

# **M. PLAN (TOWN AND COUNTRY PLANNING)**

## **MASTER OF PLANNING**

[2 YEAR FULL TIME POST GRADUATE DEGREE PROGRAM]

### **REGULATIONS**

2020– 2021 Batch (New Syllabus)

### **CHOICE BASED CREDIT SYSTEM (CBCS)**

### **FACULTY OF ARCHITECTURE**



**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**



# KARPAGAM ACADEMY OF HIGHER EDUCATION

( Deemed to be University Established Under Section 3 of UGC Act, 1956 )

## M.PLAN (TOWN AND COUNTRY PLANNING)

### REGULATIONS

**2020 - 2021 batch ((CBCS))**

**These regulations are effective from the academic year 2020 - 2021 and applicable to the Full-Time candidates admitted to M.Plan (Town and Country Planning) during 2020 - 2021 and onwards.**

*The M.Plan (Town and Country Planning) F2020 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 consist of 18 weeks in which 6 hours a day i.e 30 hours per week as contact hours between the faculty & students and does not include the time spent at Internal & External examination & other such activities. The Faculty 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:**

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

### **PRACTICAL COURSES:**

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

\* - 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) 2020 – 2021 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 3<sup>rd</sup> and 4<sup>th</sup> 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**  
**2020 - 2021 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:**

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

**MAPPING OF PROGRAMME EDUCATIONAL OBJECTIVES WITH PROGRAMME OUTCOME:**

A broad relation between the programme objectives and the outcome is given in the following table

PEO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1	√	√	√	√	√	√	√	√	√
2			√	√		√			
3	√	√	√	√	√		√		
4			√			√	√		
5		√	√			√		√	
6				√				√	√
7	√		√		√				
8									√

**MASTER OF TOWN AND COUNTRY PLANNING**  
**2020-2021 Batch**

Curriculum – Full Time (4 Semesters) **(CBCS)**

**Semester I**

Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPN101	Planning Theory and Practice	PO1, PO3, PO5	3	0	0	40	60	100	3	3
20MPN102	Socio – Economic and Spatial aspects of Human Settlements and Planning	PO1, PO3, PO5	3	0	0	40	60	100	3	3
20MPN103	Traffic and Transportation Planning	PO1, PO3, PO5	3	0	0	40	60	100	3	3
20MPN121	Planning Studio I	PO1, PO2, PO4, PO5, PO6, PO8	3	0	10	160	240	400	8	6
20MPNE**	Elective I		2	0	8	120	180	300	6	6
<b>Sub Total</b>			<b>14</b>	<b>0</b>	<b>18</b>	<b>400</b>	<b>600</b>	<b>1000</b>	<b>23</b>	
<b>Elective I</b>										
Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPNE1A	Public Transport Planning	PO1, PO2, PO5	2	0	8	120	180	300	6	6
20MPNE1B	Transport Economics	PO1, PO2, PO5, PO7	2	0	8	120	180	300	6	6
20MPNE1C	Disaster Management	PO1, PO2, PO5	2	0	8	120	180	300	6	6
20MPNE1D	Real Estate And Housing Markets	PO1, PO2, PO5, PO7	2	0	8	120	180	300	6	6
20MPNE1E	Materials, Technology and Infrastructure	PO1, PO2, PO5, PO7	2	0	8	120	180	300	6	6

**Semester II**

Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPN201	City Planning	PO1, PO3, PO5	3	0	0	40	60	100	3	3
20MPN202	Regional Planning	PO1, PO3, PO5	3	0	0	40	60	100	3	3
20MPN203	Research Methodology	PO1, PO3, PO5	3	0	0	40	60	100	3	3
20MPN221	Planning Studio II	PO1, PO2, PO4, PO5, PO6, PO8	3	0	10	160	240	400	8	6
20MPNE**	Elective II		2	0	8	120	180	300	6	6
<b>Sub Total</b>			<b>14</b>	<b>0</b>	<b>18</b>	<b>400</b>	<b>600</b>	<b>1000</b>	<b>23</b>	

Elective II										
Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPNE2A	Rural and Urban Housing	PO1, PO2, PO5	2	0	8	120	180	300	6	6
20MPNE2B	Planning Legislation and Professional Practice	PO1, PO2, PO5, PO9	2	0	8	120	180	300	6	6
20MPNE2C	GIS Modeling in Urban and Regional Planning	PO1, PO2, PO5, PO7	2	0	8	120	180	300	6	6
20MPNE2D	Urban Development And Management	PO1, PO2, PO5, PO7	2	0	8	120	180	300	6	6
20MPNE2E	Inclusive urban planning	PO1, PO2, PO5, PO7	2	0	8	120	180	300	6	6

### Semester III

Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPN301	Environmental Planning	PO1, PO3	3	0	0	40	60	100	3	3
20MPN302	Project Formulation and Implementation	PO1, PO3	3	0	0	40	60	100	3	3
20MPN321	Planning Studio III	PO1, PO2, PO4, PO5, PO6, PO8	3	0	10	160	240	400	8	6
20MPN322	Dissertation	PO1, PO2, PO3, PO5, PO6, PO7	3	0	6	120	180	300	6	6
20MPNE**	Elective III		3	0	0	40	60	100	3	3
<b>Sub Total</b>			<b>15</b>	<b>0</b>	<b>16</b>	<b>400</b>	<b>600</b>	<b>1000</b>	<b>23</b>	

### Elective III

Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPNE3A	Environmental Design	PO1, PO3	3	0	0	40	60	100	3	3
20MPNE3B	Environmental Impact Assessment	PO1, PO3	3	0	0	40	60	100	3	3
20MPNE3C	Environmental Legislation, Evaluation and Practices	PO1, PO3, PO9	3	0	0	40	60	100	3	3
20MPNE3D	Web based Applications to urban and Regional Planning	PO1, PO3, PO6, PO7	3	0	0	40	60	100	3	3
20MPNE3E	Planning for tourism	PO1, PO3	3	0	0	40	60	100	3	3

### Semester IV

Sub. Code	Course Title	Program Outcome	Instruction Hrs / Week			Marks			C	EH
			L	T	P	CIA	ESE	Total		
20MPN401	Urban Governance and institutional Management	PO1, PO3, PO4, PO9	3	0	0	40	60	100	3	3
20MPN421	Thesis (Viva Voce)	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8	4	0	28	320	480	800	18	6
<b>Sub Total</b>			<b>7</b>	<b>0</b>	<b>28</b>	<b>360</b>	<b>540</b>	<b>900</b>	<b>21</b>	
<b>Grand Total</b>			<b>50</b>	<b>0</b>	<b>80</b>	<b>1560</b>	<b>2340</b>	<b>3900</b>	<b>90</b>	

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

	Semester I	L	T	P	C
20MPN101	Planning Theory and Practice	3	0	0	3

**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, and the approaches of current issues in the field of planning.

#### 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, *Resilient City, Low Carbon City, Smart city etc., City of the future and future of the 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. *Case studies on planning surveys*

#### UNIT 4 ANALYTICAL TECHNIQUES

10

*SWOT analysis, Stress maps, 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

8

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**

**LEARNING OUTCOME:** The above course introduces the history of spatial planning and the students will have the ability to understand various modes of planning. They will earn the skill to apply basic analytical and optimizing techniques needed.

#### 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.

<b>Semester I</b>		L	T	P		C
20MPN102	Socio – Economic and Spatial aspects of Human Settlements and Planning	3	0	0		3

**OBJECTIVE:** To teach the students the social sciences inputs (Urban and Rural Sociology, Urban and Regional Economics and Urban and Human Geography) for analyzing human settlements evaluation, growth & development and incorporating them while planning of human settlements at the rural, urban and regional levels.

**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 cities- 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; *Marginalization and concepts of inclusive planning, and gender concerns in planning. Settlement Policy: National Commission on Urbanization, Rural Habitat Policy*

**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**

**LEARNING OUTCOME:** The course illustrates that the students think and analyze the spatial planning attributes from the social and economic perspective. This subject facilitate graduates towards sensitize about society and environment.

**REFERENCES:**

1. Arthur Kohun, 'Histroy 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



	<b>Semester I</b>	L	T	P	C
20MPN103	Traffic and Transportation Planning	3	0	0	3

**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.

#### **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, *Case Studies. Growth Factor Methods of Trip Distribution, Uniform Factor Method, Average Factor Method, Fratar Growth-Factor Method, Disadvantage of Growth Factor 5 Methods*

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, *Home-Interview Survey, Commercial Vehicle Survey, Intermediate Public Transport Survey, Cordon-Line Survey, Post-Card Questionnaire Survey, Registration-Number Survey, Tag-on-Vehicle Survey*

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**

**LEARNING OUTCOME:** 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.

#### **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

	<b>Semester I</b>	L	T	P	C
20MPN121	Planning Studio I	3	0	10	8

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: 150 PERIODS**

	<b>Semester I – Elective I</b>	L	T	P	C
20MPNE1A	Public Transport Planning	2	0	8	6

**OBJECTIVE:**

1. To introduce students to Public Transport System including its performance and Economic Aspects.
2. To study Infrastructure required for Bus Stops, Terminals and Depots.

**UNIT - 1 INTRODUCTION TO PUBLIC TRANSPORT SYSTEMS** 36

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)** 24

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)** 24

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** 36

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** 30

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 : 150 PERIODS**

**Aim:** To study Public Transport Network Planning and Scheduling.

**REFERENCE BOOKS:**

- 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

	<b>Semester I – Elective I</b>	L	T	P	C
20MPNE1B	Transport Economics	2	0	8	6

**OBJECTIVE:**

1. To study Transport Demand and Supply, including Costing and Pricing of Services.
2. To study Principles of Economic Appraisal of Transport Projects.

**UNIT - 1 TRANSPORT DEMAND AND SUPPLY**

30

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)**

30

Fixed and variable cost, joint and common cost, cost allocation, user cost internal cost, external cost, economic cost; *Depreciation Concepts. Case studies on costing and pricing of transport services*

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

30

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 *Case studies on economic analysis*

**UNIT - 4 PRINCIPLES OF ECONOMIC APPRAISAL**

30

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 *Methods of Economic Analysis, Problems on above. Break Even Analysis-Sensitivity Analysis. Case studies and problems.*

**UNIT - 5 REGULATION OF TRANSPORT**

30

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 : 150 PERIODS**

**Aim:** To study Transportation Economics.

**REFERENCE BOOKS:**

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 Univers, Boston, Sydney.

	<b>Semester I – Elective I</b>	L	T	P	C
20MPNE1C	Disaster Management	2	0	8	6

**OBJECTIVE:** To generate interest in students to understand the causes and consequences of disasters and its importance in planning and managing cities and towns towards mitigation and rehabilitation.

**UNIT 1 DISASTER** 15

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, *Analysis, Mitigation measures, Organizations, Response, trigger, testing and update*

**UNIT 2 NATURAL AND MAN-MADE DISASTERS** 30

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** 30

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, *Strategic Development for Vulnerability Reduction*

**UNIT 4 DISASTER AND TECHNOLOGY** 60

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, *Emergency Camps and Shelter – Deployable and low cost dwellings. Early Warnings and Safety Measures of Disaster. 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: 150 PERIODS**

**LEARNING OUTCOME:** The topics of the subjects attempt to sensitize the students about the ill effect of the disasters as well as the importance of preparedness. It also inculcates the students that technology as well as community effects are important to mitigate disaster.

**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.

	<b>Semester I – Elective I</b>	L	T	P	C
20MPNE1D	Real Estate And Housing Markets	2	0	8	6

**OBJECTIVE:**

This course applies the latest economic thinking and research to the task of analyzing real estate markets and forecasting supply or demand.

**UNIT 1 INTRODUCTION**

15

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**

15

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**

15

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. *Cost Theory and Analysis, Production Theory and Analysis.*

**UNIT 4 HOUSING MARKETS**

30

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**

75

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). *Case studies on Seven Stages of Real Estate Development (Eight Categories of Tasks in Each Stage of Development),*

**TOTAL: 150 PERIODS**

**LEARNING OUTCOME:** 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.

**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

	<b>Semester I – Elective I</b>	L	T	P	C
20MPNE1E	Materials, Technology and Infrastructure	2	0	8	6

**OBJECTIVE:**

1. To expose the students to Traditional and Conventional Building Materials.
2. To study Cost Reducing and Environment friendly Technologies for Housing Projects.

**UNIT - 1 INTRODUCTION TO MATERIALS AND TECHNOLOGY** 15

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. *Mechanization through construction equipment, Introduction and definition of Sustainability.*

**UNIT - 2 PREFABRICATION AND INDUSTRIALIZATION** 15

Concept of prefabrication, industrialization and system building, Types of prefabrication – site and plant prefabrication - Economy of prefabrication – *Modular coordination – Standardization – Planning for Components of prefabricated structures*, various open and closed systems, choice of various systems of building, concept of intelligent building;

**UNIT - 3 CONSTRUCTION INDUSTRY** 15

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** 15

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** 90

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: 150 PERIODS**

**LEARNING OUTCOME:**

To study various Technologies for Housing Development along with Physical Infrastructure.

**REFERENCE BOOKS:**

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



	<b>Semester II</b>	L	T	P	C
20MPN201	City Planning	3	0	0	3

**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.

**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, *Structure of master plan, Data collection*, Delineation of planning area, assessment of developmental issues - Plan period and phasing - Process – *Formulation of Vision*, 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. *Case studies on master plan.*

**UNIT 4 CASE STUDIES**

6

Case studies on Eco cities, Healthy cities, Low carbon cities, resilient cities, Sustainable cities, Counter magnets, *Livable cities, New towns, Safe cities, Satellite towns, Smart cities.* 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**

**LEARNING OUTCOME:** As an outcome of the above course the graduates will have the ability to conceptualize, analytically define, and treat mater plan, zonal plans and detailed development plan professionally, They would earn skills in preparing and reviewing the above plan.

**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, Wiely Blackwell, US 2011.

	<b>Semester II</b>	L	T	P	C
20MPN202	Regional Planning	3	0	0	3

**OBJECTIVE:** To make the students understand the concept of regional planning and make them skillful in applying various methods and techniques of regional planning.

#### **UNIT 1 CONCEPT OF REGIONAL PLANNING**

9

Concept - Defining a region- fluidity and purpose, and need for regional planning and regional development, *Typology of Regions and Regional Dynamics*. 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, *Social Cost-Benefit Analysis and Returns (SRR)*; *Capacity Enhancement Need Assessment (CENA)*; *Five aspects of institutional appraisal*:

#### **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, subnational 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; *Role of 73rd and 74th Constitution Amendment Acts in regional plan preparation and implementation*.

#### **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**

**LEARNING OUTCOME** The students will understand the need for Planning at various levels & especially the thrust and focus of regional planning. The students will become familiar with the contents, approach and methodology of preparation of regional plans. They will also learn important concepts & techniques in regional planning.

#### **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,

	<b>Semester II</b>	L	T	P	C
20MPN203	Research Methodology	3	0	0	3

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

### **UNIT 1 RESEARCH AND PLANNING**

8

Research- definitions, types, purposes and application - Research as a way of thinking - Research processes and planning processes - Commonalities and differences between research processes and planning processes - Research design-definition, types, features, and Ideal Research design - Planning projects Vs research projects. Research methods vs Methodology, Types of research, Descriptive vs .Analytical, Applied vs Fundamental, Quantitative vs. Qualitative, and Conceptual vs. Empirical.

### **UNIT 2 SOURCES OF DATA**

8

*Research Formulation - Defining and formulating the research problem -Selecting the problem - Necessity of defining the problem.* Data and information - Access to Information-nature, types and sources. - Census and sample surveys and case studies - Secondary data sources and its availability in terms of form, time and reliability - Organizations - Primary data-types, sources and generation -Secondary data and Literature studies - Literature survey and formulation of theoretical framework – Hypothesis-definition, formulation and relevance to research studies

### **UNIT 3 METHODS OF DATA COLLECTION**

10

Observation–participant and non-participant techniques of observation, Preparation for field observation of people, buildings, places and activities. Merits and Demerits of observation - Interview-structured and unstructured interviews, telephone interviews, rapport building, merit and demerits of Interview - Questionnaire-mailed questionnaire - Formation of questions, sequencing and constructing questions, merits and demerits – Schedule - Difference between questionnaire and schedule - Administration of field survey- pre requisites and preparations. *Web as a source: searching the web. Critical literature review - Identifying gap areas from literature review - Development of working hypothesis.*

### **UNIT 4 DATA ANALYSIS**

10

Criteria for analysis–descriptive and comparative - Processing raw data-coding, tabulating and illustrative - Secondary data analysis and primary data analysis and making interface between the two, Measures of Central Tendency and Dispersion, Time Series and Forecasting, Probability Distribution and Sampling Distribution, Correlation and Regression, Draw conclusions and interpretation of the analysis - Link interpretation to policy, design and planning.

### **UNIT 5 REPORT WRITING**

9

Structure and components of scientific reports -Types of report -Technical reports and thesis - Significance - Different steps in the preparation, Layout, structure and Language of typical reports, - Presentation of graphs, tables, maps and illustrations - Citation, referencing and Indexing - Format for preparing bibliography - Production of report. Application of results of research outcome, *Professional ethics – Ethical issues -ethical committees. Commercialization of the work - Copy right - royalty - Intellectual property rights and patent law – Trade, Reproduction of published material.*

**TOTAL : 45 PERIODS**

**LEARNING OUTCOME:** Students are able to (a) learn various methods and techniques on how to study and understand the problems of the urban and rural society in relation with environment (b) development skills to manage field work, data analysis and report working.

### **REFERENCES**

1. Burgess G. Robert, 'In the Field-An Introduction to Field', 1993.
2. Castells. M, 'The Urban Questions', English Edition, Edward Arnold.1977.
3. Dipak Kumar Bhattacharya, 'Research Methodology' Excel Books India, 2009
4. De Vaus. D.A., 'Surveys in Social Research', George Allen and Unwin, London, 1986.
5. Good and Hatt, 'Methods in Social Research', Macgrow Hill, New York, 1952.
6. Khan, J.A, 'Research Methodology' APH Publishing, 2011 25
7. Kothari C.R., 'Research Methodology- methods and Techniques, Wishwa Prakashan, New Delhi,1990.
8. Kumar Ranjit, 'Research Methodology- A Step by Step Guide for Beginners', Sage Publications, New Delhi, 2010.
9. Uwe Flick, 'Introducing Research Methodology: A Beginner's Guide to Doing a Research Project' SAGE, 2011 10.
- Young. Paul, 'Scientific Social Survey Research, Prentice Hall, New York, 1960.

	<b>Semester II</b>	L	T	P	C
20MPN221	Planning Studio II	3	0	10	8

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 from the primary and secondary sources and analyzed. Stakeholders 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 : 180 PERIODS**

	<b>Semester II - Elective</b>	L	T	P	C
20MPNE2A	Rural and urban housing	2	0	8	6

**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

**UNIT 1 INTRODUCTION URBAN AND RURAL HOUSING POLICIES**

15

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**

15

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**

20

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**

15

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. *Models and theories of rural planning, policies and practices at global level.*

**UNIT 5 CASE STUDIES OF POLICIES AND PROGRAMMES**

70

Various urban and rural housing programmes including the current JNNURM, RAY, Bharat Nirman, PURA, etc. *Action programme initiated at global level.* 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: 135 PERIODS**

**LEARNING OUTCOME:** The outcome of this course is to provide students with a comprehensive understanding of various housing policies in rural and urban housing scenario.

**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 Poo,r 1995, Sage, New Delhi
3. Friedrichs, J, Affordable Housing and the Homeless, 1988, Walter de Gruyten & Co, Berlin
4. Rao, P.S.N., Urban Governance and Management, 2005, Kanishka Pub. and IIPA, New Delhi

	<b>Semester II - Elective</b>	L	T	P	C
20MPNE2B	Planning Legislation and Professional Practice	2	0	8	6

**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.

**UNIT 1 CONCEPT OF PLANNING LEGISLATION** 30

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** 30

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, *Real Estate (Regulation and Development) Act, 2016*. 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 LEGISLATION ON DEVELOPMENT** 30

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), Legal aspects of ownership - *introduction to property law, property tax, assessment, lease, registration, etc., cooperative act*. 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** 30

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** 15

Aim and objectives of professional institutions - *authorities and administrative setup and mechanisms for planning, implementation and evaluation and levels of hierarchy*, Private and international town planning organizations - Institution buildings and setting up private practice and work, Career options and prospects – Case studies.

**TOTAL: 135 PERIODS**

**LEARNING OUTCOME:** 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. 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.

**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

	<b>Semester II - Elective</b>	L	T	P	C
20MPNE2C	GIS Modeling in Urban and Regional Planning	2	0	8	6

**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. Therefore, it is worked out as 5 modules as indicated below

**UNIT 1 INTRODUCTION**

15

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**

15

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. *Classification of spatial and non-spatial data – application of spatial data in urban and regional planning – objectives and functions of GIS models in urban and regional planning.* 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**

15

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**

15

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), *Decision making through GIS , Information systems ( Land Information system , Urban Information system for various activity sectors )*. 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**

75

Need for model – *Case study and Assignment on - Land suitability analysis, Urban land use modeling, Change demand modeling, Transition potential modeling, Network analysis, digital elevation model (DEM) and digital terrain model (DTM), decision support system (DSS) and land allocation modeling*

**TOTAL: 135 PERIODS**

**LEARNING OUTCOME:** 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.

**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.

	<b>Semester II - Elective</b>	L	T	P	C
20MPNE2D	Urban Development And Management	2	0	8	6

**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.

**UNIT 1 INTRODUCTION TO DEVELOPMENT MANAGEMENT** 30

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

**UNIT 2 URBAN DEVELOPMENT MANAGEMENT** 30

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

**UNIT - III LAND AND REAL ESTATE (PART 1)** 30

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; *Changes in tastes and preferences, Poor and their demand, Mega investments and its effect on land.*

**UNIT 4 LAND AND REAL ESTATE (PART 2)** 30

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; *Market Conditions – real estate cycles, market efficiency, market forecasting, Cartels, collusion, and rent seekers in real estate market, agents in real estate markets, risks; Real estate regulatory bill and its likely impact.*

**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. *Municipal Personnel Systems; Human Resource Development* 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: 135 PERIODS**

**LEARNING OUTCOME:** To study the Processes and Management of Urban Planning and Development.

**REFERENCES**

1. Rakodi, C. and Llyod-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



<b>Semester II - Elective</b>		L	T	P	C
20MPNE2E	Inclusive urban planning	2	0	8	6

**OBJECTIVE:**

To study Significance of Inclusion in Planning and Development Process. To study Policies, Programmes and Legislation for Participatory Planning.

**UNIT 1 UNDERSTANDING INCLUSIVE URBAN PLANNING** 15

Inclusive Planning – Definitions, components and Needs, Unsustainable current planning practices, Sustainable development goals. *Approaches to Inclusive Planning*

**UNIT 2 STAKEHOLDERS PROFILE AND NEEDS, ACCESS TO SHELTER, SERVICES AND LIVELIHOODS (PART 1)** 30

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. *Case studies on - Inclusive urbanization*

**UNIT 3 STAKEHOLDERS PROFILE AND NEEDS, ACCESS TO SHELTER, SERVICES AND LIVELIHOODS (PART 2)** 30

Informal sector - growth, characteristics, functions, economic contributions, linkages with formal sector, impact on Urban Development. Slums - dimensions, causative factors, determinants, location characteristics of settlements. *Case studies on - Inclusive urbanization – Slums*

**UNIT 4 PARTICIPATORY PLANNING & POLICIES, PROGRAMMES & LEGISLATION** 30

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. *Case studies on – Participatory planning*

**UNIT 5 PLANNING INTERVENTIONS** 30

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 : 135 PERIODS**

**LEARNING OUTCOME:** To study the various Forms, Arenas and Uses of Inclusion in the Processes of Urban and Regional Planning.

**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

	<b>Semester III</b>	L	T	P	C
20MPN301	Environmental Planning	3	0	0	3

**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.

#### **UNIT 1 DEVELOPMENT CONSEQUENCES ON ENVIRONMENT**

9

Introduction to Environmental planning, aims, objectives and Implementation. Introduction to State and National policies. *Concepts of Ecology, Ecosystem and Environmental Planning*, 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 – *Air, Water & Soil. Environmental Policies, Significant Conventions, Conference*

#### **UNIT 3 ENVIRONMENTAL IMPACT ASSESSMENT**

9

*Resource Analysis and Conservation*, 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. *Alternate energy technologies*

#### **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**

**LEARNING OUTCOME:** 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.

#### **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.

<b>Semester III</b>		L	T	P	C
20MPN302	Project Formulation and Implementation	3	0	0	3

**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.

**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, *priorities strategic development, WBS/PBS, responsibility, communication plan*)

**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 (*Basic, Time, Cost, Resource, Techniques, Guidelines*)

**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) *Project Proposal Evaluation (Reading, evaluating feasibility–resource, time, cost, idea, quality)*

**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. *Preparation for presentation (Designing small write-ups–introduction, literature review, materials, methods, results, discussion, summary, conclusions). Presentation skills development*

**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. *Project Closure (Quality assurance, auditing (resources, time, cost), submission, auditing, closure.)* Research writing and article writing stating case studies.

**TOTAL :45 PERIODS**

**LEARNING OUTCOME:** Plan identifies projects and the success of plans depends on Implementation of identified projects. In this context, students will develop knowledge on important aspects of project formulation, criteria for project appraisal and project management.

**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.

	<b>Semester III</b>	L	T	P	C
20MPN321	Planning Studio III	3	0	10	8

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: 150 PERIODS**

	<b>Semester III</b>	L	T	P	C
20MPN322	Dissertation	3	0	6	6

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 IVth semester.

**TOTAL: 105 PERIODS**

	<b>Semester III - Elective</b>	L	T	P	C
20MPNE3A	Environmental Design	3	0	0	3

**OBJECTIVE:**

1. To understand Approach to Environmental Design as applicable to Built Environment and Landscape Development.
2. To study Urban Climatology and Effects of Climate Change on City Planning.

**UNIT – 1 EVOLUTION OF ENVIRONMENTAL DESIGN, THEORY AND PRACTICE** 15

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, *Concepts of Eco cities, smart cities, compact cities etc. Challenges and opportunities of urban, rural and peri-urban growth*

**UNIT – 2 APPROACH OF ENVIRONMENTAL DESIGN AS APPLICABLE TO BUILT ENVIRONMENT (Part 1)** 30

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, *Urban water ecological challenges. Impact Analysis and ecological Footprint Analysis*

**UNIT – 3 APPROACH OF ENVIRONMENTAL DESIGN AS APPLICABLE TO LANDSCAPE DEVELOPMENT (Part 2)** 20

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- Urban greens: challenges and choices for management, Human nature interactions and urban forest management, Bio-diversity conservation conflicts, Spatial dimensions of urban ecology*

**UNIT – 4 URBAN CLIMATOLOGY, ACOUSTICS AND CLIMATE CHANGE** 20

Climate change, mitigation and adaptation - Climate modifications and managing climate change challenges in cities, *Adaptation and mitigation measures to make cities resilient*. 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** 20

Understanding Climate Change: Greenhouse gases, Anthropogenic causes, Carbon Cycle, Global Warming, Inventory of GHGs, *International and National Efforts: United Nations Framework Convention on Climate Change (UNFCCC), Conference of Parties, Kyoto Protocol, Intergovernmental Panel on Climate Change (IPCC), National Communication Process, Indian Network of Climate Change Assessment, Global Environment Facility (GEF), 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*

**TOTAL : 105 PERIODS**

**Outcome:** To study Evolution of Environmental Design, Theory and Practice.

**REFERENCE BOOKS:**

- 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

	<b>Semester III - Elective</b>	L	T	P	C
20MPNE3B	Environmental Impact Assessment	3	0	0	3

**OBJECTIVE:**

1. To study Assessment of Impacts on Resources.
2. To Assess the Role of Public Participation in EIA.

**UNIT – 1 ROLE, DEFINITION AND SCOPE OF EIA**

10

*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**

10

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, *Environmental Impact Factors and Areas of Consideration, Public Participation in EIA; definition and concepts, objectives, techniques, advantages and limitation, PRA techniques. Case studies*

**UNIT – 3 ASSESSMENT OF IMPACTS**

10

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 , *relevant notifications*

**UNIT – 4 STRATEGIC ENVIRONMENTAL ASSESSMENT**

15

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**

60

Risk assessment / Vulnerability assessment, Sustainability, Appraisal, Carrying capacity / Environmental thresholds, *Disaster risk assessment, Climate risk assessment, Social impact, Assessment, Coastal zone regulation, River regulations, Eco-sensitive zones regulations etc.*

**TOTAL: 105 PERIODS**

**Outcome:** To study Role, Definition, Scope and Methods of EIA.

**REFERENCE BOOKS:**

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

	<b>Semester III - Elective</b>	L	T	P	C
20MPNE3C	Environmental legislation, evaluation and practices	3	0	0	3

**OBJECTIVE:**

1. To familiarize students about various Acts related with Environment Protection.
2. To familiarize students about Ministry of Environment and Forest Guidelines, Notifications and Rules related with Environment Protection and Management.

Contents

<b>UNIT 1 ENVIRONMENTAL LEGISLATION (Part 1)</b>	20
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,	
<b>UNIT 2 ENVIRONMENTAL LEGISLATION (Part 2)</b>	20
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	
<b>UNIT 3 PLANNING LEGISLATION (Part 1)</b>	20
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. <i>Indian Constitution: Concept and contents, provisions, regarding property rights, Legislative competence of staff and central Government to enact town planning legislation.</i>	
<b>UNIT 4 PLANNING LEGISLATION (Part 2)</b>	20
Evolution of Planning legislation. An over view of legal tools connected with Urban Planning and Development, Town and Country Planning Act, Improvement Trusts Act, <i>Urban Planning and Development Authorities Act -objectives, content, procedures for preparation and implementation of regional plans, Master Plans and Town Planning schemes</i>	
<b>UNIT 5 ARBITRATION AND LAND DEVELOPMENT CONTROLS</b>	25
Concept of Arbitration; Betterment levy; development charges and public participation in Statutory planning process; <i>Concepts of Structure Plan; local plan/and action plan under the English law. Land Acquisition Act 1884 - Basic concept, procedure for compulsory acquisition of property and determination of compensation.</i> Research writing and article writing for Units I, 2, 3, 4 and 5	

**TOTAL : 105 PERIODS**

**REFERENCE BOOKS:**

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



	<b>Semester III - Elective</b>	L	T	P	C
20MPNE3D	Web based applications to urban and regional planning	3	0	0	3

**OBJECTIVE:**

To train the candidate in the use of web for urban and regional planning applications and to train them to build case based web development.

This course is designed based on advanced applications, and the candidates are expected to be through in INTERNET, Windows / NT OS, HTML etc.)

**ROLE OF WEB BASED TECHNOLOGY IN PLANNING**

70

Introduction to Web Applications, Web Applications Frameworks, Managing Data, Middleware, The User Interface  
*Web Design Principles, Basics in Web Design, Introduction and elements of HTML, CSS, Adobe Dreamweaver, Validation software, Data Base Management Softwares.*

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**

15

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

**PLANNING INFORMATION ACROSS INTERNET**

20

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

**TOTAL: 105 PERIODS**

**LEARNING OUTCOME:** 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.

**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 - Elective	L	T	P	C
20MPNE3E	Planning for tourism	3	0	0	3

**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.

**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., *Tourism development in India, Growth of tourism in India*

**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 *Rural Tourism - Classification, Need, Features, Elements, 5 A's of Rural Tourism Holiday Network , Challenges & Considerations of Rural Tourism, Case Study, Urban tourism – Definition, Classification, Need, Features, Element , Challenges*

**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, *Components of tourism plan, Planning approaches, Comprehensive tourism planning process, Evaluation*

**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; *The relevance of community tourism, Theories related to community 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, *Promotion of Tourism in India under Five Year Plans, An Overview of Indian Tourism Policies - Tourism Policy of 1982, National Tourism Policy of 1997, The New Tourism Policy (2002), Recommendations of the State Level Tourism Policies and Programs*. 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: 105 PERIODS**

**LEARNING OUTCOME:** To study the Role of Tourism in Urban and Regional Planning.

**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

	<b>Semester IV</b>	L	T	P	C
20MPN401	Urban Governance and institutional Management	3	0	0	3

**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.

**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, *Organizational development, Transparency and accountability, Capacity building, Systems and process improvement.*

**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, *Overview of municipal finance, Municipal accounts, Augmenting revenues, Value capture financing, PPP in urban governance*

**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, *Designing urban public spaces, Centrally sponsored programmes and schemes – AMRUT, Smart City Mission, SBM and HRIDAY, PMAY and NULM, Leadership*

**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**

**LEARNING OUTCOME:** Students are able to understand the government system and its governance processes. The understanding from the lessons develops leadership qualities and motivational skills in turn build confidence in doing things.

**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.

<b>Semester IV</b>		L	T	P	C
20MPN421	Thesis (Viva Voce)	4	0	28	18

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: 405 PERIODS**