hour : 3.0 | MURP: 1st Year 1st Term |
|--|-------------------|----------------------------|
| Course Title: Planning Process and Theories | | Course Status: Core |
| Rationale: Chaotic scenarios prevail in an area due to unplanned and haphazard development. Some serious problems arise in these areas: no systematic layout of the area, loss physical identity and harmony, lack of facilities, low social interaction, pollutions, congestion etc. However, proper planning supports systematic arrangement of land uses, promotes accessibility of the people, ensures efficient use of limited resources, protects people and environment from environmental degradation, maintains ecological balance etc. To achieve sustainable development and uphold planned development people need to understand the process and techniques of planning. This course will help student to understand concepts, nature, functions, theories, methods and techniques of planning in urban, rural and regional contexts. | | |
| Course Objectives: The aim of this course is to: <ul style="list-style-type: none"> • Understand the importance and scopes of urban, rural and regional planning. • Conceptualize various aspects of planning to delineate the relationship among them. • Understand plan preparation process, policy formulation and proper implementation. • Appreciate the relationship between planning theories and practices. • Understand legal issues and professional ethics in practicing planning. | | |
| Intended Learning Outcomes (ILOs): At the end of the course the students will be able to: <ul style="list-style-type: none"> • Understand concept, history, nature, functions and techniques of urban, rural and regional planning • Identify different aspects of planning at local and national level and their influence on overall development process. • Understand concepts, methods and technique used in plan preparation, policy formulation, implementation, monitoring and evaluation in development projects. • Assess theoretical frameworks considering spatial, economic and socio-political dimensions for understanding urban, rural and regional development processes. • Understand the manner of professional planning practices in private and public sectors, their conflicts, causes and possible solutions for maintaining development pace. • Understand available policies, strategies, legal procedure for plan preparation and standard ethical code of conduct for professional planning practices. | | |
| Course Content | | |
| Introduction: Basic concepts of planning as a subject of study and professional activity; necessity and scopes of planning; overview of history, nature, | | |

functions and techniques of urban, rural and regional planning.

Aspects of planning: Various aspects of planning; relationship between land use planning and overall development process; role of physical planning for achieving desired objectives in development; role of urban and regional planning and its relationship with general theory and process of planning; urban and regional planning at the local and strategic levels.

Plan making process: Contemporary concepts, methods and technique in plan preparation, policy formulation and implementation; plan making process and decision theory; development control; plan implementation and monitoring; interrelation between key urban and rural activities in the urban and rural planning process.

Planning theories: Review theoretical frameworks for understanding urban, rural and regional development processes; analyses of spatial, economic and socio-political dimensions of urban, rural and regional activities; relationships between capital accumulation and urban development; place marketing and rise of the creative cities.

Planning practice: Understanding professional planning practice in Bangladesh and abroad, practical dimensions of planning in public and private sectors; Practical limitations in the application of planning theories; conflicts between theory and practice; typical practice dilemmas, their causes, consequences and possible resolutions; gradual development of ideas and concepts towards a standard body of planning knowledge and doctrine.

Laws and ethics: Review the history, policies, strategies, administrative and legal procedures of planning; role of the state and public policy; standard ethical codes in professional practice.

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| Course No.: URP 6103 | Credit Hour : 3.0 | MURP: 1st Year 1st Term |
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|--|----------------------------|
| Course Title: Housing and Resettlement Planning | Course Status: Core |
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Rationale:
Housing has been and is becoming a crucial issue with rapid urbanization trend in the developing countries. This course will explore issues of housing policy and urban and regional planning issues at the national and local level. The syllabus is oriented towards the issues faced by local housing practitioners and policy analysts in the struggle to insure a decent and affordable housing for all. At the same time this theory course will explore the capitalist mode of development by displacement and resettlement issues from an international perspective.

Course Objectives:
The aim of this course is to:

- Explore the dynamics of housing in urban planning in rapidly urbanizing developing countries.
- See the provision of housing by multi-stakeholders (public, private and NGOs) in the neo-liberal era.
- How urban is becoming more global and global is becoming more urban.
- Understand planning issues for future cities.
- Voluntary and involuntary displacement and political economy of displacement.

Intended Learning Outcomes (ILOs):

At the end of the course the students will be able to:

- Understand the importance in housing for urbanization as well as social development
- Explore why and how international housing polices failed.
- What are international targets (post millennium development goals) to achieve for sustainable and robust development?
- How international development trend or political economy is shaping the future urbanization and what will be consequences at the local level.
- How development by dispossession is becoming a crucial issue for rapidly developing countries.

Course Content

Dynamics of Housing: Definition of Housing (social, cultural, economic and environmental aspect), Housing right, constitutional right, human rights, housing need, Functional housing.

Urbanization and housing: Urbanization and trend of urbanization, components and causes of urbanization, the impacts of globalization on housing, urbanization and development, managing urbanization.

Housing provision: Housing responsibility, neoliberalism and changing form of housing provision, housing accessibility, replicability, affordability, Housing problem in Bangladesh, criticism of neo-liberal ideology in housing.

Informal or extralegal housing: Pre-capitalist ‘traditional’ shelter and urban settlements, colonial period housing supply, post colonial housing, informal mode of housing supply, planning as negotiation, self-help housing and criticism.

Post-1990 issues in planning and housing: The emerging global normative agenda, the evolution of key issues in shelter and human settlements in 1990s and the new millennium, the habitat agenda, millennium development goals and post scenario, sustainable urban development, good governance and sustainable cities, from urban management to cities alliances, a new role for urban planning and housing.

How urban is becoming more global and global is becoming more urban?:
Implication of globalization in cities, contemporary city and the nature of its conflicts, theories and interpretations about the nature of ‘the divided city’, links between identity formation, cultural collision, protectionist views of territory, urban space in a transnational and cosmopolitan context.

Planning for future cities: Collaborative planning and right to the city, global agenda for housing and sustainable cities, inclusive cities and sustainable urbanization.

Resettlement Issues: Basic principles of resettlement and displacement, importance of resettlement policy, resettlement policy: WB, ADB, Bangladesh, weakness of resettlement policy, loss beyond compensation.

Voluntary and involuntary development and political economy resettlements: Distinction between voluntary and involuntary, political economy of development vis-à-vis resettlement, crony capitalism and recent trend of international development.

Case Studies of Resettlement: Jamuna Bridge, Rampal Coal-Thermal Electricity Plant, Padma Bridge, Chittagong Hill-tracts Resettlement, Rohingya Resettlement and housing.

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| Course No.: URP 6105 | Credit Hour : 3.0 | MURP: 1st Year 1st Term |
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|---|----------------------------|
| Course Title: Transportation Policy, Planning and Management | Course Status: Core |
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Rationale:

Rapid urbanization, industrialization and population growth in many cities of Bangladesh have made efficient transportation planning is an important factor for safe and comfortable travel of the people. Although, transportation ensures comfort, pleasure and convenience, it creates many problems, such as congestion, accident, pollution. Proper transportation policies and planning can significantly reduce those problems. This course will prepare students to acquire knowledge about concepts, theories, methods, tools and techniques of transportation policy, planning and management for solving transportation related problems at national and local levels.

Course Objectives:

The aim of this course is to:

- Conceptualize transportation development and interconnections among various transportation modes.
- Identify the importance of public transportation within the overall urban transportation system.
- Conceptualize various stages of transportation planning process.
- Understand various concepts, theories, models, tools and techniques of transportation demand management.
- Understand transportation economics.
- Conceptualize transportation project evaluation tools and techniques.

Intended Learning Outcomes (ILOs):

At the end of the course the students will be able to:

- Outline transport development and explain the role of transportation in national development.
- Find out various modes of transportation and their interdependence.
- Understand the process involved in making transportation policies and plans.
- Understand travel demand modeling and apply various tools and techniques to manage and forecast travel demand of the people.
- Understand the relationship between land uses and transportation and the factors that influence their relationship.
- Understand principles, techniques, characteristics of transport markets and competition.
- Conceptualize and apply economic evaluation methods to assess efficiency of transportation projects.

Course Content

Introduction: Overview of transportation development, role of transportation in national development (physical, economic, social, political and cultural).

Medium of Transportation: Different modes of transportation and scope for

future development; Functional requirement and interrelationship of different modes; role of private and public modes within the overall urban transport system, pedestrian movement planning, airport development and seaport development.

Public Transportation: Nature, characteristics, operation and maintenance of public transit systems, deregulation and privatization, role of para-transit and multi-modal cooperation, problems of public transportation at national, regional and local levels and considerations for their development.

Transport Policy and Planning: Transport planning process at urban and national level; Contemporary transport policies: transport and environment, transport and sustainable development; Developing transport plans, framework for transport plan; Case studies from various countries to evaluate the suitability and efficiency of policies and implementation mechanisms.

Travel Demand Modeling: Concept of travel demand, factors affecting travel demand; Methods and techniques of travel demand forecasting; Land use model, Trip generations models, Trip distribution models, Modal Split models and Network assignment models; travel demand management.

Land Use and Transportation Interaction: Spatial location of population and employment, urban forms, land use and transport planning process in urban context, accessibility versus mobility, optimizing methods and land use transport system.

Transportation economics: Economic principles and techniques; economic characteristics of transport markets and modes of competition; travel time valuation, road congestion pricing, public transport finance and cost-recovery.

Transportation Projects evaluation: Basic concepts of evaluation, identifying project stakeholders, selecting evaluation criteria, Measures of Effectiveness (MOE), evaluation procedure and decision making; Economic Evaluation Methods: Present Worth (PW), Equivalent Uniform Annual Cost (EUAC), Benefit-Cost Ratio (BCR), Internal Rate of Return (IRR) etc.

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| Course No.: URP 6107 | Credit Hour : 3.0 | MURP: 1st Year 1st Term |
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| Course Title: Environmental Policy, Planning and Management | Course Status: Core |
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Rationale:

This course attempts to equip the students with environmental planning and management concepts, theories, methods, tools and techniques for solving environmental management related issues at multiple levels and scales.

Course Objectives:

The aim of this course is to:

- Conceptualize the interconnections among population growth, resources use, development and environmental degradation.
- Identify the drivers, forces, agencies, actors, institutions, and policies that shape the environmental planning and management system.
- Understand various concepts, theories, models, methods, tools and techniques of environmental planning and management.
- Apply the knowledge and skills to solve environmental problem of real world situation.

Intended Learning Outcomes (ILOs):

At the end of the course the students will be able to:

- Understand the relationship among environment, economy and the society.
- Appreciate the importance of environmental management system.
- Understand contemporary environmental management issues and problems.
- Apply environmental impact assessment and audit protocols.
- Understand and apply environmental risk assessment and management framework.
- Evaluate environmental policy process and prepare strategic plan for environmental conservation and management.
- Apply economic/market based, regulatory and persuasive instruments to solve environmental problems.
- Apply valuation tools and techniques of environmental goods and services

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| Course Content |
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Environment, Economy and Society: Environment, ecology, natural resources and biodiversity; Population, resources, environment and development; Environment and population in global perspective; Economic growth, environmental degradation and poverty nexus; Environmental Kuznets Curves hypothesis.

Contemporary environmental issues & problems: Circular flow model and Material Balance Model; Limit to growth and Beyond the limit Hypothesis, Ecological footprint, Carrying capacity and assimilative capacity of nature; Pollution heaven hypothesis; Global warming, Biodiversity loss, IUCN Read List.

Sustainable Development: Evolution of the concept; three pillars of sustainable development, principles and actions areas of sustainable development, weak vs. strong sustainability paradigm, the Brundtland commission report, Rio declaration, Agenda 21.

Environmental Management – theories, tools & techniques: EMS- concepts and typologies, and importance; Regulatory instruments- technology based vs. emission based standard; Economic/Market based instruments- pollution charge; subsidy, allowance, deposit-refund system; tradable emission permit; Clean development mechanism (CDM); persuasive instruments- various rating systems, information disclosure etc.

Environmental Impact Assessment, Audit and Accounting: IEE, EIA, SEA- concepts, methods and steps to conduct; Analysis of EIA cases; Audit- concepts, types, steps to conduct; Audit institutions and protocols; Environmental Accounting.

Valuation of Environmental Goods/Bads: Public vs. private goods, environmental externalities; tragedy of commons; Environmental values: use, existence, precarious value; methods of valuation- Contingent valuation method; Averting expenditure method; Travel cost method; Hedonic price method; other Engineering/ Survey approaches.

Environmental Risk Management: Risk assessment, communication and management; Environmental Risk Management Frameworks; preparation of a Risk Management Plan.

Environmental Policy Process: Public policy and typology, Environmental public policy development; the key players-CSO/environmentalists, private firms, media, regulatory agencies and scientific bodies.

Environmental Law, Protocols and Treaties: Bangladesh Environmental Conservation Rule and Act, Convention on Biological Diversity, Kyoto Protocol, Conference of Parties (COPs).

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| Course No.: URP 6201 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
| Course Title: Research Methodology | | Course Status: Elective |

Rationale:

The course will provide an overview of the important concepts of research design, data collection, statistical and interpretative analysis, and research report/thesis presentation. The focus of this course is not on mastery of statistics but on the ability to use research in the realm of urban and regional planning.

Course Objectives:

The aim of this course is to:

- Introduce students to quantitative and qualitative methods for conducting meaningful inquiry and research.
- Enhance the students' ability to analyze and critically evaluate the issues of research in the realm of urban and regional planning.
- Enhance knowledge and skills of student for designing and conducting an academic research independently.

Intended Learning Outcomes (ILOs):

At the end of the course the students will be able to:

- Display familiarity with a broad array of research methods and approaches that are used within the field of planning.
- Demonstrate research competence in critical thinking by presenting and evaluating arguments in an academic fashion.
- Develop a research hypothesis and frame the research problem with the correct research methodology.
- Know how to write a research proposal using mixed methods of research.
- Apply research methodological tools and techniques for conducting research in the areas of urban and regional planning.

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Introduction to Research: Meaning, Importance, Fundamental Vs Applied, Exploratory & Explanatory, Longitudinal vs. Cross-section, Time Series vs. Panel research; Characteristics of Scientific inquiry.

Theory and Hypothesis: Concept and Proposition, Theory- meaning, characteristics, role; Hypothesis- meaning, types, importance, Important Tests.

Literature Review: Meaning, Importance, Methods of Review,

Research Design: Meaning, Importance, Types of design, Method vs. methodology.

Sampling and Research protocols: Sample, Population, Sample Frame; Parametric and non-parametric sampling; other classification of sampling; Questionnaire - types, and preparation of good questionnaire.

Other Methods of Data Collection: PRA, FGD, Case study, Life History Analysis and other ethnographic method of data collection.
Research Proposal: meaning, purpose, structure, content and steps in preparation.
Referencing and Bibliography: Meaning, importance, MLA, Harvard, Chicago University style of Referencing.

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| Course No.: URP 6203 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
| Course Title: Planning Sustainable Cities and Regions | | Course Status: Elective |

Rationale:
This course focuses on the linkages among environment, sustainable development and the planning of cities and regions. It also focuses on the sustainability issues and concept of the city and regions.

Course Objectives:
The aim of this course is to:

- Conceptualize the issues and concepts of sustainability, ecological modernization and sustainable development
- Appreciate the linkages between sustainable development and the planning of cities and regions.
- Design of policies to promote sustainable urban and regional development and related sustainability assessment systems.
- Understand contemporary practice in sustainability planning as reflected in emerging international experience in the field.

Intended Learning Outcomes (ILOs):
At the end of the course the students will be able to:

- Understand the concept of ecological modernization and sustainable development
- Identify the linkages between sustainable development and the planning of cities and regions.
- Design of policies related to sustainable urban and regional development and sustainability assessment systems.
- Understand emerging international experience in sustainability planning and development field.

Course Content

Sustainability, Development and Environment: Introduction to Planning for Urban Sustainability, Sustainability, Environment & Development, Sustainability Science & expertise, Sustainability & Public Participation
Sustainable Cities: Sustainable Cities & global change, Linkages between sustainable development and the planning of cities and regions.
Main Elements of Sustainability: firstly, principles of sustainable development, the concept of sustainability and related theories and discourses such as ecological modernization, secondly, the design of policies to promote sustainable urban and regional development and related sustainability assessment systems, and, thirdly, contemporary practice in sustainability planning as reflected in emerging international experience in the field.

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| Course No.: URP 6205 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
| Course Title: Advance in GIS, Remote Sensing and Photogrammetry | | Course Status: Elective |

Rationale:
This course familiarizes students with advanced topics of spatial analysis, spatial database, accuracy assessment, spatial modeling, Spatial Decision Methods related to Geographic Information System, Remote Sensing and Photogrammetry.

Course Objectives:
The aim of this course is to:

- Understand of the basic concept and issues related to Geographic Information System, Remote Sensing and Photogrammetry.
- Orient with the different types of geospatial geo-processing analytical tools and functions.
- Conceptualize the geospatial modeling techniques for spatial planning and implementation issues.
- Appreciate the importance of geospatial applications in urban and regional planning and related fields.
- Understand contemporary exemplary geospatial applications related to urban and regional planning and related fields.

Intended Learning Outcomes (ILOs):
At the end of the course the students will be able to:

- Appreciate an overall idea about the fundamental concept of Geographic Information System, Remote Sensing and Photogrammetry.
- Apply geospatial geo-processing analytical tools and functions to solve spatial problems.
- Apply the knowledge and skill to solve spatial problem through modeling techniques of real world situation related to planning and implementation issues.
- Understand contemporary geospatial innovations to solve the real spatial problems.
- Process and classify satellite imageries along with features extractions for spatial database building leading to solve the spatial problems.
- Model stereo image and extract features with 2D and 3D information

Course Content

Review of GIS Basics: GIS fundamentals; nature and models of spatial data; quality of spatial data, error propagation in GIS; Coordinate systems, Map projection and transformation. Rectification and Registration, Digitizing; data reduction and generalization, Topology creation and map correction,
GIS Analysis Functions: Overlay techniques, interpolation and aerial manipulation of spatial data, linking topological database with attribute tables, making query with different items. Overlay techniques,
GIS Modeling: Modeling of geographical data for supporting spatial planning decisions. GIS implementation issues;
Case Studies: Case studies of GIS applications in urban planning, environmental and resource management, AM/FM, and disaster management.

Remote Sensing: The Remote Sensing Analytical Process, Preprocessing of Remotely Sensed Data, Image Enhancement and Interpretation, Feature Extraction from Remotely Sensed Imagery, Classification Accuracy Assessment & Evaluation, Remote Sensing Applications

Photogrammetry Basic: Basics and principles of digital aerial photogrammetry, Modern aerial cameras and photography, platforms and options,

Tools of Digital Photogrammetry: Image adjustment, image correlation, image operators, Relative orientation of the images, epipolar geometry, Aerotriangulation: Analogue, analytical and digital, method of independent models, bundle block adjustment, accuracy, practical examples, Photogrammetric mapping on digital workstation - process, outcomes, accuracy,

Orthophoto Systems: Orthophoto creation, orthophotomosaic and orthophotomap, Airborne laser scanning, Unmanned Aerial Vehicles (UAV) Photogrammetry.

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| Course No.: URP 6207 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
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| Course Title: Sustainable Planning and Management of Natural Resources | Course Status: Elective |
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Rationale:

This course attempts to equip the students with sustainable planning and management of natural resources incorporating fundamental concepts, theories, methods, tools and techniques, successful and failure cases, policy strategies for solving problems and issues related to planning and management of natural resources at multiple levels and scales.

Course Objectives:

The aim of this course is to:

- Acquaint with the concepts, theories, methods, tools and techniques, successful and failure cases, policy strategies in planning and management of natural resources.
- Apply the knowledge and skills to solve the problems and issues related to planning and management of natural resources at multiple levels and scales.

Intended Learning Outcomes (ILOs):

At the end of the course the students will be able to:

- Understand the fundamentals of economic growth, development and sustainability.
- Appreciate the importance of planning and management of natural resources.
- Analyze the economics of the environment.
- Evaluate the policy strategies in natural resource planning and management.
- Apply the models and methods in planning and management of natural resource.

Course Content

Economic Growth, Development and Sustainability: Conceptual, theoretical and empirical overview of the economics of sustainable development; different approaches of sustaining development including micro-macro and sustaining whole countries, particularly developing ones, rather than individual resource sectors. key concepts in growth economics;

definition of sustainability with desirability and feasibility; relation of sustainability with the concepts such as economic vs. ecological vs. social sustainability; intergenerational equity; sustaining renewable resources vs. non-renewable resources, assimilative capacity; philosophical, theoretical and empirical debates about the sustainability between natural and man-made capital, and weak versus strong sustainability.

Economic Analysis of the Environment: Environment in the context of the market mechanism and policies for improving environmental performance; market failure and strategies for internalising the external costs of environmental damage; Economic activities and the natural environment linkage; Relationship at the core of environmental and resource economics; Relationship between market/non-market activities and the environment; cost-benefit analysis and methodologies for the valuation of the environment; Basic understanding of public and private goods, goods environmental, environmental externality, various methods of resource, especially public goods.

Models and Methods in Planning and Management of Natural Resource:

Means and ways of efficient planning and management of natural resources towards both economic and environmental sustainability perspective; Contingent valuation, hedonic pricing model, and other cost-benefit analysis methods; Modeling environmental problems; modeling solutions to environmental problem; and analyzing economic implications of environmental problems.

Policy Strategies in Natural Resource Planning and Management:

Policy options available to governments for moving towards a sustainable development path; effects of policies on the society's/government's effort to poverty reduction using its resources base and other social/economic capital; community mobilization, participation of various stakeholders in social, economic and environmental aspects of resources management; review and case studies on existing fields of economics, especially environmental and natural resources, and growth and development specific to sustainable development, covering ecological resilience, uncertainty, equity and the quality of life; illustration of the economic analytical tools such as market models and benefit-cost analysis to assess environmental problem and to evaluate policy solution; alternative policy instruments from an economic perspective.

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| Course No.: URP 6209 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
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| Course Title: Project Planning and Management | Course Status: Elective |
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Rationale:

This course attempts to equip the students with project planning, management, monitoring and evaluation concepts, theories, methods, tools and techniques for solving project management, monitoring and evaluation related issues at multiple levels and scales.

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| <p>Course Objectives: The aim of this course is to:</p> <ul style="list-style-type: none"> • Conceptualize the different project planning methods, tools and techniques. • Orient with the various performance criteria, techniques and rules for project selection. • Understand of the risk and uncertainty issues related to project planning, management, monitoring and evaluation. • Appreciate the problems, issues, techniques related to project cost and benefit analysis • Understand the issues, concept, analysis and management related to project monitoring and evaluation. • Understand the contemporary exemplary project with its planning, monitoring and evaluation issues. |
| <p>Intended Learning Outcomes (ILOs): At the end of the course the students will be able to:</p> <ul style="list-style-type: none"> • Understand project planning methods, tools and techniques. • Apply various performance criteria, techniques and rules to select project. • Understand and apply project risk and uncertainty assessment and management framework. • Monitor project based on concept, analysis and management techniques. • Evaluate project based on evaluation tools and techniques. • Gain the experiences from the contemporary project with its planning, monitoring and evaluation issues. |
| Course Content |
| <p>Project Planning: The Critical Path Method (CPM), The Precedence Diagramming Method (PDM), The Program Evaluation and Review Technique (PERT), The Graphical Evaluation and Review Technique (GERT), Queue - Graphical Evaluation and Review Technique (GERT), Simulation Language for Alternative Modeling (SLAM), Dynamic Planning and Control Methodology (DPM), Critical Chain Planning, Resource Loading</p> <p>Basis of Project Selection: Financial criteria, Discounter Cash Flow Techniques. Choice of discount rate and social time preference; Selection criteria; Ranking rules; Deferment criteria,</p> <p>Risk and Uncertainty: Dealing with risk and uncertainty; Treatment of income distribution and inequalities; Cost estimation methodology, cost engineering, and cost control applicable in project management;</p> <p>Cost-benefit Analysis: Concept of Cost-benefit Analysis, problems of identification, categorization, qualification and evaluation of costs and benefits; private versus social costs and benefits.</p> <p>Project Monitoring: Earned value analysis, Risk and uncertainty, Quality Assurance, Conflict Management, Change management.</p> <p>Project Evaluation: Preparation and implementation of projects; Purpose of project evaluation; Economic versus financial evaluation,</p> <p>Case Studies: Case studies related to project planning, management, monitoring and evaluation in urban and regional planning and related issues.</p> |

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| Course No.: URP 6211 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
| Course Title: Urban Governance and Planning Administration | | Course Status: Elective |
| <p>Rationale: The orthodoxy of neo-liberalism brought many fold changes in the tradition concept of government and gave rise to governance. While governance has relaxed the public authorities from many of the previous mundane tasks, it has brought new roles and responsibilities. The dynamic changes in the technology, social structure, socio-economic development and mass media has put the public administration under a constant scrutiny. This course explores the new dynamic of public administration in the 21st century.</p> | | |
| <p>Course Objectives: The aim of this course is to:</p> <ul style="list-style-type: none"> • Understand the changing nature of Bangladesh and world politics and the new roles that the public sector, society, and business currently play in the realm of governance. • Explore and identify the major forces that are redefining how we think about state –society–business relationships. • Understand and analyze the changing patterns of governance in Bangladesh. | | |
| <p>Intended Learning Outcomes (ILOs): At the end of the course the students will be able to:</p> <ul style="list-style-type: none"> • Understand the shift from government to governance. • Understand the role of CBOs, NGOs, Civil Society and voluntary associations. • Business hegemony and the new dynamics of public administration, urbanization and infrastructure development. • Explore the problematic of governance issues in Bangladesh and the rising complexities. • The influence of emerging economies on the type of governance. | | |
| Course Content | | |
| <p>Governance structure and Washington institutions: Concept of Governance (World Bank, UN and EU definitions), changing concept of governance (Washington institutions), historical platform for understanding the concept of governance.</p> <p>Public, private and NGOs/Civil society: Role back of state & rise of NGOs and civil society, good governance and the role of NGOs and civil society, consequence of NGOs and Civil Society in the governance system.</p> <p>Business Hegemony and Neo-liberalism: Public administration and private interest nexus (corporations, EPZs), role of the public administration in the crony capitalism, power balance between private sector, NGOs and Civil Society, questions of resettlement, environmental disaster and other issues during neoliberal age.</p> <p>Government and Governance in Bangladesh: Bangladesh’s political history, Bangladesh’s entry in the neo-liberalism, NGOs and civil society in Bangladesh, success and Failure of NGOs.</p> | | |

Influence of the emerging economies: Rise of China and India as economic power, East Asian Miracle, emerging donor funding strategy, security, and shifting global power.

Nexus between development and democracy: The influence of the emerging donors on domestic democracy in Bangladesh, tension between democracy and corporate freedom, the influence of and tension between India and China on Bangladesh, how does it shape South-Asian economy and geo-politics?

Development projects and governance: Jamuna Bridge, Bashkhali coal extraction, Padma Multi-purpose bridge, Ruppurnuclear power plant, Rampal thermal power plant.

Mass Media and the Shaping of Ruling Ideas: How does the media can intervene, interfere or influence shaping democracy? Ruling ideas and values (an ideology) in Bangladesh, corporate concentration in the media industry and troubling civil society.

Changing global power structure: Mega-infrastructure projects and emerging economies, extra-economic process and foreign investment. Democracy and emerging economies, contest of geo-political influence between West and South/East.

Future governance issues and Bangladesh: Local, regional and urban governance, NGOs, Civil Society, democracy and development in Bangladesh. Contemporary governance issues.

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| Course No.: URP 6213 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
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| Course Title: Urban Ecology and Landscape Planning | Course Status: Elective |
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Rationale:

This course attempts to make the students well acquainted and capable with the fundamental concepts, theories and practices, tools and techniques, policy strategies for solving the problems and issues related to urban ecology and landscape planning at local, regional and global level.

Course Objectives:

The aim of this course is to:

- Acquaint with the concepts, theories and practices, tools and techniques, policy strategies in urban ecology and landscape planning.
- Apply the knowledge and skills to solve the problems and issues in the field of urban ecology and landscape planning at local, regional and global level.
- Examine the evolution of urban areas in relation to their biophysical setting using/considering an urban area as a case study
- Lead to an understanding and appreciation of the urban ecology of the city in terms of the flows of materials, resources and energy, and the challenges presented by climate change.

Intended Learning Outcomes (ILOs):

At the end of the course the students will be able to:

- Understand the fundamentals of urban ecology and ecological interactions.
- Appreciate the importance of studying urban ecology and landscape planning and design.

- Analyze the tools, techniques and models of landscaping in site planning/urban design.
- Evaluate the policy strategies in urban ecology and landscape planning.
- Equip the students to plan and design the built environment in a comprehensive manner.
- Develop design skills in the social, economic, and political context of the built environment. Design at both the large and small scales and to understand the relationship between the two. Address the issues of small-scale design decisions related to the larger social context.
- Get idea on nature and extent of affecting a design by the regional or local jurisdiction's political environment;
- Address issues that draw on the knowledge in degrees-livable communities, smart growth, conservation design, watershed-scale planning.
- Apply the models and methods in urban ecology and landscape planning.

Course Content

Urban Ecology and Ecological Interactions: Fundamentals of ecology and urban ecology; understanding of the ecological interactions to plan development, land use, recreation, or conservation; ecological systems at several scales of organization- individual, population, community, ecosystem, and landscape; applications of ecological knowledge to planning, environmental conservation, management, or restoration; ecology of specific habitats- aquatic and terrestrial; human impact on different habitats.

Fundamentals of Landscape Planning and Design: Introduction to landscape planning and its scope. Historical references of landscape planning and design.

Site Planning, Landscaping and Ecology: A synoptic introduction of site planning as urban design technique; major factors that interact with, and directly determine the shaping of physical urban environment; the art and mechanics of site planning; ecology and aesthetics of landscaping; transport infrastructure for urban and rural development; programming and land use planning for urban development, and planning standards and environmental performance criteria; landscape conservation in macro and regional level; landscape planning in urban scale for residential, recreational and commercial environments.

Theory and Practice of Landscape Planning in Urban Ecology: Case studies of planning problems and application of the ecological concepts to the understanding of solutions to the problems; growth management, urban landscape, public health, equity planning, wildlands management, and sustainable development; multi-criteria evaluation methodologies in the evolution of urban areas in relation to their biophysical setting.

Policy Strategies in Urban Ecology and Landscape Planning: Past and present policy strategies for urban ecology and landscape planning at local, regional and global level.

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| Course No.: URP 6215 | Credit Hour : 3.0 | MURP: 2nd Year 2nd Term |
| Course Title: Climate Change and Disaster Management | | Course Status: Elective |
| Rationale: This course attempts to equip the students with the knowledge of mitigation and adaptation aspects of climate change and skills of disaster vulnerability assessment and management at multiple levels and scales. | | |
| Course Objectives: The aim of this course is to: <ul style="list-style-type: none"> • Conceptualize the interconnections among anthropogenic emission of carbon, global warming, climate change and extreme events and human insecurity. • Identify the challenges humanity will encounter due to climate change and increased incidence of hydro-metrological disasters. • Understand various international, regional, national and local initiatives and responses to climate change and disastrous events. • Apply the knowledge and skills to ameliorate the threat posed by the climate change and disasters to human wellbeing and security in the low income countries. | | |
| Intended Learning Outcomes (ILOs): At the end of the course the students will be able to: <ul style="list-style-type: none"> • Understand the scientific basis of global warming, climate extreme events and human insecurity. • Ascertain the impacts of climate change and extreme events on development. • Examine the global initiatives and responses to climate change and disaster risk reduction. • Evaluate Bangladesh response to climate change mitigation and adaptation, and disaster risk reduction. • Understand and apply vulnerability and disaster risk assessment and management tools, techniques and framework. • Apply planning tools and techniques for risk sensitive urban and regional planning in coastal context. | | |
| Course Content | | |
| Global Warming & Climate Change: Greenhouses gases and global warming; Components of climate; Science of climate change, variability and extreme events. Climate modeling and projection of global climate change. | | |
| International Responses to Climate Change: The Kyoto Protocol- context and coverage, International flexibility mechanism – emission trading, Joint Implementation (JI) and Clean Development Mechanism (CDM);The IPCC working groups, Assessment Reports, Conference of Parties and climate negotiation; Climate financing- Loss and damage estimation, Green Climate Fund, Climate Change Trust Fund and Resilient Fund. | | |
| Mitigation and Adaptation to Climate Change: Concept and measures of mitigation; Strategies of mitigation; Concept and types of adaptation; Factors affecting adaptation; Costs of mitigation and adaptation; Business responses to climate change. | | |

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| Climate Change and Bangladesh: National Adaptation Program of Actions (NAPA); Bangladesh Climate Change Strategy and Action Plan; Climate Change Trust Fund; Climate Resilient Fund; Climate resilient and adaptation program/projects – case study. |
| Disaster and Development: Global trend of hazards and disasters, slow onset and rapid onset disasters; Intensive and extensive risk of disaster; Social, economic and psychological cost of disaster. |
| Hazard, Risk, Vulnerability and Resilience: Concept and types; Risk, hazard, vulnerability and resilience- assessment methods and tools. |
| Community Based Disaster Management: Concepts, importance/benefits, actors/stakeholders, CBDM/CBDRM steps and process; Analysis of best practices- Case Study. |
| International Responses to Disaster Management: The UNISDR; Hyogo Framework of Actions and Sendai Framework of Disaster Risk Reduction; UNOCHA and humanitarian assistance for disaster victims- 2004 Asian Tsunami, Haiti earthquake, |
| Disaster Planning and Management in Bangladesh: Disaster Management Cycle, Structural and Non-structural mitigation measures, Disaster Management Policy in Bangladesh, National Disaster Management Framework of Bangladesh, Early warning and disaster risk communication, Stranding Order on Disasters (SOD). |