

M. PLAN (TOWN AND COUNTRY PLANNING)

MASTER OF PLANNING

[2 YEAR FULL TIME POST GRADUATE DEGREE PROGRAM]

REGULATIONS

2021 - 2022 Batch (New Syllabus)

CHOICE BASED CREDIT SYSTEM (CBCS)

FACULTY OF ARCHITECTURE AND PLANNING



KARPAGAM
ACADEMY OF HIGHER EDUCATION
(Deemed to be University Established Under Section 3 of UGC Act, 1956)

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Pollachi Main Road, Eachanari Post, Coimbatore – 641 021. INDIA



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M.PLAN (TOWN AND COUNTRY PLANNING)

REGULATIONS

2021 - 2022 batch ((CBCS)

These regulations are effective from the academic year 2021-2022 and applicable to the Full-Time candidates admitted to M.Plan (Town and Country Planning) during 2021-2022 and onwards.

The M.Plan (Town and Country Planning) F2018 Degree program (professional, post-graduate level) aims at producing planning professionals who will assume major leadership role in shaping the future of development across various planning platforms, they will become the instruments change growth and developments.

*The main goal is to inculcate research abilities and understanding in various focus areas of planning through live **research - analysis - proposal** based models.*

1. ADMISSION

Candidates seeking admission to the first semester of the four semesters M.Plan (Town and Country Planning) Degree Programme: should have compulsorily passed

- B.Arch having secured minimum 50% in aggregate
- B.E. Civil having secured minimum 50% in aggregate
- Masters in (Social works, Sociology, Economics) having secured minimum 50% in aggregate

Preference will be given to candidates who have passed level GATE examinations in Architecture and Planning / Design respectively or any other equivalent test at graduate level and having a valid score as prescribed by the UGC / MHRD, Govt. of India.

1.2 Lateral Entry Admission

1.3 Migration

The University may at its discretion permit M.Plan (Town and Country Planning) candidates from other institutions to migrate subject to the maximum number of students not exceeding the permitted maximum intake in a class as well as satisfying other academic requirements.

2. PROGRAMMES OFFERED

2.1 Faculty of Architecture, Planning & Design offers M.Plan (Town and Country Planning)

2.2 INTAKE

Total intake is 20 in the current batch.

3. MODE OF STUDY

3.1 Full-Time:

In this mode of study, the candidates are required to attend regular classes, to satisfy University attendance and assessment requirements.

4. STRUCTURE OF PROGRAMMES

4.1 The Programme will have curricula and syllabi consisting of Core courses, Focus area, Elective, Dissertation & Thesis:

- (i) General core courses comprising Research and Field Studies, Social aspects, Human settlement, Planning projects and GIS.
- (ii) Focus Areas in Urban planning, Regional planning, Environmental planning, Transport planning and Housing
- (iii) Advanced Elective courses for specialization from any of the focus areas.
- (iv) Planning projects will shall increase in scale an complexity from semester 1 through semester 4 and culminating in a Dissertation and Thesis based on the focus area mentioned above.

There shall be a certain minimum number of core courses of elective courses that can be opted by the student. The blend of different courses shall be so designed that the student, at the end of the Programme, would have been trained not only in his / her relevant focus area but also would have developed as a socially conscious human being.

4.2 Each semester curriculum shall normally have a blend of General core subjects, Focus Area, Advance Electives and Planning projects not exceeding 5 in total per semester.

4.3 The prescribed credits required for the award of the degree shall be within the limits specified below.

PROGRAMME	MANDATORY CREDITS
M.Plan (Town and Country Planning)	90

4.4 The medium of instruction for all Courses, Examinations, Seminars, Presentations and project / Thesis /Dissertation reports are English.

5. DURATION OF THE PROGRAMME

5.1 A student is normally expected to complete the M.Plan (Town and Country Planning) Full Time Programme in 4 semesters (two academic years) but in any case, not more than 8 Semesters (four academic years) for all candidates.

5.2 Each semester shall normally consist of 90 working days or 540 hours each. The Dean shall ensure that every teacher imparts instruction as per the number of periods / hours specified in the syllabus and that the teacher teaches the full content of the specified syllabus for the course being taught.

5.3 The Dean may arrange additional classes for improvement, special coaching, conduct of model test etc., over and above the specified periods. But for calculation of attendance requirement or writing the end semester examinations by the students 540 hours conducted within the specified academic schedule alone shall be considered and the overall percentage of attendance shall be calculated accordingly.

5.4 The total period for completion of the Programme reckoned from the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 5.1 irrespective of the period of break of study in order that he/she may be eligible for the award of the degree.

6. REQUIREMENTS FOR COMPLETION OF THE SEMESTER

- 6.1** Ideally every student is expected to attend all classes and secure 100% attendance. However, to allow for certain unavoidable circumstances, the student is expected to attend at least 75% of the classes and the conduct of the candidate has been satisfactory during the course.
- 6.2** A candidate who has secured attendance between 65% and 74% (both included), due to medical reasons (Hospitalization / Accident / Specific Illness) or due to participation in University / District / State / National / International level sports or due to participation in Seminar / Conference / Workshop / Training Programme / Voluntary Service / Extension activities or similar programs with prior permission from the Registrar shall be given exemption from prescribed attendance requirements and shall be permitted to appear for the examination on the recommendation of the Head of the Department (HOD) concerned and Dean to condone the lack of attendance. The HOD must verify and certify the genuineness of the case before recommending to the Dean.
- 6.3** A candidate who has secured less than 65% of attendance in any semester will not be permitted to take the regular examination and has to continue the study in the subsequent semester. The candidate has to redo the course by rejoining the semester in which attendance is less than 65% with proper approval of the Registrar.

7. FACULTY ADVISER

To help the students in planning their courses of study and for general advice on the academic Programme, the Dean/Head of the Department will attach a certain number of students to a teacher of the Department who shall function as **Faculty Adviser** for those students throughout their period of study. Such Faculty Advisers shall advise the students and monitor the courses undergone by the students, check the attendance and progress of the students attached to him/her and counsel them periodically. If necessary, the faculty adviser may display the cumulative attendance in the Department notice board and discuss with or inform the Parents/Guardian about the progress of the students.

8. CLASS COMMITTEE

8.1. Every class shall have a class committee consisting of teachers of the class concerned, student representatives [one boy and two girls] and the concerned Dean/Head of the Department. It is to improving the teaching-learning process. The functions of the class committee include

- Solving problems experienced by students in the studios & class room.
- Clarifying the regulations of the degree Programme and the details of rules therein particularly clause 4 and 5 which should be displayed on department Notice-Board.
- Informing the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- Informing the student representatives, the details of Regulations regarding weightage used for each assessment. In the case of Studio courses (drawing / project work / seminar etc.) the breakup of marks for each / exercise /module of work, should be clearly discussed in the class committee meeting and informed to the students.
- Analyzing the performance of the students of the class after each test and finding the ways and means of solving problems, if any.
- Identifying the weak students, if any and requesting the teachers concerned to provide some additional help or guidance or coaching to such weak students.

8.2 The class committee shall be constituted within the first week of each semester.

- 8.3** At least 2 student representatives (usually 1 boy and 1 girls) shall be included in the class committee.
- 8.4** The Chairperson of the Class Committee may convene the meeting of the class committee.
- 8.5** The Dean may participate in any Class Committee of the institution.
- 8.6** The HOD is required to prepare the minutes of every meeting, submit the same to Dean within two days of the meeting and arrange to circulate it among the students and teachers concerned. If there are some points in the minutes requiring action by the Management, the same shall be brought to the notice of the Registrar by the HOD through the Dean.
- 8.7** Two or three subsequent meetings may be held in a semester at suitable intervals. During these meetings, the student members representing the entire class, shall meaningfully interact and express the opinions and suggestions of the other students of the class to improve the effectiveness of the teaching-learning process.

9. PROCEDURE FOR AWARDING MARKS FOR INTERNAL ASSESSMENT

9.1 Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' which consists of attendance marked in each lecture, studio class, the test marks and the record of class work (topic covered), separately for each course. This should be submitted to the HOD periodically (at least three times in a semester) for checking the syllabus coverage and the records of test marks and attendance. The Dean shall sign with date after due verification. At the end of the semester, the record should be verified by the Dean who will keep this document in safe custody (for five years). Records of attendance and assessment of both current and previous semesters shall be submitted for Inspection to the team appointed by the University/any other approved body.

9.2 Continuous Internal Assessment (CIA): The performance of students in each subject will be continuously assessed by the respective teachers as per the guidelines given below

9.2.1 STUDIO COURSES:

S. No	CATEGORY	MAXIMUM MARKS
1.	Internal Jury (5 Jury x7 marks)	35
2.	Attendance	5
Continuous Internal Assessment: TOTAL		40*

PRACTICAL COURSES:

S. No	CATEGORY	MAXIMUM MARKS
1.	Internal Jury (Exercise/sheet valuation) **	35
2.	Attendance	5
Continuous Internal Assessment: TOTAL		40*

* - proportionate increase for all categories will be based on the total marks allotted for Continuous Internal Assessment for the concerned course.

** - No of Exercise/Sheets depends on subject.

9.2 ATTENDANCE

Marks Distribution for Attendance

S. No.	Attendance %	Marks
1	Between 91 % and 100%	5
3	Between 86 % and 90%	4
4	Between 81 % and 85%	3
5	Between 76 % and 80%	2
6	Less than 75 %	0

10. REQUIREMENTS FOR APPEARING FOR UNIVERSITY EXAMINATION

A candidate shall normally be permitted to appear for the University Examination of any semester commencing from I semester if he/she has satisfied the semester completion and attendance requirements and has registered for examination in all courses of the semester. Registration is mandatory for Semester Examinations as well as Arrears Examinations failing which the candidate will not be permitted to move to the higher semester. A candidate already appeared for subjects in a semester and passed the examination is not entitled to reappear in the same subject or subjects of the semester for improvement of grades / marks.

11. END SEMESTER EXAMINATIONS – Studio

End Semester Examination (ESE): End Semester Examination will be held at the end of each semester for each subject, which consists of 60 marks.

11.2 PATTERN OF ESE QUESTION PAPER: (Studio courses)

The ESE for studio subjects shall be conducted as an examination and/or as a final jury (viva-voce) for marks as per scheme of examination comprising external architect/related professionals with minimum 5 years' experience in practice or teaching.

Question Paper Pattern for Master of Planning (M.Plan) 2021-2022 Batch is as follows:

It will be divided into two parts, such as Part A and Part B.

Part A will contain 15 questions, which will be covering 3 questions from each unit. The students are required to answer any 10 questions out of the given 15 questions.

Part B will contain 5 questions, which will be covering all five units of the syllabus with 'either – or' type.

The exam will be conducted for **100 Marks and then converted to 60 Marks.**

TOTAL MARKS 100 (MARKS)

INTERNAL MARKS 40 (MARKS)

END SEMESTER EXAM 60 (MARKS) TOTAL = 100 MARKS (Later Scaled down to 60 Marks)

12. PASSING REQUIREMENTS

12.1 Passing minimum: The passing minimum for CIA is 50% (i.e. 20 out of 40 marks). The passing minimum for ESE is 50% (i.e. 30 out of 60 marks). The overall passing minimum for every course is 50% i.e. 50 out of 100 marks (Sum of his/her score in internal and external examination).

12.2 If the candidate fails to secure a pass in a particular Studio course as per clause 12.1, it is mandatory that candidate shall register and reappear for the examination in the subsequent semester as a arrear when examination is conducted in that course. Further the candidate should continue to register and reappear for the examination till a **pass** is secured in End Semester Examination of such arrear subjects.

The Continuous Internal Assessment marks obtained by the candidate in the first appearance shall be retained by the Office of the Controller of Examinations and improved CIA marks may be considered for all subsequent attempts till the candidate secure a pass.

13. AWARD OF LETTER GRADES

13.1 All assessments of a course will be done on absolute marks basis. However, for reporting the performance of a candidate, letter grades, each carrying certain number of points, will be awarded as per the range of total marks (out of 100) obtained by the candidate in each subject as detailed below:

Letter grade	Marks Range	Grade Point	Description
O	91 - 100	10	OUTSTANDING
A+	81-90	9	EXCELLENT
A	71-80	8	VERY GOOD
B+	66-70	7	GOOD
B	61-65	6	ABOVE AVERAGE
C	55-60	5	AVERAGE
P	50-54	4	PASS
RA	<50		REAPPEARANCE
AB		0	ABSENT

13.2 GRADE SHEET

After results are declared, Grade Sheets will be issued to each student which will contain the following details:

- The list of courses enrolled during the semester and the grade scored.
- The Grade Point Average (**GPA**) for the semester and
- The Cumulative Grade Point Average (**CGPA**) of all courses enrolled from first semester onwards.

GPA is the ratio of the sum of the products of the number of credits (**C**) of courses enrolled and the points corresponding to the grades (**GP**) corresponding to the grades scored in those courses, taken for all the courses, to the sum of the number of credits of all the courses in the semester to the sum of the credits of all courses registered.

$$\text{GPA} = \frac{\text{Sum of [C * GP]}}{\text{Sum of C}}$$

CGPA will be calculated in a similar manner, considering all the courses enrolled from first semester. “**RA** grade will be excluded for calculating **GPA** and **CGPA**.”

13.3 Whenever students, having arrear subjects, appear for the end semester examination during which there are no regular batch of students writing the same subjects, then, the letter grades for the arrears subjects shall be awarded based on the range of marks.

13.4 REVALUATION

Revaluation is not permitted for Studio courses.

14. ELIGIBILITY FOR THE AWARD OF THE DEGREE

A student shall be declared to be eligible for the award of the Degree if he/she has

- Successfully gained the required number of total credits as specified in the Curriculum corresponding to his/her Programme within the stipulated time.
- Successful completion of Dissertation/ Thesis.
- No disciplinary action is pending against him/her.
- The award of the degree must be approved by the Board of Management.

15. CLASSIFICATION OF THE DEGREE AWARDED

15.1 A candidate who qualifies for the award of the Degree having passed the examination in all the courses in his/her first appearance within the specified minimum number of semesters and securing a **CGPA of not less than 8.00** shall be declared to have passed the examination in **First Class with Distinction**. For this purpose, the withdrawal from examination will not be construed as an appearance. Further, the authorized break of study will not be counted for classification.

15.2 A candidate who qualifies for the award of the Degree having passed the examination in all the courses within the specified minimum number of semesters plus one semester (i.e. n+1 semesters), and securing **CGPA of not less than 6.50** shall be declared to have passed the examination in **First Class**. For this purpose, the withdrawal from examination will not be construed as an appearance. Further, the authorized break of study will not be counted for classification.

15.3 All other candidates (not covered in clauses 15.1 and 15.2) who qualify for the award of the degree shall be declared to have passed the examination in **Second Class**.

15.4 A candidate who is absent in semester examination in a course / dissertation after having enrolled for the same shall be considered to have appeared in that examination for classification.

16. PROVISION FOR WITHDRAWAL FROM END-SEMESTER EXAMINATION

16.1 A candidate, may for valid reasons and on prior application, be granted permission to withdraw from appearing for the examination of any one course or consecutive examinations of more than one course in a semester examination.

16.2 Such withdrawal shall be permitted only once during the entire period of study of the degree Programme.

16.3 Withdrawal application is valid only if it is made within 10 days prior to the commencement of the examination in that course or courses and recommended by the Head of the Department and Dean and approved by the Registrar.

16.3.1 Notwithstanding the requirement of mandatory TEN days' notice, applications for withdrawal for special cases under extraordinary conditions will be considered on the merit of the case.

16.4 Withdrawal shall not be construed as an appearance for the eligibility of a candidate for First Class with Distinction. This provision is not applicable to those who seek withdrawal during X semester.

16.5 Withdrawal from the End semester examination is **NOT** applicable to arrears subjects of previous semesters.

16.6 The candidate shall reappear for the withdrawn courses during the examination conducted in the subsequent semester.

17. PROVISION FOR AUTHORISED BREAK OF STUDY

17.1 Break of Study shall be granted only once for valid reasons for a maximum of one year during the entire period of study of the degree Programme. However, in extraordinary situation the candidate may apply for additional break of study not exceeding another one year by paying prescribed fee for break of study. If a candidate intends to temporarily discontinue the Programme in the middle of the semester for valid reasons, and to rejoin the Programme in a subsequent year, permission may be granted based on the merits of the case provided he / she applies to the Registrar, but not later than the last date for registering for the end semester examination of the semester in question, through the Head of the Department and Dean stating the reasons therefore and the probable date of rejoining the Programme.

17.2 The candidate thus permitted to rejoin the Programme after the break shall be governed by the Curriculum and Regulations in force at the time of rejoining. Such candidates may have to do additional courses as per the Regulations in force at that period.

17.3 The authorized break of study (for a maximum of one year) will not be counted for the duration specified for passing all the courses for classification. However, additional break of study granted will be counted for classification.

17.4 The total period for completion of the Programme reckoned from, the commencement of the first semester to which the candidate was admitted shall not exceed the maximum period specified in clause 4.1 irrespective of the period of break of study (vide clause 17.3) in order that he/she may be eligible for the award of the degree.

17.5 If any student is detained for want of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted 'Break of Study' or 'Withdraw'

18. DISSERTATION / THESIS

18.1 As a part of the degree requirement, all candidates must submit a dissertation/thesis in the 3rd and 4th semesters under a faculty guide and/or external guide. This thesis is to be submitted individually by each candidate and is intended to assess individual research, methodology and design skills as a culmination of the knowledge accumulated throughout the course.

The candidate can proceed to thesis only if he/she passes the dissertation successfully.

18.2 The topic selection, scope, criteria for evaluation, periodic reviews and all other matters related to the Dissertation/Thesis shall be decided by the Dissertation Committee of the Faculty of Architecture. The decision of the committee must be approved by Vice Chancellor/ Registrar before the commencement of the review process.

18.3 Continuous Internal Assessment (CIA- 80 marks) for Dissertation shall be held as a Viva-Voce examined by a jury comprising the Dissertation Committee (for 40 marks) and by the Guide (for 40 marks) of the Faculty of Architecture.

18.4 End Semester Examination (ESE-120 marks) for Dissertation shall be held as a Viva-Voce examined by a jury comprising external architect members (for 60 marks) and by internal members of the Dissertation

Committee (for 60 marks) of the Faculty of Architecture.

18.5 Continuous Internal Assessment (CIA- 320 marks) for Thesis shall be held as a Viva-Voce examined by a jury comprising the Thesis Committee (for 160 marks) and by the Guide (for 160 marks) of the Faculty of Architecture.

18.6 End Semester Examination (ESE-480 marks) for Thesis shall be held as a Viva-Voce examined by a jury comprising external architect members (for 240 marks) and by internal members of the Thesis Committee (for 240 marks) of the Faculty of Architecture/Planning/Design. Every Guide shall be an additional member (if not already a member) for evaluation of his/her Dissertation/Thesis student.

18.7 A Dissertation/Thesis Committee shall be established well before the commencement of the Dissertation/Thesis for overseeing and regulating all aspects of the student's work and shall comprise minimum two faculty members from the concerned department, minimum one external faculty member from academic background and another one external members from practicing background. The HoD shall be the Convener; and the concerned class tutor of the batch shall be the Coordinator of this committee respectively.

19. ELECTIVES

Electives shall be from any of the focus areas and may be theory, practical or studio or self-study courses and subject to satisfying their course requirement

20. CASE STUDIES AND FIELD VISITS

As part of the degree requirement, all candidates must visit places and buildings of Architectural Interest and pertaining to the focus area as per course requirements, stipulated by the Faculty of Architecture.

21. DISCIPLINE

Every student is required to observe disciplined and decorous behavior both inside and outside the college and not to indulge in any activity which will tend to bring down the prestige of the University. The erring student will be referred to the Disciplinary Committee constituted by the University, to enquire into acts of indiscipline and recommend the University about the disciplinary action to be taken. If a student indulges in malpractice in any of the University / Internal Examination, he / she shall be liable for punitive action as prescribed by the university from time to time.

23. REVISION OF REGULATION AND CURRICULUM

The University may from time to time revise, amend or change the Regulations, Scheme of Examinations and syllabi if found necessary at any stage of the course.



M.PLAN (TOWN AND COUNTRY PLANNING)
REGULATIONS
2021 - 2022 Batch (CBCS)

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

Masters of Planning curriculum is designed imbibe aptitude and knowledge

1. To educate Students about the social and economical, legal and political, environmental and physical, governance and management aspects of planning.
2. To involve in industry and community collaborative work
3. To imbibe knowledge in concepts, and theories, methods and techniques, social realities and technological advancement.
4. To acquire advanced knowledge in Planning practices by exposed to multi disciplinary learning environment and also engage in individual and group work.
5. To update themselves abreast of new developments in the field of Planning through lifelong learning.
6. Be a part of high performing professionals of prestigious private, public or community organizations of socio-economic, environment and spatial planning relevance.
7. To create world class teaching, research, training and consultancy activities by
 - a. Engaging experienced academics, professionals as part of teaching and evaluation of planning projects, dissertation and thesis and
 - b. Student and faculty exchange program with a partnered university of the world.
8. To emulate and inspire high ethical values in professional practice.

PROGRAM OUTCOME (PO):

1. Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.
2. Students gain knowledge through class room learning, field visits.
3. Students to get opportunities to publish research paper, display exhibits, present papers in conferences and seminars.
4. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
5. Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
6. Ability to review, comprehend and report technological developments in the profession of planning
7. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.

PROGRAMME SPECIFIC OUTCOME (PSO):

8. To gain leadership, decision making qualities and display commitment towards adding knowledge.
9. Ability to understand ethical and professional responsibilities.

M. PLAN (TOWN AND COUNTRY PLANNING)

MASTER OF TOWN AND COUNTRY PLANNING

Curriculum – Full Time (4 Semesters)

2021 - 2022 Batch (CBCS)

Semester I

Sub. Code	Course Title	Program Outcome	Program Educational objectives	EM / EN / SD	Instruction Hrs / Week			Marks			C	E H
					L	T	P	CIA	ESE	Total		
21MPN101	Planning Theory and Practice	PO1, PO3, PO5	III, VII	EM	3	0	0	40	60	100	3	3
21MPN102	Socio – Economic and Spatial aspects of Human Settlements and Planning	PO1, PO3, PO5	III, VII	EM	3	0	0	40	60	100	3	3
21MPN103	Traffic and Transportation Planning	PO1, PO3, PO5	III, VII	EM	3	0	0	40	60	100	3	3
21MPN104	Economics	PO1, PO3, PO5	III, VII	EM	3	0	0	40	60	100	3	3
21MPN111	Housing	PO1, PO2, PO4, PO5, PO6, PSO8	I, II, IV, V, VI, VIII	EM /EN/ SD	2	0	4	120	180	300	4	6
21MPN121	Planning Studio I	PO1, PO2, PO4, PO5, PO6, PSO8	I, II, IV, V, VI, VIII	EM /EN/ SD	1	0	10	160	240	400	6	6
21MPNE**	Elective I				2	0	4	120	180	300	4	6
	Report Writing			SD								
Sub Total					17	0	18	560	840	1400	26	
Elective I												
Sub. Code	Course Title	Program Outcome	Program Educational objectives	EM/ EN/ SD	Instruction Hrs / Week			Marks			C	E H
					L	T	P	CIA	ESE	Total		
21MPNE1A	Public Transport Planning	PO1, PO2, PO5	III,	EM	2	0	4	120	180	300	4	6
21MPNE1B	Transport Economics	PO1, PO2, PO5, PO7	I, III	EM	2	0	4	120	180	300	4	6
21MPNE1C	Disaster Management	PO1, PO2, PO5	III,	EM	2	0	4	120	180	300	4	6
21MPNE1D	Real Estate And Housing Markets	PO1, PO2, PO5, PO7	I, III	EN	2	0	4	120	180	300	4	6
21MPNE1E	Materials, Technology and Infrastructure	PO1, PO2, PO5, PO7	I, III	EN	2	0	8	120	180	300	6	6

Semester II

Sub. Code	Course Title	Program Outcome	Program Educational objectives	EM / EN / SD	Instruction Hrs / Week			Marks			C	E H
					L	T	P	CIA	ESE	Total		
21MPN201	City Planning	PO1, PO3, PO5	III, VII	EM	3	0	0	40	60	100	3	3
21MPN202	Regional Planning	PO1, PO3, PO5	III, VII	EM	3	0	0	40	60	100	3	3
21MPN203	Research Methodology: Statistics and Quantitative Reasoning	PO1, PO3, PO5	III, VII	EM/SD	3	0	0	40	60	100	3	3
21MPN204	Financing Urban Development	PO1, PO3, PO5	III, VII	EM/SD	3	0	0	40	60	100	3	3
21MPN211	Urban Infrastructure Planning	PO1, PO2, PO4, PO5, PO6, PSO8	I, II, IV, V, VI, VIII	EM/EN/SD	2	0	4	120	180	300	4	6
21MPN221	Planning Studio II	PO1, PO2, PO4, PO5, PO6, PSO8	I, II, IV, V, VI, VIII	EM/EN/SD	1	0	10	160	240	400	6	6
21MPNE**	Elective II				2	0	4	120	180	300	4	6
	Current trends in planning			EM								
Sub Total					17	0	18	560	840	1400	26	
Elective II												
Sub. Code	Course Title	Program Outcome	Program Educational objectives	EM/ EN / SD	Instruction Hrs / Week			Marks			C	E H
					L	T	P	CIA	ESE	Total		
21MPNE2A	Rural and Urban Housing	PO1, PO2, PO5	I, III, VII		2	0	4	120	180	300	4	6
21MPNE2B	Planning Legislation and Professional Practice	PO1, PO2, PO5, PSO9	I, VII	EN	2	0	4	120	180	300	4	6
21MPNE2C	GIS Modeling in Urban and Regional Planning	PO1, PO2, PO5, PO7	I, III, IV	EM/SD	2	0	4	120	180	300	4	6
21MPNE2D	Urban Development And Management	PO1, PO2, PO5, PO7	I, III, IV	EN	2	0	4	120	180	300	4	6
21MPNE2E	Inclusive urban planning	PO1, PO2, PO5, PO7	I, III, IV	EM	2	0	8	120	180	300	6	6

Semester III

Sub. Code	Course Title		Program Educational Objectives	EM/EN/SD	Instruction Hrs / Week			Marks			C	E H
					L	T		CIA	ESE	Total		
21MPN301	Environmental Planning	PO1, PO3	I,III, VII	EM	3	0	0	40	60	100	3	3
21MPN302	Project Formulation and Implementation	PO1, PO3	I,III, VII	EN	3	0	0	40	60	100	3	3
21MPN303	Urban Finance	PO1, PO3	I,III, VII	EM	3	0	0	40	60	100	3	3
21MPN311	Public Private Partnerships for Urban Development	PO1, PO2, PO4, PO5, PO6, PSO8	I, II, III, IV, V, VI, VII, VIII	EM/EN/SD	2	0	4	120	180	300	4	6
21MPN321	Planning Studio III	PO1, PO2, PO4, PO5, PO6, PSO8	I, II, III, IV, V, VI, VII, VIII	EM/EN/SD	1	0	10	160	240	400	6	6
21MPN322	Dissertation	PO1, PO2, PO3, PO5, PO6, PO7	I, II, IV, V, VI, VIII	EM/EN/SD	2	0	4	120	180	300	4	6
21MPNE**	Elective III				3	0	0	40	60	100	3	3
Sub Total					17	0	18	560	840	1400	26	
Elective III												
Sub. Code	Course Title		Program Educational Objectives	EM/EN/SD	Instruction Hrs / Week			Marks			C	E H
					L	T	P	CIA	ESE	Total		
21MPNE3A	Environmental Design	PO1, PO3	I,III, VII	EM	3	0	0	40	60	100	3	3
21MPNE3B	Environmental Impact Assessment	PO1, PO3	I,III, VII	EM	3	0	0	40	60	100	3	3
21MPNE3C	Environmental Legislation, Evaluation and Practices	PO1, PO3, PSO9	I,VI,VIII	EN	3	0	0	40	60	100	3	3
21MPNE3D	Web based Applications to urban and Regional Planning	PO1, PO3, PO6, PO7	I, II,IV, V	EM	3	0	0	40	60	100	3	3
21MPNE3E	Planning for tourism	PO1, PO3	I,III, VII	EM	3	0	0	40	60	100	3	3

Semester IV

Sub. Code	Course Title		Program Educational objectives	EM / EN / SD	Instruction Hrs / Week			Marks			C	EH
					L	T	P	CIA	ESE	Total		
21MPN401	Urban Governance and institutional Management	PO1, PO3, PO4, PSO9	I,II, III	EM	3	0	0	40	60	100	3	3
21MPN421	Thesis (Viva Voce)	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO8	I, II, III IV, V, VI, VII, VIII	EM /EN /SD	4	0	28	320	480	800	18	6
Sub Total					7	0	28	360	540	900	21	
Grand Total					58	0	82	2040	3060	5100	99	

L – Lecture, T – Tutorial, P – Practical, CIA – Continuous Internal Assessment, ESE – End semester Examination, C – Credits, EH – Exam hours

Entrepreneur Oriented Courses -Green

Employability Oriented Courses -Blue

Skill Development Oriented Courses –Red

	Semester I	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN101	Planning Theory and Practice	3	0	0	3	40	60	100

OBJECTIVE:

- This course is an introduction to the history and theories of the planning profession.
- Selectively draw on the literature in planning theory and history to examine a series of questions fundamental to planning practice.
- The discussions, exercises, and readings on these questions will highlight alternative approaches to planning practice.
- The discussions, exercises, and readings on these questions will highlight the approaches of current issues in the field of planning.
- To study the methods of collecting data base and base map preparation
- To study about the different planning concepts and inclusive planning

LEARNING OUTCOME:

1. The above course introduces the history of spatial planning
2. the students will have the ability to understand various modes of planning.
3. They will earn the skill to apply basic analytical and optimizing techniques needed.
4. Methods of population forecast in settlement
5. Ability to plan project management
6. They learn about emerging trends in planning of cities and towns

UNIT – 1 PLANNING PRINCIPLES AND PROCESS 9

Process of evolution of human settlement planning, **Basic elements of the city**, Principles in planning - the Rational-Comprehensive approach, the Incremental approach, the Transformative Incremental (TI) approach, the Transactive approach, the Communicative approach, the Advocacy approach, the Equity approach, the Radical approach, and the Humanist approach. **Technical processes for land use, urban design, natural resources, transportation, & infrastructure planning.**

UNIT - 2 PLANNING THEORIES AND SYSTEM 10

Theories: Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory and other relevant theories; Concepts: Garden City Concept; **Emerging Planning Concepts: inclusive city, safe city, Green City, Shadow city, Sustainable City**, Planning system in India - Introduction to master plan, structure plan, detailed development plans, city corporate plan and smart plan - **Orthodoxies of planning; Goal formulation, objective, scope, limitations Sustainability and rationality in planning.** Comparison of planning systems in UK and USA.

UNIT - 3 PLANNING SURVEYS 8

Data requirement for planning: questionnaire design, scale and application, sampling techniques. Techniques of conducting surveys for socio – economic, land use, density, structural condition of buildings, height of building, land utilization, physical features of land and transport survey. **Tabulation of data, graphical presentation of data, techniques of graphical presentation of spatial data**, - Aerial photo and remote sensing techniques in planning - Standards for various urban functions.

UNIT - 4 ANALYTICAL TECHNIQUES 10

Delphi, trade off-game, simulation models, gravity analysis, and Lowry model - Threshold analysis and multivariate analysis - Techniques of delineation of planning areas and planning regions - Land use models.

UNIT - 5 OPTIMIZATION TECHNIQUES

Optimization and economic analysis methods in project formulation and implementation, CPM, PERT, PBBS, Goal achievement matrix, Introduction to Cost-Benefit analysis. Research writing and article writing to be a part of Units I (Planning principle and Process) and II (Planning system).

TOTAL: 45 PERIODS

REFERENCES:

1. Andreas Faludi, A Reader in Planning Theory. Pergamon Press Oxford, New York, 1973.
2. Belinda K P Yuen, 'Planning Singapore: from Plan to Implementation, Singapore Institute of Planners, Singapore, 1998.
3. Jonathan Barnett, 'Redesigning cities: Principles, Practice, and Implementation, Planners Press, Chicago, 2003.
4. Lee. C, 'Models in Planning; An Introduction to the use of Quantitative Models in Planning, Pergamon Press, New York, 1973.
5. Rabindra Nath Dubey and Bhim Rao, 'Urbanization and Urban Planning in India-, Shree Nataraj Prakashan, New Delhi. 2010.
6. Ramachandran R, 'Urbanization and Urban Systems in India, Oxford University Press, Oxford. 1991.
7. Randall Crane and Rachel Weber, 'The Oxford Handbook of Urban Planning, Oxford University Press, New York, 2012.
8. Sundaram K.V, 'Urban and Regional Planning in India, Vikas Pub. House, New Delhi. 1977.
9. Viviana Kaminski, 'Urban Studies and Planning. World Technologies, New Delhi. 2012.
10. Regional planning for urban spaces AD Walk
11. Urban and Regional planning reader Birch E, Glasson
12. Kaiser Edward J., et.al., 1995, Urban Landuse Planning 4th (ed) Urbana, University of Illinois Press 8.
13. Bola Ayeni, 1979, Concepts and Techniques in Urban Analysis, Croom Helm, London.

	Semester I	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN102	Socio – Economic and Spatial aspects of Human Settlements and Planning	3	0	0	3	40	60	100

OBJECTIVE:

- To teach the students the social sciences inputs (Urban and Rural Sociology, Urban and Regional Economics and Urban and Human Geography)
- analyzing human settlements evolution, growth & development and incorporating them while planning of human settlements at the rural, urban and regional levels.
- To understand the socio cultural background of Indian communities
- To learn about the socio economic problems and issues in india
- Study about the economic growth in Indian settlements
- To study about the different communities and sociological theories in community development

LEARNING OUTCOME:

1. The course illustrates that the students think and analyze the spatial planning attributes from the social and economic perspective.
2. This subject facilitates graduates towards sensitize about society and environment.
3. Teaches the importance of socio cultural profile in building up communities
4. Earn knowledge in urban economics and its aspect
5. Types of societies and its significances in economic growth
6. They learn about sociological theories in the community development

UNIT - 1 SOCIOLOGY CONCEPTS AND SOCIO-SPATIAL ASPECTS 10

Introduction to the sociological concepts of Marx, Talcot, Parsons, Weber, Durkheim, Riesman, Jacobs. **Socio-cultural profile of Indian society and urban transformation**; - Socio - spatial structures and Institutions related to urban and rural communities - Human and urban geography of urban areas – Human interaction and spatial form of cites- Ecological processes and socio-spatial structures in Indian Cities.

UNIT - 2 ECONOMIC BASE 8

Economic concepts and frameworks - Macro and micro economics - Agglomeration economics - Economics of scale - Multiplier effect-concepts and scope – Urban economics - intersection of geography and economics introducing the role of space into economic considerations- Economic base of cities and region - Understanding economic base and changing spatial structure of urban areas - role of public and private policies that impact the urban form, structure and economy.

UNIT - 3 SOCIO - ECONOMIC, AND GEOGRAPHIC CONCERN AND DEVELOPMENT 10

Geographical, sociological and economic aspects of rural and urban Development - Government, non-government and community participation in the local and regional area planning and development. Role of socio-cultural aspects on growth patterns of city and neighbourhood communities; Social planning and policy, and community participation;

UNIT - 4 URBAN LAND USE AND SETTLEMENTS ORGANIZATION 7

Land use determinants - Location dynamics of urban Land use - Spatial organization of urban settlement - Social and economic Impacts of urban growth and expansion. Economic growth and development, quality of life; Human development index; Economic principles in land use planning; **Policies and strategies in economic planning, balanced versus unbalanced growth, public sector dominance; changing economic policies, implications on land.**

UNIT - 5 URBAN STRUCTURE, URBANIZATION & IMPACTS ON LIVELIHOOD 10

City-region, urban sprawl, and urban fringe - Urbanization in the World and India at a glance - Urban development in Tamil Nadu and Chennai city with reference to settlements, population distribution, economic activities and governance. Sustainable livelihoods — vulnerabilities and social exclusion – agenda for the urban poor - livelihood strategies, resilience and transformability. Research writing and article writing to be a part of Units I (Socio-spatial aspects), II

(Economic base), III (socio - economic, and geographic concern and development), IV (urban land use and settlements organization) and V (urban structure, urbanization & impacts on livelihood)

TOTAL: 45 PERIODS

REFERENCES:

1. Arthur Kohun, 'History Builds the Towns', Lund Humphries, London, 1953.
2. Bhatt Caste, 'Class and Politics', Manohar Book Service, Delhi. 1975.
3. Carter H, 'The Study of Urban Geography', Edward A Old, London. 1972.
4. Chapin F.S, 'Urban Land use Planning', Higg & brothers, New York, 1965.
5. Antony Giddens and Philip W Sutton, 'Sociology-Introductory Readings, Polity, Oxford. 2010.
6. Global Review of Human Settlements, Pergamon Press, London, 1976.
7. Xiangming Chen, 'Introduction to Cities: How Places and Space shape Human Experience, Wiley Blackwell, UK 2012
8. Sundaram K.V. (Ed), 'Geography & Planning', Concept Publishing Co., New Delhi, 1985.
9. Wilson R.A. & D.A. Schulz, 'Urban Sociology', Prentice Hall Inc., New Jersey, 1978.
10. Saskia Sassen, 'Cities in the World economy', Pine Forge Publishers UK.
11. Philip McGann, 'Modern Urban and Regional Economics' Oxford University press London.2013.
12. Frank Tonkins, 'Cities by Design: The Social Life of Urban Form' Polity Publications, UK. 2013.
13. O 'Sullivan, A. (2014) Urban Economics, 8th Edition (McGraw Hill/Irwin). 2014
14. William G. Flanagan, "Urban Sociology-images and Structures", Rowman & Littlefield Publishers Inc, 2010

	Semester I	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN103	Traffic and Transportation Planning	3	0	0	3	40	60	100

OBJECTIVE:

- Traffic and transportation planning is an integral part of spatial planning at any level. Therefore, it is proposed to give an overall framework of this course to the students of M. Plan programme in the first semester itself.
- The objective of this course is to give an historical perspective of road development in India, salient features of road geometric and intersections, traffic surveys, planning aspects of different mass transportation systems and introductory part dealing with highway capacity.
- To understand the different transport system and approaches in design
- To understand basic principles and techniques in transport planning
- To analyse, designing and forecasting for the future demand
- To study about the transport planning process

LEARNING OUTCOME:

1. In the urban transportation planning process, discuss its relationship to transportation facilities development, treat specific techniques of analysis and evaluation for urban transportation planning, and discusses possible means of achieving project and societal objectives.
2. Learn about urban transport and road safety planning
3. Survey techniques used to analyze the existing traffic conditions and plan for future demand
4. Integrated understanding of modes of transport and transport infrastructure planning
5. Understand the planning process involved in road network, infrastructure, and safety planning
6. They learn about the transport planning process

UNIT - 1 TRANSPORT DEVELOPMENT IN INDIA 8
 Economic, political and social significance of transport development –Transportation in cities - Development of rail, water and air transport policies and programmes in India- **Future Developments in transportation** - Scope and content of Nagpur, Bombay and Lucknow road development plans - Current trends in the road development sector in India.

UNIT - 2 URBAN TRANSPORTATION SYSTEM & TRIP GENERATION ANALYSIS: 10
 Transport planning process, Problem definition, Solution generation, Solution analysis, Evaluation and choice, Implementation - Sequence of activities involved in transport analysis- **Trip Generation Analysis; Trip Production Analysis; Category Analysis; Trip Attraction Modeling.**

UNIT – 3 MODE CHOICE MODELING AND TRIP DISTRIBUTION ANALYSIS: 10
 Mode Choice Modeling: Influencing Factors, Earlier Modal Split Models, Trip-End Type Modal Split Model, Trip-Interchange Modal Split Model, **Disaggregate Mode-Choice Model, Logit Model of Mode-Choice, Binary Choice Situations, Multinomial Logit Model, Model Calibration.** Different modes – Capacities – Limitations – Planning aspects – Coordination – Para transit modes – Private transport.

UNIT - 4 TRIP DISTRIBUTION ANALYSIS AND ROUTE ASSIGNMENT 8
 Trip Distribution Analysis: Presentation of Trip-Distribution Data, PA Matrix to OD Matrix, Basis of Trip Distribution, Gravity Model of Trip Distribution, Calibration of Gravity Model, Singly and Doubly Constrained, Gravity Models, **Route Assignment: Description of Transport Network, Route Choice Behaviour, The Minimum Path, Minimum Path Algorithm, Route Assignment Techniques, All-or-Nothing Assignment, Multipath Traffic Assignment, Capacity-Restrained Traffic Assignment.**

UNIT - 5 TRANSPORT SURVEY AND HIGHWAY CAPACITY 9
 Transportation Survey: Definition of Study Area Zoning Types of Movements, Types of Surveys Volume Count – Origin and Destination – Parking and Public Transport Surveys – Inventory of Transport facilities – Methods of Survey – Analysis – Inferences,

Concept of PCU and level of service – Capacity of uninterrupted flow conditions – Flow affecting capacity and level of service – Capacity of rural and urban roads. Research writing and article writing to be a part of Units I (Transport development in India) and IV (Mass transportation systems)

TOTAL: 45 PERIODS

REFERENCES:

1. Dimitriou H.T, Urban Transport Planning, A Development Approach, Routledge, London, 1992.
2. Hutchinson, B.G., 'Principles of Urban Transport Systems Planning' McGraw – Hill Book Co., New York, 1980.
3. Johanna Zmud, Martin Lee-Gosselin, 'Transport Survey Methods: Best Practice for Decision Making' Emerald Group Publishing, 2013
4. John W. Dicky, 'Metropolitan Transportation Planning', McGraw – Hill Book Co., New York, 1980.
5. Kadiyali L. R, 'Traffic Engineering and Transportation Planning' Khanna Publications. New Delhi, 1966.
6. Michael J. Bruton, 'An Introduction to Transportation Planning', Hutchinson, London, 1985.
7. Michael D. Meyer, Eric J. Miller, Urban Transportation Planning: A Decision-Oriented Approach, McGraw-Hill Higher Education, 2001
8. Vaidya B.C 'Geography Of Transport Development In India' Concept Publishing Company, 2003
9. Vukan R. Vuchic, 'Urban Transit Systems and Technology' John Wiley & Sons, 2007

	Semester I	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN104	Economics	3	0	0	3	40	60	100

OBJECTIVES:

- Exploration of how economics can contribute to understanding and solving urban problems. Application of economic analysis and reasoning to the important issues that planners confront, including zoning, land use, housing investment, and transportation.
- Focuses also on skills to use economic methods effectively.
- To integrate theoretical knowledge with quantitative and qualitative evidence in order to explain past economic events and to formulate predictions on future ones.
- To identify the basic features of alternative representations of human behaviour in economics.
- To evaluate the consequences of economic activities and institutions for individual and social welfare.
- To identify and explain economic concepts and theories related to the behaviour of economic agents, markets, industry and firm structures, legal institutions, social norms, and government policies

LEARNING OUTCOMES:

1. This lecture course provides students with basic understanding of the subject matter of economics and its relevance in ‘planning’.
2. The course introduces students to basic microeconomic concepts and theories that are commonly applied
3. The theories include demand, supply, market equilibrium, different forms of markets for basic services, market failure and externalities.
4. Students will understand macroeconomic concepts and issues; especially, that are relevant for students of urban and regional planning are included
5. Students will learn about changing paradigms of economic planning, economic base of cities, employment
6. To learn about informal sector and poverty in urban India.

UNIT 1 INDIAN ECONOMY AND DEVELOPMENT: 9
 Planning in India -Mixed Economy-Planning Commission-Five-year Plans-Demographic Dividends -Urbanization Trend and Decadal growth in India. Population Projections-Logistic population growth-Cohort Component Projection-Cohort Component Method-Ratio Method-Urban-Rural Projections

UNIT 2 BASICS OF ECONOMICS 6
 Concepts of economics and economic growth and development, GDP, GNP, per capita income, inclusive development, demand and supply, production economics, economies of scale; urban and regional growth, land economics and land use planning. Introduction to economics of urban areas; Basic concepts of macro-and micro-economics. Economic and spatial planning in India

UNIT 3 ECONOMICS 9
 The classical approach, inflation and deflation, Minsky's financial crisis, the economic cycle, Lehmen brothers' case, protectionism, Corn law, Globalization and neo liberalization, new trade theory and currency devaluation-Poverty- GDP-Growth Rate.

UNIT 4 UNDERSTANDING NATIONAL INCOME AND GROWTH INDICATIONS 6
 Concept of Income, Employment and Money Classical and modern approaches, growth and development indicators; measures of national income, defining development and under development

UNIT 5 INTRODUCTION TO URBAN AND REGIONAL ECONOMICS: 12
 Use of economic concepts in urban planning, housing, transport, taxes, land use, location, etc.; use of economic concepts in regional planning; location disparities in development, input-output techniques, sectoral development, etc.

TOTAL: 45 PERIODS

REFERENCES:

1. Appadurai, A. (1990) Disjuncture and difference in the global cultural economy, *Theory, Culture and Society*, Public Culture, Vol. 2, No. 2.
2. Appadurai, A. (2001) Deep democracy: Urban Governmentality and the Horizon of Politics, *Environment and Urbanization*, Vol. 13 No 2, pp. 23-43.
3. Appadurai, A. (2013) *The Future as Cultural Fact: Essays on the Global Condition*, Verso, London.
4. Durham, M.G. and Kellner, D.M. (eds.) (2006) *Media and Cultural Studies: Key Works*, Malden, MA
5. Kapoor, P. (2018) *Sociology & Economics for Engineers*, Khanna Book Publishing Co., New Delhi.
6. Bertaud, A. (2019) *Order without Design: How Markets Shape Cities*, MIT Press, Massachusetts.
7. Brooks, N., Donaghy, K. and Knaap, G. (2011) *The Oxford Handbook of Urban Economics and Planning*, Oxford University Press, Oxford.
8. Searle, L.G. (2013) Conflict and Commensuration: Contested Market Making in India's Private Real Estate Development Sector, *International Journal of Urban and Regional Research*, Vol. 38, Issue 1, pp. 60-78.
9. Shatkin, G. (2013) Contesting the Indian City: Global Visions and the Politics of the Local, *International Journal of Urban and Regional Research*, Vol. 38, No. 1, pp. 1-13

	Semester I	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN111	Housing	2	0	4	6	120	180	300

OBJECTIVES:

- The objective of the course is to train the students to have a comprehensive knowledge of planning, design, evaluation, construction and financing of housing projects.
- To understand the housing scenario in India their statistics, demand and supply
- The course focuses on cost effective construction materials and methods.
- To learn about the principles of sustainable housing policies and programmes.
- To understand the housing typologies and planning approaches required for each typology
- To understand the land market and real estate policies and regulations

LEARNING OUTCOMES:

1. The students should have a comprehensive knowledge of planning, design, evaluation, construction and financing of housing projects
2. On the completion of the course the student must be aware of the significance of housing in the context of both global and India
3. Students would have understood the critical social and economic issues related to housing especially in developing countries like India
4. They should familiarize to the various housing schemes
5. Familiarize with the concepts of real estate markets
6. To understand Housing mortgages and land development tools

UNIT 1 INTRODUCTION

Significance of housing in National Development Goals; Equity and efficiency parameters of housing; Current issues in housing -Assessing Housing Existing Housing Statistics; definitions; urban and rural housing statistics; Introduction to concepts of Housing Shortage, Housing Need, quantitative and qualitative aspects of housing; Housing Demand - Understanding current methods of demand assessment; Knowledge of data sources and their use and interpretation; census, NSSO and other data; Limitations of existing methods of assessments.

UNIT 2 HOUSING DEVELOPMENT PROCESS

Understanding of factors affecting residential location, theoretical knowledge of ecological, neoclassical, institutional approach to housing; Housing subsystems and their characteristics: formal and non-formal housing; Process of Public and private sector housing development process; policy context, actors and their interrelationships; Inner city housing, Slums, Squatter housing, Unauthorized Housing; Role of different institutions in housing; International agencies, NGOs, State, Financing Organizations, Private developers, co-operatives.

UNIT 3 HOUSING STANDARDS AND DESIGN FACTORS

Determining residential densities; Densities, costs and development control regulations; Housing designs parameters and their relationship to costs; Housing design and climate; Housing for disaster prone areas. Communities; its characteristics and housing; socio-economic implication of slums, clearance/ improvement of slum; sites and services schemes, squatter upgrading, incremental approach

UNIT 4 HOUSING POLICY ANALYSES

Understanding and evaluation of Housing Policy and programmes in India; five-year plans, Central government policy; Policy framework for urban and rural housing; Comparative policy analysis; Housing for the low-income groups; Co-operative housing, objectives and principles; management and financing of housing projects; investment in housing in public and private sectors

UNIT 5 REAL ESTATE

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

TOTAL: 90 PERIODS

	Semester I	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPN121	Planning Studio I	1	0	10	6	160	240	400

OBJECTIVE:

- Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning
- Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
- To improve communication skills.
- Ability to formulate a framework for study.
- To study and analysis the problem and suggest a suitable solution.
- To understand various practices and standards followed in planning

LEARNING OUTCOME:

1. Ability to present and communicate their ideas
2. To create livable human settlements in rural, urban and regional areas.
3. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
4. Ability to review, comprehend and report technological developments in the profession of planning
5. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.
6. Ability to understand ethical and professional responsibilities.

The Planning project II intends to expose the students to

1. Development of communication skills – Map preparation, report writing and presentation skills
2. Understanding of various surveys relating to preparation of plans for urban and rural Settlements
3. Preparation of plans for micro-level units
 - a. Study at Village level - Structure of village, problems, current rural improvement programmes and structure of administration.
 - b. Study on Urban Land uses Land use Zones – Land use activities – Their functional and spatial characteristics – Issues related to functions, spaces and Infrastructure
 - c. Action planning - Planning at Residential Layout Level Review of literature, site analysis, and study of existing layouts - Design criteria's – Existing act and byelaws - Alternative designs - Finalization of designs, Cost of the projects and model.

TOTAL: 165 PERIODS

	Semester I – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE1A	Public Transport Planning	2	0	4	6	120	180	300

OBJECTIVE:

- To introduce students to Public Transport System including its performance and Economic Aspects.
- To study Infrastructure required for Bus Stops, Terminals and Depots.
- To study about the main factors that affects usage of public transport
- To learn about the modern techniques, government policies and economical aspects in transport development
- Understand advantages of sustainable and efficient modes of transport
- To study about the different economic factors involved in public transport planning

LEARNING OUTCOME:

1. Learn about the different principles of public transport design
2. The importance of public transport network planning
3. Earn ability in working out Project management for different modes of transport
4. Evaluate and critically analyze the existing pattern of public transport modes in India
5. Advanced systems in public network planning like Multi Modal transport system
6. Learn about the different infrastructure requirement in public transport planning

UNIT – 1 INTRODUCTION TO PUBLIC TRANSPORT SYSTEMS

Highway systems – Road type and classification, road patterns, [Present scenario of road development in India](#)

Urban passenger transport system characteristics, public transport modes, genesis of public transport system, mass transit system, Para transit system, technological features, Demand for public transport, public transport demand and supply indicators, determinants of public transport supply and demand, public transport supply and demand characteristics in cities of various sizes and socio economic setting.

UNIT - 2 PUBLIC TRANSPORT PERFORMANCE AND ECONOMIC ASPECTS (Part 1)

Identification and Measurements of Highway Benefits, [Highway Transportation Costs](#), Physical and financial performance indicators for public transport, performance characteristics of various public transport modes including para-transit modes,

UNIT - 3 PUBLIC TRANSPORT PERFORMANCE AND ECONOMIC ASPECTS (Part 2)

Introduction to PPP - Concepts of BOO, BOT, BOOT, [Road User Cost Study in India](#) - Public transport fare types and pricing criteria, costs, services; price elasticity of demand; subsidy issues; regulation, privatization impacts and integration issues on public transport performance; public transport financing;

UNIT - 4 PUBLIC TRANSPORT NETWORK PLANNING AND SCHEDULING

Public transport based city forms and structure, Transit Oriented Development (TOD); Impact of city density, size, activity concentration on public transport patronage. Form, type and density of bus route network, bus route network planning principles; Types of bus priority measures, merits and limitations.

UNIT - 5 BUS STOPS, TERMINALS AND DEPOT INFRASTRUCTURE

Bus stops – types and characteristics , planning guidelines, pedestrian –public transport interface ; Bus Terminals – types, assessment of facilities and land areas for terminals; interchange- concepts, function and planning guidelines; bus depot - concepts, function, activity and land requirements, planning guidelines. Research writing and article writing to be a part of Units I (introduction to public transport systems), II (public transport performance and economic aspects (part 1)), III (public transport performance and economic aspects (part 2)), IV (public transport network planning and scheduling) and V (bus stops, terminals and depot infrastructure)

TOTAL: 90 PERIODS

REFERENCES:

1. White, P. Public Transport Planning, Management and Operation 1988 London, Hutchinson
2. Nash, C.A. The Economics of Public Transport London, Longman
3. Vuchic, V.R. Urban Public Transportation 1982 4. Chakraborty and Das, A Transport Planning and Highway Engineering 2003 PHI

	Semester I – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE1B	Transport Economics	2	0	4	6	120	180	300

OBJECTIVE:

- To study Transport Demand and Supply, including Costing and Pricing of Services.
- To study Principles of Economic Appraisal of Transport Projects.
- To learn about the issues related to transport funding and public transport economy
- Evaluate and criticize the current economic policy in transport development
- To know about large transport project and its funding management
- Imbibe knowledge on costing and pricing of transport services

LEARNING OUTCOME:

1. Creative and innovative solutions for transport funding and operational system
2. Develop the software skills in data analysis
3. Interpret economic data required for the transport demand
4. Interpret transport and road pricing
5. They learn about transport regulation
6. Various methods of evaluation for ongoing transport development

UNIT - 1 TRANSPORT DEMAND AND SUPPLY

Concepts and Principles of Engineering Economics, Identification and Measurements of Highway Benefits, [Highway Transportation Costs, Road User Costs and Benefits](#) Movement, transport and location, transport and economic development; Demand for transport, factors influencing demand; elasticity of demand, measures of elasticity; supply of transport, elasticity of supply; demand forecasting.

UNIT - 2 COSTING AND PRICING OF TRANSPORT SERVICES (Part 1)

Fixed and variable cost, joint and common cost, cost allocation, user cost internal cost, external cost, economic cost;

UNIT - 3 COSTING AND PRICING OF TRANSPORT SERVICES (Part 2)

Principle of pricing, marginal cost pricing, price discrimination, operational objectives of pricing; revenues, transport subsidies, Methods of Economic Analysis: [Basic formulas-Methods- BCR-NPV-IRR –Their Basic Characteristics, Illustrative applications on above](#)

UNIT - 4 PRINCIPLES OF ECONOMIC APPRAISAL

Importance of infrastructure; basic principles of appraisal, benefit valuation, cost benefit analysis, multi criteria analysis. Methods of Economic Analysis, Comparison of the Methods of Analysis-, Characteristics and Limitations of the Different. [Break Even Analysis-Sensitivity Analysis. Case studies and problems.](#)

UNIT - 5 REGULATION OF TRANSPORT

Theory of regulation, priorities in transport policies, regulatory reforms, coordination. Research writing and article writing to be a part of Units I (transport demand and supply), II (costing and pricing of transport services (part 1)), III (costing and pricing of transport services (part 2)), IV (principles of economic appraisal) and V (regulation of transport)

TOTAL: 90 PERIODS

REFERENCES:

S. No. Name of Authors Titles of the Book Edition Name of the Publisher

1. Sarkar, P.K. and Maitri, V. Theory and Applications of Transport Economics in Highway and Transport Planning 2010 Standard Publisher
2. Hutchinson, B.G. Principles of Urban Transport System Planning Mc-Graw Hill Book
3. Indian Road Congress Manual of Economic Evaluation of Highway Projects in India 1984 Special Publication
4. Kanafani, Abid Transportation Demand Analysis
5. Papacostas, C.S. and Prevedours, P.D. Transportation Engineering and Planning 2001 Prentice Hall
6. Stubbs, P.C., Tyson, W.J. and Dalvi, M.Q. Transport Economics 1980 London, George Allen and Unvers, Boston, Sydney.

	Semester I – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE1C	Disaster Management	2	0	4	6	120	180	300

OBJECTIVE:

- To generate interest in students to understand the causes and consequences of disasters
- study its importance in planning and managing cities and towns towards mitigation and rehabilitation.
- Provide the basic concepts and understandings of various disasters
- To study about disaster resilient community design
- Study and build skills for disaster response
- To build disaster resilient communities and develop strategies for disaster management

LEARNING OUTCOME:

1. The topics of the subjects attempt to sensitize the students about the ill effect of the disasters as well as the importance of preparedness.
2. It also inculcates the students that technology as well as community effects are important to mitigate disaster.
3. Mitigation measures related to environment and settlements
4. Learn about disaster resilient community design
5. Learn about the legal aspects and policies for disaster risk reduction
6. Creates disaster awareness in the future development. It also inculcates the students that technology as well as community effects are important to mitigate disaster.

UNIT – 1 DISASTER

Concepts and processes - Disaster cycle-myths and realities- Disaster-types, causes and consequences - Impacts of disasters on living things, properties, nature and community - Disaster- its importance towards multi-disciplinary perspective. Types of Incident Management, Stage of Disaster management –Hazard and vulnerability introduction,

UNIT - 2 NATURAL AND MAN-MADE DISASTERS

Types of natural Disasters- Seismic, Mass movement, Hydrological, Metrological disasters - its types, magnitude, intensity and its managements, Disaster and man-made environment - Industrial pollution and health Hazards - Industrial pollution and natural resource damage - Social vulnerability and damage to people and property - Case studies related to natural disaster and man-made disasters at the national and international levels.

UNIT - 3 DISASTER POLICY AND RISK ANALYSIS

Disaster management policy, Disaster management plan at national and state, National and State Bodies for Disaster Management. Disaster management plan of developed nations. **Risk Analysis: Its concept and analysis, Risk Reduction, Vulnerability : Its concept and analysis,**

UNIT - 4 DISASTER AND TECHNOLOGY

Disaster mitigations for Earthquake, flood and cyclone –Retrofitting, Technology, building materials, design considerations, - Prediction. Land use planning and regulations: Temporary settlements and communications, **Development planning tasks at the pre-disaster and post- disaster stages. Traditional methods of planning and construction,** Role of Information, Education, Communication, and Training,

UNIT - 5 DISASTER EDUCATION AND COMMUNITY BUILDING 15

Community awareness and action - Participatory management of community and disasters - NGO role and disaster preparedness and management, national and international perspectives – Government-roles and various levels in terms of proactive and reactive measures towards managing disasters - Gender perspectives-women, children, aged, physically disabled and disaster management. Research writing and article writing to be a part of Units I (disaster), II (natural and man-made disasters), III (disaster: physical planning and resource management), IV (disaster and technology) and V (disaster education and community building)

TOTAL: 90 PERIODS

REFERENCES:

1. Cutter L. Susan, 'Environmental Hazards and Risks, Printice Hall of India Pvt. Ltd, New Delhi, 1999.
2. Horst Friedrich, 'Earthquake Disaster Management', Peter lang, London, 2005.
3. Journal of Socio Economic Development Record Vol.12 No.1 Jan-Feb. 2005.
4. Ian Davis, 'Safe Shelter within Unsafe Cities: Disaster Vulnerability and Rapid Urbanization, Open house International, UK, 1987.
5. Mary C. Comerio, 'Disaster Hits Home, New Policy for Urban Housing Recovery', Oxford University Press, London, 2001.
6. Naseem Ahmed, 'Disaster Management', Kilaso Books, New Delhi. 2003.
7. Parag Diwan, 'A Manual on Disaster Management', Pentagon Earth, New Delhi, 2007.
8. Satendra, 'Sustainable Rural Development for Disaster Mitigation', Concept Publishing Co. 1 New Delhi, 2004.
9. Shyam Divan and Armin Rosencranz, 'Environmental Law and Policy in India, Cases, Materials and Statutes, Oxford University Press New Delhi. 2001.
10. World Bank, 'Building Safer Cities, World Bank, Geneva, 2013.

	Semester I – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE1D	Real Estate And Housing Markets	2	0	4	6	120	180	300

OBJECTIVE:

- This course applies the latest economic thinking and research to the task of analyzing real estate markets
- Forecasting supply or demand for the future
- Theories in housing markets and development
- To gain knowledge on various real estate models for project formulation, implementation etc
- Understand the land legislation and acquisition in real estate projects
- Professional services, sale and marketing aspects of Housing and real estate

LEARNING OUTCOME:

1. The outcome of this course is to provide students with a comprehensive understanding of major functional areas of real estate, including legal aspects, finance, economics, real estate practice and appraisal.
2. Economic concept of land, land pricing and acquisition
3. Urban reforms, acts and policies related to real estate markets
4. They learn about real estate development in public, private, partnership sectors
5. Tools and techniques used in land acquisition, land pooling and housing
6. Estimation and costing of real estate projects

UNIT – 1 INTRODUCTION

Introduction to real estate - Definition, principles of real estate - Value concepts - Methods of valuation, Factors affecting real estate market, role of govt. in real estate, statutory provisions, risk management, Introduction to real property ownership - Leasing property and succession - Methods of sale/purchase and title search, [Modes for conducting Real Estate Business](#). [Seven Stages of Real Estate Development](#)

UNIT - 2 INVESTMENT AND LAWS

Real estate investment analysis and portfolio management - Foreign direct investment (FDI) - Role of NRIs and PIOs in the investment market - Marketing and brokerage - Introduction to various laws related to real estate – 17 Acts. Principles for drafting agreements relating to real estate, [Different kind of Agreements used in Real Estate Business](#)

UNIT - 3 REAL ESTATE PROJECT FORMULATION

Entrepreneur and Entrepreneurship, Real estate project formulation - Real estate development process - Asset management, property insurance, taxation and fiscal incentives - Government policies and industry organization - Public- private partnerships and joint ventures, Direct Purchase Vs Joint Venture Models of Development, rating, and risk assessment.

UNIT - 4 HOUSING MARKETS

Concepts and definitions, housing market, area, the purpose - Nature of housing market studies-factors affecting housing prices, housing market behavior - Estimation of housing need, housing demand and identification of housing stress - Factors affecting local housing market - Housing demand and supply market process - Housing search residential mobility and filtering causes and consequences - Policy influence on housing market - The formal and informal housing markets and their impact on urban poor, public - Co-operative and private sector housing market, process and supply institutional frame work.

UNIT - 5 CASE STUDIES

Case studies of real estate development in public, private, partnership sectors - Real Estate as facilitator of development - Development of real estate as a tool for controlling land and property prices - Transaction and renting of real estate - Lease deeds/ sale deeds, sale documents, registration - Mortgage and pledging. Research writing and article writing to be a part of Units IV (housing markets) and V (case studies).

TOTAL: 90 PERIODS

REFERENCES:

1. David J. Lynn, 'Emerging Market Real Estate Investment: Investing in China, India, and Brazil' ; John Wiley & Sons Inc, New Jersey, U.S.A. 2010
2. Fillmore W Galaty, 'Modern Real Estate Practice' Dearborn Trade Publishing, New York, U.S.A. 2002.
3. Gerald R Cortesi, 'Mastering Real Estate Principles'; Dearborn Trade Publishing, New York, U.S.A. 2001.
4. John Ratcliffe, 'Urban Planning and Real Estate Development'' Routledge, Taylor & Francis Group, London, 2009.
5. Narayan Laxman Rao, 'Real Estate Deals'; Asia Law House, India. 2010
6. Rajkumar S Adukia, 'Real Estate: Law Practice & Procedures' Snow White Publications Pvt. Ltd, Mumbai, India. 2009

	Semester I – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE1E	Materials, Technology and Infrastructure	2	0	4	6	120	180	300

OBJECTIVE:

- To expose the students to Traditional and Conventional Building Materials.
- To study Cost Reducing and Environment friendly Technologies for Housing Projects.
- Understand Elements of physical infrastructure and its implementation in urban and rural areas
- To study about the new technologies in the field of infrastructure development
- Study on Modern materials and construction technologies
- To gain knowledge in Significance of Housing construction industry and its characteristics

LEARNING OUTCOME:

1. To study various Technologies for Housing Development along with Physical Infrastructure.
2. Learn about alternate material and construction technique
3. Different components of physical planning and design of infrastructure
4. Emerging technologies and concepts in housing
5. Cost optimization techniques in Indian housing scenario
6. They learn about Role of BMTPC and other organizations in promotion of new and alternative technologies

UNIT - 1 INTRODUCTION TO MATERIALS AND TECHNOLOGY

Building materials traditional and conventional, low cost materials, significance of technology for housing development, conventional technologies and modern technologies, appropriate technology, technology for housing in the context of housing development in India and the third world. Introduction to mechanization: Definition, advantages and limitations of mechanization, [Indian scenario](#) and [Global scenario](#).

UNIT - 2 PREFABRICATION AND INDUSTRIALIZATION

Concept of prefabrication, industrialization and system building, Types of prefabrication – site and plant prefabrication - Economy of prefabrication, various open and closed systems, choice of various systems of building, concept of intelligent building;

UNIT - 3 CONSTRUCTION INDUSTRY

Organization of the construction industry in India-Significance of Housing construction industry, its characteristics and role of various factors involved; Small scale enterprises in the housing construction industry-building material manufacturers, sellers and small contractors. Significance of resources and manpower in housing construction, need for imparting in housing building, concept of Nrimithi Kendras. Quality policy in construction industry, [Consumer satisfaction](#).

UNIT - 4 COST OPTIMIZATION

[Budgeting and budgetary control](#), [Budgeting process](#), [fixed and flexible budgeting](#), [Types of budgets](#), Cost reducing techniques, environmental friendly technologies, role of technology in housing projects formulation-cost time and other implications, Emerging technological perspectives for house construction, infrastructure and housing area planning.

UNIT - 5 ALTERNATIVE TECHNOLOGIES

Role and significance of Physical infrastructure in housing development, characteristics of various components of physical planning and design of infrastructure, appropriate technology for infrastructure development, rain-water harvesting, use of solar energy, wind energy and other appropriate technologies; Current and future trends in Construction technologies, Role of BMTPC and other organizations in promotion of new and alternative technologies. Research writing and article writing to be a part of Units I (introduction to materials and technology), II (prefabrication and industrialization), III (construction industry), IV (cost optimization) and V (alternative technologies)

TOTAL: 90 PERIODS

REFERENCES:

1. BMTPC, GoI Brochures of Building Materials and Technology Promotion Council (BMTPC), Government of India BMTPC, New Delhi
2. BMTPC Directory of Indian Building Materials and Products 2009 BMTPC, New Delhi
3. Government of India Report of High Powered Expert Committee for Estimating Investment Requirements for Urban Infrastructure and Services 2011 GoI

	Semester II	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN201	City Planning	3	0	0	3	40	60	100

OBJECTIVE:

- This course is planned to offer the students, the actual process of plan making at different levels i.e. city level and zonal levels and giving the case studies and their overview.
- The other aspects which are proposed to be dealt in this course are the development control rule which gives the required legal support to the city plans and also contain elementary aspects of urban renewal.
- Study the growth and evolution of cities with respect to their socio economic setup
- Understand the context, location and linkage factors
- To study the problems and issues of metropolitan cities
- To study about the process of preparing Master plan

LEARNING OUTCOME:

1. As an outcome of the above course the graduates will have the ability to conceptualize, analytically define, and treat master plan, zonal plans and detailed development plan professionally
2. They would earn skills in preparing and reviewing the above plan.
3. Learn to prepare development plans for different scale of cities
4. Understand the city sprawl, and peri urban development
5. Urban development policies and programmes
6. They learn about Urban renewal and redevelopment

UNIT – 1 INTRODUCTION

8

Urban - classification, Characteristics of Urban area, Impacts of urbanization – Global and India, Land utilization, Contemporary theories and concepts in city planning - Political influence and polarization of economic, socio-cultural and administrative activities. **Urban development – schemes, acts and mission**

UNIT - 2 MASTER PLAN

12

Plan making process, Delineation of planning area, assessment of developmental issues - Plan period and phasing - Process, Formulation of aim and objectives, Development proposals and land use planning, Delineation of zones, Resource mobilization, Implementation mechanism, Monitoring and review, Public participation - Deficiency of master plan.

UNIT - 3 ZONAL PLAN AND DEVELOPMENT CONTROL RULES

9

Concept, priority in the preparation - **Plan making process (URDPFI)** – Introduction, Site and background analysis, Conceptual framework, Proposals and development strategy, **Conservation and improvement of environment, Compliance of government policies, Zoning, Development regulations, Resource mobilization and Implementation mechanism,** Assessment of developmental issues - Projection of requirements - Land use zones and sub classification - Permissible activities, appellant activities, and prohibited activities - Appeals, appellant authority, and unauthorized developments.

UNIT - 4 CASE STUDIES

6

Case studies on Eco cities, Healthy cities, Low carbon cities, resilient cities, **Sustainable cities, Counter magnets,** Method of preparation, issues and proposals, and critical appraisal. Research writing and analytical writing

UNIT - 5 URBAN RENEWAL

10

Urban renewal as a part of metropolitan plan - Techniques of identification of urban renewal areas - Conservation, rehabilitation and redevelopment - Management of urban renewal areas - Incentive zoning and transfer of development rights. JNNURM – Mission, eligibility, Finance, Implementation and targets, AMRUT– Mission, eligibility, Finance, Implementation and targets. Research writing and article writing to be a part of Units I (introduction), II (Master plan), III (zonal plan and development control rules), IV (case studies) and V (urban renewal)

TOTAL: 45 PERIODS

REFERENCES:

1. Andreas Faludi & Sheryl Goldberg, 'Fifty years of Dutch National Physical Planning, Alexandrine Press, Oxford, 1991.
2. Daniel G. Parolek, AIA, Karen Parolek, Paul C. Crawford, FAICP, Form Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers, John Wiley & Sons, 2008
3. Darren Robinson, 'Computer Modeling for Sustainable Urban Design: Physical Principles, Methods and Applications, Earth scan, Washington, DC, 2011.
4. John L. Taylor & David G. Williams, 'Urban Planning Practice in Developing Countries, Pergamon Press, Oxford, 1982.
5. Kaiser Edward J., 'Urban Land use Planning, University of Illinois Press, Urbana, 1995.
6. Lichfield N.,(Ed), 'Evaluation in Planning: Facing the Challenge of Complexity, Kluwer Academic Publications, Dordrecht, 1998.
7. Melville Campbell Branch, 'Comprehensive Planning for the 21st Century: General Theory and Principles, Westport, Conn. Praeger, 1998.
8. Randall Crane and Rachel Weber, 'The Oxford Handbook of Urban Planning, Oxford University Press, New York, 2012.
9. Stuart Chapin and Edward John Kaiser, 'Urban Land use Planning, University of Illinois Press, Urbana, USA., 1979.
10. Ananya Ray and Aitiwa Ong Eds, 'World of Cities: Asian Experiments and the Art of Being Global, Wiley Blackwell, US 2011.

	Semester II	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN202	Regional Planning	3	0	0	3	40	60	100

OBJECTIVE:

- To make the students understand the concept of regional planning and make them skillful in applying various methods and techniques of regional planning.
- To provide knowledge on different types of regions and its linkages
- Understand the Paradigm shift in regions and planning
- To study about different methods to analyze region and its growth
- Scale, complexity and its impacts in different type of regions
- Study about tools and techniques available for planning regions in India

LEARNING OUTCOME

1. The students will understand the need for Planning at various levels & especially the thrust and focus of regional planning.
2. The students will become familiar with the contents, approach and methodology of preparation of regional plans.
3. They will also learn important concepts & techniques in regional planning.
4. Expected to learn about the region and its dynamics
5. Impacts of globalization in the regions
6. They Learn about different case examples

UNIT – 1 CONCEPT OF REGIONAL PLANNING 9

Concept - Defining a region- fluidity and purpose, and need for regional planning and regional development, Sustainable regional development and its components – Regionalization - Evolution of regional planning. Economy, competitiveness, Special Regions: SEZ, Agro Regions, Ecological regions, etc.

UNIT - 2 TECHNIQUES OF REGIONAL ANALYSIS 9

Input-output analysis - Shift and share analysis - Concentration and dispersal - Industrial location theory. Socio-cultural context of a project, five entry points to social analysis of a project and how to do that, Use of social assessment methods: PRA, SARAR, etc,

UNIT - 3 GROWTH MODELS 9

Sector theory, Stage theory, Export base, model, Theory of Industrial Locations, Cumulative Causation Theory, Growth pole and growth center - Core periphery concept - Central place theory - Agricultural land use model - Models of industrialization and regional development - Resource allocation models.

UNIT - 4 REGIONAL DEVELOPMENT PATTERN 9

Regions in Indian Context: Resource Regions, Corridors as regions, National, sub national and State as a region, macro, meso and micro regions in India, Regional disparities - Resources in regional development - Multi-level planning - District planning - Special area development programmes and schemes - Rural development schemes.
Core, Fringe and Periphery in a Region and its planning; Tools and techniques available for planning regions in India;

UNIT - 5 CASE STUDIES 9

Regional planning in India - Regional planning-National & International case studies. Research writing and analytical writing to be a part of Units I (Concept Of Regional Planning), II (Techniques Of Regional Analysis), III (Growth Models), IV (Regional Development Pattern), V (case studies) Case Studies from India: NCR and Delhi Mega Region, Mumbai Mega Region, Kolkata Metro Region, Chennai Metro Region, and other Metro Regions in India.

TOTAL: 45 PERIODS

REFERENCES:

1. Allen G.Noble, (Eds), 'Regional Development and Planning for the 21st Century: New Priorities and New Philosophies', Aldershot, USA, 1988.
2. Andy Pike, Andres Rodriguez-Pose, John Tomaney, 'Handbook of Local and Regional Development', Taylor & Francis, 2010
3. Chand Mahesh and U.K.Puri, 'Regional Planning in India', Allied Publishers, New Delhi, 1983
4. Dadao. Lu, Jie Fan, 'Regional Development Research in China: A Roadmap To 2050' Springer, 2010
5. David Mosse, 'Development Process: Concepts and Methods for Working with Complexity', Loutledge, London, 1998
6. Hamilton.F, (Ed), 'Industrialization in Developing and Peripheral Regions', Croom Helm, London, 1997
7. Isward Walter, 'Methods of Regional Analysis – An Introduction to Regional Science, MIT Press, Cambridge, 1960.
8. John Glasson, Tim Marshall, Tim Marshall, 'Regional Planning - Natural and Built Environment' Routledge, 2007
9. Roy Prodipdo and Patil BR (Eds), 'Manual for Block Level Planning Mcmillan Company India Limited, 1977.
10. Joseph Martial Ribeiro, 'International Development Projects: Appraisal, Execution Planning and Monitoring', Presses Internationals Polytechnique 2011,

	Semester II	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN203	Research Methodology: Statistics and Quantitative Reasoning	3	0	0	3	40	60	100

OBJECTIVE:

- Students will gain the ability to understand and critically question the kinds of analyses and representations of quantitative data encountered in urban planning and allied disciplines.
- The aim of the course is to introduce students to key concepts and tools in quantitative analysis and research.
- Most importantly, however, the goal is to develop students' intuition regarding data analysis and the application of statistical techniques
- Students will be familiar with how common techniques of quantitative analysis can be applied to a wide variety of data.
- Students will also gain a sense of the strengths and weaknesses of quantitative data analysis and under what circumstances the tools learned in the class are best applied in practice.
- To study about methods of data collection

LEARNING OUTCOME:

1. Students are able to learn various methods and techniques on how to study and understand the problems of the urban and rural society in relation with environment
2. development skills to manage field work, data analysis and report working.
3. Understand the theoretical and practical significance of research
4. Types of research in formulating a research plan
5. Interpret and infer data from statistical analysis
6. They gain knowledge in report writing

UNIT 1 DESCRIPTIVE STATISTICS 9

What are statistics and how are they useful? Scientific inquiry. Levels of measurement- Descriptive Statistics: - Using descriptive statistics - Measures of central tendency - Measures of dispersion

UNIT 2 DATA TYPES 6

Accessing Data, Using Datasets- Gathering, interpreting and presenting trend data - Understanding the India Census - The strengths and limitations of survey data-The Normal Curve -Standard (z) scores -Using the normal curve to estimate probabilities - Extrapolation and forecasting - Discuss Term Project

UNIT 3 INTRODUCTION TO INFERENTIAL STATISTICS 9

How are samples selected? - Simple random sampling and other sample techniques - Sampling distribution, sample, population - Estimation and confidence intervals- Hypothesis Testing I- Null and research hypothesis -Decision rules and the critical region - Test of significance. Hypothesis Testing II: Two sample means - Testing difference between two samples - Difference of means - Difference of proportion. Hypothesis Testing III: Chi Square – Testing relationships between two or more variables - Contingency tables - bivariate relationships - The chi-square distribution and statistic - Sample size considerations

UNIT 4 RESEARCH DESIGN TECHNIQUES 9

Causal explanations -Experimental design - Survey design and implementation- Bivariate Measures of Association: Introduction - Measuring the strength of the association - Bivariate tables for nominal variables - Measuring the direction of the relationship. Bivariate Regression & Correlation - The regression line and linear relationships - Coefficient of correlation (r)- Coefficient of determination (R²)- Explained and unexplained variation - Test of significance for r.

UNIT 5 STATISTICAL PROJECTIONS AND SIGNIFICANCE 12

Simple Linear Regression Correlation and Multiple Regression - Correlation, prediction and causation -Assumptions and limitations

TOTAL: 45 PERIODS

REFERENCES:

1. Field, Andy. (2009). *Discovering Statistics using SPSS*; Third edition. Thousand Oaks, CA: SAGE Publications. (ISBN 978-1847879073).
2. SPSS Statistics Student Version 24.0 or greater. Students can use the UFApps SPSS to complete their homework assignments and tests. The Lynda.com SPSS videos are strongly recommended to assist each student in learning the SPSS software. Articles available on Coursework's Healey, Joseph F. (2007)
3. *The Essentials of Statistics: A Tool for Social Science*. Thompson Publishing
4. Babbie Earl (1983), *The Practice Of Social Research* third edition, Wadsworth Publishing Co., Belmont, California.
5. Creswell John W. (1994) *Research Design: Qualitative Approaches* , Sage publications.
6. Creswell John W. (2003) *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* , Sage publications.
7. Denzin, Norman K.; and Lincoln, Yvonna S.; (Eds.). (1994). *Handbook of Qualitative Research* Sage Publications, London, New Delhi
8. Dwivedi , R.S.(1997) *Research Methods in Behavioral Sciences* Macmillan India Limited
9. De Vaus D.A (2002) *Surveys In Social Research* Rawat Publications Jaipur and New Delhi
10. Nachmias, Chava Frankfort & Nachmias, David *Research Methods in the Social Sciences* St. Martin's Press, New York 8. C.R Kothari, *Research Methodology*, Sultan Chand & Sons, New Delhi, 1990
11. Panneerselvam, "Research Methodology", Prentice Hall of India, New Delhi, 2012.

	Semester II	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN204	Financing Urban Development	3	0	0	3	40	60	100

OBJECTIVES:

- The course aims to introduce concepts of public finance and project finance.
- Understand fiscal and monetary policies prevalent.
- To learn about the Government budgets, fiscal deficits, budget and budget managements
- Public finance topics would include discussions on national and state finance, inter-governmental transfers, results based funding and municipal finance.
- To know Municipal Budget process.
- To learn about outcome based financing options.

LEARNING OUTCOMES:

1. The outcome is to make the student gains insights on public finance.
2. To know the taxation structure and understand the roles, limitations of various agencies in planning.
3. To learn various ways in which a government raises and allocated funds for capital expenditure.
4. To understand innovative financing methods.
5. Knowing the budget allocation for planning at Regional, State and Local levels.
6. To know various grants available.

UNIT 1 BASIC CONCEPTS OF PUBLIC FINANCE 9

Macroeconomic policies – fiscal and monetary policies, money flow, interest, taxation, and, public expenditure

UNIT 2 GOVERNMENT BUDGETS 6

Notion of government accounts and budgets, plan/ non-plan, capital-revenue accounts, deficits. -Public Expenditure review, fiscal responsibility and budget management, review of state finances

UNIT 3 FISCAL DECENTRALIZATION AND INTER GOVERNMENT FISCAL RELATIONS 9

History of Inter Government Transfers in India, role of Central Finance Commissions, State Finance Commissions-Design of inter-government transfer models, performance-based grants, tied and untied grants and issues

UNIT 4 LOCAL GOVERNMENT FINANCE 12

Sources of local government finances – grants, taxes, user charges and borrowings. Discussion on major sources – issues around property taxes and user charges -Municipal budget process. Analysis of municipal budgets, income, expenditure mandates, decision making, -Municipal finance-based planning – using the Performance Improvement Planning Model

UNIT 5 INNOVATIVE FINANCE FOR URBAN DEVELOPMENT: 9

Use of municipal debt for urban infrastructure-municipal debt, bonds, global and Indian experience, importance of regulation, credit rating, municipal development funds - Land based financing mechanisms -Outcome linked approaches -New thinking for results based funding, social impact investing

TOTAL: 45 PERIODS

REFERENCES:

1. Musgrave, Richard A. (1969), Fiscal systems. - New Haven,London etc Yale Uni. Press 1969 - 397p. - Studies in comparative economics
2. Todaro Michael, and Stephen Smith (2012), Economic Development, Tenth Edition, Pearson Education UK. Indian edition published by Dorling Kindersley India Pvt Ltd
3. Crane, Randall (2006), Public Finance Concepts for Planners, working paper (WP06RC1), Lincoln Institute of Land Policies, Cambridge, USA

4. Anwar Shah (Ed). 2006. Local Governance in Developing Countries. The World Bank. Washington D.C.
5. Government of India, Economic Survey 2014, Ministry of finance
6. Supriyo De, Fiscal Policy in India: Trends and Trajectory, Ministry of Finance, Government of India, Working Paper, January, 2012
7. <http://indiabudget.nic.in/index.asp>
8. Mishkin Frederic S, The Economics of Money, Banking and Financial Markets, Global Edition, Pearson, 2013
9. Mohanty P.K. et. al. (2007), "Department of Economic Analysis and Policy", Reserve Bank of India, Mumbai.
10. Rao Govind, and Richard Bird, (2010), Urban Governance and Finance in India, working paper 2010-68, National Institute of Public Finance and Policy, New Delhi
11. Steffenson Jesper (2010), "Fiscal decentralisation and sector funding principles and practices", DANIDA, Mimeo.
12. Steffenson, Jesper (2011), "Performance-based grant systems: Concepts and international experience", UNCDF.
13. Rao Govind, and Richard Bird, (2010), Urban Governance and Finance in India, working paper 2010-68, National Institute of Public Finance and Policy, New Delhi
14. Bahl Roy and Johannes F Linn. 1992. Urban Public Finance in Developing Countries. A World Bank book. Oxford University Press. New York.

	Semester II	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN211	Urban Infrastructure Planning	2	0	4	6	120	180	300

OBJECTIVES:

- To understand the infrastructure service planning and its theories
- To study in depth the storm water system, water supply system, sanitation and sewer systems and Solid Waste management
- To understand the storm water system – approaches, design and computation procedures
- To learn about the Water Supply systems in the City – from the source, distribution, planning process, design guidelines and financial process involved.
- To learn methods of sanitation, advantages and limitations.
- To understand the issues and database, evaluate quantity and its character in Solid Waste Management.

LEARNING OUTCOMES:

The students will gain knowledge on the infrastructure service planning, operations and management

1. The students will also understand the different agencies involved
2. Learn the types of approaches followed in Infrastructure planning and its challenges.
3. Understand planning for Water supply systems, Storm water systems, Solid waste management techniques and sewer systems.
4. Understand using case studies
5. Learn the cost recovery methods.

UNIT 1 INTRODUCTION

Basic Concepts and Theories Role of physical planner in planning of utilities and services, objectives of utilities and services planning and its implications for public health and environmental protection. Familiarizing to CPHEEO manual and guidance

UNIT 2 STORM WATER SYSTEM

Definition of Hydrology, classification, hydrological cycle, urban water cycle; Types precipitation, measurement of precipitation, intensity-duration-frequency relationships, rainfall formula, rainfall maps, significance of interpretation and presentation of rain fall data; Surface water run-off, hydrograph, measurement of discharge for small and big rivers, rational method for estimating run off, unit hydrograph and its application, definition of watershed; Flood frequencies, flood protection measures in urban areas. Estimating storm run-off, run-off co-efficient, rainfall intensity, time of concentration; Gravity flow, hydraulic gradient line, Manning's formula and nomographs, full flow and partial flow; layout and design of storm water system; General considerations, inlets, self-cleansing velocity, non-scouring velocity, physical layout-design principles, data requirement; hydraulic design of storm water system and computation procedure.

UNIT 3 WATER SUPPLY SYSTEMS

Surface and ground water sources, quality and quantity, location of sources and water intakes, area requirements of the components of water intakes; Water requirement for different land uses, factors affecting water demand, per capita requirement and its relationship with population sizes, variation of water consumption; seasonal & hourly, peak factor; demand of water for firefighting; Water treatment system, location and space requirements; Components of water distribution systems, water storage location, capacity, firefighting components, fire hydrants location, spacing, pressure requirement in pipe; Pumps types, efficiency, head loss, pump selection criteria, site selection and space requirements for pump house; Planning of water supply system, organizations and their jurisdictions, basic design guide line and layout of water supply distribution system; Financing water supply system, public and private partnership of providing water; Legal aspects 45 All India Council for Technical Education Model Curriculum for Bachelor's Degree in Planning and government policy for urban and rural water supply. Case study discussion on innovative methods and successful urban water supply system; Significance and methods and advantages of water harvesting system Design of water harvesting systems; Government initiatives for water harvesting system and case study discussion.

UNIT 4 SANITATION AND SEWER SYSTEMS

Methods of sanitation, advantages and limitations; On-site detention, design procedure for on-site detention, Off-site and on-site technology up gradation; Low cost appropriate technologies for sanitation; Quantity of sewage, standards for Indian cities; Sanitary sewer system network and layout, data needs and procedure of planning; Sewer appurtenances; sewer lift station, sewer pumping and forced main manholes; Sewage disposal methods and their advantages and disadvantages, location criteria and capacity; Case study of innovative approaches of sewage disposal in urban area; Approaches for financing and cost recovery for sewer system.

UNIT 5 SOLID WASTE MANAGEMENT

Solid waste management for Indian cities, issues and database, quantity of solid waste and its character; Methods of solid waste management's, collection and transportation, disposal of solid waste; Land filling and composting, pre and post treatment; Indore and Bangalore methods, incineration, pyrolysis and recycling park; Area requirements, location and cost aspects of different methods of solid waste disposal systems; Community participation and involvement of Non-Governmental Organizations or NGOs in efficient solid waste management.

TOTAL PERIOD: 90

REFERENCES

1. CLAYTON, C K, Solid waste management: The Regional approach /
2. CHATTERJEE, AK, Water supply, waste disposal & Environmental Engineering /
3. WALDRAM, J M, Street Lighting /
4. EHBEN, V M, Municipal and Rural Sanitation /
5. WASPE, E J, Solid Liquid flow Slurry pipeline Transportation /
6. FAIR, G.M., GAYER, J.C. AND OKUN, D.A., "Elements of water supply and Waste water Disposal", John Wiley & Sons, New York.
7. T.M. VINODKUMAR, "Networks and services", ITPI Reading Manuals.
8. TCPO AND MINISTRY OF WORKS AND HOUSING, "Norms and Standards for Urban Water Supply and Sewerage Services", New Delhi.

	Semester II	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPN221	Planning Studio II	1	0	10	6	160	240	400

OBJECTIVE:

- Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning
- Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
- To improve communication skills.
- Ability to formulate a framework for study.
- To study and analysis the problem and suggest a suitable solution.
- To understand various practices and standards followed in planning

LEARNING OUTCOME:

1. Ability to present and communicate their ideas
2. To create livable human settlements in rural, urban and regional areas.
3. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
4. Ability to review, comprehend and report technological developments in the profession of planning
5. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.
6. Ability to understand ethical and professional responsibilities.

The Planning Studio II attempts to train students in **the preparation of development plan** conceived within the framework of the approved perspective plan of a medium town having a plan period of 5 or 10 years.

The students are focused to learn to review and prepare plan for a medium urban settlement such as **Development Plan / Master Plan / Structure Plan**. The components such as

- Physical characteristics,
- Natural resources,
- Demographic characteristics,
- Economic base, employment,
- Shelter,
- Transportation,
- Social and infrastructure facilities,
- Finance,
- Institutional set-up etc. are to be learned.

Depending on the selection criteria an urban settlement would be selected and the information regarding the components stated above would be collected both form the primary and secondary sources and analyzed. St ockholders consultative meeting are also conducted during the field visit. A report / maps / charts are the media through which the case study is expected to be presented.

TOTAL: 150 PERIODS

	Semester II – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE2A	Rural and urban housing	2	0	4	6	120	180	300

OBJECTIVE:

- To study Urban and Rural Housing Policies and Programmes in India and the Developing World.
- To introduce the basic premises for Policy Preparation and Content of various Housing Policies and Programmes.
- To familiarize the students with the Real-World Issues and Evaluate Success and Failure of Policies and Programmes
- Introduce different housing schemes for rural areas
- Understand different models and theories in rural housing
- To study about global housing scenario in rural and urban areas

LEARNING OUTCOME:

1. The outcome of this course is to provide students with a comprehensive understanding of various housing policies in rural and urban housing scenario.
2. Understand norms and planning principles for rural communities
3. To learn about importance of community development and citizen participation
4. Impacts of large development in to the villages
5. Learn about the different construction techniques in rural housing
6. They learn about various urban and rural housing programmes

UNIT - 1 INTRODUCTION URBAN AND RURAL HOUSING POLICIES

Mutual dependence between urban and rural areas. Levels of living of rural people. Urban and Rural Housing Policies and its role in national development, objectives of policy in relation to settlement planning, basic components of housing policy and programmes formulation in urban and rural areas, housing policies in India and abroad, its impact and consequences on housing development,

UNIT - 2 HOUSING POLICIES

National planning and rural development, concept of planning for rural settlements. Regional development and urban rural partnership. Housing policy and their focus in different developing and developed countries, their significance in provision of housing programmes for low-income groups, their formulation implementation and evaluation role of international and national funding agencies in housing programmes special housing programmes in different countries.

UNIT - 3 HOUSING IN RURAL

India Socio-economic profile of rural India and rural housing conditions-types of traditional building materials and construction methods, house types, rural housing norms, standards and design, access to infrastructure, rural health and sanitation, environmental improvement in villages, concept of integrated rural housing development, rural housing schemes, impact of large development projects and community development in rural areas, special needs for housing for tribal. Planning principles for village and community norms. Public participation in rural development process, role of voluntary organizations.

UNIT - 4 GLOBAL OVERVIEW

Review of urban and rural housing policies in various countries with particular focus on South East Asian countries Rural energy issues, renewable and alternative resources of energy, ecological and environment considerations in rural development and village planning.

UNIT – 5 CASE STUDIES OF POLICIES AND PROGRAMMES

Various urban and rural housing programmes including the current JNNURM, RAY, Bharat Nirman, PURA, etc. Research writing and analytical writing to be a part of Units I (Introduction Urban And Rural Housing Policies), II (Housing Policies), III (Housing In Rural), IV (Global Overview), V (Case Studies Of Policies And Programmes)

TOTAL: 90 PERIODS

REFERENCES:

1. Government of India, National Urban Housing and Habitat Policy, 2007, Ministry of Housing and Urban Poverty Alleviation
2. Glaesar, Bernhard, Housing, Sustainable Development and Rural Poor, 1995, Sage, New Delhi
3. Friedrichs, J, Affordable Housing and the Homeless, 1988, Walter de Gruyter & Co, Berlin
4. Rao, P.S.N., Urban Governance and Management, 2005, Kanishka Pub. and IIPA, New Delhi

	Semester II – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE2B	Planning Legislation and Professional Practice	2	0	4	6	120	180	300

OBJECTIVE:

- To make the students aware and understand the relevance of constitution and legislation in relation to spatial planning.
- The course also facilitates students to experience implications of the existing legislations relating to planning and its importance and shortcomings.
- The students are exposed to problems and prospects of town planning in terms of professional practice.
- To study the inclusion in planning and development process
- To review policies, programmes and legislation in planning
- To study about the acts and rules of governing bodies

LEARNING OUTCOME:

1. Knowledge acquired in various Acts/Laws relating to spatial planning will enable the students to apply them in professional practice as well as apply in their day to day life.
2. Orientation towards the significance of planning rules and regulations would help students to deal urban and regional planning issues within framework of human rights and environmental protection.
3. They know about the role of state and central in planning
4. Learn about the legislations related to urban planning and development
5. Understand the basic concept of law and Indian constitution acts, regulations related to urban planning
6. Gain knowledge in Professional role responsibility and planning consultancy service

UNIT - 1 CONCEPT OF PLANNING LEGISLATION

The concept of law, legislation, ordinance, bill, Act Regulation and by-laws, concept of Eminent Domain and Police Powers. Indian constitution, national goals - Rights of ownership and development of property - Statutory control as a positive tool in plan preparation and implementation - Evolution, scope and significance of planning legislation - History and survey of development of planning legislation in India.

UNIT - 2 ACTS AND RULES GOVERNING LOCAL BODIES

Panchayat Act, Municipality Act, Corporation Act, TNULB Act, Improvement Trust Act, Development Authorities Act, Land Acquisition Act 1986, Rent Control Act, Apartment Ownership Act 1983. Provisions in the above acts related to functions, powers, role and responsibilities of local bodies including elected representatives and officers – The 73rd and 74th CAA and their implications on planning and development - Local government finance, revenue, expenditure and resource mobilization.

UNIT - 3 ACTS RELATED TO PLANNING AND IMPLICATIONS OF LAWS AND REGULATION ON DEVELOPMENT

Review of Town and Country Planning Act of Tamil Nadu, Urban Development Act, Public Health Act, Slum Improvement Act, State Housing Board Act, and National Rehabilitation and Resettlement Policy (2007) - Social Impact mitigation, National Environmental Policy (2006). Development management - Law relating to utilities and services - Implications of land ceiling, betterment levy and development charges - Concept of arbitration. Significance of land development controls – Zoning, subdivision regulations, building regulation and bye-laws

UNIT - 4 PROFESSIONAL PRACTICE

Professional role responsibility and planning consultancy service - Professional ethics-code of conduct and professional charge - Role of inter disciplinary group, role in decision making processes and the process in relation to varied consultancy assignment of planning. Consultancy agreements, and contracts - Project proposals formulation - Changing professional practice in India and abroad.

UNIT - 5 PROFESSIONAL INSTITUTIONS

Aim and objectives of professional institutions , Private and international town planning organizations - Institution buildings and setting up private practice and work, Career options and prospects – Case studies.

TOTAL: 90 PERIODS

REFERENCES:

1. Anil Chaturvedi, 'District Administration', Sage Publications India Pvt. Ltd, New Delhi, 1988.
2. Ashok Kumar Jain, 'Low Carbon City: Policy, Planning and Practice' Discovery Publishing House, 2009
3. B.I.S., 'National Building Code of India', ISI, New Delhi. 1980
4. C.K.Bikseswaran,'The Madras Building (Lease and Rent Control Act), 1960, Sitaraman and Co., Madras.1964
5. Gopal Bhargava, 'Socio-economic and Legal Implications of Urban Land Ceiling and Regulations', Abhinav Publishing Company, New Delhi.1983
6. Government of Tamil Nadu, 'The Tamil Nadu Town and Country Planning Act, 1971, Govt of Tamil Nadu. 1976
7. Govt. of India, 'The Land Acquisition Act, Ministry of Housing and Urban Development, New Delhi. 1894
8. Joshi. A, 'Town Planning: Regeneration of Cities' New India Publishing, 2008
9. Patsy Healey, Robert Upton, 'Crossing Borders: International Exchange and Planning Practices' Routledge, 2010

	Semester II – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE2C	GIS Modeling in Urban and Regional Planning	2	0	4	6	120	180	300

OBJECTIVE:

- To train the candidate in building GIS models for urban and regional planning applications with hands on experience of spatial data, attribute data input and experiment with GIS analysis. Note: This is offered as a practical in the computer lab and does not involve setting of question paper as in theory paper.
- Study the principles and applications of remote sensing
- To study the sources of demographic data in GIS application
- Study about automated mapping and facility management through GIS
- Evolve ideas of land use suitability analysis
- To study about the objectives and functions of GIS models in urban and regional planning

LEARNING OUTCOME:

1. The outcome of this course is to provide students with a comprehensive understanding of the concepts, techniques, methods used by an urban planner to treat spatially cities by preparing urban land use models using GIS.
2. Learn about the data bases for different survey techniques
3. They learn about data tabulation and interpretation of data gathered
4. Automated maps and report generation using GIS mapping
5. They learn about Analytical planning Techniques and presentation
6. They learn about urban land use mapping

UNIT – 1 INTRODUCTION

Definition, map and map analysis, automated cartography, history and development of GIS, Hardware requirement, system concepts, co-ordinate systems, standard GIS Packages. Classification of spatial and non-spatial data application of spatial data in urban and regional plans – objectives and functions of GIS models in urban and regional planning.

UNIT - 2 SPATIAL DATA INPUT

Defining the objectives of GIS planning problems, Types of data, spatial and non spatial data, data structure, points, lines, polygon, vector and raster, files and file organization, database, data entry, digitizer, scanner, Dbase, files and data formats, data compression. Identification of required spatial data layers – coding schemes – digitization of spatial data – editing spatial data usable for the given planning problem.

UNIT - 3 ATTRIBUTE DATA INPUT

Role of attribute data in defining geographic features – adding attribute data file – topology generation – Joining attribute data to its geographic features. Satellite images as input to GIS;

UNIT - 4 SPATIAL ANALYSIS USING GIS

Performing overlay functions – manipulating attribute data – GIS modeling, GIS data processing (Digitization , topology building and metadata creation), Data structures and modeling , GIS Analysis (Buffer , proximity and overlay), Automated mapping and facility management (AM/FM). – map and report generation – case problems on regional analysis, impact assessment study, project formulation and land suitability analysis

UNIT - 5 URBAN LAND USE MODELING

Need for model - Land suitability analysis, urban land use modeling, Change demand modeling, Transition potential modeling and land allocation modeling

TOTAL: 90 PERIODS

REFERENCES:

1. Brail K.R. 'Integrating GIS into Urban and Regional Planning. Alternative approaches for developing countries. Regional development Dialogue, Vol.11, No.3, UNCRD, Japan, 1990.
2. Cartwright T.J. 'Information Systems for Urban and Management in Developing Countries. The Concept and Reality, Computers, Environment and Urban Systems Vol.15, 1991.
3. David J. Maguire, Michael Batty, Michael F. Goodchild, 'GIS, spatial analysis, and modeling' ESRI Press, 2005
4. ERSI, 'Understanding GIS. The ARCI INFO. Methods, ERSI, USA. 1992
5. Fotheringham, Peter Rogerson, 'Spatial Analysis And GIS' CRC Press, 2004
6. Ian N. Gregory, Paul S. Ell 'Historical GIS: Technologies, Methodologies, and Scholarship' Cambridge University Press, 2007
7. Klosterman R.E., 'Micro Computer Packages for Planning Analysis', American Planning Association Journal, Autrenn, 1990.
8. Tomlin C.D., 'Geographic Information Systems and Cartographic Modeling, Prentice Hall, Englewood Cliffs, U.S.A. 1990.

	Semester II – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE2D	Urban Development And Management	2	0	4	6	120	180	300

OBJECTIVE:

- To comprehend the various Facets of Urban Development and Management.
- To understand the how decisions pertaining to Supply of Land and Built Environment are taken.
- To understand socio economic/political and technological forces and their consequences in urban settlements
- To study various approaches to urban development and management
- To know about the different factors affect urban development
- Study about land and real estate development and its impact on supply and demand

LEARNING OUTCOME:

1. To study the Processes and Management of Urban Planning and Development.
2. Learn about Regulations and laws related to urban development and planning
3. Gain knowledge on Land economics and land related policies
4. Develop skills in research writing
5. They learn about development-based information system and urban reforms
6. They learn about Real estate development

UNIT – 1 INTRODUCTION TO DEVELOPMENT MANAGEMENT

Concept, approaches, components, interfaces with national goals and political economic system. Land Economics, Land Policy and Land Markets

UNIT - 2 URBAN DEVELOPMENT MANAGEMENT

Strategies, Tools and Techniques -Techniques of land assembly: acquisition, readjustment, pooling, sharing, plot reconstitution, land lease, cooperative of landowners; organizations involved.

UNIT - 3 LAND AND REAL ESTATE (PART 1)

Development 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 Side Management- Property Rights, Land Development, Regulation in Land Markets, Land Management Techniques. Demand Side Management- Income elasticity of land, business cycles and its impact;

UNIT - 4 LAND AND REAL ESTATE (PART 2)

Real estate markets, type of property development and its impact on supply and demand, method of development, environmental considerations. Land valuation techniques, land pricing, subsidies, auctions; type of development: plotted, flatted system, and their effect on land pricing. Hedonistic pricing, land price behavior in urban centers; constructing the land price index;

UNIT - 5 INFORMATION SYSTEM AND URBAN REFORMS

15

Land Information System (LIS): Land records in rural areas (examples from Karnataka, Andhra, etc), transparency in land transaction, methods of publicizing land prices and land price monitoring. Spatial and Non - spatial information systems; Urban reforms and acts and policies.

Research writing and analytical writing to be a part of Units I (Introduction To Development Management), II (Urban Development Management), III (Land And Real Estate (Part 1)), IV (Land And Real Estate (Part 2)), V (Information System And Urban Reforms)

TOTAL: 90 PERIODS

REFERENCES

1. Rakodi, C. and Lloyd-Jones, T. *Urban Livelihoods: A PeopleCentered Approach to Reducing Poverty*. 2002 Earthscan, London
2. Datta, A. *The Illegal City: Space, Law and Gender in a Delhi Squatter Settlement* 2012 Ashgate, Burlington
3. Roy, A. and Ong, A. (eds.) *Worlding Cities: Asian Experiments and the Art of Being Global* 2011 Wiley Blackwell, London

	Semester II – Elective	Instruction Hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPNE2E	Inclusive urban planning	2	0	4	6	120	180	300

OBJECTIVE:

- To study Significance of Inclusion in Planning and Development Process.
- To study Policies, Programmes and Legislation for Participatory Planning.
- To study about the informal sectors and contribute inclusive planning in their development
- Understand about different communities and societies involved in different settlement structures
- Introduce citizen participation in inclusive planning
- To study about Different social groups and weaker sections

LEARNING OUTCOME:

1. To study the various Forms, Arenas and Uses of Inclusion in the Processes of Urban and Regional Planning.
2. Learn about importance of citizen participation in developing inclusive communities
3. Different approaches in participatory planning and processes
4. Understand the equal opportunities in accesses infrastructure provision of all communities
5. Learn about the linkage's aspects in communities growth
6. They learn about informal settlements and their infrastructure accessibility

UNIT - 1 UNDERSTANDING INCLUSIVE URBAN PLANNING

Inclusive Planning – Definitions, components and Needs, Unsustainable current planning practices, [Sustainable development goals](#).

UNIT - 2 STAKEHOLDERS PROFILE AND NEEDS, ACCESS TO SHELTER, SERVICES AND LIVELIHOODS (PART 1)

Identification and characteristics of Social Groups and Weaker Sections - Urban Poor, Informal Sector, Gender, Children, Elderly, Disabled, Displaced people, etc. [improving the inclusivity of urbanization, Methods of inclusivity](#).

UNIT - 3 STAKEHOLDERS PROFILE AND NEEDS, ACCESS TO SHELTER, SERVICES AND LIVELIHOODS (PART 2)

Informal sector - growth, characteristics, functions, economic contributions, linkages with formal sector, impact on Urban Development. Slums - dimensions, causative factors, determinants, [location characteristics of settlements](#).

UNIT - 4 PARTICIPATORY PLANNING & POLICIES, PROGRAMMES & LEGISLATION

Analyzing the Current Legal and Regulatory Environment w.r.t PP, [Examine the practice of participatory methods in national/regional policy making and planning exercises](#). Methods, role of stakeholders participation (including civil society organizations), etc.; Related Acts, Five year plans, policies and programmes at various levels.

UNIT – 5 PLANNING INTERVENTIONS

Inclusive zoning, development and building regulations, Slum Improvement. Research writing and analytical writing to be a part of Units I (Understanding Inclusive Urban Planning), II (Stakeholders Profile And Needs, Access To Shelter, Services And Livelihoods (Part 1)), III (Stakeholders Profile And Needs, Access To Shelter, Services And Livelihoods (Part 2)), IV (Participatory Planning Process And Policies, Programmes And Legislation), V (Planning Interventions)

TOTAL : 90 PERIODS

REFERENCES

1. Datta, A., *The Illegal City: Space, Law and Gender in a Delhi Squatter Settlement*, 2012, Ashgate, Burlington.
2. Roy, A. and Ong, A. (Eds.), *Worlding Cities: Asian Experiments and the Art of Being Global*, 2011, Wiley Blackwell, London.
3. Eijk, G.V., *Unequal Networks: Spatial Segregation, Relationships and Inequality in the City*, 2010, IOS Press, Amsterdam.
4. Harriss, J., *Antinomies of Empowerment: Observations on Civil Society, Politics and Urban Governance in India, Economic and Political*. 2007

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN301	Environmental Planning	3	0	0	3	40	60	100

OBJECTIVE:

- Environmental planning plays a vital role in balancing the needs of society by creating and carrying out programs, policies and regulations which consider the current and future impact of human development on the natural environment.
- This course will expose you to conceptual tools for understanding the two principal avenues through which the natural and built environment are managed – the rule –making procedures of environmental policy and the future-imagining of environmental planning.
- To study about the environmental issues such as open spaces, encroachments etc
- To develop knowledge about sustainable environmental planning
- To evaluate the existing policy framework and the environment
- Study about different concepts and measures in environmental standards

LEARNING OUTCOME:

1. The outcome of this course is to provide the students with professional knowledge, skills and techniques necessary to plan, manage and maintain a balanced, sustainable and productive environment.
2. They learn about different environmental impacts in India
3. Earn knowledge in developing sustainable urban planning and environment goals
4. Gain knowledge in global environmental initiatives
5. To Develop strategies for environmentally sustainable infrastructure development
6. They learn about Mitigation measures in environmental management plan

UNIT - 1 DEVELOPMENT CONSEQUENCES ON ENVIRONMENT 9

Introduction to Environmental planning, aims, objectives and Implementation. [Introduction to State and National policies](#). Components of environment – Classification of environmental resources - Purpose and objectives in environmental protection, planning and management – Consequence of development over urban and rural settlements – Environmental concerns at local, regional and global levels.

UNIT - 2 ENVIRONMENTAL MANAGEMENT AND STANDARDS 6

Environment planning theories and their applications, [Environmental Zones \(Hill, coastal, arid, characteristics, resources, settlements pattern, problems and potentials, regulating mechanisms for development\)](#). Institutional and legal support in management of environment – Environmental policies, and protocols - Global environmental initiatives - Environmental Indicators - Concepts and measures in environmental standards

UNIT - 3 ENVIRONMENTAL IMPACT ASSESSMENT 9

Overview of environmental impact assessment practice in India - Types, conceptual approach and phases of EIA – Impact identification methodologies – Prediction and assessment of social, cultural and economic environments

UNIT – 4 ENVIRONMENTAL DECISION MAKING 9

Generation and evaluation of alternatives – Decision methods- [Multicriteria decision analysis](#) – Mitigation and environmental management plan, [Environmental protection international and national agencies and legislation, Environmental policies for various geographical regions](#). Public participation in the process of environmental decision making process. [Appropriate technologies and applications](#).

UNIT - 5 ENVIRONMENTAL APPROACH IN PLANNING

12

Environmental concepts – Sustainability and environmental carrying capacity – Environmental strategies in land use, transportation, infrastructure planning and management - Legislative requirements, public awareness and community

participation – Environmental management options. Urban and rural housing. Economic measures of sustainable development. **Environmental performance evaluation.**

TOTAL: 45 PERIODS

REFERENCES:

1. Asesh Kumar Maitra, 'Urban Environment in Crisis', New Age International (P) Limited, Publishers, New Delhi. 1998.
2. Avijit Gupta and Mukul G. Asher, 'Environment and the Developing World', John Wiley & Sons, New York, USA. 1997.
3. Charles H. Eccleston, 'Environmental Impact Assessment: A Guide to Best Professional Practices' CRC Press, 2011
4. Charles H. Eccleston, NEPA and Environmental Planning: Tools, Techniques, and Approaches for Practitioners, CRC Press, 2010
5. Jerzey A. Filar, Alain Haurie, 'Uncertainty and Environmental Decision Making' Springer, 2010
6. Charles H. Eccleston, 'Environmental Impact Assessment: A Guide to Best Professional Practices' CRC Press, 2011
7. Charles H. Eccleston, NEPA and Environmental Planning: Tools, Techniques, and Approaches for Practitioners, CRC Press, 2010
8. Jerzey A. Filar, Alain Haurie, 'Uncertainty and Environmental Decision Making' Springer, 2010
9. Larry W. Canter, 'Environmental Impact Assessment', McGraw-Hill, Inc., New York, 1996
10. Pannirselvam R and Karthikeyan, 'Environmental Impact Assessment' SPGS Publishers, Chennai. 2005.
11. Rao P.K, 'Sustainable Development', Blackwell Publishers, Massachusetts, USA. 2001.

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN302	Project Formulation and Implementation	3	0	0	3	40	60	100

OBJECTIVE:

- This course aims at examining techniques and procedures relevant for project planning and implementation in developing countries, including project identification, feasibility analysis, design and implementation monitoring.
- It also considers how to evaluate economic and distributive effects of completed or ongoing infrastructure development projects.
- Specific attention has been given to show how institutional setting and other practical influences affect the use of conventional analytical tools.
- To study relationship between projects and planning at various levels
- To study about Management, implementation and evaluation of projects
- To understand organizational aspects in project management

LEARNING OUTCOME:

1. Plan identifies projects and the success of plans depends on Implementation of identified projects.
2. In this context, students will develop knowledge on important aspects of project formulation, criteria for project appraisal and project management.
3. They learn about project monitoring
4. The resource management for project funding, operation and maintenance
5. Learn about preparing feasibility reports for project planning
6. Presentation skill development

UNIT - 1 INTRODUCTION TO PROJECT FORMULATION 9

Introduction to project management, (Definition, Need / Benefits, Achieve business objective, Role of project manager, , Integrative approach, Process group). Overview of the project cycle – Planning process and project planning – Search for project ideas – Strategies in capital allocation - Key elements in project formulation – Methods and tools for project formulation – Project identification and selection – **Creating a Project Proposal (Establishing Objectives, scoping the boundaries)**

UNIT - 2 PROJECT ANALYSIS 9

Preparation of feasibility reports, Capital cost estimation - Market and demand analysis – Technical analysis – Environmental analysis – Financial and economic analysis – Cash flow generation. **Estimation in Project Proposal**

UNIT - 3 PROJECT APPRAISAL 10

Time and value of money – Investment criteria-internal rate of return, net present value, costbenefit analysis, and social cost benefit analysis – Project risk analysis – Appraisal of marketing strategy - Pricing and credit worthiness and management capabilities. Developing Project Plan (Evaluating and Constructing network, Schedule, Criticality, Gantt Charts, Techniques)

UNIT - 4 PROJECT FINANCING AND IMPLEMENTATION 9

Project resource management (Overview and types of resource, Resource constraints & Scheduling, Allocation methods, Resource vis-à-vis other Activities of project planning). Funding options for urban development projects - Tender procedure-Tamil Nadu transparency in tender rules - Organizational aspects in project management – Network techniques for project management.

UNIT - 5 PROJECT MONITORING AND EVALUATION

8

Risk Management , Time Management , Project Monitoring and Controlling (Monitoring process (time, cost, resource), control processes, earned value cost/schedule system, variance analysis, CBA and other techniques) Need and techniques

for monitoring – Performance and process monitoring – Monitoring schedules. Research writing and article writing stating case studies.

TOTAL: 45 PERIODS

REFERENCES:

1. Gudda, 'A Guide to Project Monitoring and Evaluation' Author House, 2011
2. Gray F.Cilfford, Larsen W Erik, Desai V. Gautam, "Project Management" Tata McGraw Hill Edition, New Delhi, 2010.
3. Henderson PD, 'Investment Criteria for Public Enterprises, Penguin Books, New Delhi 1999.
4. Michael Bambarger and Eleanor Hewitt, 'Monitoring and Evaluating, Urban Development Programmes: A Hand Book for Program Managers and Researchers, The World Bank. 1988.
5. Kurowski Lech, David Sussman., "Investment Project Design- A Guide to Financial and Economic Anaysis with Constraints" John Wiley & Sons publications. 2011
6. Prasanna Chandra, 'Projects', Tata McGraw-Hill Publishing Company Limited, New Delhi, 2009
7. Raghuram G, Rekha Jain, SidharthSinha, PremPangotra and Sebastian Morris, 'Infrastructure Development and Financing, Macmillan India, Delhi, 2000
8. Samuel Mantel, Jack Meredith, Scott Shafer, 'PROJECT MANAGEMENT CORE TEXTBOOK' John Wiley & Sons, 2006
9. Warren C. Baum, 'The Project Cycle', World Bank – Economic Development Projects, Washington, 1993.

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN303	Urban Finance	3	0	0	3	40	60	100

OBJECTIVES

- The aim is to understand the income, expenditure and limitations in Multiple Finance
- To understand additional funding sources.
- To study the institutional capacities of different stakeholders.
- To know the non-traditional sources of funding
- Understand better finance management practices.

LEARNING OUTCOMES

1. To students will understand urban finance methods and its application in various sectors.
2. The students will understand the value for money in making decisions of finance for urban development projects
3. Learn about grants, subsidies in project financing.
4. To know computerization tool for resource enhancements and role of IT in finance planning.
5. To know PPP mechanisms
6. Understand role of Non-governmental agencies, International funding agencies in funding the projects with grants and subsidies.

UNIT 1 MULTIPLE FINANCE

Nature and composition of income and expenditure, limitations and need for revenue enhancements; Expenditure control methods and mechanisms; Budgetary allocation from Central and State Governments for urban development; Assistance from foreign donors and Multi National agencies; Non-traditional sources of funding; Market access; Pool finance and prerequisite conditions for accessing non-traditional funds.

UNIT 2 ADDITIONAL FUNDING SOURCES

Types of partnership approaches; Privatization of civic services; public private partnership mechanisms; Types of contracts and ownerships; Emerging cost effect technology interventions; User charged projects; Pricing of services.

UNIT 3 URBAN REFORMS

Resources Based on Achievement of Urban Reforms Role of state government and urban local bodies; City's challenge fund; Urban reforms; Implications on resources, incentive fund and state level pooled finance development fund.

UNIT 4 INSTITUTIONAL CAPACITY

Enhancement Better finance management, management process; Accounting and budgeting, asset management, receivables management, cost centre approach; Computerization as tool for resource enhancement; Role of Management Information Systems.

UNIT 5 PLAN FORMS

Plan forms and Indices Financial operating plan, city corporate plan; Development of urban indicators; Infrastructure pricing and financing – financing mechanisms in addition to tax and grants; private public partnerships like BOT, BOOT, BOLT etc.; Impact fee, subsidies.

TOTAL: 45 PERIODS

REFERENCES:

1. Musgrave, Richard A. (1969), Fiscal systems. - New Haven, London etc Yale Uni. Press 1969 - 397p. - Studies in comparative economics
2. Todaro Michael, and Stephen Smith (2012), Economic Development, Tenth Edition, Pearson Education UK. Indian edition published by Dorling Kindersley India Pvt Ltd
3. Crane, Randall (2006), Public Finance Concepts for Planners, working paper (WP06RC1), Lincoln Institute of Land Policies, Cambridge, USA
4. Anwar Shah (Ed). 2006. Local Governance in Developing Countries. The World Bank. Washington D.C.
5. Government of India, Economic Survey 2014, Ministry of finance
6. Supriyo De, Fiscal Policy in India: Trends and Trajectory, Ministry of Finance, Government of India, Working Paper, January, 2012
7. <http://indiabudget.nic.in/index.asp>
8. Mishkin Frederic S, The Economics of Money, Banking and Financial Markets, Global Edition, Pearson, 2013

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN311	Public Private Partnerships for Urban Development	2	0	4	6	120	180	300

OBJECTIVE:

- Public Private Partnership projects are an integral part of urban infrastructure development.
- The objective is to learn the basic concepts of attracting private sector in public infrastructure deliver
- To understand different types of a PPP arrangement
- Learn which sectors have potential for PPP
- How PPP is used in different ways
- Value for money on using PPP than conventional financing methods.

LEARNING OUTCOMES:

1. To students will understand PPP
2. To know green infrastructure and its applications of PPP in various sectors.
3. To learn about the PPP toolkit and various institutional reforms.
4. The students will understand the value for money in making decisions of finance for urban development projects
5. Explore the PPP contracting models -BOT,BOOT, DBOT, etc.
6. To understand the risk factors involved in contracting -Project cost and time overruns.

UNIT 1: INTRODUCING PRIVATE SECTOR IN PUBLIC FINANCE AND CRITICAL APPROACH TOWARDS USING PRIVATE MONEY

This session will introduce the notion of using private money for public purpose. What are the forms of using private money and what does it mean to use private money? We will discuss various degrees of privatisation and Public Private Partnership (PPPs). What are the various approaches of PPP?

UNIT 2: PPP AND ITS IMPLICATIONS

What is the implication for finance in each approach? [Development-PPP, Urban regeneration: Local regeneration-PPP, Green infrastructure: Policy-PPP, Governance approach: Governance-PPP, infrastructure-PPP]. What are the consequences of using private money: higher borrowing rate, exit route, guarantee etc. Implication of economic recession on PPPs. What should be the safeguards to assure public interest is protected when private sector is introduced? combating corruption, anti-money laundering tools.

UNIT 3: EXPLORING INFRASTRUCTURE-PPP

Why PPP is used in infrastructure sector? How PPP was evolved over traditional model overcoming its weakness? Risk and uncertainties in infrastructure sector and how to use private money as risk capital by creating business opportunities? Why PPP is a more transparent and accountable model? Legal and institutional reforms in India in favour of Infrastructure-PPP.

UNIT 4: EXPLORING POTENTIAL OF PPP IN VARIOUS SECTORS

This session will not discuss specific sectors, but the logic behind understanding the potential of various sectors to use PPP and specific forms of PPP model; Unbundling and rebundling of public goods; vertical segmentation of infrastructure sector; financing issues: user fee, uncertainty factor.

UNIT 4: PPPS IN WATER AND SANITATION/TRANSPORT

This session will provide an understanding of types of PPP and PSP in water supply and sanitation sector. It will discuss the past trends and the reasons for slow emergence of major PPP projects in WSS sector in India. It will also identify global trends and the changing nature of PPPs in the WSS sector. Some of the measures to support effective use of PPPs in the sector will also be discussed.

UNIT 5 VALUE FOR MONEY METHODOLOGY

This session will introduce Value for Money methodology as a decision-making tool to adopt PPP. VFM methodology using hand-on exercise; discounted risk; time value of money; (What is retained risk, what is discounted risk, what is life cycle, what are the qualitative factors); Why is VFM not used in developing nations? What is Public sector comparator? Why is it not used in India? What could be the alternative? How is it related to transparency and accountability issue?

TOTAL: 90 PERIODS

REFERENCES:

1. Flyvbjerg et al (2003). Unit 10. Four instruments of accountability. in *Mega Projects and Risk: An Anatomy of Ambition*. Cambridge University Press.
2. Unit 4 in Graham, S. and Marvin, S. (2001) *Splintering Urbanism*. Stephen and Graham (2001). *Splintering Urbanism*. Routledge. London and New York.
3. Martimort, D. and Pouyet, J. (2006). "To build or not to build: Normative and Positive theories of Public Private Partnerships."
4. Weihe, G. (2008) "Ordering disorder—on the perplexities of the partnership literature." *Australian Journal of Public Administration*. Volume 67(4). Pp. 430-442.
5. Hall, D. et al. (2003) "Terminology of Public Private Partnerships" by Public Services International Research Unit. Funded by European Public Services Union (EPSU).
6. International Institute of Sustainable Development (2014). "Value for Money in infrastructure Procurement: The costs and benefits of environmental and social safeguards in India." Section-I.
7. Working Paper: The basic public finance of public-private partnerships, Center discussion paper, Economic Growth Center, No. 957. Provided in Cooperation with: Economic Growth Center (EGC), Yale University by Engel, Eduardo M. R. A.; Fischer, Ronald D.; Galetovic, Alexander.
8. Price Waterhouse Coopers (September 2007). "Infrastructure-PPP financing in India" Prepared for World Bank.
9. PPIAF Gridlines Publication: Designing and using public-private partnership units in infrastructure: Lessons from case studies around the world
10. Govt of India: Financial support to Public Private Partnership in Infrastructure.
11. Water and sanitation Program (2011), "Trends in Private Sector Participation in the Indian Water Sector: A Critical Review", WSP, Mimeo.
12. Muir Russel and Jordan Schwartz (2006), "Approaches to private participation in water sector: A toolkit", World Bank.
13. Mehta Meera (1999), "Water and Environmental Sanitation: A Review of Public Private Partnerships in India", Report for DFID, Mimeo.
14. Xun Wu and Nepomuceno A. Malaluan (2008), A Tale of Two Concessionaires: A Natural Experiment of Water Privatisation in Metro Manila, *Urban Studies*, 45(1) 207–229, January 2008
15. The World Bank, PPIAF (2013). "Value for money analysis: Practices and Challenges."
16. Infrastructure Ontario. "Assessing value for money: A guide to Infrastructure Ontario's methodology."
17. Publication of OECD Journal of budgeting: "How To Attain Value for Money: Comparing PPP and Traditional Infrastructure Public Procurement." PPIAF Gridline publication: "Is the public sector comparator right for developing countries?"

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	Total
21MPN321	Planning Studio III	1	0	10	6	160	240	400

OBJECTIVE:

- Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning
- Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
- To improve communication skills.
- Ability to formulate a framework for study.
- To study and analysis the problem and suggest a suitable solution.
- To understand various practices and standards followed in planning

LEARNING OUTCOME:

1. Ability to present and communicate their ideas
2. To create livable human settlements in rural, urban and regional areas.
3. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
4. Ability to review, comprehend and report technological developments in the profession of planning
5. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.
6. Ability to understand ethical and professional responsibilities.

Elaboration of the principals and techniques adopted and learnt themes and planning projects.

Application of themes and techniques of planning in the preparation of development plans at regional, district, blocks, central village and village level, along with community action and participation plans. Review regional plan contents, methods and practices at local, national and international levels.

Studies and analysis would consist of survey, local renewable development, settlement distribution pattern, environmental protection, institutional and implementation framework. Conducting Stake holders meeting to assess the community needs becomes very important input for the preparation of development plans. Identification of projects programmes and schemes with funding sources.

TOTAL: 165 PERIODS

	Semester III	Instruction Hrs				MARKS		
		L	T	P	C	CIA	ESE	TOTAL
21MPN322	Dissertation	2	0	4	6	120	180	300

OBJECTIVE:

- Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning
- Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
- To improve communication skills.
- Ability to formulate a framework for study.
- To study and analysis the problem and suggest a suitable solution.
- To understand various practices and standards followed in planning

LEARNING OUTCOME:

1. Ability to present and communicate their ideas
2. To create livable human settlements in rural, urban and regional areas.
3. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
4. Ability to review, comprehend and report technological developments in the profession of planning
5. Students to get opportunities to publish research paper, display exhibits, present papers in conferences and seminars.
6. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.
7. Ability to understand ethical and professional responsibilities.

Dissertation is a formal report written systematically on a particular topic as related to town and country planning. This exercise is taken up as to widen and enrich the literature pertaining to a topic of research. It may focus upon cross section of literature of a topic of research. The material written systematically may be useful in fourth semester when the same topic with literature reviewed systematically be confined as a part of thesis. Also the outcome of literature review done during the dissertation could be helpful to formulate the Thesis during the IV semester.

TOTAL: 90 PERIODS

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPNE3A	Environmental Design	3	0	0	3	40	60	100

OBJECTIVE:

- To understand Approach to Environmental Design as applicable to Built Environment and Landscape Development.
- To study Urban Climatology and Effects of Climate Change on City Planning.
- To study about the concepts of urban ecology and sustainable growth practice
- Evaluate the influence of climate change in designing cities
- Study of environmental theories and practice
- To study about urban forest management

LEARNING OUTCOME:

1. To study Evolution of Environmental Design, Theory and Practice.
2. Learn about different climatic based design and practices
3. Application of sustainable principles in reducing energy in urban infrastructure
4. Understand the different climate change and its mitigation measures
5. Gain knowledge on different concepts of urban ecology
6. They learn about Acoustics and climate change

UNIT – 1 EVOLUTION OF ENVIRONMENTAL DESIGN, THEORY AND PRACTICE

Design as a determinant of Environmental quality; evolution of Environmental design, theories and practice of design.

Concepts of urban ecology - Theories of urban ecology and linkages with sustainable urbanism,

UNIT – 2 APPROACH OF ENVIRONMENTAL DESIGN AS APPLICABLE TO BUILT ENVIRONMENT (Part 1)

Criteria of Urban Environmental design issues-pedestrian-vehicular conflict, City Centre Environment, Housing areas, dereliction, environmental upgradation programmes; built environment aesthetics of ensemble of buildings, techniques of study of building condition, conservation aspects of built-up areas. Environmental approaches to design and planning of rural settlements, use of alternate technology in design of human settlements. Urban Environment - Industrial ecology and symbiosis, Management of air quality and noise,

UNIT – 3 APPROACH OF ENVIRONMENTAL DESIGN AS APPLICABLE TO LANDSCAPE DEVELOPMENT (Part 2)

Landscape as an environmental asset, techniques of landscape assessment at different levels, use of landscape design for environmental improvement. Green Spaces, bio-diversity conservation and conflicts-

UNIT – 4 URBAN CLIMATOLOGY, ACOUSTICS AND CLIMATE CHANGE

Climate change, mitigation and adaptation - Climate modifications and managing climate change challenges in cities, Urban climatology, effects of thermal pollution, factors causing heat sink effects, direct radiation, climatic effects on Urban areas, control techniques Urban acoustics:- source of noise, methods of control, design techniques.

UNIT – 5 URBAN CLIMATOLOGY, ACOUSTICS AND CLIMATE CHANGE II

Understanding Climate Change: Greenhouse gases, Anthropogenic causes, Carbon Cycle, Global Warming, Inventory of GHGs, Climate Change and City Planning, application of Energy code, Clean Development Mechanism. Research writing and analytical writing to be a part of Units I, II, III, IV, V

TOTA: 45 PERIODS

REFERENCES:

- 1 Fabio Giudice, Guido La Rosa, Fabio Giudice, Guido La Rosa, AntoninoRisitano Product Design for the Environment: A Life Cycle Approach 2006 Taylor and Francis Group
- 2 Amos Rapoport Meaning of the Built Environment: A Non-Verbal Communication Approach 1990 Sage Publications, USA
- 3 Leonard J. Hopper Landscape Architectural Graphic Standards 2007 John Wiley and Sons
- 4 Mat Santamouris Environmental Design of Urban Buildings: An Integrated Approach 2006 Earthscan UK

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPNE3B	Environmental Impact Assessment	3	0	0	3	40	60	100

OBJECTIVE:

- To study Assessment of Impacts on Resources.
- To Assess the Role of Public Participation in EIA.
- To impart knowledge on environmental impact assessment and environmental management
- Evaluate the acts and policies related to environmental impact assessments
- Introduce different applications for appropriate techniques in assessing impact data
- To study about constitutional provisions and policy regulation

LEARNING OUTCOME:

1. To study Role, Definition, Scope and Methods of EIA.
2. Carryout scope in environmental projects and social awareness
3. Gain knowledge on different methodologies for environmental impact prediction and assessment
4. Enhance writing skills on environment reports
5. Obtain knowledge on environment management plans
6. They learn about impacts on resources

UNIT – 1 ROLE, DEFINITION AND SCOPE OF EIA

Concept of Environment, Concept of EIA - Definition and need, evolution and objectives, tasks and scope. EIA: Origin and Development, Evolution of EIA in India: Constitutional Provisions and Policy Regulations. Role of EIA in the Planning and decision making process.

UNIT – 2 METHODS OF EIA

Methods of EIA; advantages and limitations. Screening and Scoping, Baseline Studies for EIA, Environmental Settings Impact Prediction and Evaluation, Methods of EIA; advantages and limitations, Documentation and Monitoring, EIA Effectiveness, EMP's,

UNIT – 3 ASSESSMENT OF IMPACTS

Assessment of impacts on resources (Including air, water, flora and fauna); assessment of impacts on Land use. Assessment of social and health impacts. Assessment of development projects (including roads, industries, housing, townships etc.). Exposure to Project specific TOR s and EIA Manuals.

UNIT – 4 STRATEGIC ENVIRONMENTAL ASSESSMENT

Policy environmental assessment, Sectoral environmental assessment, Strategic Environmental Assessment: Key concepts, SEA Legislation and Process, Regulatory and Planning Framework of SEA and Implementation, SEA Tools and Techniques

UNIT – 5 APPLICATION OF APPROPRIATE TECHNIQUES FOR EIA

Risk assessment / Vulnerability assessment, Sustainability, Appraisal, Carrying capacity / Environmental thresholds,

TOTAL: 45 PERIODS

REFERENCES:

1. Asian Development Bank Environmental Impact Assessment for developing Countries in Asia Vol. I and II. 1997 ADB Publication
2. L.W. Canter Environmental Impact Assessment 2nd Edition 1996 McGraw Hill, New York
3. R.R. Barthwal Environmental Impact Assessment 1998 New Age International Publishers
4. R. Dale Evaluating Development Programme and Project 2nd Edition 2004 Sage Publication
5. A.K. Srivastava Environment Impact Assessment 2003 A.P.H. Publish

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPNE3C	Environmental legislation, evaluation and practices	3	0	0	3	40	60	100

OBJECTIVE:

- To familiarize students about various Acts related with Environment Protection.
- To familiarize students about Ministry of Environment and Forest Guidelines, Notifications and Rules related with Environment Protection and Management.
- Evaluate the different roles and responsibilities different institutions
- To study the different regulations and bye laws related to environment legislation
- To know about the importance of community participation in policy planning
- To study about the planning legislation

LEARNING OUTCOME:

1. Common rules and laws protecting environment
2. Legislative measures to address climate change and impacts
3. Roles and responsibilities of state and central government organization
4. To gain knowledge on land development controls
5. To formulate and contribute new rules to the planning legislative acts
6. They gain knowledge about planning legislation

UNIT 1 ENVIRONMENTAL LEGISLATION (Part 1)

Introduction to Law (Indian Constitution, Evolution of Environmental Laws in India). EP Act 1986., Air (Prevention and Control of pollution) Act., Water (Prevention and Control of pollution) Act, [Mines and Mineral Act.](#), [Factories Act.](#), [Pesticides Act.](#), [Indian Forest Act.](#), [Wildlife Act.](#)

UNIT 2 ENVIRONMENTAL LEGISLATION (Part 2)

Ancient Monuments and Archaeological Sites and Remains Act., Hazardous Waste Management and Handling Rules / Biomedical Rules / Solid Waste, Environment Tribunal Act, Climate change Protocols and Conventions, MOEF Guidelines and Notifications, Appellate Authority Act, Other related Notifications

UNIT 3 PLANNING LEGISLATION (Part 1)

[Concept of Law: Source of law \(i.e. custom. legislation and precedent\), meaning of terms of law, legislation, ordinance, Bill, Act, Regulations and Bye-laws. Significance of law and its relationship to Urban planning benefit of statutory provisions- eminent domain & police powers.](#)

UNIT 4 PLANNING LEGISLATION (Part 2)

[Evolution of Planning legislation. An over view of legal tools connected with Urban Planning and Development, Town and Country Planning Act, Improvement Trusts Act,](#)

UNIT 5 ARBITRATION AND LAND DEVELOPMENT CONTROLS

[Concept of Arbitration; Betterment levy; development charges and public participation in Statutory planning process;](#) Research writing and article writing for Units I, 2, 3, 4 and 5

TOTAL: 45 PERIODS

REFERENCES:

1. Shyam Divan, Armin Rosencranz Environmental Law and Policy in India Second edition, 2001 Oxford University Press (India)
2. Jane Holder and Maria Lee Environmental Protection, Law and Policy Second edition, 2007 Cambridge University Press
3. Gadgil M. and Guha R. Ecology and Equity 1995 Oxford, New Delhi
4. Upadhyay S. and Upadhyay V. Book on Environmental Law- Forest Laws, Wildlife Laws and the Environment; Vols. I, II and III, 2002 Lexis Nexis- Butterworths India, New Delhi.
5. Choudhuri, S.K. Environmental Legislation in India Latest Edition Oxford QIBH Pub. Co.
6. Bedi, R.S. and Bedi, A.S. Encyclopedia for Environment and Pollution Laws Latest Edition Orient Law House

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPNE3D	Web based applications to urban and regional planning	3	0	0	3	40	60	100

OBJECTIVE:

- This course is designed based on advanced applications, and the candidates are expected to be through in INTERNET, Windows / NT OS, HTML etc.)
- Students to gains insights and understanding of e- governance.
- To teach the student the working and process followed in Governance.
- To keep the students in touch with the recent updates in the industry.
- To train the candidate in the use of web for urban and regional planning applications
- To train them to build case based web development.

LEARNING OUTCOME:

1. As an outcome of the above course the students will have the ability to independently develop web based solutions for the application of urban and regional planning.
2. Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning and create livable human settlements in rural, urban and regional areas.
3. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
4. Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
5. Ability to review, comprehend and report technological developments in the profession of planning
6. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.

ROLE OF WEB BASED TECHNOLOGY IN PLANNING

Introduction to Web Applications, Web Applications Frameworks, Managing Data, Middleware, The User Interface Information need and the role of web in planning – Public participation – Information transparency – Current trends.
[Process and systems in Organization involved in planning,](#)

INFORMATION DISSEMINATION THROUGH INTRA AND INTERNET

Knowledge sharing – e- Governance – Information kiosks – Digital planning

PLANNING INFORMATION ACROSS INTERNET

Web sites and information sources in urban and regional planning. .

TOTAL: 45 PERIODS

REFERENCES:

1. Abbate J., 'Inventing the Internet', MIT Press: Cambridge, MA. 1999
2. Arnum E. & Conti S., 'INET'98: The Internet Summit,, Geneva, Switzerland, 1998
3. Carriere J. & Kazman R., 'Sixth International World Wide Web Conference. 1997.
4. Dodge, M & Kitchin, R., 'Atlas of Cyberspace', Addison-Wesley, London. 2001
5. Downey G, 'Technology and Culture', Vol. 42, No. 2, pages 209-235. 2001
6. Graham S. & Marvin S., 'Telecommunications and the City: Electronic Spaces, Urban Places', Rutledge : London 1996
7. Kim T.J., 'Expert systems : Applications to Urban Planning, Springer- Verleg, New York, 1999
8. www.esri.com and number of such sites as and when developed would be used as the resource for the course.
9. www.infocity.com

	Semester III	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPNE3E	Planning for tourism	3	0	0	3	40	60	100

OBJECTIVE:

- To study Tourism and its Relevance in Urban Development.
- To study Policies and Programmes of Tourism so as to ascertain parameters for Planning for Tourism Sector.
- Evaluate the relationships between tourism and urban development
- Basic awareness of the importance of tourism and its impact on urban development
- To study about the Tourism policies at various levels
- To study about impacts in the tourism development

LEARNING OUTCOME:

1. To study the Role of Tourism in Urban and Regional Planning.
2. Scope and evolution of tourism development in India
3. Strategic action plans for tourism in India
4. Policies related to tourism development
5. Development of sustainable tourism measures
6. They learn about National level tourism policies and programs

UNIT - 1 INTRODUCTION TO TOURISM 9

Introduction, the concept of tourism, New concept of tourism, Definitions, scope, nature, **Types of tourism** & classification and , **The basic components of tourism, The elements of tourism, Importance of tourism**, tourism as an industry, tourism in developed and developing world.

UNIT - 2 TOURISM SECTOR – IMPACTS 9

Rationale for planning tourism, the tourism planning process, Levels of tourism planning Relationship between Tourism and Urban Development, Tourism multiplier and forecasting methods: capacity building and carrying capacity planning for tourism projects, tourism and cultural and social change: Socio-cultural problems, environmental degradation. **Economic impacts of tourism development, Socio-cultural impacts of tourism development, and Environmental impacts of tourism development**

UNIT - 3 PLANNING FOR TOURISM (PART 1) 9

Evolution of tourism planning, Significance of tourism planning, Nature and scope of a tourism plan- key issues and stages, data requirements, surveys, role of key players / stake holders in tourism policy and planning, sustainable tourism development planning; **Interactive planning vs. Conventional planning in tourism, Environmental and socio-cultural considerations in planning, Common sequence/ levels in tourism planning,**

UNIT - 4 PLANNING FOR TOURISM (PART 2) 9

Introduction to sustainable tourism planning, planning for sustainable tourism development, Components of sustainable tourism planning, Stakeholders networking model for sustainable tourism development, Community planning and tourism; implementation and management, role of travel and tourism promoting agencies, monitoring the tourism development; Tourism marketing - concept, techniques and strategies.

UNIT - 5 POLICIES AND PROGRAMMES 9

Introduction, Recommendations of the National Level Tourism Policies and Programs - Various Committees on Tourism. Research and journal article writing for Units I (Introduction To Tourism), II (Tourism Sector – Impacts), III (Planning For Tourism (Part 1)), IV (Planning For Tourism (Part 2)), V (Policies And Programmes)

TOTAL: 45 PERIODS

REFERENCES:

1. Charles R. Goeldner , J. R. Brent Ritchie, Tourism: Principles, Practices, Philosophies, 2009, John Wiley & Sons
2. A. SatishBabu, Tourism Development in India, 2008, APH Publishing Corporation , New Delhi
3. Christopher M Law, Urban Tourism: The Visitor Economy and the Growth of Large Cities, 2009, Continuum
4. K.K. Sharma, Planning for Tourism, 2003, Sarup & Sons, New Delhi
5. Planning Commission Working Group Report on Tourism (2012-2017), 2012, Planning Commission, Government of India
6. Ministry of Tourism Strategic Action Plan for Tourism in India, 2011, Ministry of Tourism, Government of India

	Semester IV	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN401	Urban Governance and institutional Management	3	0	0	3	40	60	100

OBJECTIVE:

- To make students understand the governance systems of urban and rural local government with respect to the role, structure and functions of planning agencies.
- To understand the organizational change and management principles and its application to planning and implementing organization in the context of urban and rural development management.
- To study the role of government, private sector and third sector for governance of cities and regions
- To study about the Role of states in urban and regional planning at national ,state and local levels
- To study the decision making processes and organizations responsible for the planning, finance and delivery
- To understand essential concepts in regional and metropolitan planning

LEARNING OUTCOME:

1. Students are able to understand the government system and its governance processes.
2. The understanding from the lessons develops leadership qualities and motivational skills in turn build confidence in doing things.
3. Understand the role of participatory governance in urban development
4. Learn about Risks involved in urban development
5. Gain knowledge about e-governance
6. They learn about e governance and municipal finance

UNIT - 1 INTRODUCTION: BASIC CONCEPT & LEGAL PROVISIONS 7

Introduction to Urbanization, Introduction to Urban Governance, Constitutional provisions, Legislative provisions, Organizational interfaces, People and community, Land as basic resources, Environment and Ecology, Distinctive feature of nagar panchayat and NMU,

UNIT – 2 URBAN AND METROPOLITAN PLANNING 10

Urban reform and managing change, Visioning for the city, Resolving conflicts in change management, Leadership and teambuilding, Essential concepts of planning and developments, Regional and metropolitan planning, Urban planning, Urban infrastructure and services,

UNIT – 3 GOVERNANCE TO E-GOVERNANCE 7

E-Governance-concepts, theories and practices - e-Governance indices-technology, legal, organizational and community related aspects of e-governance - Description to Institution and Institutional development - e-Governance efforts in India and abroad - e-Readiness indices and e-Governance

UNIT – 4 URBAN ISSUES AND RISK MANAGEMENT 12

Housing strategy for cities, Housing and urban poverty, Real estate regulation and development, Urban land management, Urban risk and disaster management, Managing urban environment, Traffic and transportation management, Traffic and transportation management,

UNIT - 5 PARTICIPATORY GOVERNANCE AND URBAN DEVELOPMENT 9

Role of City Managers, Self Development for City Managers People’s participation-theories, concepts and methods - Participatory governance-meaning, processes and methods - Role of people’s participation in planning processes - People, NGO and civil society and urban development - Public relations-concepts types, methods and planning public relations - Best practices - national and international on participation, infrastructure and urban development. Research and analytical article writing for Units I (Urban Governance), II (Local Government Administration And Management),

III (Governance To E-Governance), IV (Organization And Management), V (Participatory Governance And Urban Development)

TOTAL: 45 PERIODS

REFERENCES:

1. Deiric O Broin, 'Politics, Participation and Power' Glasnevin Publications, Dublin, 2013.
2. Gavin Shatkin (Ed), 'Contesting the Indian City: Global Vision and the Politics of the Local', Wiley Blackwell UK, 2013.
3. Ganguli, 'Structure and Processes of Organization' Allied Publications Pvt. Ltd, New Delhi. 1983.
4. Jain R.B, 'Public Administration in India, 21st Century Challenges for Good Governance', Deep & Deep Publications, Delhi. 2001. 18
5. John Abbott, 'Sharing the City: Community Participation in Urban Development', Earthscan, London. 1996.
6. Richard O'Dohanty, 'Planning, People and Preferences', Arebury, USA 1999.
7. Ishwar Dayal, 'Organization for Management in Developing Countries', Concept Publishing Co. New Delhi. 1983.
8. Manoj Sharma, 'Local Government Rural and Urban', Anmol Publications, New Delhi. 2004.
9. Martin Boddy. 'Urban transformation and urban governance: shaping the competitive city of the future' The Policy Press, 2003.
10. Mathur Om Prakash 'India: The Challenge of Urban Governance' Centre for Urban & Comm. Studies, Univ. of Toronto, 1999.
11. Maria Pinto, 'Metropolitan City Governance in India', Sage Publications, New Delhi. 1999.
12. Prasad B.K, 'Urban Development New Perspective', Sarup and Sons, New Delhi, 2003.
13. Melin Bulu, 'City Competition and Improving Urban Subsystem: Technology and Application, IGI Global Publicatio, London 2012.

	Semester IV	Instruction hrs				Marks		
		L	T	P	C	CIA	ESE	TOTAL
21MPN421	Thesis (Viva Voce)	4	0	28	18	320	480	800

OBJECTIVE:

- Ability to gain knowledge in social and economical, legal and political, environmental and physical, governance and management aspects of planning
- Ability to gain knowledge in concepts, and theories, methods and techniques and social realities
- To improve communication skills.
- Ability to formulate a framework for study.
- To study and analysis the problem and suggest a suitable solution.
- To understand various practices and standards followed in planning

LEARNING OUTCOME:

1. Ability to present and communicate their ideas
2. To create livable human settlements in rural, urban and regional areas.
3. Students are also exposed to build confidence and capacity to work in academic, professional, corporate and voluntary sector work environment towards preparation, execution, implementation and monitoring of planning assignments.
4. Ability to review, comprehend and report technological developments in the profession of planning
5. Ability to gain advanced knowledge in Planning practices by being exposed to multi disciplinary learning environment.
6. Ability to understand ethical and professional responsibilities.

Students shall be required to undertake thesis work in the areas of relevance and concern in the urban and regional development process. The broad areas of study would include

1. Planning for region, urban development and renewal
2. Planning for infrastructure development
3. Urban governance, management and finance
4. Environmental and sustainable development
5. Housing, heritage conservation and tourism
6. Planning implications of Smart cities, Green cities, Digital Cities, Eco-Cities.
7. E-Governance and urban local governments and e-Participation of communities in city infrastructure planning and development
8. Any other emerging areas in the field of urban and regional planning

The thesis shall be submitted in the form of thesis report, presentation drawing sheets, slides and posters etc. Thesis work submission also includes all relevant information in a CD.

TOTAL: 480 PERIODS