

Department of Architecture & Planning
Master in Urban & Regional Planning

SEMESTER I

S. No.	Course Code	Course Title	L	T	P/S	Credit	Internal		End Term		Grand Total	Course Type
							Sessional	Mid Term	Viva	Theory		
1	UP 101	Planning History and Theory	3	0	0	3	15	15	--	70	100	C1
2	UP 103	Planning Techniques	2	1	0	3	15	15	--	70	100	C3
3	UP 105	Economics and Sociology	3	0	0	3	15	15	--	70	100	C2
4	UP 107	Housing and Environment Planning	3	0	0	3	15	15	--	70	100	C6
		Open Elective-I				2	15	15	--	70	100	OE1
5	UP 111	Area Planning Studio	0	0	12	6	15	35	50	--	100	C4
6	UP 113	Geo-spatial Technology	1	0	2	3	15	35	50	--	100	C5
7	UP 121	Educational Tour	0	0	2	2	50	--	50	--	100	C7
	GP 101	General Proficiency										NC
TOTAL			12	1	16	25						

Following course maybe taken under 'Open Elective-I':

1. Environment Modelling (ES 407)
2. Constitution of India

SEMESTER II

S. No.	Course Code	Course Title	L	T	P/S	Credit	Internal		End Term		Grand Total	Course Type
							Sessional	Mid Term	Viva	Theory		
1	UP 102	Metropolitan Regional Planning	3	0	0	3	15	15	--	70	100	C1
2	UP 104	Infrastructure Planning & Management	2	1	0	3	15	15	--	70	100	C2
3	UP 106	Transport Planning	3	0	0	3	15	15	--	70	100	C4
4	UP 108	Professional Elective-I	3	0	0	3	15	15	--	70	100	C3
		Open Elective-II	3	0	0	3	15	15	--	70	100	C6
6	UP 110	Urban Planning Studio	0	0	12	6	15	35	50	--	100	C5
7	UP 120	Educational Tour	0	0	2	2	50	--	50	--	100	C7
	GP 102	General Proficiency										NC
TOTAL			14+2^A	1	14	23						

^AMandatory(Non Credit) Audit Course

Following courses maybe taken under 'Professional Elective-I':

1. Public Policy and Politics
2. Big Data and Data Analytics

Following course maybe taken under 'Open Elective-II':

1. Water Security and Planning
2. Universally Accessible Built Environments

Prof. Pradeep Kumar Yadav
Dean
School of Engineering
Gautam Buddha University
Greater Noida (U.P.)

Mirmita Mehrotra
Head of Department
Department of Architecture & Planning
School of Engineering
Gautam Buddha University (U.P.)

SEMESTER III

S. No.	Course Code	Course Title	L	T	P/S	Credit	Internal		End Term		Grand Total	Course Type
							Sessional	Mid Term	Viva	Theory		
1	UP 201	Urban and Regional Governance	2	0	0	2	15	15	--	70	100	C1
2	UP 203	Land Markets & Management	2	0	0	2	15	15	--	70	100	C2
3	UP 205	Professional Elective-II	3	0	0	3	15	15	--	70	100	C4
4	UP 207	Disaster & Climate Resilience	2	1	0	3	15	15	--	70	100	C3
5	UP 209	Dissertation and Professional Training	2	0	2	4	50	--	50	--	100	C6
6	UP 211	Regional Planning Studio	0	0	12	6	15	35	50	--	100	C5
7	UP 221	Educational Tour	0	0	2	2	50	--	50	--	100	C7
	GP 201	General Proficiency										NC
TOTAL			11	1	16	22						

Following courses may be taken under 'Professional Elective-II':

1. Real Estate Development and Management
2. Participatory and Integrated Urban Development

Note: UP 209 - Summer Training 30-45 Days under an Organization signed by Registered Planner (With ITP No.), Min. 5 Years Experience.

SEMESTER IV

S. No.	Course Code	Course Title	L	T	P/S	Credit	Internal		End Term		Grand Total	Course Type
							Sessional	Mid Term	Viva	Theory		
1.	UP 202	Planning Practice & Ethics	2	1	0	3	15	15	--	70	100	C1
2.	UP 204	Planning Legislation	3	0	0	3	15	15	--	70	100	C2
3.	UP 206	Development Finance	3	0	0	3	15	15	--	70	100	C3
4.	UP 212	Thesis	0	0	12	15	35	15	50	--	100	C4
5.	GP 202	General Proficiency										NC
TOTAL			8	1	12	24						

Prof. Pradeep Kumar Yadav
Dean
School of Engineering
Gautam Buddha University
Greater Noida (U.P.)

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[Signature]

[Signature]
20/07/2021

Shruti Mehrotra
Head of Department
Deptt. of Architecture & Planning
School of Engineering
Gautam Buddha University (U.P.)

DEPARTMENT OF ARCHITECTURE & DESIGN

Bachelor in Interior Design

First Semester

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credit	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID101	History of Interior Design (Indian Persian, European)	3	—	3	15	15	—	70	100
		Open Elective-I	2	—	2	15	15		70	100
2	ID103	Design Fundamentals	2	2	3	15	15	—	70	100
3	ID105	Communication Skills with Computers & Personality Development	—	3	3	15	35	50	—	100
4	ID111	Interior Design Studio-I	—	6	6	25	50	25	50	150
5	ID113	Interior & Construction Technology - I	—	4	4	25	50	25	50	150
6	ID115	Graphics & Basic Drawing	—	3	3	—	50	50	—	100
7	ID117	Freehand & Measured Drawing	—	3	3	—	50	50	—	100
8	ID119	Model Workshop	—	3	3	—	50	50	—	100
	---	General Proficiency								
		Total	7	24	30					900

Open Elective-I: EN 111 Language Culture & Society

Second Semester

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credit	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID102	Principle of Architecture (History, Theories & Terminology)	3	—	3	15	35	50	—	100
2	ID104	Product Design – Futuristic & Craft based	3	—	3	15	35	50	—	100
3	BS101	Human Values and Buddhist Ethics	2	—	2	15	35	50	—	100
4	ES101	Environment Studies	3	—	3	15	15		70	100
5	ID110	Interior Design Studio -II	—	6	6	25	50	25	50	150
6	ID112	Interior & Construction Technology – II	—	4	4	25	50	25	50	150
7	ID114	Interior Graphics - II	—	3	3	—	50	50	—	100
8	ID116	Furniture Design & Furnishing	2	2	3	—	50	50	—	100
	---	General Proficiency								
		Total	13	15	27					900

Prof. Pradeep Kumar Yadav
Dean
School of Engineering
Gautam Buddha University
Greater Noida (U.P.)

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Dr. (Ar) Nirajita Mehrotra
26/10/2021
Dept. of Architecture & Planning
School of Engineering
Gautam Buddha University (U.P.)

DEPARTMENT OF ARCHITECTURE & DESIGN

Third Semester

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credits	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID-201	Design Based on User's Lifestyle Requirement	2	—	2	15	15	—	70	100
2	ID-203	Colour & Lighting role in Interiors	3	—	3	15	15	—	70	100
3	ID-205	Residential Space Planning	3	—	3	15	15	—	70	100
4	ID-211	Interior Design Studio -III	—	6	6	25	50	25	50	150
5	ID-213	Interior and Construction Technology - III	—	4	4	25	50	25	50	150
6	ID-215	Line Sketch with AUTOCAD	—	3	3	—	50	50	—	100
7	ID-217	Working Drawing & Presentation Technique	—	3	3	—	50	50	—	100
	—	General Proficiency								
		Total	8	16	24					800

Fourth Semester

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credits	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID-202	Behaviour Science, Environment & Ecology	2	—	2	15	35	—	50	100
2	ID-204	Estimation & Costing	3	—	3	15	15	—	70	100
3	ID-206	Commercial Space Design Theory	3	—	3	15	15	—	70	100
4	ID-210	Interior Design Studio -IV (Residential Project)	—	6	6	25	50	25	50	150
5	ID-212	Interior and Construction Technology - IV	—	4	4	25	50	25	50	150
6	ID-214	Computers (Corel Draw Photoshop & In Design)	—	3	3	—	50	50	—	100
7	ID-216	Furniture Design and Detailing (Commercial)	2	2	3	—	50	50	—	100
	—	General Proficiency								
		Total	10	15	24					800

Prof. Pradeep Kumar Yadav
Dean
School of Engineering
Gautam Buddha University
Greater Noida (U.P.)

Dr. (Ar.) Nirmita Mehrotra
26/10/21
Dept. of Architecture & Planning
School of Engineering
Gautam Buddha University (U.P.)

DEPARTMENT OF ARCHITECTURE & DESIGN

Fifth Semester (Green Env Sp.)

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credits	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID-301	Green & Energy Efficient Buildings	3	—	3	15	35	—	50	100
2	ID-303	Interior Design for Special Needs	3	—	3	15	15	—	70	100
3	ID-305	Handling Services in Interiors (Electrical, Water supply, Fire safety & Acoustic,)	3	—	3	15	15	—	70	100
4	ID-311	Interior Design Studio -V	—	6	6	25	50	25	50	150
5	ID-313	Interior and Construction Technology - V (Using Discarded Material for Interior & Furniture)	—	4	4	25	50	25	50	150
6	ID-315	Retail Design & Furniture Detailing (Outdoor Oriented)	—	3	3	—	50	50	—	100
7	ID-317	Computers 3d Max & Animation	—	4	4	—	50	50	—	100
	—	General Proficiency								
		Total	9	17	26					800

Sixth Semester (Special Need)

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credits	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID-302	Entrepreneurship Development	3	—	3	15	15	—	70	100
2	ID-304	Low cost Interior Design & Furniture	3	—	3	15	15	—	70	100
3	ID-306	Restoration & Renovation of Interiors	3	—	3	15	15	—	70	100
4	ID-310	Interior Design Studio -VI	—	6	8	25	50	25	50	150
5	ID-312	Interior and Construction Technology - VI	—	4	4	25	50	25	50	150
6	ID-314	Building Safety Norms	2	2	4	15	35	50	—	100
7	ID-316	End Sem Group Project (Team based actual work)	—	3	3	—	50	50	—	100
	—	General Proficiency								
		Total	11	15	28					800

Prof. Pradiseep Kumar Yadav
Dean
School of Engineering
Gautam Buddha University
Greater Noida (U.P.)

Dr. Armita Mehrotra
Head of Department
Deptt. of Architecture & Planning
School of Engineering
Gautam Buddha University (U.P.)
26/10/2021

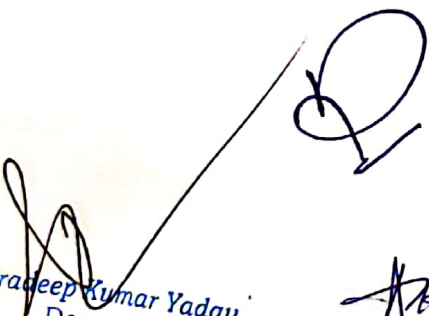
DEPARTMENT OF ARCHITECTURE & DESIGN

Seventh Semester

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credits	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID-401	Professional Practice & Management	3	—	3	15	15	—	70	100
2	ID-411	Theme Interior (Dissertation Project)	—	12	12	—	50	50	—	100
3	ID413	Summer Internship Viva (4-6 weeks duration)	—	10	10	—	50	50	—	100
	—	General Proficiency								
		Total	3	22	25					300

Eight Semester

S. No.	Course No	Course Title	Periods/Week (L-T-P/S)		Credits	Internals		End		Total Marks
						Mid-term Exam	Sessional	Viva	Theory	
1	ID-410	Internship	—	18	18	—	50	50		100
	—	General Proficiency								
		Total		18	18					100


 Prof. Pradeep Kumar Yadav
 Dean
 School of Engineering
 Gautam Buddha University
 Greater Noida (U.P.)






 26/10/2021
 Dr. Nirmita Mehrotra
 Head of Department
 Deptt. of Architecture & Planning
 School of Engineering
 Gautam Buddha University (U.P.)

SCHOOL OF ARCHITECTURE

Programme Objectives

Programme: MURP (2 Year programme)

Programme Objectives (PO)

The key objective of the course is to equip the students with adequate skills required to comprehend urban and regional issues and to analyse physical, socio-economic, cultural, political and ecological dimensions of the human settlements. The course is designed to provide necessary exposure to various planning processes, emerging trends and oilier related advanced technical knowhow. It intends to contribute towards the creation of professionals in the field and hence to cater to the specific needs of the industry and academics. During the course, the students will be provided with ample opportunities to interact with the subject experts, relevant organisations, etc. The course enables the students to gain real time experience through their involvement in the ongoing or live projects.

MURP is a two-year course consisting of four semesters. The course structure and syllabus is designed in coherence with the *Model Curriculum for' M.Plan , All India Council for Technical Education, 2011*. The course structure is a combination of various subjects, which includes studios, labs, theory, and field visits. The broad course structure is as follows:

The **first semester** is an integrated semester common to all master courses of planning offered by the **school**. The studio focuses on area planning. Subjects offered are introduction to information systems, evolution of human settlements and planning, planning techniques and quantitative methods, habitat and environmental planning, infrastructure planning, arid socio economic dimensions in planning.

The **second semester** focuses on urban planning and consists of the related subjects, such as applications oY geo-informatics, city and metropolitan planning, land economics and management, advanced infrastructure planning, and urban and regional governance.

The **third** semester focuses on regional planning. Subjects offered in this semester are advanced research methods, planning legislation and professional practice, rural planning and development, project planning and management, and disaster preparedness and management.

In the **fourth semester**, students would be required to undertake thesis. In addition, Evo theory subjects are offered. These include development finance, and *planning* and politics.

Core Courses

Core Courses represent the central learning of architectural education. Architecture is synthetic learning of various fields relating to humanities and scientific fields. Practical knowledge of the subjects is applied to projects which are resolved by students with faculty and these form the core of studios. Architectural Design, Building construction Arts and Drawing and communication along with other studio subjects are principally conducted in this way. Supplementary formal knowledge about technical aspects of building as well as abstract aspects of architectural thought draw upon other related disciplines of humanities are learned in a theoretical mode.

Elective Courses

Electives shall be offered by the institute to supplement additional coursework or to advance knowledge in architecture and allied fields beyond core subjects. The Elective courses also reflect diverse technical and cultural developments of current relevance. These provide valuable specialized expertise or knowledge with the faculty of the institution or in the city. The courses will be seminar or practical/studio courses.

The syllabus is designed so as to develop strong communication, interpersonal, advocacy and analytical skills of the student. The subject faculty members are encouraged to assess the students in a progressive manner throughout the semester through seminars, debates, video documentation group/individual presentations, term papers, written exams (open or closed book), take home exams, report submissions, viva voce, etc.

Course Educational Objectives and Course Outcomes

Department of Architecture and Regional Planning

MURP (2 year programme)

First Semester

CEO 1: UP 101– Evolution of Settlement and Planning Processes

- To equip the students with the required knowledge of conventional and contemporary planning thought, pluralistic nature of values in the profession, planning approaches and models.
- Focus would be on integrating procedural and substantive elements of planning theory, to current and future planning practices.

CEO 2: UP 103-Numerical and Statistical Analysis

- To acquire proficiency in statistical techniques and able to conduct empirical studies employing statistical software

CEO 3: UP 105- Planning Theories

- To critically understand economic, political, cultural, social and other forces shaping built environments in history.
- To examine the significance of histories as they inform the present planning of settlements.

CEO 4: CE 503- Remote Sensing, GIS and SDI

- The first objective of this course is to introduce and promote the idea of urban information systems.
- To unravel the relevance of urban information systems to city planning.
- To teach students about spatialization of data and information through GIS and remote sensing.

CEO 5: UP 107- Planning Techniques

- This course intends to impart knowledge about preparation of maps and undertake data collection and analysis for plan preparation.

CEO 6: UP 109- Demography and Economics

- To learn the nature of sociological and economic forces, and how they shape human settlements.

CEO 7: CE 509- Remote Sensing and GIS Lab

- The first objective of this course is to introduce and promote the idea of urban information systems.
- To unravel the relevance of urban information systems to city planning.
- To teach students about spatialization of data and information through GIS and remote sensing.

CEO 8: UP 111- Planning Studio

- Area planning studio intends to develop an ability in students to apply the concepts learnt in theory subjects to day to day planning practice.
- Through field visit, the students would understand comprehensive, interrelatedness and long-term nature of planning in a settlement.

Course Outcomes

CO 1: UP 101– Evolution of Settlement and Planning Processes

- To equip the students with the required knowledge of conventional and contemporary planning thought, pluralistic nature of values in the profession, planning approaches and models.
- Focus would be on integrating procedural and substantive elements of planning theory, to current and future planning practices.

CO 2: UP 103-Numerical and Statistical Analysis

- To analyse the types of data required for planning and methods of data collection.
- To demonstrate an understanding about data analysis and to be able to examine data for understanding the existing situation in a settlement.

CO 3: UP 105- Planning Theories

- To demonstrate appreciation and knowledge of histories of planning.
- To explain and analyse abstract theoretical formulations.

CO 4: CE 503- Remote Sensing,GIS and SDI

- To show understanding of urban information systems in planning and relevant government initiatives.
- To produce maps and generate analysis of planning issues with the use of GIS and remote sensing.
-

CO 5: UP 107- Planning Technique

- To create base maps and present planning information on maps.
- To analyse the types of data required for planning and methods of data collection.
- To demonstrate an understanding about data analysis and to be able to examine data for understanding the existing situation in a settlement.
-

CO 6: UP 109- Demography and Economics

- To express basic understanding of sociological processes generally as they relate to urban and regional planning.
- To develop basic understanding of some of the key economic concepts and their application in planning.
- To analyse the working real estate markets and evaluate the nature of these markets.
-

CO 7: CE 509- Remote Sensing and GIS Lab

- To show understanding of urban information systems in planning and relevant government initiatives.
- To produce maps and generate analysis of planning issues with the use of GIS and remote sensing.

CO 8: UP 111- Planning Studio

- To develop data collection and analytical skills through field surveys and analysis for the purposes of plan preparation.
- To apply theoretical concepts to the real world situations.
- To develop sensitivity to group dynamics and working in teams.

2nd Semester

CEO 1: UP 102– Settlement Planning

CEO 2: UP 104-Infrastructure Planning and Management

- To provide basic knowledge about physical and social infrastructure and requirements of various infrastructure for a settlement.
- To study planning and policy issues for urban and regional infrastructure.
- To familiarize the students with concepts, processes and current issues related to management. The emphasis would be placed on issues and challenges related to spatial planning sectors.

CEO 3: UP 106- Transportation Planning

- To familiarize students with different transport systems, and also principles, practices and policies of transportation planning.
- To learn the basic concepts of planning and designing transport facilities and traffic management tools for human settlements

CEO 4: UP 108- Environment Planning

- The course would focus on the significance of physical environment and its various parameters as they relate of plan preparation and implementation processes.

CEO 5: UP 110- Housing and Community Planning

- This course provides an understanding about the nature of housing problems, and various programmes and policies initiated to deal with these problems in Indian cities and villages.

CEO 6: UP 112- Planning Studio II

- To understand contents, substance and characteristics of various types of development plans for predominantly urban settlements.
- To comprehend processes of plan preparation and analyses techniques for the identification of issues and potentials for an urban settlement.
- To evolve development policies, development control rules and regulations, land use plan and devise implementation mechanisms for a selected urban area.

CEO7: UP 114- Seminar (Case Study)

Course Outcomes

CO 1: UP 102– Settlement Planning

CO 2: UP 104-Infrastructure Planning and Management

- To identify the problems and issues related to infrastructure provision in a settlement.
- To appraise planning guidelines to tackle these problems, and extent of infrastructure required for the future planning of settlements.
- To design and make recommendations for meeting the future needs infrastructure for a human settlement.
- To express knowledge about the basics concepts of general management.

CO 3: UP 106- Transportation Planning

- To plan for the conduct of field survey, examine and analyse data and information collected through various field surveys, perform analysis.
- To make presentations of traffic and transportation data in relation to human settlements and to identify the issues related to traffic and transportation planning.

CO 4: UP 108- Environment Planning

- To analyse the eco-system and resources and their importance for planning.
- To appraise the environment parameters for consideration while planning.

CO 5: UP 110- Housing and Community Planning

- To investigate and analyse the nature of housing problem in India.
- To examine the housing policy and programmes in India.

CO 6: UP 112- Planning Studio II

- To analyse the existing policy and planning literature on urban development plans, and to examine field survey data and information.
- To plan and design different future scenarios, priorities of development, action areas, phasing and monitoring, and to propose governance structures for the implementation of the plan.
- To produce spatial policies, and to make planning proposals along with a land use plan for a selected urban settlement.

CO 7: UP 114- Seminar (Case Study)

3rd Semester

CEO 1: UP 201– Decentralization and District Planning

CEO 2: UP 203-Land Markets and Management

- To understand the structure of urbanization and their overall impact.
- To understand the various reasons for land values and the types of land tenure.
- To understand the peculiarities of Indian land and its market.
- To understand the various land policies brought out by the government of India.
- To understand the various types of land management techniques and acts in India.

CEO 3: UP 205- Project Planning and Management

- To make them understand the concepts of Project Management for planning to execution of projects.
- To make them understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation.
- To enable them to comprehend the fundamentals of Contract Administration, Costing and Budgeting.
- Make them capable to analyze, apply and appreciate contemporary project management tools and methodologies in Indian context.

CEO 4: UP 207- DSE I

CEO 5: UP 207- DSE II

CEO 6: UP 211- Planning Studio

- To train the students in Geo-Informatics software towards the preparation of Regional Plans.
- To assess the status of the Case Study City, to prepare Management Plans, to identify and formulate Projects, to prepare DPR covering Physical, Environmental aspects, sequence of tasks, Cost Estimates, Project Benefits, and Institutional Framework for Project Implementation.

CEO 6: UP 213- Research Methods

- To develop a research culture among the students and study, use and understand appropriate methods in formulating problems and conduct surveys, analyze data and prepare a research report.

Course Outcomes

CO 1: UP 201– Decentralization and District Planning

CO 2: UP 203-Land Markets and Management

- To understand the structure of urbanization and their overall impact.
- To understand the various reasons for land values and the types of land tenure.
- To understand the peculiarities of Indian land and its market.
- To understand the various land policies brought out by the government of India.
- To understand the various types of land management techniques and acts in India.

CO 3: UP 205- Project Planning and Management

- Understand project characteristics and various stages of a project.
- Understand the conceptual clarity about project organization and feasibility analyses – Market, Technical, Financial and Economic.
- Analyze the learning and understand techniques for Project planning, scheduling and Execution Control.
- Apply the risk management plan and analyse the role of stakeholders.
- Understand the contract management, Project Procurement, Service level Agreements and productivity.
- Understand the How Subcontract Administration and Control are practiced in the Industry.

CO 4: UP 207- DSE I

CO 5: UP 207- DSE II

CO 6: UP 211- Planning Studio

- To train the students in Geo-Informatics software towards the preparation of Regional Plans.
- To assess the status of the Case Study City, to prepare Management Plans, to identify and formulate Projects, to prepare DPR covering Physical, Environmental aspects, sequence of tasks, Cost Estimates, Project Benefits, and Institutional Framework for Project Implementation.

CO 7: UP 213- Research Methods

- Learn various methods and techniques on how to study and understand the problems of the urban and rural society in relation with environment.
- Development skills to manage field work, data analysis and report working.

4th Semester

CEO 1: UP 202– Planning Thesis

- To train the students in doing a research topic pertaining to his interest in the field of planning and in the preparation of systematic report, which may be useful when he undertakes the same area of research for his Thesis.
- To develop a basic understanding of the area chosen for study (by carrying out a detailed Literature review).
- To undertake detailed exploration of the topic (by way of surveys and studies).
- To identify issues and concerns those emerge out of the study and suggest recommendations.

CEO 2: UP 204-Planning Legislations

- To understand the fundamentals of law and its relevance with planning.
- To understand the various planning acts and policies legislated by the government from time to time and their need.
- To understand the various planning legislations and their relevance in current urban development.
- To understand the various legal tools available for the structured development of a space.
- To understand the various professional obligations as a urban planner for a successful practice.

Course Outcomes

CEO 1: UP 202– Planning Thesis

- To train the students in doing a research topic pertaining to his interest in the field of planning and in the preparation of systematic report, which may be useful when he undertakes the same area of research for his Thesis.
- To develop a basic understanding of the area chosen for study (by carrying out a detailed Literature review).
- To undertake detailed exploration of the topic (by way of surveys and studies).
- To identify issues and concerns those emerge out of the study and suggest recommendations.

CEO 2: UP 204-Planning Legislations

- To understand the fundamentals of law and its relevance with planning.
- To understand the various planning acts and policies legislated by the government from time to time and their need.
- To understand the various planning legislations and their relevance in current urban development.
- To understand the various legal tools available for the structured development of a space.
- To understand the various professional obligations as a urban planner for a successful practice.

SEMESTER I

S.No.	Course Code	Course Title	L	T	P	C
1	UR 101	Planning History and Theory	3	0	0	3
2	UR 103	Planning Techniques	2	1	0	3
3	UR 105	Transport Planning	3	0	0	3
4	UR 107	Housing and Environment Planning	3	0	0	3
5	UR 111	Area Planning Studio	0	0	12	6
6	UR 113	Economics and Sociology	3	0	0	3
TOTAL			14	1	12	21

SEMESTER II

S. No.	Course Code	Course Title	L	T	P	C
1	UR 102	Metropolitan Regional Planning	3	0	0	3
2	UR 104	Infrastructure Planning	2	1	0	3
3	UR 112	Urban Planning Studio	0	0	12	6
4	UR 106	Professional Elective-I	3	0	0	3
5	UR 110	Open Elective-I	3	0	0	3
6	UR 114	Fundamentals of Management	2	0	0	2
7		Sports and Yoga	2	0	0	0
TOTAL			13+2[^]	1	12	20

^Mandatory (Non Credit) Audit Course

Following courses may be taken under 'Professional Elective-I':

1. Public Policy and Politics
2. Big Data and Data Analytics

Following course may be taken under 'Open Elective-I':

1. Water Security and Planning
2. Universally Accessible Built Environments

Course Objective: Planning History covers ancient and medieval cities in India and Mughal and colonial built environments in the country. In Planning History course, the following objectives are followed:

- To critically understand economic, political, cultural, social and other forces shaping built environments in history.
- To examine the significance of histories as they inform the present planning of settlements.

As far as Planning Theory is concerned, the chief goal is not to replace conventional theories with non-conventional ones, but identify under what conditions any set of theoretical propositions hold. Hence, identifying conditions which determine development and planning outcomes is crucial. One assumption that underlies this pedagogical approach is that it encourages unconventional thinking, and reflection in action—and not planning prescriptions based on pre-conceived ideas. Following are the course objectives of Planning Theory:

- To learn to have a general, and substantive command of the spectrum of past and present perspectives regarding planning theory.
- To learn to write clearly and concisely about abstract planning concepts.

Course Contents:

Unit 1: Ancient and Medieval Cities in India

Urbanization in the Medieval period including a study of cities like Varanasi, Mohenjo-Daro, Harappa, Dholavira and Lothal; Chola dynasty sponsored famous towns like Thanjavur, Nagapattinam, Kanchipuram and Madurai; Why India could not become urbanized during the medieval period?

Unit 2: Mughal and Colonial Built Environment

Mughals and Vijayanagara Kingdoms built grand cities like Shahjahanabad in the north and Hampi – the capital of Vijayanagara Kingdom in the south; Mughal towns and cities; City and regional planning during the British Raj involving cantonments, model towns, capital towns like New Delhi; Regional planning efforts involving development of port cities such as Bombay, Madras, Calcutta, etc.; Construction of railways, and road networks; The Portuguese port towns of Cochin, Cannanore, Goa, Daman and Diu. Contributions of scholars like Sir Patrick Geddes to Indian planning; Governance and planning legislation during the British period include a study of improvement trusts, municipalities, etc.

Unit 3: Urban Theories

Concentric Zone Theory, Sector Theory, and Multiple Nuclei Theory with a focus on the contributions of Robert E. Park, Louis Wirth, etc.; Land Use and Land Value Theory of William Alonso; From the world city to the global city.

Unit 4: Theories of Planning

Rational Planning Model; Advocacy Planning Model; Political Economy Model; Equity Planning Model; Radical Planning model; Collaborative Planning Theory.

Text Books and References:

1. Allmendinger, P. (2017) *Planning Theory*, Macmillan, London. Third Edition.
2. Buch, M. N. (1987) *Planning the Indian City*, Vikas Publishing, New Delhi.
3. Fainstein, S.S. and DeFilippis, J. (Eds.) (2016) *Readings in Planning Theory*, Wiley, London. Fourth Edition.
4. Friedmann, J. (1987) *Planning in the Public Domain*, Princeton University Press, Princeton. Second Edition.
5. Gooptu, N. (2001) *The Politics of the Urban Poor in Early Twentieth - Century India*, Cambridge University Press, Cambridge.
6. Healey, P. (2010) *Making Better Places: The planning project in the twenty-first century*, Palgrave Macmillan, London.
7. King, A. (1976) *Colonial Urban Development: Culture, Social Power, and Environment*, Routledge and Kegan Paul, New York.
8. Kumar, A., Sanjeev, V., and Prakash, P. (2020) *City Planning in India, 1947-2017*, Routledge, New York.

Course Outcomes: Upon the completion of this course, the students would be able:

- To demonstrate appreciation and knowledge of histories of planning.
- To explain and analyse abstract theoretical formulations.

Course Objective: This course intends to impart knowledge about preparation of maps and undertake data collection and analysis for plan preparation.

Course Contents:

Unit 1: Scales and Preparation of Maps

Maps as a representation of reality, Elements of Maps; Graphical, linear and areal scales, Notations involving basic discipline of maps; Measurement of areas; Learning to prepare base maps; Contents of base maps at various scales; Choice of appropriate scales for region and settlement level plans, town development plans, zonal development plans, layout plans

Unit 2: Data for Planning and Socio-Economic Surveys

Data requirements for urban and regional planning; Sources of primary and secondary data; Quantitative and Qualitative methods of data collection, Validity and reliability of data, Questionnaire design, measurement scales and their applications, sampling techniques, types of socioeconomic surveys; Self-surveys, interviews, mailed questionnaires and observer participation, focus groups etc.

Unit 3: Physical Surveys

Techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of buildings, land utilization and physical features of land; Data requirements for various types of regional plans; Techniques for conducting regional surveys.

Unit 4: Analysis and Presentation of Data

Land suitability analysis, Land use classification, coding and analysis; residential and non-residential density patterns and their analyses; population and economic analysis. Tabulation of data, graphical presentation of data; Preparing pie diagrams, histograms, bar charts, normal, semi-log and double log graphs and their uses; colour, black and white presentation techniques; Understanding the discipline of illustrations and tables. Colour, black and white presentation techniques; Basic discipline of presenting illustrations; Presentation of spatial data, analysis and proposals.

Text Books and References:

1. Bracken, I. (1999) *Urban Planning Methods: Research and Policy Analysis*, Methuen, London.
2. Berke, P.R. and Goodschalk, D.R., Kaiser, E.J and Rodriguez, D.A (2006) *Urban Land Use Planning*, University of Illinois Press, U.S.A. Fifth Edition.
3. Wang X., Rainer A. and Hofe, V. (2007) *Research Methods in Urban and Regional Planning*, Springer, Berlin.
4. Monmonier, M. (1996) *How to Lie with Maps*, University of Chicago Press, Chicago.

Course Outcomes: Upon the completion of this course, the students would be able:

- To create base maps and present planning information on maps.
- To analyse the types of data required for planning and methods of data collection.
- To demonstrate an understanding about data analysis and to be able to examine data for understanding the existing situation in a settlement.

Course Objective:

- To familiarize students with different transport systems, and also principles, practices and policies of transportation planning.
- To learn the basic concepts of planning and designing transport facilities and traffic management tools for human settlements.

Course Contents:**Unit 1: Transport System**

Types and characteristics of transport systems; Determinants of transport demand; Planning norms and standards; Principles of transport infrastructure planning and design of roads and intersections, street infrastructure elements; Pedestrian and cyclist infrastructure; Parking facilities; and Principles of traffic management.

Unit 2: Land use – Transport Integration

Land use transport integration: definitions and concepts, land use transport cycle, importance of accessibility; Factors affecting land use-transport integration, and tools for land use-transport integration; Key elements of integration; Integrating land use and transport in the planning process; Institutional integration and legal mechanisms for integration.

Unit 3: Traffic Impact on Land Development

Principles of traffic impact analysis, land development attributes, traffic generation rates of different land use; Land development impact on traffic congestion on road segments, intersections and parking, impact on public transportation, pedestrian traffic and safety.

Unit 4: Transport Planning Policies and Projects

Transport planning policies of central and state governments; Transit Oriented Development: Definition, concepts and key components; Principles of TOD, planning norms and standards of TOD, pre-requisites of TOD, financing of TOD projects, role of stakeholders; Golden Quadrilateral project, corridor development projects, expressway projects; Metro rail networks projects of urban and regional significance.

Text Books and References:

1. Kadiyali, L.R. (2017) *Transport Engineering*, Khanna Book Publishing Co., New Delhi.
2. Saxena, S.C. (1989) *A Course in Traffic Planning and Design*, Dhanpat Rai and Sons, New Delhi.
3. Sarkar, P.K., Maitri, V. and Joshi, G.J. (2014) *Transportation Planning: Principles, Practices and Policies*, Prentice Hall India Learning Private Limited, New Delhi.
4. Verma, A. and Ramanayya, T.V. (2014) *Public Transport Planning and Management in Developing Countries*, CRC Press, Taylor and Francis Group, London.

Course Outcomes: Upon the completion of this course, the students would be able:

- To plan for the conduct of field survey, examine and analyse data and information collected through various field surveys, perform analysis.
- To make presentations of traffic and transportation data in relation to human settlements and to identify the issues related to traffic and transportation planning.

Course Objective: The first part of this course provides an understanding about the nature of housing problems, and various programmes and policies initiated to deal with these problems in Indian cities and villages. The second part focuses on the significance of physical environment and its various parameters as they relate of plan preparation and implementation processes.

Course Contents:

Unit 1: Problem of Housing

Significance of housing in economic and social development; Basic Terms in housing, understanding concepts of Housing need, demand, supply and shortage; Housing data analysis from Census; Housing typologies; Housing development process; Nature of housing problem in urban and rural India, Public health issues in housing; Housing for the poor, houselessness in India, old housing,

Unit 2 Housing Policy and Finance

Evolution of housing policy in India, Role of the government and private sector in housing; housing programmes for the poor and night shelters; Examples of housing projects, Introduction to housing finance; Affordability and Cost of housing; Role of Financing organisation. Critical Review of Current housing programmes

Unit 3: Ecosystem, Urban Ecosystem and Quantitative Ecology

Eco-system and their relevance to environment, Impact of advanced agriculture-methods, urbanization and industrialization on nature; Pollution, types, sources, remedies; Urban ecosystem approach, evolution and significance; Introduction to quantitative ecology, Identification of ecological parameters for planning at different levels, Site planning, Settlement planning, Regional planning. Data needs, formats for data collection Types of analysis required to evolve ecological parameters; Environmental impact assessment, Methods and their appraisal. preparation and analysis of resource inventories and resource matrices.

Unit 4: Resource Planning and Management

Finiteness of resources, examples of transfer from one resource to another in history in different parts of world; Development, utilization and conservation of resources, resource planning, integrated resource planning approach; Resource regions, their problems and potentials; Resource management, traditional and contemporary approaches. Resource development in India, some selected areas (energy, water, manpower, etc.); and Government's 8 missions under the National Action Plan on Climate Change.

Text Books and References:

1. Jain, A.K. (2019) *Housing for all*, Khanna Book Publishing Co., New Delhi.
2. Cedric, P. (1990) *Housing and Urbanisation: A Study of India*, Sage, London.

3. Hardoy, J.E. and Satterthwaite, D (1989) *Squatter Citizen: Life in the Urban Third World*, Routledge, London.
4. Kohli, V.K. (2007) *Housing Finance Agencies in India*, Deep and Deep, New Delhi.
5. Jenkins, P., Smith, H. and Wang, Y.P. (2007) *Planning and Housing in the Rapidly Urbanizing World*, Routledge, London.
6. McHarg, I. (2008) *Design with Nature*, Wiley, London. 25th Edition.
7. Ndubisi, F.O. (ed.) (2014) *The Ecological Design and Planning Reader*, Island Press, Washington, D.C.
8. Verma, G.D. (2001) *Slumming India*, Penguin, New Delhi.
9. Wallace-Wells, D. (2019) *The Uninhabitable Earth*, Crown Publishing, U.S.A.
10. Wachter, S.M. and Birch, E.L. (2008) *Growing Greener Cities: Urban Sustainability in the Twenty First Century*, University of Pennsylvania Press, Philadelphia, PA.
11. Whitehead, M. (2014) *Environmental Transformation: A Geography of the Anthropocene*, Routledge, New York.

Course Outcomes: Upon the completion of this course, the students would be able:

- To investigate and analyse the nature of housing problem in India.
- To examine the housing policy and programmes in India.
- To analyse the eco-system and resources and their importance for planning.
- To appraise the environment parameters for consideration while planning.

Course Objective: Area planning studio intends to develop an ability in students to apply the concepts learnt in theory subjects to day to day planning practice. Through field visit, the students would understand comprehensive, interrelatedness and long-term nature of planning in a settlement.

Course Contents: This course provides basic introduction to GIS and Statistics to be applied to relevant exercises. Developing an appreciation of components of a settlement and develop an ability to read a city or small settlement. Second part of the studio will require the students to prepare a development plan for a neighbourhood or village for rural and urban areas based on a field visit. As planning endeavour is a team work, it is expected in this studio, the students make a beginning to learn to work in collaborative environments.

Course Outcomes: Upon the completion of this course, the students would be able:

- To develop data collection and analytical skills through field surveys and analysis for the purposes of plan preparation.
- To apply theoretical concepts to the real world situations.
- To develop sensitivity to group dynamics and working in teams.

Course Objective: To learn the nature of sociological and economic forces, and how they shape human settlements.

Course Contents:

Unit 1: Culture and the City

Learning how culture and the city are folded into each other and how they shape each other; Man and environment relationship; Traditional patterns and trends of change in the Indian society; Concept of social structure and agency, culture and social institutions; Relations between social structures and spatial structures; Social aspects of housing and social problems in slums.

Unit 2: Economic Resources

Defining economic resources, typology of goods, production economics, processes, laws, products and costs; Economies of scale including external economies; Valuation and typology of markets; and other macro-economic concepts.

Unit 3: Economic Analysis

Basics of economic analysis; Economic principles and land uses; Relationship between economic rent, land use patterns and land values.

Unit 4: Land and Real Estate Markets

Understanding the institution of the private property; Development of land and real estate and property markets; Financial balance sheet of land development; Private ownership and social control over land.

Text Books and References:

1. Appadurai, A. (1990) Disjuncture and difference in the global cultural economy, *Theory, Culture and Society, Public Culture*, Vol. 2, No. 2.
2. Appadurai, A. (2001) Deep democracy: Urban Governmentality and the Horizon of Politics, *Environment and Urbanization*, Vol. 13 No 2, pp. 23-43.
3. Appadurai, A. (2013) *The Future as Cultural Fact: Essays on the Global Condition*, Verso, London.
4. Durham, M.G. and Kellner, D.M. (eds.) (2006) *Media and Cultural Studies: Key Works*, Malden, MA
5. Kapoor, P. (2018) *Sociology & Economics for Engineers*, Khanna Book Publishing Co., New Delhi.
6. Bertaud, A. (2019) *Order without Design: How Markets Shape Cities*, MIT Press, Massachusetts.
7. Brooks, N., Donaghy, K. and Knaap, G. (2011) *The Oxford Handbook of Urban Economics and Planning*, Oxford University Press, Oxford.

8. Searle, L.G. (2013) Conflict and Commensuration: Contested Market Making in India's Private Real Estate Development Sector, *International Journal of Urban and Regional Research*, Vol. 38, Issue 1, pp. 60-78.
9. Shatkin, G. (2013) Contesting the Indian City: Global Visions and the Politics of the Local, *International Journal of Urban and Regional Research*, Vol. 38, No. 1, pp. 1-13.

Course Outcomes: Upon the completion of this course, the students would be able:

- To express basic understanding of sociological processes generally as they relate to urban and regional planning.
- To develop basic understanding of some of the key economic concepts and their application in planning.
- To analyse the working real estate markets and evaluate the nature of these markets.

Course Objective: The first objective of this course is to understand various aspects and dimensions of large and growing cities generally. The second objective is to understand the processes of planning and development of metropolitan cities and regions in India along with comprehending relevant development plans. The third objective is to understand the processes leading to the peripheralization of metropolitan cities.

Course Contents:

Unit 1: Metropolitan Cities, Agglomerations and Regions

Defining cities, metropolitan cities, mega cities, metropolitan agglomerations, conurbations, and metropolitan regions; Physical, economic and political structures of metropolitan regions; and Globalisation and extended metropolitan region; desakota model, and territoriality of rural-urban interactions.

Unit 2: Metropolitan Regional Planning

Theories about the evolution of metropolitan regions; Techniques for the delineation metropolitan regions; Approaches to preparing metropolitan regional plans; Organizations involved in the planning of metropolitan regions; Implementation of regional plans in India.

Unit 3: Peripheralization of Metropolitan Regions

Nature and causes of development in the peripheral areas of metropolitan regions; Actors involved in the development in the peripheral areas; Role of the private sector in the development of peripheral areas.

Unit 4: Peripheral Development and Physical Environment

Environmental assets in peripheral areas of metropolitan regions and their uses; Condition and status of forests, water bodies, etc.

Text Books and References:

1. Evenson, N. (1989) *Indian Metropolis - A View toward the West*, Yale University Press, Yale.
2. Kennedy, K. (2007) Regional industrial policies driving peri-urban dynamics in Hyderabad, India, *Cities*, Vol. 24, No. 2, pp. 95–109.
3. Kumar, A. (2006) Trends of Planning and Governance in Metropolitan India, *ITPI Journal*, Vol. 3, No. 2, pp. 10-20.
4. Mitra, S. (2017) 'A 'peripheries' view of planning failures in Kolkata and Hyderabad in India', in G. Bhan, S. Srinivas, and V. Watson (eds.) *The Routledge Companion to Planning in the Global South*, Routledge, London.

5. Mitra, S. (2018) Roads to New Urban Futures: Flexible Territorialisation in Peri-urban Kolkata and Hyderabad, *Economic and Political Weekly*, Vol. 53, No 56, pp. 56-64.
6. Miraftab, F. and Kudva, N. (2014) *Cities of Global South*, Routledge, London.

Course Outcomes: Upon the completion of this course, the students would be able:
To analyse the nature, form and planning of metropolitan cities and regions in India.

Course Objective:

- To provide basic knowledge about physical and social infrastructure and requirements of various infrastructure for a settlement.
- To study planning and policy issues for urban and regional infrastructure.

Course Contents:

Unit 1: Water Supply System

Water supply systems and networks, and network mapping; Water sources, quality and quantity requirements, and water requirement for various land uses; Factors affecting water demand; Storage facilities and distribution systems; Rain water harvesting systems and locational criteria, implications on land use and density of water harvesting system; Innovative Methods and successful urban water supply system practices; Water programmes and policies.

Unit 2: Sanitation and Sewerage System and Storm Water Drainage

General considerations and principle of sanitation and sewerage systems; Sewage disposal and treatment methods; Characteristics of waste water, industrial pollutants and their affects; Open defecation; Manual scavenging; Innovative approaches of sewage disposal in urban areas and low cost appropriate technologies for sanitation; Storm water drainage networks, and network mapping; Estimations of sewer generation and network requirements; Elements of Solid Waste Management, Classification and Characteristics of Solid Wastes; Methods for Solid waste Collection, Storage, transportation and disposal; Processing and Treatment of Solid Wastes; Land Filling methods of Solid Waste Management.

Unit 3: Social Infrastructure

Social infrastructure typologies; Planning norms and space standards for education, health, recreation and socio-cultural facilities; Amenities for urban and rural settlements; Significance of education and health infrastructure in planning; Locating education and health facilities; Understanding scalogram and other techniques.

Unit 4: Policies, Programmes and Projects

Understanding prevalent policies, projects and missions, for example, JnNURM, AMRUT, HRIDAY, Smart Cities Mission, etc.; Norms and standards for different types of infrastructure; Nature and content of infrastructure in development plans at different geographical levels; Making assessment of infrastructure requirements in plans.

Text Books and References:

1. Hudson, W.R., Hass, R.C.G. Uddin, W. (1997) *Infrastructure Management*, McGraw Hill, London.
2. Gifford, J.W. Uzarski, D.R. and McNeil, S. (1993) *Infrastructure Planning and Management*, American Society of Civil Engineers, Reston, VA.
3. Goodman, A. and Hartak, M. (2000) *Infrastructure Planning Handbook*, ASCE Press, Reston, VA.
4. Parkin, J. and Sharma, D. (1999) *Infrastructure Planning*, Thomas Jelford Publishing,

London.

Course Outcomes: Upon the completion of this course, the students would be able:

- To identify the problems and issues related to infrastructure provision in a settlement.
- To appraise planning guidelines to tackle these problems, and extent of infrastructure required for the future planning of settlements.
- To design and make recommendations for meeting the future needs infrastructure for a human settlement.

Course Objective:

- To understand contents, substance and characteristics of various types of development plans for predominantly urban settlements.
- To comprehend processes of plan preparation and analyses techniques for the identification of issues and potentials for an urban settlement.
- To evolve development policies, development control rules and regulations, land use plan and devise implementation mechanisms for a selected urban area.

Course Contents: This studio is focused on the preparation of master development plan. Students are expected to not only prepare the master development plan for a city or city-region but also analyse debates around strengths and limitations of the ideas of a master development plan. Data collection, analysis and plan proposals need to be framed in a collaborative and participatory manner.

Text Books and References:

1. Bureau of Indian Standards (2005) *National Building Code of India*, Bureau of Indian Standards, New Delhi

2. Delhi Development Authority (2007) *Master Plan for Delhi, 2021*, DDA, New Delhi.
3. Singh V., Ahmed A., Sharma Y. (2020) *Unified Building Bye-Laws for Delhi 2016*, Society for Fundamental Research and Development, New Delhi.
4. Ministry of Urban Development (1996) *The Urban Development Plan Formulation and Implementation (UDPFI) Guidelines*, Government of India, New Delhi.
5. Ministry of Urban Development (2015) *The Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines*, Government of India, New Delhi.

Course Outcomes: Upon the completion of this course, the students would be able:

- To analyse the existing policy and planning literature on urban development plans, and to examine field survey data and information.
- To plan and design different future scenarios, priorities of development, action areas, phasing and monitoring, and to propose governance structures for the implementation of the plan.
- To produce spatial policies, and to make planning proposals along with a land use plan for a selected urban settlement.

B.ARCH SEMESTER –II

UR 106 PROFESSIONAL ELECTIVE I

Studio-

Credit -03

Any one course from following options can be opted under 'Professional Elective I':

1. Public Policy and Politics
2. Big Data & Data Analytics.

Refer Appendix I on Professional Electives.

B.ARCH SEMESTER –II

UR 110 OPEN ELECTIVE I

Studio-

Credit -03

Any one course from following options can be opted under 'Open Elective-I'

1. Water Security and Planning
2. Universally Accessible Built Environments

For syllabus, Refer Appendix II on Open Electives.

Course Objective: To familiarize the students with concepts, processes and current issues related to management. The emphasis would be placed on issues and challenges related to spatial planning sectors.

UNIT 1: Basic Issues in Management

Meaning, functions and principles of management; Levels of management, management skills, evolution of management; Planning: Meaning, nature, importance and steps of planning, types of plans; Management by Objectives; Decision making: meaning, types, process, and models; Organization: Meaning, characteristics and importance, types of organization structure with a focus on spatial planning organisations.

UNIT 2: Directing and Controlling

Directing: Meaning, importance and principles; Organization culture; Corporate social responsibility; Motivation: Motives, characteristics, motivation theories; Leadership styles and approaches; Control Process: Nature, need, methods, tools and techniques.

UNIT 3: Organizational Studies

Organizational behavior: meaning, nature and relevance; Historical evolution of studies related to organisational behaviour; Opportunities and challenges of organisational behaviour in spatial planning of tourism sector; Determinants of individual and group behavior; Individual and group psychology.

UNIT 4: Personality Development

Personality: Determinants, theories and relevance in organisational behaviour; Perception: Process and factors affecting perceptions and relevance in organisational behaviour; Attitudes: Nature, components, functions; Group dynamics: Types, group development, and determinants of group behavior.

Text Books and References:

1. Kapoor, P. (2019), *Principles of Management*, Khanna Book Publishing Co., New Delhi.
2. Daft, R.L. (2013) *Management*, South-Western, Mason, OH. Thirteenth Edition.
3. Edmondson, A.C. (2018) *The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth*, Wiley, London.
4. Mullins, L.J. (2019) *Organisational Behaviour in the Workplace*, Pearson Education, New York, Twelfth Edition.

Course Outcomes: Upon the completion of this course, the students would be able:
To express knowledge about the basics concepts of general management.

Course Objective:

- To make the students understand the importance of sound health and fitness principles as they relate to better health.
- To expose the students to a variety of physical and yogic activities aimed at stimulating their continued inquiry about Yoga, physical education, health and fitness.
- To create a safe, progressive, methodical and efficient activity based plan to enhance improvement and minimize risk of injury.
- To develop among students an appreciation of physical activity as a lifetime pursuit and a means to better health.

Course Contents:

- **Introduction to Physical Education**
 - Meaning & definition of Physical Education
 - Aims & Objectives of Physical Education
 - Changing trends in Physical Education
- **Olympic Movement**
 - Ancient & Modern Olympics (Summer & Winter)
 - Olympic Symbols, Ideals, Objectives & Values
 - Awards and Honours in the field of Sports in India (Dronacharya Award, Arjuna Award, Dhyanchand Award, Rajiv Gandhi Khel Ratna Award etc.)
- **Physical Fitness, Wellness & Lifestyle**
 - Meaning & Importance of Physical Fitness & Wellness
 - Components of Physical fitness
 - Components of Health related fitness
 - Components of wellness
 - Preventing Health Threats through Lifestyle Change
 - Concept of Positive Lifestyle
- **Fundamentals of Anatomy & Physiology in Physical Education, Sports and Yoga**
 - Define Anatomy, Physiology & Its Importance

- Effect of exercise on the functioning of Various Body Systems. (Circulatory System, Respiratory System, Neuro-Muscular System etc.)
- **Kinesiology, Biomechanics & Sports**
 - Meaning & Importance of Kinesiology & Biomechanics in Physical Edu. & Sports
 - Newton's Law of Motion & its application in sports.
 - Friction and its effects in Sports.
- **Postures**
 - Meaning and Concept of Postures.
 - Causes of Bad Posture.
 - Advantages & disadvantages of weight training.
 - Concept & advantages of Correct Posture.
 - Common Postural Deformities – Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow Legs and Scoliosis.
 - Corrective Measures for Postural Deformities
- **Yoga**
 - Meaning & Importance of Yoga
 - Elements of Yoga
 - Introduction - Asanas, Pranayama, Meditation & Yogic Kriyas
 - Yoga for concentration & related Asanas (Sukhasana; Tadasana; Padmasana & Shashankasana)
 - Relaxation Techniques for improving concentration - Yog-nidra
- **Yoga & Lifestyle**
 - Asanas as preventive measures.
 - Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Sharasana.
 - Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, Ardh Matsyendrasana.
 - Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana.
 - Diabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana.
 - Asthema: Procedure, Benefits & contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana.
- **Training and Planning in Sports**
 - Meaning of Training
 - Warming up and limbering down
 - Skill, Technique & Style
 - Meaning and Objectives of Planning.

- Tournament – Knock-Out, League/Round Robin & Combination.
- **Psychology & Sports**
 - Definition & Importance of Psychology in Physical Edu. & Sports
 - Define & Differentiate Between Growth & Development
 - Adolescent Problems & Their Management
 - Emotion: Concept, Type & Controlling of emotions
 - Meaning, Concept & Types of Aggressions in Sports.
 - Psychological benefits of exercise.
 - Anxiety & Fear and its effects on Sports Performance.
 - Motivation, its type & techniques.
 - Understanding Stress & Coping Strategies.
- **Doping**
 - Meaning and Concept of Doping
 - Prohibited Substances & Methods
 - Side Effects of Prohibited Substances
- **Sports Medicine**
 - First Aid – Definition, Aims & Objectives.
 - Sports injuries: Classification, Causes & Prevention.
 - Management of Injuries: Soft Tissue Injuries and Bone & Joint Injuries
- **Sports / Games**

Following subtopics related to any one Game/Sport of choice of student out of:

Athletics, Badminton, Basketball, Chess, Cricket, Kabaddi, Lawn Tennis, Swimming, Table Tennis, Volleyball, Yoga etc.

 - History of the Game/Sport.
 - Latest General Rules of the Game/Sport.
 - Specifications of Play Fields and Related Sports Equipment.
 - Important Tournaments and Venues.
 - Sports Personalities.
 - Proper Sports Gear and its Importance.

Text Books/References:

1. Modern Trends and Physical Education by Prof. Ajmer Singh.
2. Light On Yoga by B.K.S. Iyengar.
3. Health and Physical Education – NCERT (11th and 12th Classes)

Course Outcomes: On successful completion of the course the students will be able to:

1. Practice Physical activities and Hatha Yoga focusing on yoga for strength, flexibility, and relaxation.

2. Learn techniques for increasing concentration and decreasing anxiety which leads to stronger academic performance.
3. Learn breathing exercises and healthy fitness activities
4. Understand basic skills associated with yoga and physical activities including strength and flexibility, balance and coordination.
5. Perform yoga movements in various combination and forms.
6. Assess current personal fitness levels.
7. Identify opportunities for participation in yoga and sports activities.
8. Develop understanding of health-related fitness components: cardiorespiratory endurance, flexibility and body composition etc.
9. Improve personal fitness through participation in sports and yogic activities.
10. Develop understanding of psychological problems associated with the age and lifestyle.
11. Demonstrate an understanding of sound nutritional practices as related to health and physical performance.
12. Assess yoga activities in terms of fitness value.
13. Identify and apply injury prevention principles related to yoga and physical fitness activities.
14. Understand and correctly apply biomechanical and physiological principles related to exercise and training.

SEMESTER III

S.No.	Course Code	Course Title	L	T	P	C
1	UR 201	Urban and Regional Governance	2	0	0	2
2	UR 203	Risks, Disaster Mitigation and Management	2	0	0	2
3	UR 209	Dissertation and Professional Training	2	2	4	6
4	UR 211	Regional Planning Studio	0	0	12	6
5	UR 207	Professional Elective-II	3	0	0	3
6	UR 205	Introduction to Philosophy	2	0	0	2
TOTAL			11	2	16	21
Following courses may be taken under 'Professional Elective-II': 1. Real Estate Development and Management 2. Participatory and Integrated Urban Development						

Note: Students will undergo professional training in a department approved organization on a project for 2 months. This will be supervised training by a senior professional from the organization. Satisfactory completion of training will be mandatory for the award of a degree. Out of six credits, two credits will be awarded after evaluation by the faculty for successful completion of training as reflected in UR 209.

SEMESTER IV

S. No.	Course Code	Course Title	L	T	P	C
1.	UR 202	Planning Legislation	3	0	0	3
2.	UR 204	Planning Practice	2	1	0	3
3.	UR 206	Development Finance	3	0	0	3
4.	UR 212	Thesis	0	0	12	6
5.	UR 208	Open Elective-II	3	0	0	3
6.	UR 210	Indian Constitution	2	0	0	0
TOTAL			11+2[^]	1	12	18
^Mandatory(Non-Credit)Audit Course Following course maybe taken under 'Open Elective-II': 1. Urban and Regional Planning in India 2. Urban Information Systems and Spatial Analysis						

SEMESTER – III

Course Objective: Governance plays a crucial role in framing planning policies and their effective implementation. Therefore, the primary objective of the course on Urban and Regional Governance is to introduce to the students how cities and regions in India are governed with a particular focus on land the built environment.

Course Contents:

Unit 1: Evolution of Urban and Regional Governance

Comprehending governance; History of governance of urban and regional after 1947; Organizations involved in planning, development and management of urban and rural areas; Present status of urban and regional governance in India.

Unit 2: Devolution of Local Government

Need for decentralization and devolution of powers from state governments to local government; District Planning Committees and Metropolitan Planning Committees; Current position of implementation of 73rd and 74th amendment acts.

Unit 3: Coproduction: Role of the Third Sector

Shift from government to governance; Context of governance for greater involvement of the private sector; Ideas of good governance; Public private partnerships; Role of global players such as the World Bank, IMF, Asian Development Bank, the private sector, INGOs, NGOs, CBOs.

Unit 4: Land Administration and Management

Models of land assembly in India - Bulk land acquisition, land reconstitution, etc.; Land administration and management; Understanding maps of land records; Methods of keeping land records in urban and rural areas.

Text Books and References:

1. Baud, I., and Wit, J. (2008) *New Forms of Urban Governance in India: Shifts, Models, Networks and Contestations*. New Delhi: Sage.
2. Desai, R. (2012) Governing the Urban Poor: Riverfront Development, Slum Resettlement and the Politics of Inclusion in Ahmedabad, *Economic and Political Weekly, Vol. 47, No. 2*, pp. 49-56.
3. Diwakar, D. (2016) Resettlement of Urban Poor in Chennai, Tamilnadu: Concerns in R and R Policy and Urban Housing Programme, *Journal of Land and Rural Studies, Vol. 4, No. 1*, pp. 97-110.
4. Freire, M. and Stren, R. (2001) *The Challenges of Urban Government: Policies and Practices*, World Bank, Washington, D.C.

5. Gandhi, S., and Pethe, A. (2017) Emerging Challenges of Metropolitan Governance in India. *Economic and Political Weekly*, Vol. 52, No. 27, pp. 55-65.
6. Gupta A., and Sivaramakrishnan, K. (2010) *The State in India after Liberalization*, Routledge, New York.
7. Jenkins, R., Kennedy, L., Mukhopadhyay, P., and Pradhan, K. (2015) Special Economic Zones in India: Interrogating the Nexus of Land, Development and Urbanization, *Environment and Urbanization Asia*, Vol. 6, No. 1, pp. 1-17.
8. Pethe, A., and Lalvani, M. (2006) Towards Economic Empowerment of Urban Local Bodies in Maharashtra, *Economic and Political Weekly of India*, Vol. 41, No. 7, pp. 635-641.
9. Pethe, A., and Nallathiga, R. (2017) Legislative Impact on Land Markets in Cities: The Case of ULCRA in Mumbai and Its Repeal, *Environment and Urbanization Asia*, Vol. 8, No. 2, pp. 201- 213.
10. Sivaramakrishnan, K. (2011) *Re-visioning Indian Cities: The Urban Renewal Mission*, Sage, Delhi.
11. Sivaramakrishnan, K. (2013) Revisiting the 74th Constitutional Amendment for better Metropolitan Governance, *Economic and Political Weekly*, Vol. 31, No. 13, pp. 86-94.
12. Sivaramakrishnan, K. C., and Maiti, A. (2009) *Metropolitan Governance in India, An Overview of Selected Cities*, East West Center, Honolulu.

Course Outcomes: Upon the completion of this course, the students would be able:

- To explain the evolution of the idea of governance.
- To analyse the role of the third sector, and to develop knowledge of constitutional amendments as they impact urban and regional governance.
- To demonstrate knowledge about the basics of land administration and management.

Course Objective:

- To understand the basic concepts of disaster management as these relate to urban and regional planning.
- To understand processes and mechanisms of disaster management, disaster risk mitigation, and post disaster measures.
- To expose students to relevant planning policies and guidelines for reduction of disaster risks.

Course Contents:**Unit 1: Basic Concepts of Disaster Management**

Disaster: Definitions, concepts, types and perceptions; Recent initiatives at national and state level; Kyoto Framework of disaster mitigation and management; Paris agreements; Disaster management policy at the national and state levels; Disaster management statutes at national and state levels.

Unit 2: Disaster Management Mechanisms

Disaster management mechanisms at national, state and district levels; Select global practices; Disaster and development; Development plans and disaster management plans; Roles played in disaster management by INGOs, NGOs, CBOs and armed forces; and Community Based Disaster Preparedness.

Unit 3: Disaster Risk Mitigation

Natural Disasters: cyclones, floods, earthquakes, landslides etc.; Disaster as a physical phenomenon, causes and consequences of mitigation and management practices; Risks' mitigation strategies in development plans inclusive of industrial, chemical and biological disasters; Land use planning, building bye laws and disaster safe construction practices.

Unit 4: Disaster Preparedness and Post Disaster Management

Forecasting and early warning systems for various types of disasters; Role of communication and information technologies in disaster management; Disaster education and awareness; Case studies on natural disasters; Climate change and its implications in disaster mitigation; Post-disaster management including rehabilitation and reconstruction of disaster affected areas; Safe hill area development guidelines and coastal zone regulations for safe habitation.

Text Books and References:

1. Capolla, D.P. (2007) *Introduction to International Disaster Management*, Butterworth Heinemann, London.
2. Joshi, A.D. (2009) *Text Book of Disaster Management*, Lotus Publication of Pvt. Ltd., Mumbai.
3. Sharma, S.C. (2019) *Disaster Management*, Khanna Book Publishing Co., New Delhi.
4. NDMA (2007) *Disaster Management Guidelines*, NDMA, Government of India, New Delhi.
5. Ministry of Home Affairs (2004) *Model Amendment in Town and Country Planning Legislations, Regulation for Land Use Zoning and Building Byelaws for Structural Safety*, Government of India, New Delhi.

6. Ministry of Home Affairs (2006) *National Policy on Disaster Management*, Government of India, New Delhi.

Course Outcomes: After completion of this course the students would be able:

- To show an understanding of the concepts and principles of disaster risk mitigation and planning.
- To demonstrate knowledge of preparing plans for area prone to disaster risks in order to reduce vulnerabilities.

Unit 1: Basic Concepts of Disaster Management

Disaster: Definitions, concepts, types and perceptions; Recent initiatives at national and state level; Kyoto Framework of disaster mitigation and management; Paris agreements; Disaster management policy at the national and state levels; Disaster management statutes at national and state levels.

Unit 2: Disaster Management Mechanisms

Disaster management mechanisms at national, state and district levels; Select global practices; Disaster and development; Development plans and disaster management plans; Roles played in disaster management by INGOs, NGOs, CBOs and armed forces; and Community Based Disaster Preparedness.

Unit 3: Disaster Risk Mitigation

Natural Disasters: cyclones, floods, earthquakes, landslides etc.; Disaster as a physical phenomenon, causes and consequences of mitigation and management practices; Risks' mitigation strategies in development plans inclusive of industrial, chemical and biological disasters; Land use planning, building bye laws and disaster safe construction practices.

Unit 4: Disaster Preparedness and Post Disaster Management

Forecasting and early warning systems for various types of disasters; Role of communication and information technologies in disaster management; Disaster education and awareness; Case studies on natural disasters; Climate change and its implications in disaster mitigation; Post-disaster management including rehabilitation and reconstruction of disaster affected areas; Safe hill area development guidelines and coastal zone regulations for safe habitation.

Text Books and References:

7. Capolla, D.P. (2007) *Introduction to International Disaster Management*, Butterworth Heinemann, London.
8. Joshi, A.D. (2009) *Text Book of Disaster Management*, Lotus Publication of Pvt. Ltd., Mumbai.
9. Sharma, S.C. (2019) *Disaster Management*, Khanna Book Publishing Co., New Delhi.
10. NDMA (2007) *Disaster Management Guidelines*, NDMA, Government of India, New Delhi.
11. Ministry of Home Affairs (2004) *Model Amendment in Town and Country Planning Legislations, Regulation for Land Use Zoning and Building Byelaws for Structural Safety*, Government of India, New Delhi.
12. Ministry of Home Affairs (2006) *National Policy on Disaster Management*, Government of India, New Delhi.

Course Outcomes: After completion of this course the students would be able:

- To show an understanding of the concepts and principles of disaster risk mitigation and planning.
- To demonstrate knowledge of preparing plans for area prone to disaster risks in order to reduce vulnerabilities.

1. Dissertation

Course Objective: The purpose of dissertation is to introduce to students, the research methods and to develop competencies for critically examining topics of their interest and present them. This will be a preparatory stage for the terminal or thesis project.

Course Contents:

Unit 1: Conducting Literature Review

Preliminary literature review for identification of research gaps; Selection of topic, thesis statement, developing the thesis; developing research questions; detail literature reviews to understand the current state of knowledge around a particular topic.

Unit 2: Developing an Argument

What is an argument, argument structure and identification, validity and strength of arguments, common fallacies of reasoning, use and abuse of language in reasoning, principles of fair play in argumentation, respecting opposing positions, understanding different modes of persuasion; emotional, moral and rational.

Unit 3: Report Writing

Report writing, Type; characteristics of writing technical reports. Format of Reports: Preface, acknowledgements, contents, indexing, key word indexing, introduction, body terminal section, appendices, references; Writing style - introductory, developmental, transitional and concluding paragraphs, linguistic unity, coherence and cohesion, descriptive, narrative, expository and argumentative writing. Proofreading and editing.

Unit 4 Developing a Research Design

Formulation of objectives, research methods relevant for individual topic, development of research methodology elaborating methods of primary data collection.

Text Books and References:

1. Machi, L.A. and McEvoy, B.T. (2012) *The Literature Review, Six Steps to Success*, Sage, New Delhi.

Course Outcomes: After taking this course, the students would be able:

- To develop general ideas about the selection of their topics for thesis projects.
- To develop capabilities for framing research questions, structure of research, research strategy.
- To demonstrate abilities for critical analysis of the existing literature on related research topics.

2. Professional Training

Course Objective: To gain hands on experience in a planning organization so that students become future ready after they obtained the postgraduate degree. The main objective of professional training is to expose the students to live planning and development project and working environment in a planning agency.

Course Contents: Each student shall undertake training in a planning or related office for two months. Students will undergo professional training in a department approved organization on a project for 2 months. This will be supervised training by a senior professional from the organization. Satisfactory completion of training will be mandatory for the award of a degree. Out of six credits, two credits will be awarded for successful completion of training as reflected in MPS201.

Text Books and References:

1. Locke, E.A. (2003) *The Blackwell Handbook of Principles of Organizational Behavior*, Wiley-Blackwell, London.
2. Saccoccia, S. (2016) *Planning Practice*, MIT Press, Massachusetts.

Course Outcomes: After undertaking professional training, the students would be able:

- To show capabilities of working on live planning and development projects.
- To demonstrate knowledge of work environments in different planning organizations.

Course Objective: The primary objective of regional planning studio is to learn about approaches and methodologies for the preparation of a regional, sub-regional, district or block development plan comprising of few urban and several rural settlements.

Course Contents: Central to regional planning are two prominent ideas of integrated and balanced regional development. A regional plan is a spatial plan rather than sectoral plan and regional planning is directed at development efforts towards optimal utilization of region's resources benefitting people and physical environments to the maximum extent possible. Economic growth may be an overriding objective of regional planning, but equally important are environmental concerns and quality of life issues in a region. All economic, environmental and social issues are intertwined and of equal significance. There are many forces that shape any region or sub-region extending around the core and the stirring growth and developments, directly or indirectly linked to political and economic developments taking place in the regions or sub-regions. Developments in the external and internal environment can have a positive or negative impact on the region, thus, priority should be given to policies and strategies that ensure a region's integrated and sustainable development.

Text Books and References:

1. Misra, R.P. (ed.) (1992) *Regional Planning Concepts Techniques Policies and Case Studies*, Concept Publishing, New Delhi.
2. Sundaram, K.V. (1978) *Urban and Regional Planning in India*, Vikas Publishing, New Delhi.
3. Hall, P. and Tewdwr-Jones, M. (2010) *Urban and Regional Planning*, Routledge, London.

Course Outcomes: Upon the completion of this course, the students would be able:

- To demonstrate understanding of the concept of region, types of regions, forms of regional plans, and their significance.
- To develop knowledge about various approaches, techniques, and technologies involved in the preparation of a regional plan using regional planning spatial approach.
- To develop abilities and skills to prepare a regional plan for a selected region by identifying the key drivers of development and their planning implications on one another, and to demonstrate comprehension of various approaches, techniques and technologies learned during the semester.

Following courses may be taken under 'Professional Elective-II':

1. Real Estate Development and Management
2. Participatory and Integrated Urban Development

Refer Appendix I on Professional Electives.

Course Objective: Major concern of philosophy is the study of ideas central to the ways we think and live. The value of many of our key concepts is often hidden from us. We take the ways we make sense of ourselves and the world for granted. We forget why truth matters or acting decently is a minimal requirement for treating others justly

Course Description:

Unit 1: Our Place in the World

Is there a real world, or is everything a figment of our imagination? Do we have free will, or do our brains simply respond mechanically to stimuli? What, if anything, distinguishes right from wrong? Philosophers relentlessly pursue the fundamental questions of life, and their techniques apply to problems in any discipline or endeavour. They establish standards of evidence, provide rational methods of resolving conflicts, and create techniques for evaluating ideas and arguments.

Unit 2: Logic and Ethics

This course is a survey of several major areas of Indian and Western analytic philosophy: metaphysics and epistemology, ethics, philosophy of mind, philosophy of language, philosophy of religion, and philosophy of science.

Unit 3: Knowledge Production and Use

Students explore such concepts as the nature of the world and how we have access to knowledge of the world; moral behavior and the nature of good and evil; the relationship between minds and bodies; the relationship between our thoughts and the external world; and how we should employ logical analysis and empirical observations to evaluate arguments.

Unit 4: Study of Great Thinkers

For each topic, students consider positions of historical thinkers such as Plato, Descartes, and Hume, as well as those of contemporary philosophers such as M.K. Gandhi, B.R. Ambedkar, Amartya Sen, John Rawls and Hilary Putnam. Students reflect upon philosophical issues through debates, discussions, and formal critical essays in order to develop the analytical skills necessary for effectively evaluating arguments and thinking independently.

Text Books and References:

1. Borchet, D.M. (ed.) (2006) *Encyclopaedia of Philosophy*, Macmillan, Detroit.
2. Honderish, T. (ed.) (2005) *The Oxford Companion to Philosophy*, Oxford University

Press, New York.

3. Perrett, R.W. (2016) *An Introduction to Indian Philosophy*, Cambridge University Press, Cambridge. Fourth Edition.

Course Outcomes: Upon the completion of this course, the students would be able:

- To summarise the nature of various forms of reasoning.
- To show knowledge of her thoughts in a logical and clear fashion.
- To construct good arguments, and to identify fallacies.
- To explain knowledge about the key philosophical thinkers.

SEMESTER – IV

Course Objective: The primary objective of this course is to expose the students to urban and regional planning statutes as planning statutes foundationally impact planning practice.

Course Contents:

Unit 1: Concept of Law

Sources of law (custom, legislation and precedent); meaning of the term of law, legislation, ordinance, bill, act, regulations and bye-laws; significance of law and its relationship to urban planning; benefits of statutory backing for planning schemes.

Unit 2: Indian Constitution

Concepts and contents of Indian Constitution; Rights and their implication on planning; Fundamental provisions regarding property rights; evolution of planning legislation and overview of legal tools connected with urban planning and development; model town planning laws.

Unit 3: Statutory Framework for Planning and Development Law

Evolution of town planning legislation, town planning laws, town planning as a state subject, 73rd and 74th amendment and its implications for planning law, current amendments in planning and development laws.

Unit 4: Planning law and its interface with other laws affecting development

Current laws related to environment, heritage, housing, real estate, property law and their interaction with planning law; PPP and contract laws; Any other Acts relevant at a particular time, for example, special investment region acts model community participation law.

Text Books and References:

1. Lakshimikanth, M. (2007) *Indian Polity*, Tata McGraw Hill, India.
2. Bhattacharya, M. (2001) *New Horizons of Public Administration*, Jawahar Publishers and Distributors, New Delhi.
3. Government of India (2014) *URDPFI Guidelines*, Ministry of Housing and Urban Affairs, New Delhi.
4. Needham, B. (2006) *Planning, Law and Economics: An investigation in the rules we make for using land*, Routledge, London.
5. McAuslan, P. (2019) *Bringing the Law Back In: Essays in Land, Law and Development*, Routledge, London.

Course Outcomes: Upon the completion of this course, the students would be able:

- To demonstrate knowledge about sources of law and basic terminologies in law.
- To explain implications of relevant articles of constitution on town planning.
- To show understanding about statutory nature of town and country planning.
- To express familiarity with environment and heritage laws and their interface with town planning.

Course Objective: The main objective of this course is to familiarise the students with the nature of planning practice in the Indian context and develop an understanding of responsibility of planning professionals and inculcate ethical behaviour in planners. Students will also get familiar with requirements of setting up a planning practice.

Course Contents:

Unit 1: Nature of Planning Practice

Planning as a profession and Role of a Planner, Definition of profession, planning as a profession, role of planner in the society, different roles of planner in practice; Nature of planning practice in general and in Indian context, global context and planning practice; Legal framework for planning in India, planning and development organisations, current planning practices, study of selected projects.

Unit 2: Ethical Planning Practice and Planning Engagement

Human values and moral reasoning, Planning practice and ethical dilemmas, resolution of ethical dilemmas, code of professional conduct, Concept of reflective and deliberative practice, Study of decision making, role of different interest groups, deliberation and negotiation large planning project or policy modification requiring approvals.

Unit 3: Planning Practice Cases

This unit would focus on developing a critical reasoning and communication skills through study planning cases including planning permissions, court cases, and attending public meetings etc., application of concepts of previous unit through study of planning practice, documentation of cases.

Unit 4: Professional Engagement and Office Administration

Tenders, Contracts, Formulation of Project Proposals., Professional fees for different types of planning practice, setting up of planning firms, official correspondence, office management practices.

Text Books and References:

1. Barrett, C.D. (2001) *Everyday Ethics for Practicing Planners*, American Institute of Certified Planners, Chicago.
2. Kulshreshtha, S.K. (2012) *Urban and Regional Planning in India: A Handbook for Professional Practice*, Sage, New Delhi.
3. Saccoccia, S. (2016) *Planning Practice*, MIT Press, Massachusetts.
4. Thomas, H. and Healey, P. (1991) *Dilemmas of Planning Practice: ethics, legitimacy, and the validation of knowledge*, Aldershot, Hants.

Course Outcomes: After completing this course, the students would be able:

- To analyse and evaluate technically a planning proposal.
- To develop the ability to recognize an ethical dilemma.
- To show knowledge about processes of ethical decision making.
- To make documents involving scope of work and fees for a planning project.

Course Objective: Development plans and policies get implemented through planning and development projects. Funding of these projects is critical for the implementation of plans and policies. It is in this context that this course will introduce concepts of development finance, revenue, and municipal finance. This course intends to develop a logical reasoning ability in analysing the innovative methods of financing for urban infrastructure.

Course Contents:

Unit 1: Overview of Development Finance

Understanding development finance: approaches, concepts, credit ratings; Role of municipalities and panchayats, development authorities, infrastructure and industrial development corporations, special economic zones and special purpose vehicles.

Unit 2: State and Municipal Finance

Central Finance Commission and state finance commissions: constitution, powers and functions; consolidated fund of central and state; Financing municipalities and panchayats and financial categorisation of sources of revenue; Reforms in municipal and panchayat finances, rationalisation of user charges, and streamlining of tax administration.

Unit 3: Public Private Partnership (PPP)

Partnerships and alliances: concepts, need, preconditions for partnerships; Advantages of collaboration; Methods of promoting public private partnerships; Policies, statutes, regulations and administrative procedures for forging partnerships; Role of government as partner, regulator and enforcer of laws; Principles of PPP: contractual framework, selection of service provider, payment mechanism, monitoring and evaluation, risk and revenue sharing; and Models contract agreement.

Unit 4: Innovative Methods for Financing Urban Development

Monetary Exaction: betterment levy, impact fees, external development charges and vacant land development tax; Land exactions: Transfer of development rights, town planning schemes, monetisation of underutilised public assets; Valorisation charges; Debt financing, partnership financing, financing through intermediaries, Municipal bonds, and pooled financing; Funding of development plan proposals and projects.

Text Books and References:

1. Bell, C. (2003) *Development Policy as Public Finance*, Oxford University Press, Oxford.
2. Fisher, R.C. (2018) *State and Local Public Finance*, Routledge, New York.
3. Kaushik, B. (2003) *Analytical Development Economics: The Less Developed Economy Revisited*, MIT Press, Cambridge, MA.
4. Mohanty, P.K. (2016) *Financing Cities in India: Municipal Reforms, Fiscal Accountability and Urban Infrastructure*, Sage, New Delhi.

Course Outcomes: Upon completion of the course, the students will be able:

- To express understanding about the major aspects of development finance including municipal finance; and to develop specialized knowledge and relevant skills in urban finance.
- To demonstrate understanding about the financial challenges being faced by urban local bodies.
- ☐ To propose effective financial management systems with enhanced organizational capacity for urban reforms

Course Objective: The primary purpose of a thesis is to independently undertake a piece of research involving a deeper study of theories and frameworks, develop elegant research questions and connect with empirical evidences for creating new knowledge.

Course Contents: The purpose of a postgraduate thesis is to take forward the literature review involving a deep study of theories and frameworks and develop elegant research questions. It is expected that a postgraduate student is clearly able to explain how a piece of research adds new knowledge to the existing body of knowledge in a field and show its practical significance to the profession of planning. Without a clearly defined purpose and strong theoretical grounding, the thesis is fundamentally flawed.

Text Books and References:

1. Booth, W.C., Colomb, G., Williams, J.M., Fitzgerald, W. (2016) *The Craft of Research*, University of Chicago Press, Chicago.
2. Eco, U. (2015) *How to Write a Thesis*, MIT Press, Massachusetts.
3. Oliver, P. (2008) *Writing your Thesis*, Sage, New Delhi.

Course Outcomes: After completing this course, the students would be able:

- To formulate independently a research programme on a chosen topic in order to contribute

Following courses may be taken under an 'Open Elective-II'

1. Urban and Regional Planning in India
2. Urban Information Systems and Spatial Analysis

For syllabus, Refer Appendix II on Open Electives.

Course Objective: To make students aware about the Indian Constitution.

Course Content

Unit 1: The Constitution - Introduction

- The History of the Making of the Indian Constitution
- Preamble and the Basic Structure, and its interpretation
- Fundamental Rights and Duties and their interpretation
- State Policy Principles

Unit 2 – Union Government

- Structure of the Indian Union
- President – Role and Power

- Prime Minister and Council of Ministers
- Lok Sabha and Rajya Sabha

Unit 3 – State Government

- Governor – Role and Power
- Chief Minister and Council of Ministers
- State Secretariat

Unit 4 – Local Administration

- District Administration
- Municipal Corporation
- Zila Panchayat

Unit 5 – Election Commission

- a. Role and Functioning
- b. Chief Election Commissioner
- c. State Election Commission

Text Books / References:

S. No.	Title of Book	Author	Publication
1	Ethics and Politics of the Indian Constitution	Rajeev Bhargava	Oxford University Press, New Delhi, 2008

2	The Constitution of India	B.L. Fadia	Sahitya Bhawan; New edition (2017)
3	Introduction to the Constitution of India	DD Basu	Lexis Nexis; Twenty-Third 2018 edition

Suggested Software/Learning Websites:

1. <https://www.constitution.org/cons/india/const.html>
2. <http://www.legislative.gov.in/constitution-of-india>
3. <https://www.sci.gov.in/constitution>
4. <https://www.toppr.com/guides/civics/the-indian-constitution/the-constitution-of-india/>

Course Outcomes: Upon the completion of this course, the students would be able:

- To demonstrate knowledge about the basic structure, and features of the Constitution of India.
- To develop deeper understanding and knowledge about constitutional provisions pertaining to urban and rural governance involving municipalities and panchayats.

Appendix-1

Professional Electives

Professional Elective I

List of available courses under Professional Elective - I		
S. No.	Subject Code	Subject
1	UR 106	1. Public Policy and Politics
2	UR 106	2. Big Data & Data Analytics.

Professional Elective II

List of available courses under Professional Elective - II		
S. No.	Subject Code	Subject
1	UR 207	1. Real Estate Development and Management
2	UR 207	2. Participatory and Integrated Urban Development

1. Public Policy and Politics

Course Objective: The first objective of this course is to show that public policy, planning policy and politics are enfolded into one another and multiple links amongst them. In the second objective nature and various aspects of planning and public policies are discussed. The third objective provides analyses of integration and coherence of planning policies.

Course Contents:

Unit 1: Comprehending Policy and Politics

Classical and modern notions of politics; Links between politics and planning; Meaning of public policy; Forms and components of public policies; Cycle of public policy formulation; and theories of public policies and policy analysis.

Unit 2: Planning and Public Policies

Meaning of planning policy; Forms and components of planning policies; Sources and content of public planning policies; Joined-up government; and Policy implementation and evaluation.

Unit 3: Integration and Coherence of Planning Policies

Reasons for linking urban and regional planning policies to public policies; Integration and coherence of planning policies; Context and integration of planning policies with relevant other public policies; and Methods of making public planning policies.

Unit 4: Nature of Planning Policies

Welfarist planning policies; Managerialism and urban entrepreneurialism; Neoliberal urbanism; Gentrification; Spatial dialectics of injustice, the Right to the city; and some case examples of current and classical Indian planning policies.

Text Books and References:

1. Cochrane, A. (2007) *Understanding Urban Policy: A Critical Approach*, Blackwell, Oxford.
2. Dikeç, M. (2007) *Badlands of the Republic: Space, Politics and Urban Policy*, Blackwell, Oxford.
3. Dunn, W.N. (2018) *Public Policy Analysis: An Integrated Approach*, Routledge, New York.
4. Harloe, M., Pickvance, C.G. and Urry, J. (1990) *Place, Policy and Politics: Do Localities Matter?*, Unwin Hyman, London.

5. Jenkins, R., Kennedy, L. and Mukhopadhyay, P. (2014) *Power, Policy and Protest: The Politics of India's Special Economic Zones*, Oxford University Press, New Delhi.
6. Knoepfel, P., Larrue, C., Varone, F. and Hill, M. (2007) *Public Policy Analysis*, Policy Press, Bristol.
7. Mathur, K. (2014) *Public Policy and Politics in India*, Oxford University Press, New Delhi. Third Edition.

Course Outcomes: Upon the completion of this course, the students would be able:

- To discuss politics of policy and planning in relation to place and space.
- To examine and analyse public policies and planning policies professionally
- To propose coherently linked up planning policies for planning projects and development plans.

Course Objective: As technologies are getting embedded in the built environments, in this context, the major objective of this course is to understand the role and application of big data in urban and regional planning.

Course Contents:

Unit 1: Big data – An introduction

Defining big data and what makes it 'big'; Emergence of data science and big data; Importance and utility of big data in planning; Characteristics of big data; Links between big data, urban and regional planning, development, management and policy making.

Unit 2: Mapping the City

Different tools for making maps with big data; Understanding basic elements of maps; Map online programs and open spatial data and its uses; Geographic information systems software for mapping; and Identification of winners and losers in the big data system.

Unit 3: Data acquisition and analytics

Understanding open data platforms; Generators of big data; Handling large datasets, cloud database system; Cleaning data, SQL, introduction to R or other software for urban data analysis.

Unit 4: Big Data and Smart Cities

Explore big data in the context of smart cities; Learning use of real-time and crowd-sourced data collection and use; Interactive data visualization in the context of smart cities and regions.

Text Books and References:

1. Jain, V.K. (2018) *Big Data and Hadoop*, Khanna Book Publishing Co., New Delhi.
2. Carta, S. (2019) *Big Data, Code and the Discrete City, Shaping Public Realms*, Routledge, London.
3. Desouza, K. and Smith, K. (2016) *Big Data and Planning*, PAS Report 585, American Planning Association, Washington, D.C.

4. Townsend, A.M. (2013) *Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia*, W.W. Norton and Company, London.
5. Offenhuber, D. and Ratti, C. (eds.) (2014) *Decoding the City: Urbanism in the Age of Big Data*, Birkhauser Verlag AG.

Course Outcomes: Upon the completion of this course, the students would be able:

- To express understanding about the nature of big data and its significance for planning and urban development.
- To analyse and evaluate big data for planning projects such as smart city projects in India.

B.ARCH SEMESTER –II

UR 207 REAL ESTATE DEVELOPEMENT AND MANAGEMENT

Studio-

Credit -03

1. Real Estate Development and Management

Course Objective: To examine the fast changing nature of the real estate scenario and land markets in India, particularly after the July 1991 economic reforms.

Course Contents:

Unit 1: Developments of Land and Real Property

Process of land development, market mechanism and land use pattern cost of development, source of finance, and financial calculation for real estate developer

Unit 2: Real Property Markets

Heterogeneity and imperfections, valuation of real property - principles and practices; private ownership and social control of land; disposal of land; land development charges and betterment levy; land use restrictions, compensation and requisition taxation of capital gain on land versus public ownerships, economic aspects of land policies at various levels of decision making.

Unit 3: Factors Influencing Locational Decisions

Analysis of location of specific uses like residential, industrial, commercial and institutional in the light of location theories in intra-regional and inter-regional context; Techniques of cost benefit analysis of urban development programme.

Unit 4: Case Studies

Case studies of real estate development in public, private, partnership sectors; Real estate as facilitator of development; Development of real estate as a tool for controlling land and property prices; Transaction and renting of real estate, Lease deeds and sale deeds, sale documents, registration; Mortgage and pledging.

Text Books and References:

1. Mittal, S. (2018) *The ABC of Real Estate in India: An Eye Opener Account of the Real Estate Industry in India*, White Falcon Publishing, Chandigarh.
2. Searle, L.G. (2013) Conflict and Commensuration: Contested Market Making in India's Private Real Estate Development Sector, *International Journal of Urban and Regional Research*, Vol. 38, Issue 1, pp. 60-78.
3. Shatkin, G. (2013) Contesting the Indian City: Global Visions and the Politics of the Local, *International Journal of Urban and Regional Research*, Vol. 38, No. 1, pp. 1-13.

Course Outcomes: Upon the completion of this course, the students would be able:

- To examine and analyse the nature of real estate and land markets generally but analytically.
- To demonstrate links between economic, social, and political forces on one hand, and real estate on the other.

B.ARCH SEMESTER –II UR 207 PARTICIPATORY AND INTEGRATED URBAN DEVELOPEMENT

Studio-

Credit -03

Course Objective: The course intends to sensitize the students to the importance of participatory processes and integrated institutional arrangements for more effective, efficient and sustainable implementation.

Course Contents:

Unit 1: Understanding Public participation

Understanding participation, conditions for effective participation; idea of power and representation in participatory process, Arenas of participation; Brief introduction to theories on citizen and community participation such as Arnstein's ladder of citizen participation.

Unit 2: Public Participation in India

Channels of public participation in plan making, plan implementation and governance in India; Legislative provisions; mandated and claimed spaces of participation; Requirements for planning a participatory process; evolution of community participation in development projects; Pani Panchayats.

Unit 3: Horizontal and vertical integration

Coordination in planning, understanding various kinds of public agencies involved in urban development and coordination for the purpose of plans projects and management in urban areas and regions; Current practices of cross-sectoral development, and case studies.

Unit 4: Participatory and integrated urban development – Case Studies

Based on the conceptual understanding developed in the first two parts of the course, this section will develop an understanding of the idea of Participatory and Integrated Urban Development through case studies of Multi-stakeholder projects.

Text Books and References:

1. Cornwall, A. (ed.) (2011) *The Participatory Reader*, Zed Books, London.
2. Kochi Municipal Corporation and GIZ (2019) *Multi-stakeholder Ente Kochi Initiative*, Kochi Municipal Corporation and GIZ India, Kochi.
3. Kumar, A. and Prakash, P. (eds.) *Public Participation in Planning in India*, Cambridge Scholars Publishing, Newcastle.
4. Pune Smart City Development Corporation Ltd. (2016) *Smart City Development Plan*, Pune Smart City Development Corporation Ltd., Pune.
5. UN Habitat (2018) *Leading Change: Delivering the New Urban Agenda through Urban and Territorial Planning*, UN Habitat, Nairobi.

Course Outcomes: Upon the completion of this course, the students would be able:

- To demonstrate an understanding of the necessity of participatory and integrated urban development.
- To show Knowledge of current mandates and practices of public participation at planning level.
- To express knowledge of horizontal and vertical organizational integration.
- To apply participatory and integrated development processes in planning practice.

Appendix-II

Open Electives

Open Elective I

List of available courses under Open Subject – I		
S. No.	Subject Code	Subject
1	UR 110	1. Water Security and Planning
2	UR 110	2.Universally Accessible Built Environments

Open Elective II

List of available courses under Open Subject – II		
S. No.	Subject Code	Subject
1.	UR 208	1.Urban and Regional Planning in India
2.	UR 208	2.Urban Information Systems and Spatial Analysis

1. Water Security and Planning

Course Objective:

Water is the most important life sustaining resource as well as the global and Indian government's top most priority. The primary objective of this course is to teach about the global and Indian water security challenges. It is also our objective that the future professionals know how to effectively transcend these global life threatening water security challenges.

Course Contents:

Unit 1: Definitions and Status of Water Security

Concepts and definitions of water security; Spatial variations of water availability in India; Water stock, water consumption, and demand for various water uses; Status of water security in India; Sustainability and water security; Water security challenges in India.

Unit 2: Disasters and Vulnerabilities

Floods and draughts and their impact on water security; Forms of vulnerabilities; Climate change and its impact on water security; Probable mitigation measures and planning for reduction of impact on water security; Water bodies and water security.

Unit 3: Water Governance and Water Policies

Water governance; Policy interventions for water security in India; Role of water policies, missions and action plans for water security for rural communities and urban settlements; Initiatives for ensuring water security; Role of organisations and institutions working for water security in India.

Unit 4: Water Security and Settlement Planning

Development plans and water resource planning; Integration of concepts of water security in urban and regional planning and other development plans; Water requirements and demand projections for ensuring water security for settlements.

Text Books and References:

1. Hoekstra A.Y. (2013) *The Water Footprint of Modern Consumer Society*, Routledge, London.

2. Sharp, L. (2017) *Reconnecting People and Water, Public Engagement and Sustainable Water Management*, Earthscan, London.
3. Asthana V. and Shukla A.C. (2014) *Water Security in India: Hope, Despair, and the Challenges of Human Development*, Bloomsbury Academic, London
4. IDSA (2011) *Water Security for India: The External Dynamics, Institute for Defence Studies and Analyses*, New Delhi.
5. Gupta K.R. (2008) *Water Crisis in India*, Atlantic Publishers and Distributors Private Limited, New Delhi.

Course Outcomes: Upon the completion of this course, the students would be able:

- To develop knowledge of global and Indian water security challenges.
- To develop abilities and skills for making development plans and designing projects for meeting global and Indian water security challenges.

B.ARCH SEMESTER –I

UR 110 UNIVERSALLY ACCESSIBLE BUILT ENVIRONMENT

Studio-

Credit -03

Course Objective:

This course majorly focuses on issues and problems faced by persons with disabilities on a day to day basis. The primary objective of this course is to sensitise students and provide them with basic understanding of government policies about universally accessible built environments. Another main objective is to equip students with skills so that they could critically examine built spaces from the perspective of universal accessibility and propose planning and design solutions for universal accessibility.

Course Contents:

Unit 1: Concepts and Definitions

Meanings and definitions of accessibility and universal accessibility; Accessibility challenges for different groups and communities; Freedom and universal accessibility.

Unit 2: Challenges for Universal Accessibility

Challenges of building accessible build environments and infrastructure in settlements; Accessibility audits for public spaces, buildings, infrastructures and facilities.

Unit 3: Acts and Policies and Plans

Acts, rules and guidelines on universal accessibility; Universal accessibility standards; Harmonious guidelines; Persons with disabilities acts and policies in India; Links between planning and universal accessibility; Development plans and universal accessibility.

Unit 4: Government Initiatives

Understanding efforts of government in providing accessible build environments; Accessible India Campaign, other schemes and programmes of governments and other stakeholders.

Text Books and References:

1. Helen P., Jenny D., Tanja W., David S., Leonardo S., Andrew L., Christopher P. (2016) *Universal Design 2016: Learning from the Past, Designing for the Future*, IOS Press Ebooks.
2. Indian Building Congress (2012) *Guidelines for Design of Universally Accessible Built Environment*, Indian Building Congress, New Delhi.
3. Government of India (2016) *Harmonized Guidelines and Space Standards for Barrier-Free Built Environment for persons with Disability and Elderly Persons*, Ministry of Urban Development, New Delhi.
4. Hamraie A. (2017) *Building Access: Universal Design and the Politics of Disability*, University of Minnesota Press, Minneapolis, Minnesota.

Course Outcomes: Upon the completion of this course, the students would be able:

- To develop abilities to identify critical issues and problems faced by persons with disabilities in human settlements.
- To express basic understanding of government policies about universally accessible built environments.
- To develop skills to critically examine built spaces from the perspective of universal accessibility, and to propose planning and design solutions for universal accessible built environments.

B.ARCH SEMESTER –II

UR 208 URBAN AND REGIONAL PLANNING IN INDIA

Studio-

Credit -03

1. Urban and Regional Planning in India

Course Objective: By providing an overview of spatial planning India after 1947, the major concern of this course is to acquaint students with the nature of planning by highlighting its chief features. This course is designed as a generic course because it is aimed at students who may or may not be spatial planners.

Course Contents:

Unit 1: What is Planning and who are the Planners

Various meanings of the term planning, distinction between land use planning and spatial planning; Goals and objectives of planning, orthodoxies of planning; Planning at various spatial scales; Planning challenges; Planners and their different roles.

Unit 2: History of Planning before 1991

Planning in the central Five Year Plans; Planning guidelines: Urban Plans Formulation and Implementation (URDPFI) Guidelines 1996; Story of master plan preparation and their implementation or lack of it; Planning institution building prior to 1990s; Programmes for planning like IDSMT, etc.

Unit 3: Current Nature of Planning

Mission mode planning versus plan based planning, JNNURM, SEZs, SCM; Planning in a globalised and networked India; Planning Guidelines: Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2015, Shyama Prasad Mukherji Rurban Mission, 2016; Sustainable Development goals and their relationship with spatial planning.

Unit 4: Plans and Policies

Types, substance and dimensions of various kinds of development plans; Rethinking about development plans; Do we really need development plans; Planning policies versus economic policies; Politics and spatial planning; Spatial plans for rural settlements; Integration of spatial and economic plans.

Text Books and References:

1. King, A. (1976) *Colonial Urban Development: Culture, Social Power, and Environment*, Routledge and Kegan Paul, New York.
2. Kumar, A., Sanjeev, V., and Prakash, P. (2020) *City Planning in India, 1947-2017*, Routledge, New York.

Course Outcomes: Upon the completion of this course, the students would be able:

- To demonstrate basic understanding and knowledge about urban and regional planning in India.

B.ARCH SEMESTER –II UR 208 URBAN INFORMATION SYSTEMS AND SPATIAL ANALYSIS

Studio-

Credit -03

2. Urban Information Systems and Spatial Analysis

Course Objective: The first objective of this course is to introduce and promote the idea of urban information systems. We also seek to unravel the relevance of urban information systems to city planning. The second concern of this course is to teach students about spatialization of data and information through GIS and remote sensing.

Course Contents:

Unit 1: Urban Information Systems

Importance of urban information systems, information scales and levels; Pre-requisites for using planning information systems; Representing, modelling and impact analysis of the data; Query measurement and transformations; Summary statistics and inferences.

Unit 2: Urban Information Systems for Planning

Urban information systems for planning; Tools for spatial data handling-type systems, nature, hierarchy and values; Raster and vector data structures; Analysis of tools and

software; Spatial data models, geo-database; Geospatial information regulation statutes and policy guidelines.

Unit 3: Government Initiatives and Urban Information Systems in Planning

National Natural Resources Management System (NNRMS), National Urban Information System (NUIS), NUIS guidelines and design standards; National urban observatory, municipal information systems, the National E-Governance Plan (NEGP) and land information systems; Global navigation satellite systems.

Unit 4: Geographic Information System (GIS) and Remote Sensing Techniques

Geographic Information Systems: Concept, components, and benefits; Spatial data entry into GIS, data structure for GIS; Mapping and spatial analysis software, linking of attribute data, spatial data aggregation, spatial data generalization; Raster data capture; Cloud based GIS on Bhuvan platform; GIS based master plans; Resource satellite, and sensing capabilities; Aerial photography; Digital survey; Raster data processing and analysis; Resolutions; Geo-Rectification; Geometric distortions, image enhancement, transformation, segmentation; Image interpretation and analysis, 3D terrain modelling.

Text Books and References:

1. Government of India (1983) *National Natural Resources Management System*, Government of India, New Delhi.
2. Greene, R.P. and Pick, J.B. (2012) *Exploring the Urban Community: A GIS Approach*, Prentice Hall, Upper Saddle River, NJ.
3. Huxhold, W.E. (1991) *An Introduction to Urban Geographic Information Systems*, Oxford University Press, New York.
4. Laurini, R. (2001) *Information Systems for Urban Planning: A Hypermedia Co-Operative Approach*, Routledge, New York.
5. Lavender, S. and Lavender, A. (2015) *Practical Handbook of Remote Sensing*, CRC Press, New York.
6. Malczewski, J. (2004) GIS-based Land-Use Suitability Analysis: A Critical Overview, *Progress in Planning*, Vol. 62, pp. 3–65.
7. Ministry of Urban Development (2006) *National Urban Information System*, Ministry of Urban Development, New Delhi.
8. Weng, Q. (2010) *Remote Sensing and GIS Integration: Theories, Methods, and Applications*, McGraw Hill, New York.

Course Outcomes: Upon the completion of this course, the students would be able:

- To show understanding of urban information systems in planning and relevant government initiatives.
- To produce maps and generate analysis of planning issues with the use of GIS and remote sensing.
