Your Dreams Our Goal

POORNIMA UNIVERSITY

Member of Association of Indian Universities & Approved by UGC (Govt. of India) under 2(f) & 12(B)

FACULTY OF PLANNING & ARCHITECTURE

PROGRAM: MASTER OF PLANNING (URBAN PLANNING)

SCHEME & SYLLABUS BOOKLET

BATCH 2024-2026

INDEX

Disclaimer: The scheme, syllabus and other materials published in this booklet may be changed or modified as per the requirement after approval of competent authority. The decision taken by the management of Poornima University will be final and abiding to all.

Your Dreams Our Goal

POORNIMA UNIVERSITY

Member of Association of Indian Universities & Approved by UGC (Govt. of India) under 2(f) & 12(B)

Vision

Our vision is to create a knowledge based society with scientific temper, team spirit and dignity of labour to face global competitive challenges.

Mission

Our mission is to evolve and develop skill based systems for effective delivery of knowledge so as to equip young professionals with dedication and commitment to excellence in all spheres of life.

Quality Policy

To provide quality education through faculty development, updating of facilities and continual improvement for meeting norms laid down by the government, keeping the stakeholders satisfied. Poornima University has forged industrial alliances with Top MNC's worldwide which assures high educational standards, up to- date and forward-thinking curricula, and professional relevance. At Poornima University you will have a distinct advantage through exposure to the corporate standard environment through industry sponsored infrastructure and expert faculty. The University involves global industry leaders in many ways.

Knowledge Wheel

At Poornima, the academic atmosphere is a rare blend of modern technical as well as soft skills and traditional systems of learning processes.

About Program and Program Outcomes (PO):

Title of the Program: Master of Planning

Nature of the Program: Regular

Program Outcomes (POs):

Graduates will be able to:

PO1: Design Knowledge: Apply the knowledge of design fundamentals, and a specialization to the solution of complex design problems.

PO2: Problem analysis: Identify, formulate, research literature, and analyze complex design problems reaching substantiated conclusions using elements and principles of design.

PO3: Design/Development of solutions: Design solutions for complex problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

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PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern designing and IT tools including prediction and modeling to complex designing activities with an understanding of the limitations.

PO6: The Designer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional design practice.

PO7: Environment and Sustainability: Understand the impact of the professional designing solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the designing practice.

PO9: Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

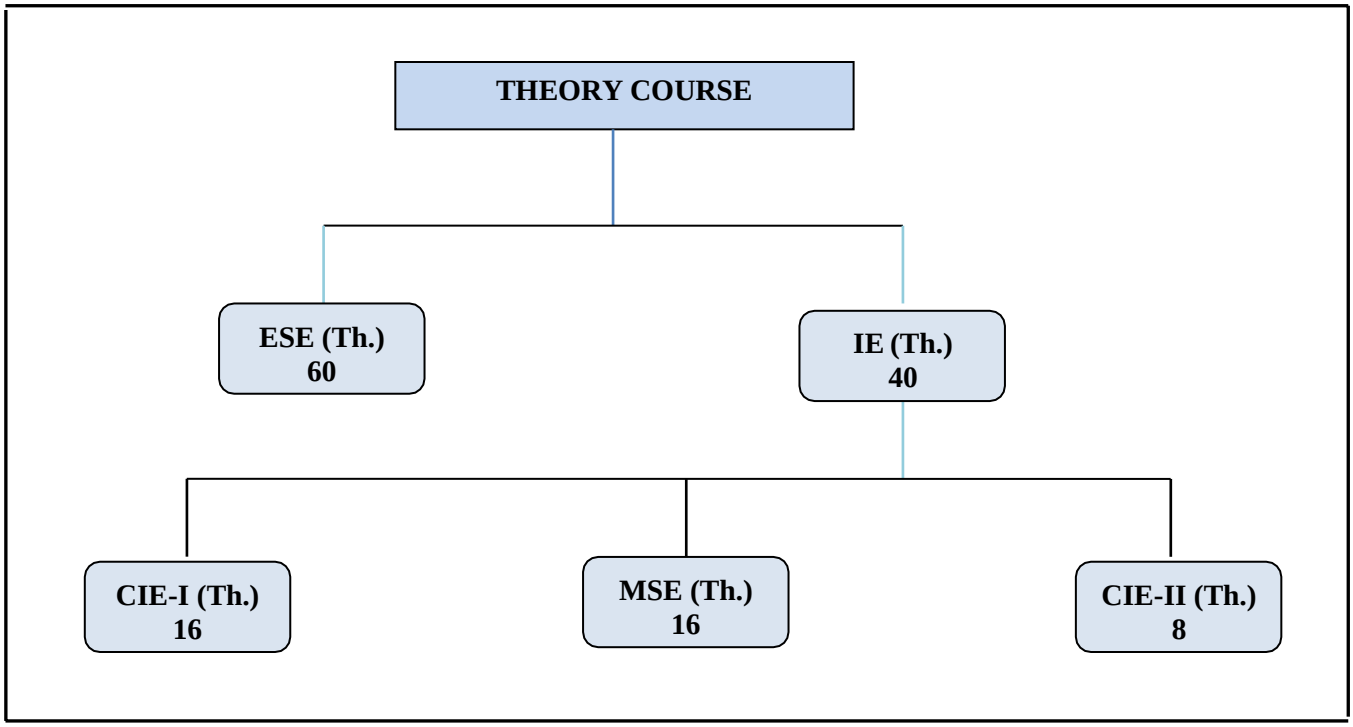
PO10: Communication: Communicate effectively on complex design activities with the design community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

PO11: Project Management and Finance: Demonstrate knowledge and understanding of the design and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

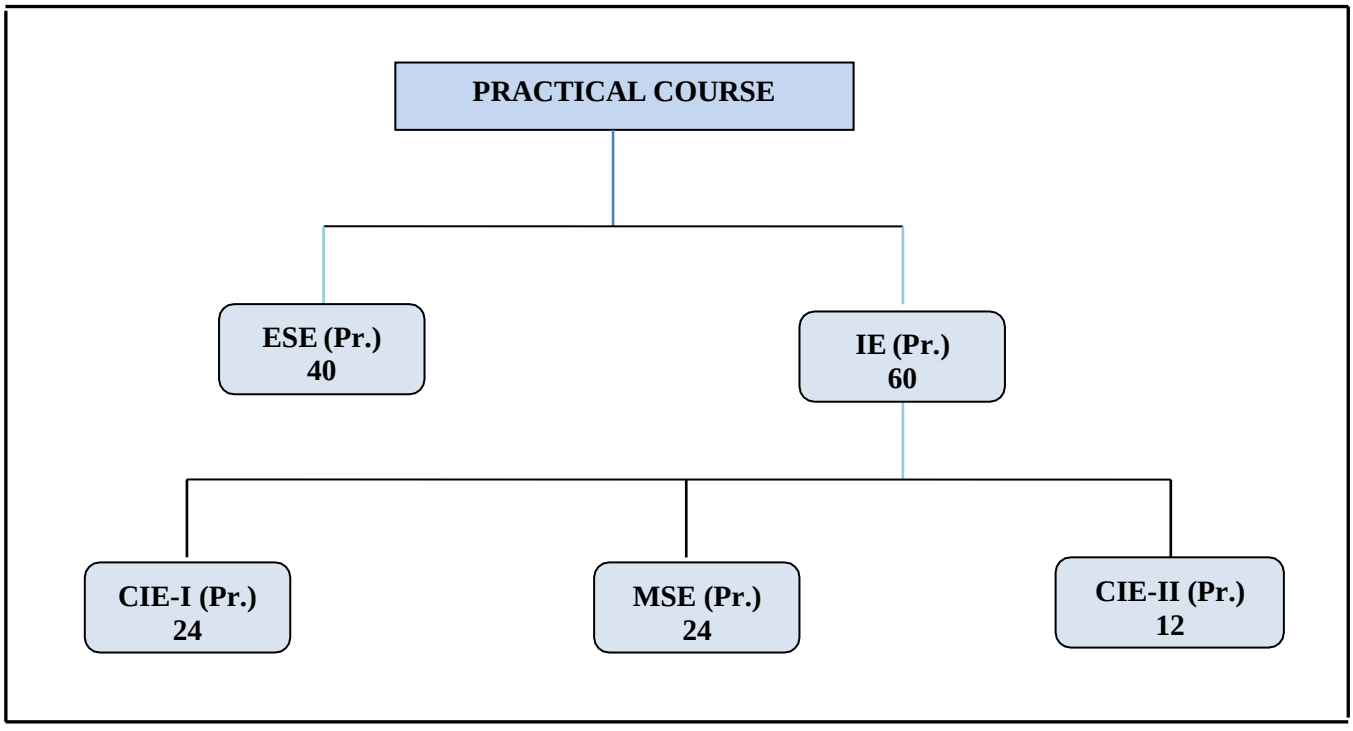
PO12: Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life- long learning in the broadest context of technological change.

Examination System :

Marks Distribution of Theory Course:



A. **Marks Distribution of Practical Course :**



Th.: Theory, Pr.: Practical, **ESE:** End Semester Examination, **MSE:** Mid Semester Examination, **CIE:** Continuous Internal Evaluation.

CO Wise Marks Distribution:

Exam Entity	Theory Subject		Practical/ Studio Subject	
	Maximum Marks	CO to be Covered	CO to be Covered	Maximum Marks
CIE-I	16 (8 + 8)	1 & 2	1 & 2	24 (12 + 12)
MSE	16 (8 + 8)	3 & 4	3 & 4	24 (12 + 12)
CIE-II (Activity / Assignment)	8 (8)	5	5	12 (12)
ESE	60	-	-	40
TOTAL	100	-	-	100

Minimum Passing Percentage in All Exams:

S. No.	Program Name	Minimum Passing Percentage in		
		IE Component	ESE Component	Total Component
1	Course Work for PhD Registration	-	-	50%
2	B. Arch., FIRE Dept. (BBA, B. Com., MBA)	-	45%	50%
3	MBA, MCA, M.Des., M.Tech., M.Plan, MHA, MPH	-	40%	40%
4	B. Tech., B. Des., BVA, BCA, B.Sc., BBA, B.Com., B.A. & any other program	-	35%	35%

SGPA Calculation

$$SGPA = \frac{C_1G_1 + C_2G_2 + \ldots\ldots\ldots + C_nG_n}{C_1 + C_2 + \ldots\ldots + C_n}$$

$$SGPA = \frac{\sum_i C_i \times G_i}{\sum_i C_i}$$

where (as per teaching scheme & syllabus):

C_i is the number of credits of subject i,

G_i is the Grade Point for the subject I and i = 1 to n,

n = number of subjects in a course in the semester

CGPA Calculation

$$CGPA = \frac{C_1G_1 + C_2G_2 + \ldots\ldots\ldots + C_nG_n}{C_1 + C_2 + \ldots\ldots + C_n}$$

$$CGPA = \frac{\sum_i C_i \times G_i}{\sum_i C_i}$$

where (as per teaching scheme & syllabus):

C_i is the number of credits of subject i,

G_i is the Grade Point for the subject I and i = 1 to n,

n = number of subjects in a course of all the semesters up to which CGPA is computed

Grading Table:

Academic Performance	Grade	Grade Point	Marks Range (in %)	Academic Performance	Grade	Grade Point	Marks Range (in %)
Outstanding	O	10	90≤ x ≤100	Outstanding	O	10	90≤ x ≤100
Excellent	A+	9	80≤ x <90	Excellent	A+	9	80≤ x <90
Very Good	A	8	70≤ x <80	Very Good	A	8	70≤ x <80
Good	B+	7	60≤ x <70	Good	B+	7	60≤ x <70
Above Average	B	6	50≤ x <60	Above Average	B	6	50≤ x <60
Fail	F	0	x <50	Average	C	5	40≤ x <50
Absent	Ab	0	Absent	Pass*	P	4	35≤ x <40
				Fail	F	0	x <35
				Absent	Ab	0	Absent

CGPA to percentage conversion rule:

Equivalent % of Marks in the Program = *CGPA* *10

Award of Class

CGPA	Percentage	Equivalent Division
7.50 ≤ CGPA	75% or more	First Division with Distinction
6.00 ≤ CGPA < 7.50	60% ≤ x <75%	First Division
5.00 ≤ CGPA < 6.00	50% ≤ x <60%	Second Division
4.00 ≤ CGPA < 5.00	40% ≤ x < 50%	Pass Class

Guidelines for Massive Open Online Courses (MOOCs)

(Session 2023-24)

Poornima University, in its never ending endeavor to equip students with best-of-class learning and knowledge, has undertaken to include MOOC courses as part of its credit scheme from session 2023-24 onwards. The objective behind this is to enable students to study courses designed by the best teachers in the country and to scale their knowledge base with the rest of learners from the nation. The MOOCs which are included under this scheme is can be chosen from SWAYAM-NPTEL.

1. Introduction of MOOCs: SWAYAM-NPTEL

About SWAYAM-NPTEL

NPTEL (National Programme on Technology Enhanced Learning), is a joint venture of the IITs and IISc, funded by the Ministry of Education (MoE) Government of India, and was launched in 2003. Initially started as a project to take quality education to all corners of the country, NPTEL now offers close to 600+ courses for certification every semester in about 22 disciplines.

Some highlights:

- Largest online repository in the world of courses in engineering, basic sciences and selected humanities and management subjects
- YouTube channel for NPTEL – most subscribed educational channel, 1.3 billion views and 40+ lakhs subscribers
- More than 56000 hours of video content, transcribed and subtitled
- Most accessed library of peer-reviewed educational content in the world
- Translation of more than 12000 hrs of English transcripts in regional Indian languages

NPTEL Online Certification:

The objective of enabling students obtain certificates for courses is to make students employable in the industry or pursue a suitable higher education programme. Through an online portal, 4, 8, or 12-week online courses, typically on topics relevant to students in all years of higher education along with basic core courses in sciences and humanities with exposure to relevant tools and technologies, are being offered. Enrolment to and learning from these courses is free. Following these online courses, an in-person, proctored certification exam is conducted and a certificate is provided through the participating institutions and industry, as applicable.

Some statistics regarding the open online courses since March 2014 till Dec 2021
Completed courses: 3496;
Enrollments across courses: 1.58 CRORE +
Number of exam registrations: 15.1 LAKH +

All the statistics pertaining to completed courses are available at https://beta.nptel.ac.in/courses. All courses are completely free to enroll and learn from. The certification exam is optional and comes at a fee of Rs 1000/course exam.

2. MOOCs at Poornima University:

MOOCs envelops best in class teaching - learning processes along with meeting the requirements of various courses in terms of quality of teaching and evaluation system. To promote the MOOCs among students of Poornima University, it is decided to consider the credits earned through MOOCs.

(a) MOOCs as Credit Courses

(For this document, only those MOOCs will be considered which are available only on NPTEL platforms)

- Credit and Non-credit SWAYAM-NPTEL MOOCs can be opted by anyone, anytime, anywhere and in any language. However, prior-permission of the University Authorities is mandatory if the credits are to be transferred to regular degree.
- As Open Elective (for batches entered till 2022) / Multidisciplinary Courses (for batches admitted from 2023-24 onwards): Open Elective (for batches entered till 2022) courses were available at University level in offline mode till 2022-23 for which relevant booklets were published. From session 2023-24, Multidisciplinary Courses are introduces in lieu of open elective courses as per NEP 2020. These courses carries 02 credits. These category/type of courses (similar/different) are available as MOOC courses on SWAYAM-NPTEL platform which are being introduced from session 2023-24 onwards for all the students. The respective Deans / HODs shall provide all the information to all the students pertaining to MOOCs as per details given below:
    1. Deans / HODs shall prepare a list of up to 10 appropriate MOOC courses (From NPTEL Only) of Minimum 02/03 credits each, well in advance (at-least 15 days prior to commencement of semester) and take approval from the Office of Dean, Academics / Pro-President, PU.
    2. After approval, the respective Deans / HODs shall circulate a notice to all their respective students so that they can select any one course from the list, the credits (only 02) of which will be counted against Open Elective/ Multidisciplinary courses pertaining to that particular semester.
    3. The tutor of the class shall monitor the progress (assignments, feedback, any problem etc.) on weekly basis and report to Head/Dean and provide the academic support to students as per requirement.

(b) Important points related to MOOCs at Poornima University

- Only one MOOC shall be allowed in a particular semester for the purpose of credit transfer in the beginning.
- No attendance will be taken for MOOC courses.
- The method of assessments of MOOC such as assignments and examination are completely associated with that particular MOOC and no internal exam (IE component) will be conducted by the department as well as by the Examination Cell.
- The respective Dean / HOD must submit the detail of course i.e., code, name and credit of MOOC opted against that particular course in particular semester attached with highlighting in the related examination scheme of syllabus of that semester signed by BOS Convener / HoD and Dean of Faculty to the office of Pro-President before commencement of the classes.

- The center of examination for MOOCs will be finalized by SWAYAM-NPTEL. All the responsibility related to registration for MOOCs, timely submission of assignments, examinations etc. will be borne by the students only.
- NPTEL will award a certificate to all the students passing the examination.
- The list of registered students in MOOC along with name of course will be submitted to the Examination Cell by the Deans / HoDs before commencement of the classes.
- An ESE Exam of each said MOOC course will also be conducted by the University as per University norms.
- The award of marks/grading will be computed as given below:

Award of marks/grading	Remarks
1. 20% weightage taken from MOOC Certificate +80% weightage taken from ESE Exam of Poornima University **OR** 2. 100% of weightage taken from MOOC Certificate Note: The Higher Marks/Grades of the above two will be considered	The Certificate of MOOC to be Submitted as per date notified by COE, Poornima University

- Any student who would not be able to clear/pass the said course, will be required to appear as a back exam candidate of the University as per PU norms. Students who have not passed the MOOC exam are required to register and participate in the next semester for either the same subject or a similar subject (Ensuring at least 60% of the syllabus matches with the back subject and also approved by respective Dean) offered through NPTEL.
- The scorecard and related certificate of MOOC along with a consolidated list of students with marks of assignment and final exam will be submitted to the examination cell by the concerned Dean / HOD for further process. It is also recommended that alteration/changes/scaling in marks obtained by the students in any MOOC will not be considered.
- The exam registration fee of MOOC up to Max. INR 1000/- will be reimbursed to the student only after successful completion of the course in first attempt and submission of the fee receipt, score-card and certificate of the MOOC to the concerned department within stipulated time after declaration of the results.
- There will be no provision of re-evaluation of MOOC.

NOTE: This is to be noted that the procedure for getting approval from BOS, Faculty Board, Academic Council and BoM is to be followed as per regular process.

Attached Items:

Ability Enhancement Courses	Annexure-1
Value Added Course Booklet	Annexure-2

M.PLAN
SCHEME
BATCH: 2024-26

POORNIMA UNIVERSITY, JAIPUR

Faculty of Planning & Architecture

Name of Program : M.Plan **Total Duration: 2 years** **Credits: 24**

Teaching Scheme for Batch 2024-26

Semester-I

Course Code	Name of Course	Teaching Scheme			Marks Distribution			Credits
		Lecture (L)	Tutorial (T)	Practical (P)	IE	ESE	Total	
A	**Major (Core Courses)**							
A.1	**Theory**							
MPLCPL1101	Planning History & Theory	2	-	-	40	60	100	2
MPLCPL1102	Housing & Environment Planning	2	-	-	40	60	100	2
MPLCPL1103	Socio Economic Base for Planning	2	-	-	40	60	100	2
A.2	Practical							
MPLCPL1201	Planning Studio-I	2	-	6	60	40	100	11
MPLCPL1202	GIS- Survey & Statistics	2	-	4	60	40	100	4
MPLCPL1203	Planning Techniques	1	-	4	60	40	100	3
B	**Minor Stream Courses / Department Electives**							
B.1	**Theory**							
B.2	**Practical**							
	Nil	-	-	-	-	-	-	
C	**Multidisciplinary Courses**							
	Nil	-	-	-	-	-	-	-
D	**Ability Enhancement Courses (AEC)**							
	Nil	-	-	-	-	-	-	-
E	**Skill Enhancement Courses (SEC)**							
	Nil	-	-	-	-	-	-	-
F	**Value Added Courses (VAC)**							
	Nil	-	-	-	-	-	-	-
G	**Summer Internship / Research Project / Dissertation**							
Total		**11**	**-**	**14**				
Total Teaching Hours		**25**						**24**

POORNIMA UNIVERSITY, JAIPUR

Faculty of Planning & Architecture

Name of Program : M.Plan **Total Duration: 2 years** **Credits:24**

Teaching Scheme for Batch 2024-26

Semester-II

Course Code	Name of Course	Teaching Scheme			Marks Distribution			Credits
		Lecture (L)	Tutorial (T)	Practical (P)	IE	ESE	Total	
A	**Major (Core Courses)**							
A.1	**Theory**							
MPLCPL2101	City & Metropolitan Planning	2	-	-	40	60	100	2
MPLCPL2102	Infrastructure Planning	2	-	-	40	60	100	2
MPLCPL2103	Planning Legislation & Urban Development Policies	2	-	-	40	60	100	2
A.2	**Practical**							
MPLCPL2201	Planning Studio-II	2	-	6	60	40	100	11
MPLCPL2202	Advanced Planning Techniques	2	-	4	60	40	100	4
B	**Minor Stream Courses / Department Electives**							
B.1	**Theory**							
B.2	**Practical**							
MPLEPL2211	Project Planning and Management	1	-	4	60	40	100	3
MPLEPL2212	Sustainable Planning and Development							
C	**Multidisciplinary Courses**							
	Nil	-	-	-	-	-	-	-
D	**Ability Enhancement Courses (AEC)**							
	Nil	-	-	-	-	-	-	-
E	**Skill Enhancement Courses (SEC)**							
	Nil	-	-	-	-	-	-	-
F	**Value Added Courses (VAC)**							
	Nil	-	-	-	-	-	-	-
G	**Summer Internship / Research Project / Dissertation**							
Total		**11**	**-**	**14**				
Total Teaching Hours		**25**						**24**

POORNIMA UNIVERSITY, JAIPUR

Faculty of Planning & Architecture

Name of Program : M.Plan **Total Duration: 2 years** **Credits:22**

Teaching Scheme for Batch 2024-26

Semester-III

Course Code	Name of Course	Teaching Scheme			Marks Distribution			Credits
		Lecture (L)	Tutorial (T)	Practical (P)	IE	ESE	Total	
A	**Major (Core Courses)**							
A.1	**Theory**							
MPLCPL3101	Urban Development Management and Governance	2	-	-	40	60	100	2
MPLCPL3102	Legal Issues and Professional Practice	2	-	-	40	60	100	2
A.2	**Practical**							
MPLCPL3201	Planning Studio-III	2	-	6	60	40	100	11
MPLCPL3202	Practical Training & Pre thesis seminar	2	-	4	60	40	100	4
B	**Minor Stream Courses / Department Electives**							
B.1	**Theory**							
B.2	**Practical**							
MPLEPL3211	Urban Risk & Disaster Management	1	-	4	60	40	100	3
MPLEPL3212	Community Planning and Participation							
C	**Multidisciplinary Courses**							
	Nil	-	-	-	-	-	-	-
D	**Ability Enhancement Courses (AEC)**							
	Nil	-	-	-	-	-	-	-
E	**Skill Enhancement Courses (SEC)**							
	Nil	-	-	-	-	-	-	-
F	**Value Added Courses (VAC)**							
	Nil	-	-	-	-	-	-	-
G	**Summer Internship / Research Project / Dissertation**							
Total		**09**	**0**	**14**				
Total Teaching Hours		**23**						**22**

POORNIMA UNIVERSITY, JAIPUR

Faculty of Planning & Architecture

Name of Program : M.Plan **Total Duration: 2 years** **Credits: 19**

Teaching Scheme for Batch 2024-26

Semester-IV

Course Code	Name of Course	Teaching Scheme			Marks Distribution			Credits
		Lecture (L)	Tutorial (T)	Practical (P)	IE	ESE	Total	
A	**Major (Core Courses)**							
A.1	**Theory**							
MPLCPL4101	Development Finance	2	-	-	40	60	100	2
A.2	**Practical**							
MPLCPL4201	Planning Thesis	2	-	8	60	40	100	14
B	**Minor Stream Courses / Department Electives**							
B.1	**Theory**							
B.2	**Practical**							
MPLEPL4211	Inclusive cities	1	-	4	60	40	100	3
MPLEPL4212	Urban Heritage Conservation							
C	**Multidisciplinary Courses**							
	Nil	-	-	-	-	-	-	-
D	**Ability Enhancement Courses (AEC)**							
	Nil	-	-	-	-	-	-	-
E	**Skill Enhancement Courses (SEC)**							
	Nil	-	-	-	-	-	-	-
F	**Value Added Courses (VAC)**							
	Nil	-	-	-	-	-	-	-
G	**Summer Internship / Research Project / Dissertation**							
Total		**05**	**0**	**12**				
Total Teaching Hours		**17**						**19**

PROFESSIONAL ELECTIVE COURSES
(Session 2024-26)

	For General		For Artificial Intelligence & Data Science		For Cyber Security	
	Code	Name	Code	Name	Code	Name
Professional Elective-I	MCACCA1106	Computer Graphics	MCDCCA1101	Fundamentals of Artificial Intelligence and Data Science	MCYCCA1101	Introduction to Cyber Security
Professional Elective-II	MCACCA2104	Web Technologies	MCDCCA2101	Data Science and Analytics	MCYCCA2101	Ethical Hacking
Professional Elective-III	MCACCA2105	Internet of Things	MCDCCA2102	Machine Learning	MCYCCA2102	Cyber Forensic
Professional Elective-IV	MCACCA3103	Cloud Computing	MCDCCA3101	NLP and Computer Vision	MCYCCA3101	Vulnerability Assessment & Penetration Testing
Professional Elective-V	MCACCA3104	Artificial Intelligence	MCDCCA3102	Deep Learning and ANN	MCYCCA3102	Cloud Computing
Professional Elective-VI	MCACCA3105	Big Data	MCDCCA3103	Cloud Computing	MCYCCA3103	Cryptography & Network Security

PROFESSIONAL ELECTIVE LABS
(Session 2024-26)

	For General		For Artificial Intelligence & Data Science		For Cyber Security	
	Code	Name	Code	Name	Code	Name
Professional Elective Lab -I	MCACCA2204	Web Technology Lab	MCDCCA2201	R Programming Lab	MCYCCA2201	Ethical Hacking Lab
Professional Elective Lab - II	MCACCA3203	Cloud Computing Lab	MCDCCA3201	NLP and Computer Vision Lab	MCYCCA3201	Vulnerability Assessment & Penetration Testing Lab
Professional Elective Lab-III	MCACCA3204	Artificial Intelligence Lab	MCDCCA3202	Deep Learning and ANN Lab	MCYCCA3202	Cloud Computing Lab

I SEMESTER

Code: MPLCPL1101 Planning History and Theory I 2 Credits [LTP: 2-0-0]

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the history of urban form and describe different forces behind urban development in different times. Illustrate the contemporary urban patterns from a historical perspective	L1	PO1,PO3
CO2	Determining the various Models of Planning.	L2	PO1,PO3
CO3	Correlating the various plans and inspect differences and similarities between them.	L3	PO1,PO3,PO4,PO7
CO4	Reviewing the various theories of urbanization and understanding the Goal formulation, objective, scope, limitations; Plan making process, planning methodology and case studies.	L4	PO1,PO2,PO3,PO4,PO5
CO5	Composing the city-region relationship	L5	PO1,PO3,PO4,PO5,PO6,PO7,PO10,PO11

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B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	1	-	-	-	-	-	-	-	-	-
CO2	2	-	2	-	-	-	-	-	-	-	-	-
CO3	2	-	1	2	-	-	2	-	-	-	-	-
CO4	2	2	2	3	1	-	-	-	-	-	-	-
CO5	3	-	3	1	1	1	2	-	-	2	1	-
	2.00	**2.00**	**1.80**	**2.00**	**1.00**	**1.00**	**2.00**			**2.00**	**1.00**	

C. OUTLINE OF THE COURSE

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Planning History**	**6**
2	**Models of Planning**	**4**

3	**Types of Plans**	**4**
4	**Planning Theory**	**4**
5	**City-Region Relationship**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Planning History**
	Relevance of the study of Evolution; Hunter gatherer/farmer and formation of organized society; Cosmological and other influences origin & growth of cities, effects of cultural influence on physical form; Human settlements as an expression of civilization. Basic elements of the city, Concepts of space, time, scale of cities; Town planning in ancient India medieval, renaissance, industrial and post industrial cities; City as a living & spatial entity; Concepts of landmark, axis, orientation. City form as a living space. City as a political statement. New Delhi, Chandigarh, Washington D.C. Brazilia etc; Contribution of individuals to city planning. Lewis Mumford, Patric Geddes, Peter Hall etc; The dynamics of the growing city. Impact of industrialization and urbanization. Metropolis and Megalopolis; Generic and paracentric cities
2	**Definations ,objectives and Models of Planning**
	Definitions of town and country planning; Orthodoxies of planning; Goal formulation, objective, scope, limitations; Sustainability and rationality in planning; Components of sustainable urban and regional development. Pluralism in Planning; Systems. Approach to Planning: Rationalistic and Incremental Approaches, Mixed Scanning, Advocacy Planning and Action Planning, Equity Planning
3	**Types of Plans**
	Master Plan, Development Plan, Structure Plan, Strategic Plan, Sectoral Plan, Zonal Plan, Local Area Plan, Action Area Plan Etc.
4	**Planning Theory**
	. Theories of urbanization including Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory and other latest theories, Land use and land value theory of William Alonso*;* Ebenezer Howard's Garden City Concept; Green Belt Concept. City as an organism: a physical, social, economic and political entity Goal formulation, objective, scope, limitations; Plan making process, planning methodology and case studies. Emerging Concepts: global city, inclusive city, safe city, etc.; City of the future and future of the city; Shadow cities, divided cities;
5	**City-Region Relationship**
	Structure of City Regions, Area of Influence, Dominance; Rural- Urban Fringes; Metropolitan Region; Socio-Economic Impacts of Growth of Urban Areas; Push and Pull Factors; Rural-Urban Migration; Location of New Regional Economic Activities; Impact of Technology on Urban Forms; Transportation and Urban Form; Other Emerging Issues in Planning, Components of sustainable urban and regional development

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Urban and Regional planning, a system approach	Mcl.oughlin, J. B.	1969	Faber and Faber. , London.
2	A reader in Planning Theory	Faludi, A.	1973	Pergamum Press, London
3	Urban and Regional Planning,	Peter, G.H.Tewdwr-Jones, M.	2011	Rutledge, Lonoo. Tewdwr-Jones, M. Fifth Editor..

4	Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century,	Hall Peter	2001	Blackwell, London
5	Urban and Regional planning, a system approach	Mcl.oughlin, J. B.	1969	Faber and Faber. , London.
Important Web Links				
1	https://www.citylab.com/design/2012/11/evolution-urban-planning-10-diagrams/3851/			
2	https://journals.sagepub.com/home/jph			
	https://www.citylab.com/design/2012/11/evolution-urban-planning-10-diagrams/3851/			
	https://journals.sagepub.com/home/jph			

Code: MPLCPL1102 Housing and Environmental Planning 2 Credits [LTP: 2-0-0]

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the determinants of housing form, Housing needs and various housing typologies	L1	PO1,PO2,PO3,PO6,PO7
CO2	Determining the concepts of Housing in development of family and community wellbeing, status and prestige related to housing, safety, crime and insecurity, deprivation and social vulnerability, ghettoism.	L2	PO1,PO2,PO3,PO5,PO6,PO7
CO3	Correlating the housing as an important land use component of city plan / master plan.	L3	PO1,PO2,PO4,PO5,PO6,PO7
CO4	Reviewing the Planning for Modern, Traditional & contemporary Neighbourhoods and its design criteria.	L4	PO1,PO2,PO3,PO4,PO5,PO6,PO7
CO5	Composing and design a holistic neighborhood planning.	L5	PO1,PO2,PO3,PO4,PO5,PO6,PO7,PO12

B. MAPPING MATRIX OF CO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	1	1	-	-	1	1	-	-	-	-	-
CO2	1	1	1	-	1	3	2	-	-	-	-	-
CO3	1	1	2	1	-	2	2	-	-	-	-	-
CO4	2	1	2	1	1	3	2	-	-	-	-	-
CO5	2	2	3	1	2	2	2	-	-	-	-	2
	1.60	**1.20**	**1.80**	**1.00**	**1.33**	**2.20**	**1.80**					**2.00**

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Concepts and Definitions**	**4**
2	**Social and Economic Dimensions**	**4**
3	**Housing and the City**	**4**
4	**Planning for Neighbourhoods**	**4**
5	**Environmental Planning**	**8**

D.DETAILED SYLLABUS

Module	Content
1.	**Concepts and Definitions**
	Shelter as a basic requirement, determinants of housing form, Census of India definitions, Introduction to policies, housing need, demand and supply, dilapidation, structural conditions, materials of constructions housing age, occupancy rate, crowding, housing shortage, income and affordability, poverty and slums, houseless population.Various housing typologies viz. traditional houses, plotted development, group housing, multi-storied housing, villas, chawls, etc., slums and squatters, night shelters, public health issues related to housing, various theories of housing, concept of green housing, green rating of housing projects..
2.	**Social and Economic Dimensions**
	Housing as social security, role of housing in development of family and community well being, status and prestige related to housing, safety, crime and insecurity, deprivation and social vulnerability, ghettoism, gender issues, housing and the elderly Contribution of housing to micro and macro economy, contribution to national wealth and GDP, housing taxation, national budgets, fiscal concessions, forward and backward linkages
3.	**Housing and the City**
	Understanding housing as an important land use component of city plan / master plan, considerations for carrying out city level housing studies projections, land use provisions.Suitability of land for housing, housing stress identification, projecting housing requirements, calculating housing shortages, housing allocation
4.	**Planning for Neighbourhoods**
	Approaches to neighbourhood living in traditional and contemporary societies, elements of neighbourhood structure, Planning and design criteria for modern neighbourhoods, norms and criteria for area distribution, housing and area planning standards, net residential density and gross residential density, development controls and building byelaws, UDPFI guidelines, NBC 2005 provisions. Case studies of neighbourhood planning.
5.	**Environmental Planning**
	Global Environmental Concerns and Planning of Settlements, UN/ International Conferences/ Conventions (Global /National issues).Components, structure and meaning of the urban and environment. Environmental Policies and Initiatives,Strategies, Protocols, Treaties Sustainable Development (Concept and Methods), Environment planning Techniques, Environmental surveys-Methods of data collection, techniques, analysis Database for incorporation of environmental concerns in planning analysis Techniques of resource protection and conservation (land suitability analysis, carrying capacity, vulnerability analysis, Environmental Resources and assessment, Resources type, scale, inventory Resource Assessment - Land –Topographic analysis ,Water – quality standards Air and Noise – quality standards Biodiversity – basics of floral and fauna diversity assessment, Environmental Quality, Methods of addressing environmental quality Environmental Impact Assessment – an introduction EIA notification as related to human settlement planning

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Shelter in India: Sustainable Development Series	Aromar Revi	1990	Stosiusloc/ Advent Books IDivision
2	Housing : A factual Analysis	Beyer Glen H,	1958	The Macmillan Co. NY

3	Sustainable Urbanism: Urban Design with Nature	Douglas Farr	2007	John Wiley & Sons
4	People and Housing in Third World cities	Dwyer, DJ.	1981	Orient Lcogrna;
5	Fundamentals of Ecology,	Odom, E.P., Barrett, G.W., Brewer, R., Thomson Brooks,	Latest	
	Ecology, Impact Assessment and Environmental Planning,	West man W.,	Latest	John Wiley and Sons
	Integrated Environmental Planning,	James K. Lien,	Latest	Blackwell Publishing
	AITP Reader on Ecology & Resource Development,	AITP	Latest	AITP
Important Web Links				
1	https://swayam.gov.in/nd1_noc20_ar14/preview			
2	https://elearning.unep.org/moocs/courses			
	https://www.springer.com/journal/10901			
	https://www.tandfonline.com/loi/cjep20			

Code: MPLCPL1103 Socio-Economic base for Planning **2 Credits [LTP: 2-0-0]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the sociological concepts, socio-cultural profile and urban transformation of Indian society.	L1	PO1,PO4,PO5
CO2	Determining the concepts and elements of inclusivity in the vulnerable Social Groups and city planning	L2	PO1,PO2,PO5
CO3	Correlating and analyse the social problems of slums and squatters communities , urban rural social transformation and its effects on social life	L3	PO1,PO2,PO5
CO4	Reviewing the demand, supply, elasticity and consumer market and the concept of revenue cost, and Economies of scale.	L4	PO1,PO4,PO5
CO5	Composing and Develop the inclusive design with Human development index, poverty and income distribution, employment and livelihood.	L5	PO1,PO3,PO4,PO5,PO6,PO7,PO11

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B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	1	3	-	-	-	-	-	-	-
CO2	1	2	-	-	3	-	-	-	-	-	-	-
CO3	1	2	-	-	3	-	-	-	-	-	-	-
CO4	1	-	-	2	3	-	-	-	-	-	-	-
CO5	1	-	2	3	3	1	2	-	-	-	2	-
	1.20	**2.00**	**2.00**	**2.00**	**3.00**	**1.00**	**2.00**				**2.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Nature and Scope of Sociology**	**4**
2	**Inclusive Cities**	**4**
3	**Community and Settlements**	**6**
4	**Elements of Micro and Macro Economics**	**6**
5	**Development economics and Lessons from Indian Experiences**	**4**

D.DETAILED SYLLABUS

Module	Contents
1	**Nature and Scope of Sociology**
	Sociological concepts and methods, man and environment relationships; socio-cultural profile of Indian society and urban transformation; traditions and modernity in the context of urban and rural settlements ,Issues related to caste, age, sex, gender, health safety, marginalized group, un/underemployed, disabled population. .
2	**Inclusive Cities**
	Overview - Definition, Concepts, Elements of Inclusivity; Exclusion and Related Issues, Disparities, Social Fragmentation, Existing Divisiveness; Need for Inclusion of the Disadvantaged, Marginalized and other Week and Vulnerable Social Groups.
3	**Community and Settlements**
	Social problems of slums and squatters' communities, urban and rural social transformation and its effects on social life, safety, security and crime in urban areas and its spatial planning implications, social structure and spatial planning; Role of socio-cultural aspects in the growth patterns of city and neighborhood communities; Social planning and policy; community participation; Marginalization and concepts of inclusive planning, Gender concerns. Settlement Policy: National Commission on Urbanization, Rural Habitat Policy – Experiences in developing countries regarding Settlement structure, growth and its spatial distribution.
4	**Elements of Micro and Macro Economics**
	Concepts of demand, supply, elasticity and consumer market; concept of revenue cost; Economies of scale, economic and social cost, production and factor market; Different market structure and price determination; market failure, cost-benefit analysis, public sector pricing; Determinants of national income, consumption, investment, inflation, unemployment, capital budgeting, risk and uncertainty, long-term investment planning
5.	**Development economics and Lessons from Indian Experiences**
	Economic growth and development, quality of life; Human development index, poverty and income distribution, employment and livelihood; Economic principles of land use planning; Policies and strategies of economic planning, balanced vs. unbalanced growth, public sector dominance; changing economic policies, implications on land and case studies

.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Sociology	Anthony Giddens,	Latest	Wiley
2	Urban Problems in Sociological Perspective	Shannon, Thomas R.	Latest	Waveland Press Inc
3	Economics – A Primer for India	G. Omkarnath,	Latest	Orient Blacks wan
4	General Economics	Deepashree,	Latest	Tata Mc Graw Hill Publication
Important Web Links				
1	https://www.coursera.org/learn/gte-sustainable-cities			
2	https://www.journals.elsevier.com/socio-economic-planning-sciences			

Code: MPLCPL1201 Planning Studio-I **11 Credits [LTP: 2-0-6]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the real site conditions in an urban area, learn survey and documentation techniques, assessing needs and programming for planning intervention	L1	PO2,PO4
CO2	Determining the different methodological approaches, technologies and foundation theories of urban planning.	L2	PO2,PO3,PO5
CO3	Correlating the forces that shape and develop cities, understand the form, structure and development process of cities	L3	PO1,PO3
CO4	Reviewing the general theoretical models, analytical approaches to urban planning and contexts, technical knowledge's, stakeholder interests and ethical frameworks	L4	PO4,PO8
CO5	Devising the skills necessary for the effective practice of planning, including its purpose, schemes, methods and policy framework that envision future change,elements of plans, adoption, administration, and implementation of plans	L5	PO3,PO4,PO6,PO11

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B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	3	-	2	-	-	-	-	-	-	-	-
CO2	2	-	3	-	1	-	-	-	-	-	-	-
CO3	3	-	2	-	-	-	-	-	-	-	-	-
CO4	-	-	-	3	-	-	-	2	-	-	-	-
CO5	-	-	3	1	-	1	-	-	-	-	2	-
	2.50	**3.00**	**2.67**	**2.00**	**1.00**	**1.00**		**2.00**			**2.00**	

C.OUTLINE OF THE SUBJECT

The thrust of the studio would broadly address the concepts of both urban and rural planning and integration of the city and region. The studio would consist of two assignments:

Assignment 1

Understanding Human Settlement Systems (Individual Assignment)

The assignment would be a short introductory exercise undertaken with the objective of initiating students with the concepts of urban planning by developing skills of observation and documenting the same in graphical ways.
The thrust of the studio would be on:

- Understanding the context of the city.
- Readings on the city and settlement systems
- Understanding the structure of networks and land uses
- City form and its visual impact.
- Identification of landmarks and public realms.
- Application of appropriate techniques of documentation and presentation of the data collected.

Assignment 2

Area Planning in Urban Areas (Individual Assignment)

The assignment would identify different urban zones based on land use characteristics and could also include predefined 'zones' for zonal plans. The objective of this exercise would be to learn various methods of surveying to collect different types of data and represent and interpret them to give meaningful observations on the planning and development of the area. Thrust of the exercise would be on:

- Understanding the zone in the context of the city.
- Mapping of Networks and Linkages
- Preparation of Base Map of the area through primary surveys and updating secondary data
- Socio-economic profiling of the area through surveys
- Physical and Social infrastructure mapping
- Gap Analysis and issue identification
- Formulation of broad outlines of Intervention Strategies and Development Blueprint.

Assignment 3

Rural Planning (Group Assignment)

The main goal of the assignment is to expose students to the life and living in rural area as it is different from urban areas. This would help in conceptualizing the integration of urban and rural areas for regional planning.

Students will undertake study of a particular village in groups and conduct a primary survey on demographic profile, household income level, socio-cultural practices, etc. Information about development programmes shall be collected and resource mapping will be done. This exercise will aim at improving the understanding about the requirements of different categories of rural population. Conducting the primary survey will provide exposure to research methodology, techniques of data collection, data processing and analysis.
Thrust of the exercise would be on:

- Understanding the socio-economic aspects of the rural settlement
- Importance of location, spatial and economic linkages of the village.
- Explaining the social and physical infrastructure of the village.
- Understanding the availability and usage of local resources.
- Exposure to government programmes and institutional mechanism working for rural planning and development
- Identifying the present problems and future possibilities in the village.
- Proposing a strategy of improvement in the condition and development of the villages.

Assignment 4

- **Zonal Development Plan (Group Assignment)**

A Zonal Development Plan is a detailed plan for a zone conceived and prepared within the framework of the Master Plan containing proposals for various land uses, roads and streets ,parks and open spaces, community facilities, services and public utilities. Understanding city involves appreciating this multi direction, and include them in the city making process. A job of physical planner does not merely understand the current conflict in development but to emerge out of this and to come out with a vision for the city. To arrive at this vision, a planner needs to understand dynamics of various components of the city and how and what level interventions can be made ,achieve that vision.

A group of students are expected to study a city in terms its present problems and issues and project a futuristic vision -in terms of scenario building.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Rural Development, Principles, Policies and Management,	Katar Singh, Sage,	Latest	
2	Readings Material on Village Planning and Rural Development,	H.B Singh,	Latest	ITPI, New Delhi
3	The Role of Intermediate Towns in Regional Development : A Case Study,	National Institute of Urban Affairs (NIUA), NIUA, New Delhi	Latest	National Institute of Urban Affairs (NIUA), NIUA, New Delhi
4	Rural Development, Principles, Policies and Management,	Katar Singh, Sage,	Latest	
Important Web Links				
1	https://www.cppr.in/urban-studies			
2	https://www.wri.org/resources/data platforms			
	http://icrier.org/publications/icrier-think-ink/			

Code: MPLCPL1202 GIS-Survey & Statistics **4 Credits [LTP: 2-0-4]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the diverse use of GIS software and its importance in Urban Planning. To apply this knowledge for data interpretation & analysis in the domain of Urban Planning.	L1	PO1,PO3,PO6
CO2	Determining the process of Remote Sensing, interpretation of satellite imagery and its application in Planning.	L2	PO1,PO3,PO6,PO7
CO3	Correlating the demographic data and population structures and determine their inter-relation with growth of urban settlements and sprawl.	L3	PO1,PO5,PO7,PO11
CO4	Reviewing the techniques of data collection through sampling and assess its interpretation and accuracy through various statistical methods (like co-relation regression)	L4	PO1,PO5,PO7,PO11
CO5	Composing and Develop the graphical and spatial representation of data for studio projects. To learn image processing and integration of GIS with GPS	L5	PO1,PO5,PO7,PO11

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B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	1	-	-	3	-	-	-	-	-	-
CO2	1	-	1	-	-	3	1	-	-	-	-	-
CO3	1	-	-	-	1	-	2	-	-	-	1	-
CO4	1	-	-	-	1	-	2	-	-	-	2	-
CO5	1	-	-	-	2	-	2	-	-	-	2	-
	1.00		**1.00**		**1.33**	**3.00**	**1.75**				**1.67**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Fundamentals of Cartography, Photogrammetry and Digital Image Processing**	**4**
2	**Basics of Remote Sensing**	**4**
3	**Remote Sensing**	**6**
4	**Basics of GIS and its Applications**	**4**
5	**GIS Hands on exercise**	**6**

D.DETAILED SYLLABUS

Unit	Contents
1.	**Fundamentals of Cartography, Photogrammetry and Digital Image Processing**
	Introduction of unit- Lithosphere, Geomorphic Processes and Landforms, Cartography. **Aerial photography-**Introduction to aerial photography – Basic information and specifications of aerial photographs; Planning and execution of photographic flights Basic; Types of Aerial Photograph **Photogrammetry-**Definitions and Development of Photogrammetry; Classifications of Photogrammetry; Uses of Photogrammetry; **Photographic Scale-**Concept of Photographic Scale; Methods for Determining Photo Scale; Scale of a Vertical Photograph over Flat Terrain; Scale of a Vertical Photograph over variable Terrain; **Stereo Photogrammetry-**Stereo Photogrammetry: Model deformation & Rectification, Relief displacement, vertical exaggeration, Triangulation, Control & Mapping. **Fundamentals of Digital Image-**Concepts about digital image and its characteristics, Spectral, Spatial, Radiometric and Temporal resolution, Visual vs. Digital methods, Image data storage and retrieval, Visual and Digital Satellite Image Interpretation, Elements of Image Interpretation, Development of Interpretation Keys, Image restoration and Noise removal, Radiometric and Geometric correction technique, Interpolation methods – linear and nonlinear transformation for geometric corrections. **Image Classification-**Principles of Image Classification-Image space, Feature space, Image classification; Image Classification process- Preparation for image classification, supervised image classification, unsupervised image classification.
2.	**Basics of Remote Sensing**
	Introduction; Definition and Scope; Stages of Remote Sensing data acquisition; Process of Remote Sensing data analysis; T y p e of Remote Sensing- Active and passive remote sensing; Advantages and Limitations of Remote Sensing. **Electromagnetic energy-**Introduction; Electromagnetic energy- Electromagnetic spectrum, Radiation Principal's; EMR interaction With Atmosphere- scattering, Absorption and Atmospheric Windows; EMR interaction with earth surface features - reflection, absorption, emission and transmission; Spectral response pattern - vegetation, soil, water bodies. **Remote Sensing Platforms and Sensors-**Types and their characteristics; Satellites and their characteristics – Geo-stationary and sun-synchronous; Earth Resources Satellites- LANDSAT, SPOT, IRS, IKONOS, QUICKBIRD satellite series; Meteorological satellites – INSAT, NOAA, GOES; Sensors – Types and their characteristics, Across track (whiskbroom) and Along track (push broom) scanning; Optical mechanical scanners – MSS, TM, LISS, WiFS, PAN; Concept of Resolution – Spatial, Spectral, Temporal, Radiometric.
3.	**Remote Sensing**
	Image Interpretation-Introduction; Fundamental of Visual Image Interpretation; Elements of Image Interpretation; Image Interpretation strategies; Image Interpretation keys. **Remote Sensing Data Requirement and Ground Investigation-**Remote Sensing Data Products and their procurement, Ground Truth Collection –Spectral Signatures, Commonly used Ground Truth equipment's - use of Radiometers, Display Forms – Computer printouts, Thematic maps.
4.	**Basics of GIS and GIS Applications**
	Basics-Definitions of GIS and Related Terms; Development of GIS; Components of GIS; Geographical Data Characteristics and GIS; Coordinate Systems, Datum's and Projections in GIS. **Data Structures and Data Base Design-** Digital representation of Geographic Data; Raster and Vector models for Geographic Data Representation and Conversion; Digitization—Methods and Errors; Topology Building; GIS Data Standards—Concepts and Components; Data and Information Sources for GIS; GIS Data Base

	Management Systems--Conceptual and Logical Data Modelling; Spatial Data Quality and Error Analysis; GIS Customization. **Attribute Data and Data Exploration-**Attribute Data in GIS, Attribute Data Entry, Manipulation of Fields and Attribute Data, Data Exploration; Attribute Data Query, Raster Data Query, Map- Based Data Manipulation, **Application Methodologies-**Spatial Analysis through GIS; DEM/DTM and Derivatives; Remote Sensing Data and GIS Integration; GIS Project Design and Planning Methodologies; GIS Information Products. **Geo Statistical Analysis Techniques-**Introduction to Spatial Interpolation: Control Points, Global Method- Trend surface analysis, regression model, local methods- Thiessen polygons, density estimation, Inverse Distance weighted Interpolation, Kriging- Ordinary Kriging and Universal Kriging, GIS and decision support system, Introduction to AHP, basic principal of AHP. Principal and components of multiple criteria decision making.
5.	**GIS Hands on exercise**
	GIS II (Practical) - Georeferencing; Creation of Shape Files, Layers; On-Screen Digitization of Polygons, Points and Lines and adding Attributes; Conversions and Topology; Spatial Analysis, DEM. Digitization of maps, Land use land cover analysis, Demographic analysis, Roads and transportation analysis.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Advanced Surveying: Total Station, GIS and Remote Sensing,	Satheesh Gopi	Latest	Pearson
2	Applied Remote Sensing in Urban Planning, Governance and Sustainability	Netzband, Springer, India	Latest	Ashoke K.Ghosh
3	Remote Sensing and GIS,	Basdudeb Bhatt	Latest	Oxford University Press
4	Geographic Information Systems and Science,	PA Longley et al,	Latest	John Wiley and Sons Ltd.
Important Web Links				
1	https://www.coursera.org/specializations/gis			
2	https://guides.lib.utexas.edu/gis-and-geospatial-academic-literature/gis-and-geospatial-journals			

Code: MPLCPL1203 Planning Techniques **3 Credits [LTP: 1-0-4]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the mapping , components and techniques of Physical survey& socio economic surveys	L1	PO1,PO2,PO4
CO2	Determining the concepts of urban database and data analysis in the planning process.	L2	PO1,PO2,PO4
CO3	Correlating the regions on the bases of its classification, its delineation techniques, SWOT, population forecasts and projections	L3	PO1,PO3,PO4,PO6
CO4	Reviewing the planning standards, performance standards and benchmarks	L4	PO1,PO3,PO4
CO5	Composing and Develop the inclusive design with Geo informatics.	L5	PO1,PO4,PO5

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	2	-	3	-	-	-	-	-	-	-	-
CO2	1	3	-	2	-	-	-	-	-	-	-	-
CO3	1	-	2	3	-	1	-	-	-	-	-	-
CO4	1	-	2	3	-		-	-	-	-	-	-
CO5	1	-	-	2	3	-	-	-	-	-	-	-
	1.00	**2.50**	**2.00**	**2.60**	**3.00**	**1.00**	**-**	**-**	**-**	**-**	**-**	**-**

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Survey Techniques and Mapping**	**6**
2	**Demographic Methods**	**8**
3	**Analytical Methods**	**6**
4	**Planning Standards**	**4**
5	**Introduction to Geo informatics**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Survey Techniques and Mapping**
	Data base for physical surveys including land use, building use, density, building age, etc., and socio-economic surveys; Survey techniques; Land use classification or coding and expected outputs; Techniques of preparing base maps including understanding the concepts of scales, components and detailing for various levels of plans like regional plan, city plan, zoning plan, and local area plan.
2	**Demographic Methods**
	Methods of population forecasts and projections; Lorenz Curve, Ginni Ratio, Theil's index, rations: urban – rural, urban concentration, metropolitan concentration; Location dimensions of population groups – social area and strategic choice approach – inter connected decision area analysis.
3	**Analytical Methods**
	Classification of regions, delineation techniques of various types of regions, analysis of structure of nodes, hierarchy, nesting and rank size; Scalogram, sociogram, etc.; Planning balance sheet; Threshold analysis; Input output analysis, SWOT analysis;
4	**Planning Standards**
	Spatial standards, performance standards and benchmarks, and variable standards. UDPFI guidelines, zoning regulations and development controls
5	**Introduction to GIS**
	Basics-Definitions of GIS and Related Terms; Development of GIS; Components of GIS; Geographical Data Characteristics and GIS; Coordinate Systems, Datum's and Projections in GIS.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Concepts and Techniques of Geographic Information Systems	Lo C.P. and Yeung A.K.W.,	Latest	PHI Learning Private Limited
2	URDPFI Guidelines Volume 1,	Ministry of Urban Affairs and Employment Govt. of India, New Delhi	Latest	
3	Regional Planning,	Glasson J.,	Latest	Open University Press
4	Concepts and Techniques of Geographic Information Systems	Lo C.P. and Yeung A.K.W.,	Latest	PHI Learning Private Limited
Important Web Links				
1	https://ocw.mit.edu/courses/urban-studies-and-planning/			
2	https://www.tandfonline.com/doi/abs/10.1080/01944367308977650			

II SEMESTER

Code: MPLCPL2101 City & Metropolitan Planning **2 Credits [LTP: 2-0-0]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the growth of the cities.Understand the dichotomy between technology transportation and urban form.	L1	PO1
CO2	Determining the various theories of urban structure and land use.	L2	PO1,PO4,PO6
CO3	Correlating the urban planning norms and standards. Understand how to develop indicators to measure various environmental, social and economic qualities of urban areas.	L3	PO4,PO6,PO8
CO4	Reviewing the various approaches and techniques of planning for special areas. Understand the Concept and components, essential dimensions of inclusive planning ,the significance of city-region linkages and inter-dependence.	L4	PO1,PO3,PO6
CO5	Building the best practices of city and metropolitan planning in India and abroad, inter-disciplinary policy issues and public actions for guiding metropolitan development	L5	PO1,PO4,PO6,PO8,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	-	-	-	-	-	-	-	-	-	-
CO2	2	-	-	3	-	1	-	-	-	-	-	-
CO3	-	-	-	3	-	2	-	1	-	-	-	-
CO4	2	-	3	-	-	1	-	-	-	-	-	-
CO5	1	-	-	3	-	1	-	2	-	-	2	-
	2.00		**3.00**	**3.00**		**1.25**		**1.50**			**2.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Urban Structure and Growth Implications**	**4**
2	**Theories of Development and Emerging Concepts**	**4**
3	**Planning Norms and Standards**	**4**
4	**Preparation Approaches and Techniques Planning**	**8**
5	**Approaches for Special Areas**	**4**

D.DETAILED SYLLABUS

Module	Contents
1	**Urban Structure and Growth Implications**
	Growth of cities; cities as engine of growth; urban sprawl; land value, economic attributes of activity location, economic forces in urban development; Structure of City Regions, area of influence, Impact of technology on urban forms; Transportation and urban form; location characteristics and impact of urban settlements.
2	**Theories of Development and Emerging Concepts**
	Theories of urban structure and land use- Centre place theory, urban realm model, core frame theory; New urbanism; Territorial Development Theory - Growth pole theory, urban bias critique, secondary cities and urban diffusion; Emerging Rural Urban Relationship models – urban rural linkage, expanding city, globalization and extended metropolitan region, Desakota model, Networked model; Territoriality of rural-urban interaction; Peri- urban Interface (PUI) case studies.
3	**Planning Norms and Standards**
	Spatial standards for residential , industrial, commercial , institutional, transport, ecological spaces , recreational areas etc.; space standards for facility areas, utilities and networks; performance standards
4	**Preparation Approaches and Techniques Planning**
	Approaches for preparation of Urban development plans, Master Plans, Structure plans and Strategy Plan; Public Participation and Plan Implementation; Techniques of urban renewal and redevelopment; System approach to planning; Threshold analysis, retail location and industrial location analysis; transport system analysis.
5	**Approaches for Special Areas**
	Special area planning- definition, types, attributes, requirements, planning process; inner areas ,peri-urban areas issues and planning approaches; Smart City – Concepts, Elements, Features, planning approach and strategies, policy efforts in India; Inclusive planning- Concept and components, essential dimensions of inclusive planning; growth of informal sector, characteristics, linkages with formal sector, Planning interventions, Inclusive zoning, development and building regulations, slum improvement;

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	City and metropolitan planning and design	ITPI	1998	ITPI,New Delhi
2	Urbanization and urban systems in India	Ramachandran .R	1998	Oxford University Press, New Delhi
3	Regional Plan 2021	NCRPB	2005	NCRPB, New Delhi
4	Indian Metropolis: Urbanization, Planning and Management	Bawa V.K	1987	Inter-India Publications, New Delhi
Important Web Links				
1	https://swayam.gov.in/nd2_cec20_ar01/preview			
2	https://www.sciencedirect.com/science/article/pii/S2226585616300036			

Code: MPLCPL2102 Infrastructure Planning **2 Credits [LTP: 2-0-0]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the Importance of Infrastructure - Transport Integration, mobility patterns and need for sustainability.	L1	PO1,PO7,PO10,PO11
CO2	Determining the various Principles of infrastructure – Transport Integration, Institutional integration and legal mechanism.	L2	PO1,PO2,PO6
CO3	Correlating the infrastructure-Transport Models understanding the Components, concept, measures and quantification and its types	L3	PO1,PO4,PO6
CO4	Reviewing the Traffic Impact of Land Development, Principles of traffic impact and its analysis	L4	PO1,PO2,PO3
CO5	Building the Transit Oriented Development (TOD) in detail and understanding the Case Studies on Land use - Transport Integration	L5	PO1,PO3,PO6

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B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	-	-	-	-	2	-	-	1	1	-
CO2	1	3	-	-	-	1	-	-	-	-	-	-
CO3	2	-	-	3	-	1	-	-	-	-	-	-
CO4	1	2	3	-	-	-	-	-	-	-	-	-
CO5	1	-	3	-	-	2	-	-	-	-	-	-
	1.60	**2.50**	**3.00**	**3.00**		**1.33**	**2.00**			**1.00**	**1.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Role of Infrastructure in Development**	**4**
2	**Planning and Management of Water, Sanitation and Storm Water**	**6**
3	**Planning and Management of Municipal Wastes, Power and Fire**	**4**
4	**City Development and Transport Infrastructure Planning, Management and Design**	**4**
5	**Transit Oriented Development (TOD)**	**6**

D.DETAILED SYLLABUS

Module	Content
1.	**Role of Infrastructure in Development**
	Elements of Infrastructure (physical, social, utilities and services); Basic definitions, concepts, significance and importance; Data required for provision and planning of urban networks and services; Resource analysis, provision of infrastructure, and land requirements; Principles of resource distribution in space; Types, hierarchical distribution of facilities, Access to facilities, provision and location criteria, Norms and standards, etc.
2	**Planning and Management of Water, Sanitation and Storm Water**
	Water – sources of water, treatment and storage, transportation and distribution, quality, networks, distribution losses, water harvesting, recycling and reuse, norms and standards of provision, institutional arrangements, planning provisions and management issues; Sanitation – points of generation, collection, treatment, disposal, norms and standards, grey water disposal, DEWATS, institutional arrangements, planning provisions and management issues. Storm water – rainfall data interpretation, points of water stagnation, system of natural drains, surface topography and soil characteristics, ground water replenishment, storm water collection and disposal, norms and standards, institutional arrangements, planning provisions and management issues;
3	**Planning and Management of Municipal Wastes, Power and Fire**
	Municipal and other wastes – generation, typology, quantity, collection, storage, transportation, treatment, disposal, recycling and reuse, wealth from waste, norms and standards, institutional arrangements, planning provisions and management issues. Power – Sources of power procurement, distribution networks, demand assessment, norms and standards, planning provisions and management issues. Fire – History of fire hazards, vulnerable locations, methods of fire fighting, norms and standards, planning provisions and management issues.
4	**City Development and Transport Infrastructure Planning, Management and Design**
	Role of transport, types of transport systems, evolution of transport modes, transport problems and mobility issues; Urban form and Transport patterns, land use – transport cycle, concept of accessibility; Hierarchy, capacity and geometric design elements of roads and intersections; Basic principles of Transport infrastructure design; Traffic and transportation surveys and studies, traffic and travel characteristics; Urban transport planning process – stages, study area, zoning, data base, concept of trip generation Transport, environment and safety issues; principles and approaches of traffic management, transport system management.
5	**Transit Oriented Development (TOD)**
	Planning for infrastructure and facilities for transport ,Transit Oriented Development- Definition, concepts and key components ; principles of TOD, planning norms and standards of TOD , pre-requisites of TOD , financing TOD , role of stakeholders, case studies of TOD, Best practices of Land use transport integration in India and abroad, inter-disciplinary policy issues and public action for guiding land use transport integration.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Environmental Engineering,	Howard S. Peavy,	1990	Tata Mc Grawhill
2	Urban Planning Manual,	AIILGS Reader	1958	Khanna Publishers
3	Urban Transport: Planning and Management,	A K Jain,	2007	APH Publishing

4	Transportation Engineering and Planning,	C. S Papacostas, P. D Prevedouros,	2007	PHI Learning
Important Web Links				
1	https://www.classcentral.com/course/swayam-urban-landuse-and-transportation-planning-20017			
2	https://jtlu.org/index.php/jtlu			

Code: MPLCPL2103 Planning Legislations & Urban Development Policies 2 Credits [LTP: 2-0-0]

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the Concept of Legislation, its significance and Objectives.	L1	PO1,PO8
CO2	Determining the concepts of various urban planning acts referred in the procedures for preparation, implementation of regional plans, master plans and town planning schemes.	L2	PO1,PO3,PO4,PO6,PO8
CO3	Correlating the roles and responsibilities of Town & Country Planning Organization, Urban Development Departments , City Improvement Trust, Development Authorities, Municipal Corporation.	L3	PO1,PO3,PO8
CO4	Reviewing the interdisciplinary groups; community participation process in planning	L4	PO1,PO2,PO6
CO5	Building a planning model with the integration of various policies and regulations and acts	L5	PO1,PO3,PO8

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7		PO8	PO9	PO10	PO11	PO12
CO1	3	-	-	-	-	-		-	2	-	-	-	-
CO2	1	-	3	2	-	1		-	1	-	-	-	-
CO3	1	-	2	-	-	-		-	3	-	-	-	-
CO4	2	2	-	-	-	3		-	-	-	-	-	-
CO5	2	-	2	-	-	-		-	3	-	-	-	-
	1.80	**2.00**	**2.33**	**2.00**		**2.00**			**2.25**				

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Concept of Planning Legislation**	**4**
2	**Planning and Development Organizations & Overview of Development Control Regulations-**	**6**
3	**Policy Making Process**	**6**
4	**Urban Development Policies in India**	**4**
5	**Emerging Policy Thrust Areas and Case Studies on Urban Development Policies**	**4**

D.DETAILED SYLLABUS

Module	Contents
1.	**Concept of Planning Legislation**
	Significance and Objectives of Legislation; Constitutional basis and provisions relating to land, its development and use; Overview of legal tools in various components of Urban Planning & Development; Evolution of Planning Legislation in India; Types and description of various Acts- Town and Country Planning Acts, Regional Planning acts, Improvement Trust Act, Urban Planning and Development Authorities Act- objectives, contents, procedures for preparation and implementation of regional plans, master plans and town planning schemes; Various Acts related to urban governance; land resources, environment protection, public participation in statutory process.
2.	**Planning and Development Organizations & Overview of Development Control Regulations-**
	Town & Country Planning Organization, Urban Development Departments , City Improvement Trust, Development Authorities, Municipal Corporation etc. – objectives, functions and duties, organizational structure, technical capacity , statutory obligations, budgetary outlays; coordination and implementation issues, Zoning, Sub-Division Regulations, Building Regulations and Bye Laws; Apartment Ownership Act ,Water Bodies Conservation Act; Environment Protection Act; 73rd and 74th Constitution Amendment Acts and other relevant acts e.g. Nagar Raj Act; Model Municipal Act
3	**Policy Making Process**
	Policy Process - problem definition, policy objectives and options, policy implementation, policy evaluation and maintenance; Policy making approaches- Power approaches, Institutional approaches, Strategic Planning, Rational approach and Simon's Rationality Model; Decision-making process and techniques; Policy monitoring- approaches and techniques; Role of non-officials in policy making; Intergovernmental relations and public policy issues; Public policy implementation- Approaches and models; Inter-organizational relations and public policy implementation; Public Participation in Planning Process.
4.	**Urban Development Policies in India**
	National Urban Sanitation Policy, National Urban Housing & Habitat Policy , National Policy for Urban Street Vendors , National Environmental Policy , National Urban Transport Policy , National Water Policy , National Policy on Energy; Emerging policies and programmes of government- JNNURM, AMRUT , HRIDAY etc
5.	**Emerging Policy Thrust Areas and Case Studies on Urban Development Policies**
	Policies to promote efficient urban spatial development ; development of eco-friendly neighborhoods; flexible FSI in urban design and planning; transport and land use integration ; integrated spatial and economic planning; inclusionary zoning regulations; renewal of neglected historic districts and derelict inner city areas ; integrating environment in urban planning and development; green urban economy approach; environment and social opportunities of densities; green urban infrastructure ; green urban governance. Best practices of urban development and planning policies- approach and impacts; procedure and inter-disciplinary issues related to policies.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Town and Country Planning Act (any State Act)	State Govt.	Latest	Khanna
2	Model Municipal Act, Ministry of Urban Development, Government of India	State Govt.	Latest	Khanna
3	Building Byelaws (any State Act)	State Govt.	Latest	Khanna
4	Development Authority Act (any State Act)	State Govt.	Latest	Khanna

	Governance and Planning	Mishra, A. K.,	Latest	
	Working papers from National Institute of Urban Affairs, Centre for Good Governance, United Nations Centre for Human Settlement and National Institute of Public Finance and Policy.	National Institute of Urban Affairs, Centre for Good Governance, United Nations Centre for Human Settlement and National Institute of Public Finance and Policy.		McGraw Hill
	Land Policy and Urban Growth,	Drabkin, H. D.,	1977	Pergamon Press,
	Land Management: Challenges and strategies,	Iyyer, C.,	2009	Global India Publications
Important Web Links				
1	https://ocw.mit.edu/courses/urban-studies-and-planning/			
2	https://online-learning.tudelft.nl/courses/sustainable-urban-development-discover-advanced-metropolitan-solutions/			

Code: MPLCPL2201 Planning Studio-II **11 Credits [LTP: 1-0-6]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the real site conditions in an urban area, learn surveynd documentation techniques, assessing needs and programming for planning intervention	L1	PO2,PO4
CO2	Determining the different methodological approaches, technologies and foundation theories of urban planning.	L2	PO1,PO3,PO5
CO3	Correlating the forces that shape and develop cities, understand the form, structure and development process of cities	L3	PO1,PO3
CO4	Reviewing the general theoretical models, analytical approaches to urban planning and contexts, technical knowledge's, stakeholder interests and ethical frameworks	L4	PO4,PO8
CO5	Devising the skills necessary for the effective practice of planning, including its purpose, schemes, methods and policy framework that envision future change,elements of plans, adoption, administration, and implementation of plans	L5	PO3,PO4,PO6,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	3	-	2	-	-	-	-	-	-	-	-
CO2	2	-	3	-	1	-	-	-	-	-	-	-
CO3	3	-	2	-	-	-	-	-	-	-	-	-
CO4	-	-	-	3	-	-	-	2	-	-	-	-
CO5	-	-	3	1	-	1	-	-		-	2	-
	2.50	**3.00**	**2.67**	**2.00**	**1.00**	**1.00**		**2.00**			**2.00**	

C.DETAILED SYLLABUS

Defining characteristics of identified areas
Case study and literature review of planning concepts and norms for the selected area/special area
Selection of site and collection data (field trip of 2 weeks duration)
Data analysis and presentation
Outline framework of development – sectoral and spatial
Implementation framework – capital investment and funding methods
Financial feasibility
Governance and management aspects.

Assignment 1

Geo Informatics Laboratory Training

The laboratory training will be conducted in accordance with the studio exercise. Introduction to Geo-Informatics, Introduction to remote sensing –aerial and satellite ;Introduction to GIS ,spatial data and attributes data; satellite images as input to GIS; collection and presentation to base line information.

Assignment 2

Development Plan

The studio exercise focuses on the planning ,development and design aspect (in line with the other core and elective courses offered in the semester).The exercise pertains to large cities and emerging metropolitan cities and ranges from preparation of sustainable development plans to sector specific themes pertaining to tourism.SEZ s, etc. The studio exercise enables students to develop an approach/framework for the task ;it is field based as a database in generated that is analyzed and the plan and strategies are formulated.

Initial studies involve understanding of the exercise through theories , studies of similar case studies, awareness of relevant norms and standards through extensive literature research. Students are required to prepare a comprehensive list of required data and identify probable sources before making a field visit to the case study town/city. Students are encouraged to translate learning from core and elective subjects to the studio exercise. The introduction of GIS in the studio enables them to apply it in the studio exercise. Students are expected to analyze the data collected and come out with proposals and recommendations for planned development of the city. The entire exercise is also documented in the form of technical report.

The second exercise is a short and intensive exercise of one month duration. It pertains to tropical issues that is property tax reforms ,informal sector, development of railway land etc. The study is based on primary surveys and students are expected to analyze the information and arrive at the recommendation.

D.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	An introduction to social research, quantitative and qualitative approaches	Punch, Keith	2005	Sage
2	Basics of social research qualitative and quantitative approaches	Neuinan, William	2007	Pearson, Allen & Bacon
3	Social research methods	Bryman ,Allan	2008	Oxford University press
4	Statistical methods for the social sciences	Finlay ,B.	2009	Pearson Publisher University of Florida, US
Important Web Links				
1	https://olc.worldbank.org/content/sustainable-urban-land-use-planning-self-paced			
2	http://www.itpi.org.in/journals			

Code: MPLCPL2202 Advanced Planning Techniques **4 Credits [LTP: 2-0-4]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the various survey & sampling techniques used in urban planning.	L1	PO1,PO2,PO5
CO2	Determining concept of GIS mapping on master plans	L2	PO3,PO5
CO3	Correlating the research design approaches and developing a method for research	L3	PO2,PO5
4CO4	Reviewing the techniques of data tabulation, interpretation and representation in urban planning.	L4	PO1,PO4,PO5
CO5	Building a GIS based analysis using tools and techniques and representing them.	L5	PO2,PO3,PO5,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	3	-	-	2	-	-	-	-	-	-	-
CO2	-	-	2	-	3	-	-	-	-	-	-	-
CO3	-	2	-	3	-	-	-	-	-	-	-	-
CO4	1	-	-	2	3	-	-	-	-	-	-	-
CO5	-	2	1	-	3	-	-	-	-	-	1	-
	1.00	**2.33**	**1.50**	**2.50**	**2.75**						**1.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Survey Techniques**	**4**
2	**Research Design and implementation**	**6**
3	**Research design and implementation**	**6**
4	**Analytical planning techniques, report writing and presentation.**	**4**
5	**Report writing and presentation.**	**4**

D.DETAILED SYLLABUS

Module	Contents
1	**Survey Techniques**
	Database for physical surveys (including land use / building use/density/building age etc.) and socio economic surveys, questionnaire formulation, sampling and survey techniques etc. Land use classification/coding.

2	**Research design and implementation**
	Approaches in research, developing a method for research; Questionnaire Design, Types of data, sampling methods; developing aims, objectives, scope, limitations; and literature research – using library, accessing the Internet
3	**GIS Mapping**
	Coordinate system, Georeferencing and geo-coding; GIS data processing (Digitization, topology building and metadata creation), Data structures and modeling, GIS analysis (Buffer, proximity and overlay), Decision making through GIS, Information systems (Land Information system, Urban Information system for various activity sectors).
4	**Analytical techniques**
	Data tabulation; interpretation of information; graphical presentation of data ;spatial representation of data;
5	**Report writing and presentation.**
	Types of reports with specific focus on technical report writing; Organizing the report, structure chapter organization, Writing the report (analytical findings); Referencing in text, use of software in referencing

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Survey Methodology	Groves R.M.Fowler	2009	John willey & Sons
2	Urban Planning and Development,Application of GIS	Easa S.ChanY.(ED)	2000	American society of civil engineers
3	Research Design	John W.Creswel	2003	Sage Publicationn,California
4	Writing the winning thesis,	Glatthorn A.A & Joyner R.L.	2005	Corwin Press, California
Important Web Links				
1	https://ocw.mit.edu/courses/urban-studies-and-planning/			
2	https://www.tandfonline.com/doi/abs/10.1080/01944367308977650			

Code: MPLEPL2211 Project Planning and Management 3 Credits [LTP: 1-0-4]

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the definition & concepts of project management and project life cycle	L1	PO9,PO11
CO2	Determining the project appraisal concept using survey methods on a urban project.	L2	PO4,PO5
CO3	Correlating project planning & scheduling system for an urban project using various tools & techniques	L3	PO4,PO5
CO4	Reviewing the project financing and assessment for an urban scale project	L4	PO5,PO9,PO11
CO5	Building the project monitoring and decision making criteria using principles on an urban scale project.	L5	PO3,PO5,PO8,PO9

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	-	-	-	1	-	3	-
CO2	-	-	-	3	2	-	-	-	-	-	-	-
CO3	-	-	-	2	3	-	-	-	-	-	-	-
CO4	-	-	-	-	1	-	-	-	2	-	3	-
CO5	-	-	1	-	2	-	-	2	1	-	-	-
			1.00	**2.50**	**2.00**			**2.00**	**1.33**		**3.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Importance of Project Management**	**4**
2	**Project Appraisal**	**6**
3	**Project Planning and Scheduling**	**6**
4	**Project Financing**	**4**
5	**Project Monitoring and Evaluation**	**4**

D.DETAILED SYLLABUS

Module	Contents
1	**Importance of Project Management**
	Definition of Project , Project Management – Definition and its importance; Stages of Project Life Cycle; Causes of Project Delay; Role of Project Manager; Attributes of a Successful Project Management..
2	**Project Appraisal**

	Introduction to Project Appraisal - Types of Feasibility, Financial and Economic Appraisals, Project Financial Appraisal Techniques; Market Analysis - survey methods, market characterization, demand forecasting; Technical analysis- materials, equipment, factors of production availability, implementation schedule, suitability of the plans, layout and design; supporting infrastructure requirements, capital budgeting, estimation of casting of components; social cost benefit analysis.
3	**Project Planning and Scheduling**
	Introduction to Project Planning- Process, Investment Phase; Project Work (Work Breakdown Structure), Manpower and Organization, Project Finance, Information System; Process of Project Formulation and constraints; Breakeven Analysis; Sensitivity Analysis; Project Budgeting; Project Scheduling - definition and steps; Network techniques and activity on Arc/Node; Forward Pass and Backward Pass; Critical Path and Slack; PERT; concept of Gantt Chart
4	**Project Financing**
	Project financing need assessment; sources of funds; disposition of funds, planning for project financing, Various financing models (Public-private Partnership etc.)
5	**Project Monitoring and Evaluation**
	Project Monitoring and criteria for decision making; Parameters and Tools of Control; Use of Network Analysis in Project Monitoring; Reporting and Corrective Actions; Resource Management and Project Reporting. Project Evaluation- Methods, tools, time frame and results; Project Cash Flows; Principles of Cash Flow Estimation; Project Benefits; Financial Closure, Presentation of evaluation findings.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Construction Project Management : Planning, Scheduling and Controlling,	K.K. Chitkara,		Tata Mc Graw Hill
2	Project Management, Perspective	Clifford F Gray et all,		Tata Mc Graw Hill
3	Projects: Planning, Analysis, Selection and Review,	Prasanna Chandra,		Tata Mc Graw Hill
4	Project Planning, Scheduling and Control,	James P Lewis,		Tata McGraw-Hill Publishing Co. Ltd.
Important Web Links				
1	https://www.coursera.org/courses?query=project%20management			
2	https://www.journals.elsevier.com/international-journal-of-project-management			

Code: MPLEPL2212 Sustainable Planning and Development 3 Credits [LTP: 1-0-4]

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the Sustainable development concepts and various initiatives by organizations.	L1	PO1,PO7
CO2	Determining the sustainable planning principles for integrating diverse communities	L2	PO6,PO7
CO3	Correlating the ecological planning principles and various models using case studies	L3	PO1,PO2,PO4,PO7
CO4	Reviewing the climate change and it's effect on nature	L4	PO6,PO7
CO5	Building and Design environment management plan for an urban area by strategizing resources.	L5	PO3,PO6,PO7,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	-	3	-	-	-	-	-
CO2	-	-	-	-	-	2	3	-	-	-	-	-
CO3	1	1	-	2	-	-	3	-	-	-	-	-
CO4	-	-	-	-	-	2	3	-	-	-	-	-
CO5	-	-	2	-	-	1	3	-	-	-	1	-
	1.00	**1.00**	**2.00**	**2.00**		**1.67**	**3.00**				**1.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Introduction to Sustainable Development**	**6**
2	**Principle of Sustainable Planning**	**4**
3	**Ecological Principles in Planning**	**4**
4	**Climate Change and its Impact**	**4**
5	**Urban Environmental Management, Low Carbon Urban Development**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Introduction to Sustainable Development**
	Sustainable Development- Definitions, Concepts and Parameters; Eco-City Approach; Kyoto Protocol, Intergovernmental Panel on Climate Change (IPCC), United Nations Framework Convention on Climate

	Change; Indian Network of Climate Change Assessment, Global Environment Facility, and Clean Development Mechanism; UNHABITAT policies, Sustainable Development Goals, New Urban Agenda, Sustainable Cities Programme (UNEP and UN-Habitat), Localizing Agenda 21 (UN-Habitat)
2	**Principle of Sustainable Planning**
	Concept of sustainable planning, Three pillars of sustainability and its implication in planning process; Environmental preservation; commerce and livability; Walkability and Connectivity; Integration of diverse community features; Strong sense of place.
3	**Ecological Principles in Planning**
	Natural drainage and water bodies; Application of Ecological Principles in Sustainability; Carrying Capacity Based Planning- Concept, Parameters and Indicator Measures; Models and Case Studies in Urban and Regional Development
4	**Climate Change and its Impact**
	Basic concepts and definitions of Climate Change; Urban Heat Islands; Climatic Change and Human History; Impacts of Climate Change; Climate as Forcing Variable, Location Attributes, Sensitivity and Vulnerability of Different Sectors; Extreme events and their effects
5	**Urban Environmental Management, Low Carbon Urban Development**
	Urban Environmental Management and Planning; Human activities and energy in Cities; Contribution to GHGs; Environmental Impact and Strategic Environmental Assessment for Urban Areas; Ecological Footprint Analysis of Cities; Sustainable Lifestyle Assessment. Low carbon urban development strategies-concept of 3-Rs: "Recycle-Reuse and Recovery"; Low carbon transport modes and mobility options; Land Capability and Suitability Analysis; Compact City Concept; Use of Non-Conventional Energy Sources; Urban Water Treatment, Recycling and Harvesting; Pollution Control Measures for Industrial Wastes, Hazardous Wastes, Biomedical Wastes, Domestic Waste Water, Air Pollutants and Noise.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Eco-City Planning: Policies, Practice and Design,	Tai-Chee Wong and Belinda Yuen,	Latest	Springer
2	AITP Reader on Ecology & Resource Development,	AITP New Delhi	Latest	AITP New Delhi
3	Eco-City Planning: Policies, Practice and Design,	Tai-Chee Wong and Belinda Yuen,	Latest	Springer
4	AITP Reader on Ecology & Resource Development,	AITP New Delhi	Latest	AITP New Delhi
Important Web Links				
1	https://www.coursera.org/learn/sustainable-development			
2	https://sustainabledevelopment.un.org/resources/publications			

III SEMESTER

Code: MPLCPL3101 Urban Development Management and Governance 2 Credits [LTP: 2-0-0]

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Contrasting the basics of Development Management and its Role of management in developing economy	L1	PO1,PO6
CO2	Determining the Land Economics and Real Estate Development, concepts of Urban Redevelopment	L2	PO1,PO4,PO6,PO8
CO3	Correlating the various Urban Governance, Institutional and Organizational framework	L3	PO1,PO8
CO4	Reviewing the Urban Local Governance and its Reforms	L4	PO1,PO8
CO5	Building the Participatory Process in Urban Governance	L5	PO1,PO3,PO6,PO8

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	3	-	-	-	-	-	-
CO2	1	-	-	2	-	2	-	3	-	-	-	-
CO3	2	-	-	-	-	-	-	3	-	-	-	-
CO4	1	-	-	-	-	-	-	3	-	-	-	-
CO5	1	-	2	-	-	2	-	3	-	-	-	-
	1.20		**2.00**	**2.00**		**2.33**		**3.00**				

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Introduction to Development Management**	**4**
2	**Land Economics and Real Estate Development, Urban Redevelopment**	**4**
3	**Urban Redevelopment**	**4**
4	**Urban Governance, Institutions and Organizations**	**6**
5	**Urban Local Governance and its Reforms**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Introduction to Development Management**
	Definition, objectives and scope of management; Role of management in developing economy; Decision making process and corporate activity in urban development; Application of management techniques in urban planning and development.
2	**Land Economics and Real Estate Development, Urban Redevelopment**
	Economic concepts of land, land pricing/ valuation; economic principles of land use; demand forecasting for land use: factors affecting land supply and demand; land development methods, supply management, Demand side management; real estate markets, type of property development and its impact on supply and demand, method of development, environmental considerations.
3	**Urban Redevelopment**
	Strategies and evaluation of redevelopment; role of public sector agencies in redevelopment; Area based redevelopment Initiatives; Property ledredevelopment policies; Investment and Funding of Urban Redevelopment Schemes; Role of private sector; Development Potential and Pricing; Plot reconstitution; Renewal through Housing and Mixed Use Development; Community Participation
4	**Urban Governance, Institutions and Organizations**
	Urban Governance- Definition, concepts and components; hierarchy and structure, form of governance Institutional and organizational framework, existing institutional and organizational setting for urban management in India; distribution of responsibilities ; special purpose vehicles (SPV's) in the urban sector ; significance of organizational framework; Difference between institutions and organizations;
5	**Urban Local Governance and its Reforms**
	Urban local governance- type, organization, power , functions, resource, state supervision control and their working; improvement trust- organizations, scope of their powers and functions and their working; City development authorities: organizations, scope of their power and functions, resources, and their working; administrative reforms in local governance; Organisational Restructuring of Local Governments; capacity building; NGO's, Participatory Process in Urban Governance.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	India: The Challenges of Urban Governance,	O.P. Mathur,	Latest	National Institute of Public Finance and Policy, New Delhi
2	Urban Governance and Management: Indian Initiative,	P.S.N. Rao,	Latest	Kanishka Publishers
3	People's Participation in Urban Governance,	K.C. Sivaramkrishnan,	Latest	CSS, New Delhi
4	Local Governance in India	Niraja Gopal et all.,	Latest	Oxford University Press
Important Web Links				
1	https://www.classcentral.com/course/swayam-urban-governance-and-development-management-ugdm-12887			
2	https://www.tandfonline.com/doi/full/10.1080/07352166.2016.1271614			

Code: MPLCPL3102 Legal Issues and Professional Practice **2 Credits [LTP: 2-0-0]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Contrasting the professional nature of various organizations involved in the planning profession	L1	PO1,PO6,PO8
CO2	Determining concept of Reporting, review, monitoring and evaluation; Dissemination and mainstreaming of project learning in the process of implementation	L2	PO2,PO8
CO3	Correlating the Role of interdisciplinary groups; community participation process in planning.	L3	PO1,PO6,PO8
CO4	Reviewing The Project Planning and Scheduling , Investment Phase; Project Work (Work Breakdown Structure.	L4	PO8,PO9,PO11
CO5	Building the project finance report , Project Monitoring and criteria for decision making; Parameters and Tools of Control	L5	PO5,PO8,PO10

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	1	-	3	-	-	-	-
CO2	-	2	-	-	-	-	-	3	-	-	-	-
CO3	1	-	-	-	-	2	-	3	-	-	-	-
CO4	-	-	-	-	-	-	-	3	2	-	3	-
CO5	-	-	-	-	1	-	-	3	-	3	-	-
	1.00	**2.00**			**1.00**	**1.50**		**3.00**	**2.00**	**3.00**	**3.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Introduction**	**4**
2	**Understanding of Law**	**4**
3	**Planning Legislation and Policy Formulation and Appraisal**	**4**
4	**Professional Practice**	**6**
5	**Project Formulation and Implementation**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Introduction**
	Understanding the Interface between policy and legislation pertaining to urban development.

2	**Understanding of Law**
	Concepts, sources, terminologies, significance of law and its relationship to Urban Planning benefits of statutory backing for schemes - eminent domain and police powers; Indian Constitution: concept and contents; 73rd and 74th Constitution Amendment Act, provision regarding property rights.
3	**Planning Legislation and Policy Formulation and Appraisal**
	Evolution; An over view of legal tools connected with Urban Planning and Development, Town and Country Planning Act, Improvement Trust Act, Urban Planning and Development Authorities Act – objectives, contents, procedures for preparation and implementation of Regional Plans, Master Plans and Town Planning Schemes. Various Acts related to urban governance, planning and development organizations, land resources, environment protection, and public participation in statutory planning process; Approaches of formulation of policies, appraisal of policies.
4	**Professional Practice**
	Aims and objectives of professional Institutes, sister bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charges; Formulation of project proposal and outlines, consultancy agreements and contracts, managerial aspects; Role in inter disciplinary groups: Appreciation of the decision-making processes and the process in relation to varied consultancy assignments of planning., Project context; Project rationale and objectives; Bid documents, Tenders, Contracts ;Implementation approaches and methods, Work plan, Budget, Assumptions, risks and sustainability; Implementation arrangements; Organizational structure and stakeholder involvement mechanisms; Reporting, review, monitoring and evaluation; Dissemination and mainstreaming of project learning
5	**Project Formulation and Implementation**
	Introduction to Project Planning- Process, Investment Phase; Project Work (Work Breakdown Structure), Manpower and Organization, Project Finance, Information System; Process of Project Formulation and constraints; Breakeven Analysis; Sensitivity Analysis; Project Budgeting; Project Scheduling - definition and steps;; concept of Gantt Chart, Project financing need assessment; sources of funds; disposition of funds, planning for project Financing. Project Monitoring and criteria for decision making; Parameters and Tools of Control; Use of Network Analysis in Project Monitoring; Reporting and Corrective Actions; Resource Management and Project Reporting. Project Evaluation- Methods, tools, time frame and results; Project Cash Flows; Principles of Cash Flow Estimation; Project Benefits; Financial Closure, Presentation of evaluation findings.

F.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	India: The Challenges of Urban Governance,	O.P. Mathur,	Latest	National Institute of Public Finance and Policy, New Delhi
2	Urban Governance and Management: Indian Initiative,	P.S.N. Rao,	Latest	Kanishka Publishers
3	People's Participation in Urban Governance,	K.C. Sivaramkrishnan,	Latest	CSS, New Delhi
4	Local Governance in India	Niraja Gopal et all.,	Latest	Oxford University Press
Important Web Links				
1	https://www.wits.ac.za/news/latest-news/general-news/2020/2020-02/new-mooc-what-do-architects-and-urban-planners-do.html			
2	https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1541-0072.1980.tb00970.x			

Code: MPLCPL3201 Planning Studio-III **11 Credits [LTP: 2-0-6]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the real site conditions in an urban area, learn surveynd documentation techniques, assessing needs and programming for planning intervention	L1	PO2,PO4
CO2	Determining the different methodological approaches, technologies and foundation theories of urban planning.	L2	PO1,PO3,PO5
CO3	Correlating the forces that shape and develop cities, understand the form, structure and development process of cities	L3	PO1,PO3
CO4	Reviewing the general theoretical models, analytical approaches to urban planning and contexts, technical knowledge's, stakeholder interests and ethical frameworks	L4	PO4,PO8
CO5	Devising the skills necessary for the effective practice of planning, including its purpose, schemes, methods and policy framework that envision future change,elements of plans, adoption, administration, and implementation of plans	L5	PO3,PO4,PO6,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	3	-	2	-	-	-	-	-	-	-	-
CO2	2	-	3	-	1	-	-	-	-	-	-	-
CO3	3	-	2	-	-	-	-	-	-	-	-	-
CO4	-	-	-	3	-	-	-	2	-	-	-	-
CO5	-	-	3	1	-	1	-	-		-	2	-
	2.50	**3.00**	**2.67**	**2.00**	**1.00**	**1.00**		**2.00**			**2.00**	

C.DETAILED SYLLABUS

The studio is designed to study one particular urban area and analyze its issues and develop spatial plans with thrust on critical sectors. It focuses on the preparation of integrated development plan for a selected urban area analyzing all aspects of physical planning including socio-economic factors and physical infrastructure and also formulation of methods of implementation and projectization. The course deliverables would be designed based on specific projects undertaken, keeping in mind the overall objective of the course.

Identification of an urban area
Identification and Formulation of Planning Objectives for the project
Survey of the study area. Data collection through primary and secondary surveys
Analyses and presentation of data and information
Review of Planning Objectives post data analysis; Redefining objectives
Planning for urban area and its region (structure plan / development plan) with emphasis on: Land use, transportation networks and Infrastructure networks
Preparation of Detailed Project Report (case specific)
Identification and Detailing of Action Area, Local Area plans or Project Plans (case specific)
Plan Implementation strategies: Stake holder participation, project funding options
Implementation strategies including urban governance and management issues

D.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Urban and Regional planning, a system approach	Mcl.oughlin, J. B.	1969	Faber and Faber. , London.
2	A reader in Planning Theory	Faludi, A.	1973	Pergamum Press, London
3	Urban and Regional Planning,	Peter, G.H. Tewdwr-Jones, M.	2011	Rutledge, Lonoo. Tewdwr-Jones, M. Fifth Editor.
4	Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century,	Hall Peter	2001	Blackwell, London
Important Web Links				
1	https://olc.worldbank.org/content/sustainable-urban-land-use-planning-self-paced			
2	http://www.itpi.org.in/journals			

Code: MPLCPL3202 Practical Training & Pre thesis seminar **4 Credits [LTP: 2-0-4]**

A. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Summarizing the importance of practical training, the aspects and criterias associated with it and to realize the minimum eligibility requirements for selecting the office.	L1	PO6,PO8,PO12
CO2	Determining the learnings & exposure gained during the training into the day to day working.	L2	PO2,PO5,PO6,PO8,PO12
CO3	Appraising the learnings and knowledge gained during the training and use them in architecture field & academics in the most appropriate manner.	L3	PO3,PO6,PO8,PO12
CO4	Assessing the outcomes gained from the training & their usage in the field as well as academics.	L4	PO6,PO7,PO8,PO12
CO5	Building a portfolio of works done during the training period containing the drawings, quantities, est details, photographs, analysis & other documents and use them in the future academics and field.	L5	PO5,PO8,PO12

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	-	-	-	-	1	-	2	-	-	-	3
CO2	-	1	-	-	1	1	-	2	-	-	-	3
CO3	-	-	1	-	-	2	-	2	-	-	-	3
CO4	-	-	-	-	-	1	1	2	-	-	-	3
CO5	-	-	-	-	1	-	-	2	-	-	-	3
		1.00	**1.00**		**1.00**	**1.25**	**1.00**	**2.00**				**3.00**

Code: MPLEPL3211 Urban Risk & Disaster Management 3 Credits [LTP: 1-0-4]

A.COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Comparing the basics of urbanization and its impact. Also relate the associated risks.	L1	PO1,PO7
CO2	Determining the urban risks and the climate change	L2	PO1,PO7
CO3	Correlating the various Methods and approaches to urban risk assessment	L3	PO1,PO4,PO7
CO4	Reviewing the Disaster Types and Impacts, Disaster Vulnerability Preparedness.	L4	PO1,PO3,PO6,PO7,PO11
CO5	Devising the Disaster Mitigation and Management Framework and also understand the various Disaster Management Policies and Act	L5	PO1,PO7,PO8,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	-	3	-	-	-	-	-
CO2	1	-	-	-	-	-	3	-	-		-	-
CO3	1	-	-	2	-	-	3	-	-	-	-	-
CO4	1	-	1	-	-	2	3	-	-	-	1	-
CO5	1	-	-	-	-	-	3	3	-	-	1	-
	1.00		**1.00**	**2.00**		**2.00**	**3.00**	**3.00**			**1.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Urbanization and Associated Risks**	**4**
2	**Urban Risks and Climate Change**	**4**
3	**Urban Risks Assessment**	**4**
4	**Disaster Types and Impacts, Disaster Vulnerability Preparedness**	**6**
5	**Disaster Mitigation and Management**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Urbanization and Associated Risks**
	Urbanization patters, resource consumption and environment versus economy and their impacts; Resource Depletion and Pollution; Environmental Concerns and Challenges , impact of human activity on environment; Inter-relation with urban risks; Causative factors; role of land-use planning, zoning and development control regulations in managing urban risks
2	**Urban Risks and Climate Change**

	Urban Risks- Definitions, Types and nature, Magnitude; Hazard, vulnerability and risks ; Climate Change- Risks and Resilience in cities
3	**Urban Risks Assessment**
	Methods and approaches to urban risk assessment; hazard impact assessment, institutional assessment; socioeconomic assessment, Risk Mitigation and Risk Transfer; Causes and risk mitigation strategies for industrial, chemical and biological disasters
4	**Disaster Types and Impacts, Disaster Vulnerability Preparedness**
	Disasters- Definitions, types and examples of disasters across the World; Natural disasters and manmade Calamities, Degree of Damage, Frequency of Occurrences and Other Historical Facts; Classification of Disasters in India; Impacts of disasters, land use planning, building bye laws and disaster safe construction practices for different types of disasters. Identification of Disaster prone areas; Forecasting and early warning systems for various types of disasters; communication and information technology in disaster management; Disaster Vulnerability Mapping; Disaster Preparedness, Response and Post Disaster Recovery and Rehabilitation Measures; Disaster management principles; local, district and State disaster management groups , structures and functions; prevention and preparedness activities; response and recovery activities; disaster declaration arrangements
5	**Disaster Mitigation and Management**
	Kyoto Framework of Disaster Mitigation and Management; Disaster Management Policies and Act – National and States; Select Global Practices. Disaster Coordination Centers – functions, logistics, operations and planning; Developing and Assessing Disaster Management Plans; Community engagement; Standard Emergency Warning Signal (SEWS); and the Emergency Alert System, Basic Principles of Incident Command System – Facilities, Resource Management, Event Planning Process, Emergency response management principles and concepts; ICT in emergency responses and management;

F.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Disaster Management Handbook,	Pinkowski J.,	Latest	CRC Press
2	Earthquake Architecture: New Construction Techniques for Earthquake Disaster Prevention,	Garcia, Belen,	Latest	New York, Loft Publications
3	Environmental Hazards : Assessing Risk and Reducing Disaster,	Smith, K., David P., London,	Latest	Routledge Publications
4	Handbook of Disaster Research,	Rodriguez, H., ed., Quarantelli, E., ed., Dynes, R.R.,	Latest	ed., New York, Springer Science
Important Web Links				
1	https://www.classcentral.com/course/swayam-urban-disaster-risk-mitigation-climate-resilient-development-14349			

Code: MPLEPL3212 Community Planning and participation **3 Credits [LTP: 1-0-4]**

A.COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Summarizing the Overview of communities , interpret the activity patterns , locational patterns; socio cultural aspects; community needs and spatial requirements ; socio-economic implication	L1	PO1,PO6
CO2	Determining the Community planning-Principles, approaches and key considerations; spatial-socio-economic linkages.	L2	PO1,PO4,PO6
CO3	Appraising the various Participatory Learning (PLA) tools used in Mapping local context and problem identification, Focus Group Discussions, Audit of communities and its facilities; rapid assessment of community needs and planning intervention	L3	PO1,PO4,PO5,PO6
CO4	Assessing the Role of Community Participation	L4	PO1,PO6
CO5	Building the Process of People's Participation by analyzing the Case Studies on Community Participation	L5	PO3,PO4,PO6

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	3	-	-	-	-	-	-
CO2	1	-	-	2	-	3	-	-	-	-	-	-
CO3	1	-	-	1	2	3	-	-	-	-	-	-
CO4	1	-	-	-	-	3	-	-	-	-	-	-
CO5	-	-	2	2	-	3	-	-	-	-	-	-
	1.00		**2.00**	**2.00**	**2.00**	**3.00**						

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Overview of Communities**	**4**
2	**Principles of Community Planning**	**4**
3	**Local Planning Tools and Techniques**	**4**
4	**Role of Community Participation**	**4**
5	**Process of People's Participation, Case Studies on Community Participation**	**8**

D.DETAILED SYLLABUS

Module	Contents
1	**Overview of Communities**
	Overview of communities – definition, type, attributes , activity patterns , locational patterns; socio cultural aspects; community needs and spatial requirements ; socio-economic implication,
2	**Principles of Community Planning**
	Community planning- Principles, approaches and key considerations; spatial-socio-economic linkages; inclusion and quality of life; neighborhood planning ; local area planning
3	**Local Planning Tools and Techniques**
	Participatory Learning (PLA) tools: Mapping local context and problem identification, Focus Group Discussions, ; Audit of communities and its facilities; rapid assessment of community needs and planning intervention
4	**Role of Community Participation**
	Participatory process in housing and community development; Community participation- community involvement, community action; role of CBOs, NGOs, SHGs, etc.
5	**Process of People's Participation, Case Studies on Community Participation**
	Participatory approaches, Typology of participation, Key principles of applying participatory methods and tools, Participatory attitudes and behavior, Teamwork skills in the context of participation, PLA/PID Tools, Participation as a process, Participatory Monitoring and Evaluation, Beneficiary Assessment, social assessment, stakeholder analysis, Detailed cases of community participation in areas of provision of housing/shelter, electricity, water supply, sanitation, solid waste disposal, transport , social infrastructure – health , education and cultural facilities; economic upliftment, resource mobilization; maintenance and management of community assets

F.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Location, Transport and Land-Use: Modelling Spatial-Temporal Information,	Yupo Chan	Latest	Springer
2	Integrated Land Use and Transport Modelling,	Tomas De La Barra	Latest	Cambridge University Press.
3	Transportation Engineering and Planning,	C. S Papacostas, P. D Prevedouros	Latest	PHI Learning
4	Public Transportation Improvement,	Semiat Idris,	Latest	Lambert Academic Publishing
Important Web Links				
1	https://my.uq.edu.au/programs-courses/course.html?course_code=PLAN3005			
	mdpi.com/2076-0760/8/6/183/htm			

IV SEMESTER

Code: MPLCPL4101 Development Finance **2 Credits [LTP: 2-0-0]**

B. COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Summarizing the basics of Development Management and its Role of management in developing economy	L1	PO1,PO6,PO11
CO2	Determining the Land Economics and Real Estate Development, concepts of Urban Redevelopment	L2	PO6,PO8,PO11,PO12
CO3	Appraising the various Urban Governance, Institutional and Organizational framework	L3	PO6,PO8
CO4	Assessing the Urban Local Governance and its Reforms	L4	PO8
CO5	Building the Participatory Process in Urban Governance	L5	PO1,PO6,PO8,PO12

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	2	-	-	-	-	3	-
CO2	-	-	-	-	-	1	-	2	-	-	3	1
CO3	-	-	-	-	-	2	-	3	-	-	-	-
CO4	-	-	-	-	-	-	-	3	-	-	-	-
CO5	1	-	-	-	-	2	-	3	-	-	-	1
	1.00					**1.75**		**2.75**			**3.00**	**1.00**

C.OUTLINE OF THE SUBJECT: Governance & Finance

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Overview of Development Finance**	**2**
2	**State and Municipal Finance**	**4**
3	**Investment Planning and Appraisal**	**6**
4	**Public Private Partnership (PPP)**	**6**
5	**Innovative Methods of Financing Urban Development**	**6**

D.DETAILED SYLLABUS

Module	Contents

1	**Overview of Development Finance**
	Development Finance- approaches, concepts, components, process, credits rating; Role of Improvement Trusts, Development Authorities, SEZs and Special Purpose Vehicles(SPV) in Urban finance Management.
2	**State and Municipal Finance**
	Central Finance Commission (CFC) and State Finance Commission (SFC)- Constitution, Powers and Functions; Consolidated Fund (Central and State); Centrally Sponsored Schemes; Municipal Finance- Categorization of Municipal Sources of Revenue, Internal Vs. External Revenue, Capital Vs. Revenue Receipt; Municipal Finance Assessment Framework; Reforms in Municipal Finance- Unit Area Method in Property Tax Calculation, Rationalization of User Charges; Streamlining Municipal Tax Administration
3	**Investment Planning and Appraisal**
	Investment Planning- Process, components and investment needs; budgeting, finance investments in infrastructure and services; Manpower planning- performance appraisal, motivational aspects. Integrated reporting system, works standard oriented cost control, turnkey system, inventory cost control technique, unified status index technique.
4	**Public Private Partnership (PPP)**
	Concept , need, preconditions for Partnerships; Advantages of Collaboration, Methods of Promoting Participation, Regulations and Administrative Procedures; Role of Government as Partner, Regulator and Enforcer; Principles of PPP- Contractual Framework, Selection of Service Provider, Payment Mechanism, Monitoring and Evaluation, Risk and Revenue Sharing; Regulatory Authority for PPP; Model Contract Agreement.
5	**Innovative Methods of Financing Urban Development**
	Monetary Exaction- Betterment Levy, Impact Fee, External Development Charges and Vacant Land Development Tax; Land Exactions- TDR, Town Planning Scheme , Monetization of Underutilized Public Assets; Valorization Charges; External Finance- Debt Financing, PPP, Financial Intermediaries, Municipal Bond, Pooled Finance.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Public Finance: Policy Issues for India,	Sudipto Mundle,	Latest	Oxford University Press
2	Municipal Finance in India – An Assessment,	P.K. Mohanty et all,	Latest	Reserve Bank of India
3	Fiscal Federalism in India	Vithal & Sastry,	Latest	Oxford University Press
4	Costs and Challenges of Local Urban Services:	O.P. Mathur et all.	Latest	Oxford University Press
Important Web Links				
1	https://www.classcentral.com/course/swayam-urban-governance-and-development-management-ugdm-12887			
	https://www.tandfonline.com/doi/full/10.1080/07352166.2016.1271614			

Code: MPLCPL4201 Planning Thesis **14 Credits [LTP: 2-0-8]**

A.COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Summarizing the process of documentation, analyses and synthesis related to his/her specific topic and related area of work.	L1	PO3,PO4
CO2	Determining concept of relevant case studies and literature relevant to the planning thesis	L2	PO1,PO3,PO5
CO3	Appraising the research design approaches and developing a method for research	L3	PO1,PO3
CO4	Assessing the techniques of data tabulation, interpretation and representation in urban planning	L4	PO4,PO8
CO5	Building a urban planning project and develop the skills related to data collection , data analysis , issues identification, impact assessment and formulation of strategies/proposals	L5	PO3,PO4,PO6,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	-	3	-	2	-	-	-	-	-	-	-	-
CO2	2	-	3	-	1	-	-	-	-	-	-	-
CO3	3	-	2	-	-	-	-	-	-	-	-	-
CO4	-	-	-	3	-	-	-	2	-	-	-	-
CO5	-	-	3	1	-	1	-	-		-	2	-
	2.50	**3.00**	**2.67**	**2.00**	**1.00**	**1.00**		**2.00**			**2.00**	

C.DETAILED SYLLABUS

- The thesis project is to be undertaken independently by each student on a topic of his/her choice related to urban planning, selected and approved by the faculty during the previous semester as part of course requirements of the subject seminar
- As part of the studio requirements, the student is expected to go through a process of documentation, analyses and synthesis related to his/her specific topic and related area of work.
- Initial stages would include study of relevant case studies and literature relevant to the topic, on the basis of which the space program would be determined.
- Alternative designs arrived at through an iterative process of prioritization and elimination would be developed in the next stage.
- Final stages of work would include detailed design of the best option selected. detailing would be largely dependent on the thrust and focus of the project selected and would vary from student to student.

- The student is required to work under the guidance of a supervisor allotted by the department and complete the requisite work in the course of the semester, ending in a viva-voce exam by a panel of examiners both external and internal.
- Progressive evaluation would be done by a panel of external and/or internal jurors during reviews held at intervals during the course of the semester.
- The student is required to defend his thesis through drawings, reports, study sheets, models and digital presentations and verbal communications in all the reviews and the final viva-voce

D.RECOMMENDED ONLINE STUDY MATERIAL:

Important Web Links	
1	https://iglus.org/innovative-governance-of-large-urban-systems-mooc/
	https://www.tandfonline.com/doi/full/10.1080/07352166.2016.1271614

Code: MPLEPL4211 Inclusive cities **3 Credits [LTP: 1-0-4]**

A.COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Summarizing the importance of Inclusive development.	L1	PO1,PO6
CO2	Determining the role of stakeholders in inclusive urban development	L2	PO1,PO6,PO8
CO3	Appraising the various principles of Inclusive city planning.	L3	PO1,PO3,PO4,PO6
CO4	Assessing the different approaches and methods, of participatory planning,	L4	PO2,PO4,PO6
CO5	Building and Discussing the management of inclusive cities.	L5	PO3,PO6,PO11

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	-	-	-	-	3	-	-	-	-	-	-
CO2	1	-	-	-	-	2	-	3	-	-	-	-
CO3	1	-	2	2	-	3	-	-	-	-	-	-
CO4	-	1	-	2	-	3	-	-	-	-	-	-
CO5	-	-	2	-	-	2	-	-	-	-	3	-
	1.00	**1.00**	**2.00**	**2.00**		**2.60**		**3.00**			**3.00**	

C.OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Importance of Inclusive Development**	**4**
2	**Stakeholders in Inclusive Urban Development**	**6**
3	**Principle of Inclusive City Planning**	**6**
4	**Participatory Planning for Inclusive Development**	**4**
5	**Management of Inclusive Cities**	**4**

D.DETAILED SYLLABUS

Module	Contents
1	**Importance of Inclusive Development**
	Urban development patterns, inequities and need for Inclusive development, growth of informal sector ,Needs, access to shelter, services and livelihoods of informal sector ; Understanding inclusive growth concept, theories and components; essential dimensions of inclusive planning
2	**Stakeholders in Inclusive Urban Development**

	Disadvantaged groups –urban poor, informal sector, gender, children, elderly, disabled, displaced people; Causative factors, determinants, informal sector- location characteristics, functions, economic contributions, linkages with formal sector; impact of informal sector on urban development
3	**Principle of Inclusive City Planning**
	Inclusive city planning- Need, concept and pre-requisites, Affordable housing; resilient and sustainable urban form; social and economic development; key principles- Sustainability and Resilience, Accessibility, Diversity, Open Spaces, Compatibility, Incentives, Adaptability and Identity
4	**Participatory Planning for Inclusive Development**
	Importance of participatory planning for inclusive development; approaches and methods of participatory planning, role of stakeholders (including civil society organizations) , constraints, prerequisites
5	**Management of Inclusive Cities**
	Management of inclusive cities- need and approaches- Inclusive zoning, development and building regulations, slum improvement; related acts; five year plans, policies and programmes. Policies for inclusive city planning; Best practices of inclusive Planning in India and abroad-planning approach, procedures and impacts, inter-disciplinary policy issues ,public action and participation for guiding inclusive planning in cities.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	Urban Renewal: Theory and Practice,	Chris Coch, Macmillan.	Latest	UCL press, London.
2	Urban Planning and Development Process in Renewal,	D. Adams,	Latest	UCL press, London.
3	An Introduction to Urban Renewal,	Michael Gibson, Hutchinson.	Latest	JAI press.
4	Management of Regeneration,	Diamond and Little, Routledge, London.	Latest	UCL press, London.
Important Web Links				
1	http://www.makingofcities.org/journal/best-moocs-on-cities			
	https://www.henrystewartpublications.com/jurr#:~:text=Journal%20of%20Urban%20Regeneration%20and%20Renewal%20is%20the%20essential%20peer,social%20regeneration%20of%20urban%20communities.			

Code: MPLEPL4212 Urban Heritage conservation **3 Credits [LTP: 1-0-4]**

A.COURSE OUTCOMES AND THEIR RESPECTIVE MAPPING

Course Outcomes (COs):	At the end of this course, learners will be able to:	Bloom Level	PO Mapping
CO1	Summarizing the importance of Urban Heritage,its classification.	L1	PO1
CO2	Determining the concept of Urban heritage conservation to the planning process.	L2	PO1,PO2
CO3	Appraising the various principles of conservation and its management.	L3	PO1,PO2,PO4,PO11
CO4	Assessing the Heritage and Tourism, Policies and Programmes, Legislation	L4	PO1,PO4,PO8
CO5	Building the Social / cultural / ecological / energy determinants of design	L5	PO3,PO6,PO7.PO10

B. MAPPING MATRIX OF CO,PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	-	-	-	-	-	-	-
CO2	2	3	-	-	-	-	-	-	-	-	-	-
CO3	1	3	-	2	-	-	-	-	-	-	2	-
CO4	1	-	-	2	-	-	-	3	-	-	-	-
CO5	-	-	2	-	-	3	3	-	-	1	-	-
	1.50	**3.00**	**2.00**	**2.00**		**3.00**	**3.00**	**3.00**		**1.00**	**2.00**	

C .OUTLINE OF THE SUBJECT

Unit	Title of the unit	Time Required for the Unit (Hours)
1	**Introduction to Urban Heritage**	**4**
2	**Heritage Conservation**	**4**
3	**Heritage and Tourism, Policies and Programmes, Legislation**	**4**
4	**Design in Human Habitation**	**6**
5	**Principles of Conservation, Management of Urban Conservation Assets**	**6**

D.DETAILED SYLLABUS

Module	Contents
1	**Introduction to Urban Heritage**
	Typology / classification, inventories, mapping; Human habitation in historical context; Heritage as a motivating force in sustainable urban conservation and development,
2	**Heritage Conservation**

	Natural heritage conservation - typologies, policies for conservation, regulatory measures, community participation; Concept of Historic Urban Landscapes; Built heritage conservation - determinants of built form on heritage; Historic urban infrastructure and traditional water harvesting systems. Integration of historic monuments / areas / cores / urban systems in the developmental process and land use, regulatory measures and community involvement; Intangible cultural heritage and development: issues, conservation strategies. Preparation of conservation and heritage management plans.
3	**Principles of Conservation, Management of Urban Conservation Assets**
	Basic concepts of conservation values- overview and introduction; Principles for judging the conservation importance of sites, area and related typology; scope and basic technique of urban conservation; national policies and programmes. Legal and administrative aspects, archaeological acts/charters pertaining to conservation, development and conservation; case studies on management of urban conservation of sites/ area in India and abroad.
4	**Heritage and Tourism, Policies and Programmes, Legislation**
	Cultural and heritage based tourism - nature, potential and prospects, marketing aspects; Acts and laws recognizing conservation / regeneration; Heritage toolkit; Implications of 74th Constitution Amendment Act.
5	**Design in Human Habitation**
	Social / cultural / ecological / energy determinants of design; Imagibility of the city; Structure of urban spaces – location criteria of activities and urban uses; Urban Regeneration, renewal, rehabilitation, revitalization, reconstruction and redevelopment - concepts, interventions, processes, approaches and methods, tools.

E.RECOMMENDED STUDY MATERIAL:

Sr.No	Reference Book	Author	Edition	Publication
1	The Urban Design Reader,	Elizabeth Mcdonald,	Latest	Routledge, New York
2	Public Places Urban Spaces : Dimensions of Urban Design	Mathew Carmona, Steve Teisdell,	Latest	Architectural Press, London.
3	Urban Design: The Architecture of Towns & Cities,	Paul D. Spreiregen, R.E. Krieger Pub	Latest	Routledge, New York
4	My Idea of India,	Sunil Khilnani, Farrar Straus and Giroux.	Latest	Lambert Academic Publishing
Important Web Links				
1	https://www.classcentral.com/course/cultural-heritage-cities-8833			
	https://www.tandfonline.com/toc/cjud20/22/4?nav=tocList			