HINDUSTAN UNIVERSITY

HINDUSTAN INSTITUTE OF TECHNOLOGY & SCIENCE

Department of Architecture

M. Plan. (Full Time)

Curriculum & Syllabus
2014 Regulations

ACADEMIC REGULATIONS – 2014-15 (M.Plan)

1. Vision, Mission & Objectives

1.1 The vision of the institute is "To make every man a success and no man a failure".

In order to progress towards the vision, the institute has identified itself with a mission to provide every individual with a conducive environment suitable to achieve his / her career goals, with a strong emphasis on personality development, and to offer quality education in all spheres of engineering, technology, applied sciences and management, without compromising on the quality and code of ethics.

1.2 The institute always strives

- To train our students with the latest and the best in the rapidly changing fields of Engineering, Technology, Management, Science & Humanities.
- To develop the students with a global outlook possessing, state of the art skills, capable of taking up challenging responsibilities in the respective fields.
- To mould our students as citizens with moral, ethical and social values so as to fulfill their obligations to the nation and the society.
- To promote research in the field of science, Humanities, Engineering, Technology and allied branches.

1.3 Our aims and objectives are focused on

- Providing world class education in engineering, technology, applied science and management.
- Keeping pace with the ever changing technological scenario to help our students to gain proper direction to emerge as competent professionals fully aware of their commitment to the society and nation.
- To inculcate a flair for research, development and entrepreneurship.

2. Admission

2.1. The admission policy and procedure shall be decided from time to time by the Board of Management (BOM) of the Institute, following guidelines issued by Council of Architecture (COA). The number of seats of the programme will be decided by BOM as per the directives from COA taking into account the market demands. Some seats for Non Resident Indians and a few seats for foreign nationals shall be made available.

2.2. Candidates for admission to the Master's Degree Programme shall be required to have passed B.Arch Degree Examination recognized by Hindustan University with a minimum of 50% marks in aggregate.

2.3. The selected candidates will be admitted to the M.Arch programme after he/she fulfills all the admission requirements set by the Institute and after payment of the prescribed fees.

2.4. In all matters relating to admission to the M.Arch programme, the decision of the Institute and its interpretation given by the Chancellor of the Institute shall be final.

2.5. If at any time after admission, it is found that a candidate has not fulfilled any of the requirements stipulated by the Institute, the Institute may revoke the admission of the candidate with information to the Academic Council.

2.6 Intake and migration: Sanctioned intake in each class shall not exceed the limit prescribed by COA from time to time.

3. Structure of the programme

3.1. The programme of instruction will have a curriculum comprising of the following.

i) Core courses of Architecture and Planning.
ii) Elective courses for specialization in the area of student's choice.

3.2 The minimum duration of the programme is 4 semesters but in any case not more than 8 semesters excluding the semesters withdrawn on medical grounds.
M.Arch programme will have a curriculum and syllabi for the courses approved by the Academic Council.

3.3. The following norms will generally be followed in assigning credits for courses.

- One credit for each lecture / tutorial hour per week per semester.
- One credit for each design studio / dissertation / thesis session of two periods per week per semester.

3.4. For the award of degree, a student has to earn certain minimum total number of credits specified in the curriculum. The curriculum of M.Arch shall be so designed that the minimum prescribed credits required for the award of the degree shall be within the limits of 80 - 95.

3.5. The medium of instruction, examination and the language of the project reports will be English.

4. Faculty Advisor

4.1. To help the students in planning their courses of study and for getting general advice on the academic programme, the concerned Department will assign a certain number of students to a Faculty member who will be called their Faculty Advisor.

5. Class Committee

5.1 A Class Committee consisting of the following will be constituted by the Head of the Department for each class at the beginning of the semester.

(i) A Chairman, who is not teaching the class.
(ii) All subject teachers of the class.
(iii) Two students nominated by the department in consultation with the class.

The Class Committee will meet as often as necessary, but not less than three times during a semester.

The functions of the Class Committee will include:

(i) Addressing problems experienced by students in the classroom and the laboratories.
(ii) Analyzing the performance of the students of the class after each test and finding ways and means of addressing problems, if any.
(iii) During the meetings, the student members shall express the opinions and suggestions of the class students to improve the teaching / learning process.

6. Grading

6.1 A grading system shown below will be adhered to.

6.2 GPA and CGPA

GPA is the ratio of the sum of the product of the number of credits C_i of course "N " and the grade points P_i earned for that course taken over all courses "i" registered by the student to the sum of Ci for all "i". That is,

$$GPA = \frac{\sum_i C_i P_i}{\sum_i C_i}$$

CGPA will be calculated in a similar manner, at any semester, considering all the courses enrolled from first semester onwards.

6.3. For the students with letter grade **"I"** in certain subjects, the same will not be included in the computation of GPA and CGPA until after those grades are converted to the regular grades S to E.

6.4 Raw marks will be moderated by a moderation board appointed by the Vice Chancellor of the University. The final marks will be graded using absolute grading system. The Constitution and composition of the moderation board will be dealt with separately.

7. Registration & Enrollment

7.1 Except for the first semester, registration and enrollment will be done in the beginning of the semester as per the schedule announced by the University.

7.2 A student will be eligible for enrollment only if his / her programme of study has not exceeded the maximum duration as specified in the regulation 3.2 and will be permitted to enroll if (i) he/she has cleared all dues in the Institute, Hostel & Library up to the end of the previous semester and (ii) he/she is not debarred from enrollment by a disciplinary action of the University.

7.3. Students are required to submit registration form duly filled in.

8. Registration requirement

8.1. A full time student shall not register for less than 14 credits in 1, 2, and 4th semester and 16 in 3rd semester or more than 26 credits in any given semester.

8.2 If a student finds his/her load heavy in any semester, or for any other valid reason, he/she may withdraw from the courses within three weeks of the commencement of the semester with the written approval of his/her Faculty Advisor, HOD and the Director (Academic). However the student should ensure that the total number of credits registered for in any semester should enable him/her to earn the minimum number of credits per semester for the completed semesters.

9. Temporary discontinuation

9.1. A student may be permitted by the Director (Academic) to discontinue temporarily from the programme for a semester or a longer period for reasons of ill health or other valid reasons. Normally a student will be permitted to discontinue from the programme only for a maximum duration of two semesters.

Range of Marks	Letter Grade	Grade points
95-100	S	10
85 - 94	A	09
75- 84	B	08
65-74	C	07
55-64	D	06
50-54	E	05
< 50	U	00
	I (Incomplete)	--

10. Discipline

10.1. Every student is required to observe discipline and decorum both inside and outside the campus and not to indulge in any activity which will tend to bring down the prestige of the University.

10.2. Any act of indiscipline of a student reported to the Director (Academic) will be referred to a Discipline Committee so constituted. The Committee will enquire into the charges and decide on a suitable punishment if the charges are substantiated. The committee will also authorize the Director (Academic) to recommend to the Vice-Chancellor the implementation of the decision. The student concerned may appeal to the Vice-Chancellor whose decision will be final. The Director (Academic) will report the action taken at the next meeting of the Council.

10.3. Ragging and harassment of women are strictly prohibited in the University campus and hostels.

11. Attendance

11.1. A student whose attendance is less than 75% is not eligible to appear for the end semester examination for that semester. The details of all students who have attendance less than 75% will be announced by the teacher in the class. These details will be sent to the concerned HODs and Director (Academic).

11.2. Those who have less than 75% attendance will be considered for condonation of shortage of attendance. However, a condonation of 10% in attendance will be given on medical reasons. Application for condonation recommended by the Faculty Advisor, concerned faculty member and the HOD is to be submitted to the Director(Academic) who, depending on the merits of the case, may permit the student to appear for the end semester examination. A student will be eligible for this concession at most in two semesters during the entire degree programme. Application for medical leave, supported by medical certificate with endorsement by a Registered Medical Officer, should reach the HOD within seven days after returning from leave or, on or before the last instructional day of the semester, whichever is earlier.

11.3. As an incentive to those students who are involved in extra curricular activities such as representing the University in Sports & Games, Cultural Festivals, and Technical Festivals, NCC/ NSS events, a relaxation of up to 10% attendance will be given subject to the condition that these students take prior approval from the officer –in-charge. All such applications should be recommended by the concerned HOD and forwarded to Director (Academic) within seven instructional days after the programme / activity.

12. Assessment Procedure

12.1. The Academic Council will decide from time to time the system of tests and examinations in each subject in each semester.

12.2. For each theory course, the assessment will be done on a continuous basis as follows:

Test / Exam	Weightage	Duration of Test / Exam
First Periodical Test*	10%	2 Periods
Second Periodical Test*	10%	2 Periods
Third Periodical Test/Model exam	20%	3 hours
Seminar/ Assignments/Quiz	20%	
End – semester examination	50%	3 Hours

*** Best out of the two test will be considered.**

12.3. For studio/dissertation/thesis, the assessment will be done by the subject teachers as below:

(i) Sessional assessment-weightage 60%
(ii) End semester viva voce examination- 40%

12.4 Dissertation

(i)Dissertation is a Thesis preparation course offered in the third semester of the M.Arch programs. It is basically a review and critical appraisal of literature / works done related to any coursework of the respective program. The dissertation shall be carried out under the supervision of a qualified teacher in the concerned department.

(ii)The Dissertation shall be pursued for minimum of 10 weeks during the third semester.

(iii)The Dissertation Report prepared according to approved guidelines and duly signed by the supervisor(s) and the HOD shall be submitted to the Head of the Department.

12.5 Thesis

(i)Thesis shall be carried out under the supervision of a qualified teacher in the concerned department.

(ii)A candidate may, however, in certain cases, be permitted to work on the project in an Industrial / Research Organization, on the recommendations of HOD, with the approval of the Head of the Institution. In such cases, the Thesis shall be jointly supervised by a supervisior of the department and an expert from the organization and the student shall be instructed to meet the supervisior periodically and to attend the review committee meetings for evaluating the progress.

(iii)The Thesis shall be pursued for a minimum of 15 weeks during the final semester.

(iv)The Thesis Report and drawings prepared according to approved guidelines and duly signed by the supervisor(s) and the HOD shall be submitted to the Head of the Department.

(v) Every candidate doing M.Arch, based on his/her thesis work, shall be encouraged to send a paper for publication in a Journal or a Conference.

(vi) The medium of instruction, examination seminar and design/ project and thesis / dissertation reports will be English.

(vii) The assessment will be done on a continuous basis as follows:

Review / Exam	Weightage
First Review	10%
Second Review	20%
Third Review	30%
Viva – voce Exam	40%

For end semester exam, the student will submit a thesis Report in a format specified by the Director(Academic). The first three reviews will be conducted by a Committee constituted by the Head of the Department. The end – semester exam will be conducted by a Committee constituted by the Controller of Examinations. This will include an external expert.

13. Make up Examination / Periodical Test

13.1. Students who miss the end-semester examinations / model examination for valid reasons are eligible for make-up examination/ model

examination. Those who miss the end-semester examination / model examination should apply to the Head of the Department concerned within five days after he / she missed examination, giving reasons for absence.

13.2. Permission to appear for make-up examination / model exam will be given under exceptional circumstances such as admission to a hospital due to illness. Students should produce a medical certificate issued by a Registered Medical Practitioner certifying that he/she was admitted to hospital during the period of examination / model exam and the same should be duly endorsed by parent / guardian and also by a medical officer of the University within 5 days.

14. Declaration of results

14.1 A candidate who secures not less than 50% of total marks prescribed for a course (other than Design Studio, dissertation and thesis) with a minimum of 50% of the marks prescribed for the end semester examination shall be declared to have passed the course and earned the specified credits for the course.

14.2. For Design Studio, dissertation and thesis courses, a candidate who secures not less than 50% prescribed for a course with a minimum of 50% of the marks prescribed for sessional assessment and a minimum of 50% of the marks prescribed for end semester examination shall be declared to have passed the course and earned specified credits for the course.

14.3 Studio works:
Students failing to secure minimum qualifying marks shall improve the design and resubmit for assessment as arrear subject in the following semester.

14.4 If a Candidate fails in Thesis, he/she shall re-enroll in the same in a subsequent semester when the course is offered next.

14.5 Revaluation
A candidate can apply for the revaluation of his/her end-semester Examination answer paper in a theory course within 2 weeks from the declaration of the results, on payment of a prescribed fee through proper application to the Registrar/Controller of Examinations through the Head of the Department. The Registrar / Controller of Examination will arrange for the revaluation and the results will be intimated to the candidate concerned through the Head of the Department. Revaluation is not permitted for studio courses and for Dissertation / Thesis courses.

15. Grade Card

15.1. After results are declared, grade sheet will be issued to each student, which will contain the following details:
(i) Program and branch for which the student has enrolled.
(ii) Semester of registration.
(iii) List of courses registered during the semester and the grade scored.
(iv) Semester Grade Point Average (GPA)
(v) Cumulative Grade Point Average (CGPA).

16. Class / Division

16.1 Classification is based on CGPA and is as follows:
CGPA≥8.0: **First Class with distinction**
6.5 ≤CGPA < 8.0: **First Class**
5.0 ≤CGPA < 6.5: **Second Class.**

16.2 (i) Further, the award of 'First class with distinction' is subject to the candidate becoming eligible for the award of the degree having passed the examination in all the courses in his/her

first appearance within the minimum duration of the programme.

(ii) The award of 'First Class' is further subject to the candidate becoming eligible to the award of the degree having passed the examination in all the courses within 5 semesters of the programme.

(iii) The period of authorized discontinuation of the programme (vide clause 11.1) will not be counted for the purpose of the above classification.

17. Transfer of credits

17.1. Within the broad framework of these regulations, the Academic Council, based on the recommendation of the transfer of credits committee so constituted by the Chancellor may permit students to earn part of the credit requirement in other approved institutions of repute and status in the country or abroad.

18. Eligibility for the award of M.Arch Degree

18.1. A student will be declared to be eligible for the award of the (M.Arch) Degree if he/she has

i) registered and successfully earned all credits prescribed for the course.
ii) has no dues to all sections of the Institute including Hostels, and
iii) has no disciplinary action pending against him/her.

The award of the degree must be recommended by the Academic Council and approved by the Board of Management of the University.

19. Power to modify

19.1. Notwithstanding all that has been stated above, the Academic Council has the right to modify any of the above regulations from time to time subject to approval by the Board of Management.

HINDUSTAN UNIVERSITY
HINDUSTAN INSTITUTE OF TECHNOLOGY & SCIENCE

HINDUSTAN INSTITUTE OF TECHNOLOGY & SCIENCE
DEPARTMENT OF ARCHITECTURE
DEGREE FOR MASTER PLANNING
(4 SEMESTER PROGRAMME – FULL TIME)
CURRICULUM –2014

SEMESTER I

Sl.No.	CODE No.	SUBJECT NAME	L	T	P	C	TCH
Theory							
01.	PAP 101	Introduction to Human Settlement Planning	3	0	0	3	3
02.	PAP 102	Urban and Rural Planning	3	0	0	3	3
03.	PAP 103	Demography and Statistics for Planning	3	0	0	3	3
04.	PAP 104	Planning Theory and Techniques	3	0	0	3	3
05.	PAP 105	Socio-Economic and Spatial Aspects of Planning	3	0	0	3	3
Studio							
06.	PAP 109	Planning Project I	0	0	14	7	14
		TOTAL	**15**	**0**	**14**	**22**	**29**

SEMESTER II

Sl.No.	CODE No.	SUBJECT NAME	L	T	P	C	TCH
Theory							
01.	PAP 201	Regional Planning and Development	3	0	0	3	3
02.	PAP 202	Urban Infrastructure and Network Planning	3	0	0	3	3
03.	PAP 203	Environmental Planning and Management	3	0	0	3	3
04.	PAP 204	Planning Legislation and Professional Practice	3	0	0	3	3
05.	E1	Elective - I	3	0	0	3	3
Studio							
06.	PAP 209	Planning Project II	0	0	14	7	14

		TOTAL	**15**	**0**	**14**	**22**	**29**

SEMESTER III

Sl.No.	CODE No.	SUBJECT NAME	L	T	P	C	TCH
Theory							
01.	PAP 301	Research Methodology In Planning	3	0	0	3	3
02.	PAP 302	Urban Finance and Governance	3	0	0	3	3
03.	E2	Elective - II	3	0	0	3	3
Studio							
04.	PAP 308	Dissertation	0	0	8	4	8
05.	PAP 309	Planning Project III	0	0	14	7	14
		TOTAL	**9**	**0**	**22**	**20**	**31**

SEMESTER IV

Sl.No.	CODE No.	SUBJECT NAME	L	T	P	C	TCH
Theory							
01.	PAP 401	Sustainable Planning and Practices	3	0	0	3	3
Studio							
02.	PAP 409	Thesis	0	0	28	14	28
		TOTAL	**3**	**0**	**28**	**17**	**31**

ELECTIVES

Elective No.	Semester	Code No.	Subject Name	L	T	P	C	TCH
I	II SEM	PAP 701	Urban and Rural Housing	3	0	0	3	3
		PAP 702	Project Formulation and Implementation	3	0	0	3	3
		PAP 703	Land Economics and Real Estate Planning	3	0	0	3	3
		PAP 704	Web Based Application to Urban and Regional Planning	2	0	2	3	4
II	III SEM	PAP 705	GIS Modeling Planning	2	0	2	3	4
		PAP 706	ICT Based City and Infrastructure Planning	3	0	0	3	3
		PAP 707	Urban Disaster Management	3	0	0	3	3
		PAP 708	Future Cities	3	0	0	3	3

TOTAL CREDITS - 81

HINDUSTAN UNIVERSITY
DEPARTMENT OF ARCHITECTURE

SYLLABUS FOR I SEMESTER M.PLAN COURSE

PAP 101	**INTRODUCTION TO HUMAN SETTLEMENT PLANNING**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To expose students the origin, growth and development of human settlements from ancient times to the present context.		

Objectives	**Outcomes**
To enable the student to: • Understand early settlement pattern and growth • Understand the impact of Industrial revolution in planning. • Understand Human Settlements as expression of Civilization and Culture.	The student should be able to: • Understand the evolution of settlements. • Learn positive Planning aspects of early civilizations and apply in current scenario. • Plan in a better way for the future.

1. Early Settlements **8**

Human Settlements as expression of Civilization, Physical form and pattern, nucleus of settlement growth during different periods up to the industrial revolution. Socio-Political context and their effect on settlement development during medieval ands renaissance periods.

2. Growth of Indian Settlements **9**

Evolution of settlements, their planning and building during the early, medieval, mughal and colonial periods. Study of spatial components of settlements.

3. Effects and impacts of Industrial Revolution **12**

Change in mode of Production. Shift of population and the concentration of activities. Impact of industrialization and urbanization in cities. New cities like Washington,D.C, Brazilia, New Delhi & Chandigarh. Planning thoughts of Patric Geddes, L.Mumford, E.Howard, CA Doxiadis, & Le-carbousier. The emerging thought on environmental and physical consequences.

4 Heritage and Conservation **8**

Historical heritage, Rules of settlements growth and decay, Urban renewal – methods, conversation and strategies, clearance & improvement of heritage structures. Development provision and regulation on heritage conservation. Conservation and preservation of temple towns and colonial buildings.

5. Settlement System in a changing World **8**

Human settlements in Space. Regionalism and regional approach to human settlements growth. Global City, Information Technology & communication – the city of the future and future of the cities.

Total 45

References

1. ConstantinodA.Doxiadis, 'Ekistics', Hutchinson of London, 1968.
2. 'Global Review of Human Settlements', Pergamon Press, London, 1976.
3. Arthur Kohun,'Histroy Builds the Towns', Lund Humphries, London, 1953.
4. Paul Zucker 'Town and the square, Columbia University Press, New York, 1996.
5. C.P.VenkataramaAyyar, Town Planning in Early South India, Mittal Publications, Delhi, 1987.

PAP 102	**URBAN AND RURAL PLANNING**	**3 Credits**	**L T P C** 3 0 0 3
Goal	To understand the concept of Urban and Rural Planning through various plans and programmes in India and abroad.		

Objectives	**Outcomes**
To enable the student to: • Understand the importance of urban and rural development in the national and international perspective. • Understand various urban and rural development programmes. • Expose the validity of the various programmes and problems faced.	The students should be able to: • Have better knowledge about Urban and Rural Planning • Understand various development programmes. • Prepare different Development Plans.

1. National Planning and Rural Development **8**

Policies and Programme of rural development in India. GOI Five year plans and Agricultural development.

2. Rural Development Programmes **9**

Rural development programmes in India. Past and present – performances and problems. Rural development programmes in other developing nations. Development inputs and its impact on socio- economic changes.

3. Rural Institutions **9**

Rural institutions and Organizations, Rural banks, Co-operatives, Marketing, Mass Media and Communication. Micro – finance, Self Help Groups(SHG) and rural credit access.

4 Introduction to urbanization and urban planning **8**

Contemporary theories and concepts in city planning, Urbansiation as a process, advantage and disadvantage, political influence and Polarization of Economic, Socio – Cultural and Administrative Activities, Urban development programmes.

5. Types of plans **11**

Plan making process, Delineation of Planning area, Assessment of developmental issues, Plan period and phasing, Projection of requirements, Formulation of aim and objectives, Development proposals and landuse planning, Delineation of zones, Resource mobilization, Implementation mechanism, Monitoring and review, Role of Public Participation, Deficiency of Master plan, Regional Plan, Development Plan,

Detailed Development Plan.
Total - 45

References

1. Institute of Town Planners, India, Ministry of Urban Affairs & Employment, Government of India, New Delhi, UDPFI Guidelines , 1996.
2. Vivek Saurath, "Rural Development – Planning Strategy and Policy Imperatives", Dominant Publishers and Distributors, New Delhi, 2003.
3. Doshi (et al), "Rural Sociology", Rawat Publication, Jaipur, 2009.
4. Rajagopalan, "Rural urban Dynamics – perspectives and experiences", ICFAI books, the ICFAI University Press, Hyderabad, 2010.
5. Nair (et al), Rural Infrastructure – Issues and Perspectives", ICFAI books, the ICFAI University Press, Hyderabad, 2010

PAP 103	**DEMOGRAPHY AND STATISTICS FOR PLANNING**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To understand the importance of Demography and Statistics and its application in planning.		

Objectives	**Outcomes**
To enable the student to: • Understand the different types of statistical analysis. • Understand different sampling techniques in surveys. • Understand demography analysis.	The student should be able to: • Collect the data in an appropriate way and consolidate it. • Forecast population projections while making different development plans. • Use appropriate sampling and analysis in practice.

1. **Data Collection, Compilation and Condensation** **9**
   Scope and Function of Statistics in Planning Analysis - Data Types and Sources - Classification and Tabulation of Data - Measures of Central Tendencies, Arithmetic Mean, Median and Mode – Measures of Dispersion – Pictorial Representations of Data

2. **Sampling and Social Surveys** **9**
   Methods of Primary Data Collection – Principles in Design of questionnaires – Principles of Sampling – Types of Sampling – Sampling of Population, Area and Time – Sources of Error – Sample Size

3. **Statistical Inference** **9**
   Elementary Probability – Concepts and Definitions – Theories of Addition and Multiplication - Theory of Estimation and Testing of Hypothesis – Tests for Means and Proportion – Non-Parametric Tests

4. **Trend Analysis and Index Numbers** **9**

Time Series – Components of Time Series – Measurement of Trend and Variations – Interpolation and Extrapolations - Index Numbers – Meaning - Types and Construction of Index Numbers – Simple Regression Analysis

5. Demographic Analysis **9**

Demographic Characteristics of Population and their Measures – Projection of Population – Migration analysis – Description and Construction of Life Tables – Vital Statistics

Total 45

REFERENCES

1. Gupta S.C, 'Fundamentals of Statistics', Himalaya Publishing House, New Delhi, 2004
2. C. B. Gupta and Vijay Gupta, "An Introduction to Statistical Methods", Vikas Publishing House Pvt Ltd, Noida, 2009.
3. Murray and Larry, "Theory and Problems of statistics, Third Edition", Tata Mcgraw-hill Publishing Company Limited, New Delhi, 2008.
4. P. N. Arora, Sumeet Arora and Amit Arora, "Comprehensive statistical methods", S. Chand & Company Ltd, New Delhi, 2008.
5. A. Rajathi and P. Chandran, "SPSS for you", MJP Publishers, Chennai, 2010.

PAP 104	**PLANNING THEORY AND TECHNIQUES**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To understand the history and theories of the planning profession highlighting alternative approaches to planning practice, helping in decision making, in planning.		

Objectives	**Outcomes**
To enable the student to: • Understand different planning principles and planning systems in India and Abroad. • Learn different planning surveys. • Learn different analytical and optimization techniques in planning.	The student should be able to: • Choose appropriate planning system in practice • Use different analytical and optimization techniques while planning

1. Planning Principles and Process **9**

Process of evolution of human settlement planning, Principles in Planning - rationality in planning, Blueprint and process mode, disjointed incremental mode of planning, Normative versus functional mode of planning

2. Planning System **8**

Planning system in India, Introduction to Master Plan, Structure Plan, Detailed Development Plans, City Corporate Plan and Smart Plan.Comparison of planning systems in UK, USA & Developing countries in South Asia

3. **Planning Surveys** **10**
   Type of planning surveys, data identification for various plan preparation. Aerial photo and remote sensing techniques in planning. Formulation of standards for various urban functions

4. **Analytical Techniques** **10**
   Delphi, Trade off-game, simulation models, gravity analysis, Lowry model, Threshold analysis, Multivariate analysis.Techniques of delineation of planning areas and planning regions. Land use models.

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

Total 45

References

1. Lichfield N., et.al. (eds), 1998, Evaluation in Planning: Facing the challenge of complexity, Kluwer Academic publications, Dordrecht.
2. Knox P, and P. Taylor (eds), 1995, World Cities in a World System, Cambridge University Press, Cambridge.
3. Kaiser Edward J., et.al., 1995, Urban Landuse Planning 4th (ed) Urbana, University of Illinois Press
4. Paul R. Wolf, 1986, Elements of Photogrammetry, McGraw Hill Books Co., London.
5. Bola Ayeni, 1979, Concepts and Techniques in Urban Analysis, Croom Helm, London.

PAP105	**SOCIO-ECONOMIC AND SPATIAL ASPECTS OF PLANNING**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To teach the students the social sciences inputs for analyzing Human Settlements growth & development and incorporating them while planning of Human settlements.		

Objectives	**Outcomes**
To enable the student to: • Understand socio-economic and spatial aspects of planning. • Understand economic base and theories of economic development. • Understand Urbanisation and urban land use	The student should be able to : • Learn different socio-economic base under different culture. • Better understanding about Urbanisation while planning. • Utilise Urban land better, while planning

1. **Socio-economic and Spatial Aspects of Human Settlement Planning** **10**
   Socio-economic groups, structures and Institutions as related to urban and rural communities, Ecological processes and structures in Indian Cities.

2. Economic Base **9**

Agglomeration economics- Economics of scale, Multiplier effect- concept, scope, limitation, basic and non-basic activities of economics base, methods of base identification

3. Theories of Economic Development **8**

Geographical, sociological, economic and holistic approaches. Balanced and unbalanced growth trends.

4. **Urban Land use and Settlements Organization** **8**

Landuse determinants, Locational Dynamics of urban Landuse spatial organization of Urban settlement.

5. **Urban Phenomena & Urbanization** **10**

City-region, Urban Sprawl and Fringe, Urbanization in India and Tamilnadu with reference to settlements and population distribution.

Total 45

References

1. F.S.Chapin, 1965, 'Urban Landuse Planning', Higg& brothers, New York.
2. K.V.Sundaram (Ed), 1985 'Geography & Planning', Concept Publishing Co., New Delhi.
3. R.A.Wilson and D.A. Schulz, 1978, 'Urban Sociology', Prentice Hall Inc., New Jersey.
4. Ravender Kumar Kaul, "Migration and Society - A Study of Displaced Kashmiri Pundits", Rawat Publications, New Delhi, 2005.
5. K. R. Gupta, "Advanced Economics of Development", Vol 1 & 2, Atlantic Publishers and Distributors (P) Ltd, New Delhi, 2011.

PAP 109	**PLANNING PROJECT I**	**8 Credits**	**L T P C** **0 0 14 7**
Goal	To create the awareness and comprehensive knowledge in residential area development		

The Planning project I 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) Planning at Layout Level

Review of Literature, Site analysis, Study of Existing Layouts, Design criteria's – Existing act and Byelaws, Alternative designs, Finalization of Designs, Cost of the Projects and Model

Total – 240

PAP 201	**REGIONAL PLANNING AND DEVELOPMENT**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To make the candidate understand the concept of regions and make them skillful in applying various methods and techniques of Regional planning.		

Objectives	**Outcomes**
To enable the student to: • Understand the concept and evolution of regions. • Learn different regional analysis techniques. • To learn regional development patterns.	The student should be able to: • Learn the concept of regions and framework of regional planning. • Learn about regional planning in India and Abroad • Prepare different types of regional plan.

1. **Concept of Regional Planning** **9**
   Concept of region, types of region, Regionalization. Evolution of regional planning.Institutional framework for regional planning.

2. **Techniques of Regional Analysis** **9**
   Input-output analysis, shift and share analysis, concentration and dispersal. Industrial Location Theory.

3. **Growth Models** **9**
   Growth pole and Growth Center, Core Periphery Concept, Central Place Theory, Agricultural landuse model, Models of industrialization and regional development. Resource allocation models.

4. **Regional Development Pattern** **9**
   Regional disparities, Resources in regional development.Multi-level planning. District Planning, special area development programmes and schemes. Rural development schemes.

5. **Case Studies:** **9**
   Regional planning in India, Regional Plan Case Studies - USA, Japan and other developing countries.

   Total 45

References

1. Allen G.Noble, et.al., (eds) 1998, Regional Development and Planning for the 21st Century: New priorities New Philosophies, Aldershot, USA,
2. David Mosse, et.al, 1998. Development Process: concepts and Methods for working with complexity, Loutledge, London,

3. Hamilton.F, (eds) 1997. Industrialization in Developing and Peripheral Regions, Croom Helm, London,
4. Chand Mahesh and U.K.Puri, 1983. Regional Planning in India, Allied Publishers, New Delhi,
5. Isward Walter, 1960. Methods of Regional Analysis – An Introduction to Regional Science, MIT Press, Cambridge,.
6. Roy Prodipdo and Patil BR (eds) 1977 Manual for Block Level Planning Mcmillan Company India Limited,

PAP 202	**URBAN INFRASTRUCTURE AND NETWORK PLANNING**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To align land use planning along with Infrastructure planning such as water supply, sewerage, solid waste management, roads and street Lighting etc.		

Objectives	**Outcomes**
To enable the student to: • Understand Urban Forms • Understand different services with respect to planning. • Learn networking process of services	The student should be able to: • Learn standards and norms related to services • Provide better networking system while planning

1 Urban Forms, Size and Infrastructure 10

Obligatory and Discretionary Services, Implication of Urban Form and Size on Services, Norms and Standards, National and Local guidelines, Recommendations of Rakesh Mohan Committee.

2 Essential Services 11

Demand Strategy, Issues and Tasks, Operation and Management Aspects of each Service–Water Supply, Sewerage / Drainage, Solid Waste Management, Street Lighting and Living Environment. Siting of Services Vs Landuse and Efficiency, Service planning.

3 Geometric Design 8

Highway classification - Traffic characteristics – Horizontal and Vertical alignment – Sight distance – Cross-sectional elements – At grade and Grade separated intersections.

4 Traffic Surveys and Highway Capacity 10

Volume Count – Origin and Destination – Parking and Public Transport Surveys – Methods of Survey – Analysis – Inferences, Concept of PCU and Level of Service – Capacity of uninterrupted flow conditions – Capacity of Rural and Urban roads.

5. Mass Transportation Systems 6

Different modes – Capacities – Limitations – Planning Aspects – Coordination – Para Transit modes – Private transport.

Total 45

References

1. Sai Sujatha, "Water, Sanitation and Health in urban areas", Discovery Publishing House Pvt Ltd, New Delhi, 2012.
2. Padmanabhan Nair, "Urban Public Services – A Development Perspective", ICFAI Books, the ICFAI University press, Hyderabad, 2010.
3. Murthy, "Infrastructure Financing – Trends, Challenges and Experiences", ICFAI Books, the ICFAI University press, Hyderabad, 2010.
4. India Infrastructure Report, 2009 – Land a Critical Resource for Infrastructure", 3i Network, Infrastructure Development Finance Company, Oxford University Press, New York.
5. Varsha Joshi, "Institutions and Social Change", Rawat Publications, New Delhi, 2003.
6. Bidyut Chakrabarty and Prakash Chand, "Public Administration in a Globalizing World – Theories and Practices", Sage Publications, Los Angeles, 2012.
7. Ramachandraiah (et al), "High Tech Urban Spaces – Asian and European Perspectives", IDPAD, Manohar Publishers and Distributors, New Delhi, 2008.

PAP 203	**ENVIRONMENTAL PLANNING AND MANAGEMENT**	**3 Credits**	**L T P C 3 0 0 3**
Goal	To expose the students 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-imaging of environmental planning.		

Objectives	**Outcomes**
To enable the student to: • Understand the consequences of development to environment. • Learn about Environmental impact Assessment. • Understand environmental management in planning.	The student should be able to: • Learn how development has an impact on environment. • Do environmental analysis. • Consider the environmental aspects while planning.

1. DEVELOPMENT CONSEQUENCES ON ENVIRONMENT 9

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.

2. ENVIRONMENTAL MANAGEMENT AND STANDARDS 8

Institutional and Legal Support in management of the Environment – Environmental Policies, and Protocols - Global Environmental Initiatives - Environmental Indicators - Concepts and Measures in Environmental Standards

3. ENVIRONMENTAL IMPACT ASSESSMENT 9

Overview of Environmental Impact Assessment Practice in India - Types, Conceptual Approach and Phases of EIA – Impact Identification Methodologies – Prediction and Assessment of Social, Cultural and Economic Environments, EIA Report making Process.

4. ENVIRONMENTAL DECISION MAKING 9

Generation and Evaluation of Alternatives – Decision Methods – Mitigation and Environmental Management Plan – Public Participation in the Process of Environmental Decision Making Process

5. ENVIRONMENTAL APPROACH IN PLANNING 10

Environmental Concepts – Sustainability and Environmental Carrying Capacity – Ecological footprint – Environmental Strategies in Landuse, Transportation, Infrastructure Planning and Management - Legislative Requirements, Public Awareness and Community Participation – Environmental Management Options

Total 45

REFERENCES

1. Asesh Kumar Maitra, 'Urban Environment in Crisis', New Age International (P) Limited, Publishers, New Delhi.
2. Avijit Gupta and Mukul G. Asher, 'Environment and the Developing World', John Wiley & Sons, New York, USA.
3. Larry W. Canter, 'Environmental Impact Assessment', McGraw-Hill, Inc., New York, 1996.
4. Pannirselvam R and Karthikeyan (2005), 'Environmental Impact Assessment' SPGS Publishers, Chennai.
5. Rao P.K (2001), 'Sustainable Development', Blackwell Publishers, Massachusetts, USA.
6. Tim Davie, "Fundamentals of Hydrology, Second Edition, Routledge Fundamentals of Physical Geography", Routledge Taylor and Francis Group, London.
7. Katar Singh and Anil. S. Shishodia, "Environmental Economics – Theory and Applications", SAGE Publications, Los Angeles, 2010.

PAP 204	**PLANNING LEGISLATION AND PROFESSIONAL PRACTICE**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To make the students aware and understand the relevance of constitution and legislation in terms with spatial planning.		
Objectives		**Outcomes**	

To enable the student to:	The student should be able to:
• To learn planning laws and legislations • Learn different acts and laws related to state and local bodies. • Understand professional responsibilities while planning, • Learn problems and prospects of town planning in terms of professional practice.	• Facilitate implications of the existing legislations relating to planning and its importance and shortcomings. • Better coordination with local bodies. • Inculcate responsibilities and ethics of professional practice.

1. Concept of Planning Legislation 8

The concept of law, 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.

2. Acts and Rules governing Local Bodies 12

Tamil Nadu Panchayat Act 1994, Municipality Act 2012, Corporation Act 1919, TNULB Act 1998, Development Regulations 2010, Provisions in the above acts related to functions, powers, role and responsibilities of local bodies including elected representatives and officers.73rd and 74th CAA and their implications on planning and development. Local Body finance, revenue, expenditure and resource mobilization.

3. Acts related to Planning and Implications of Laws and Legislation on Development 10

Review of Town and Country Planning Act of Tamilnadu 1972, Urban Development Act 1993, Public Health Act 1939, Slum Improvement Act 1971, Housing Act, Pollution Act 1981, Heritage Act, Acts related to Environment, , Legal aspects of Ownership, Lease and Tenancy transfers development management, law relating to utilities and services. Implications of Land ceiling, betterment levy and development charges.Concept of arbitration.

4. Professional Practice 9

Professional role responsibility and planning consultancy service, professional ethics, code of conduct and professional charge, role of inter disciplinary group, consultancy agreements, contracts, project proposals formulation, changing professional practice in India and abroad

5. Professional Institutions involved in planning 6

Aims, objectives of Professional institutions - Private organizations and practices, International organizations. Institution building and setting up private practice and work. Career options and prospects.

Total 45

References

1. C.K.Bikseswaran, 1964, 'The Madras Building (Lease and Rent Control Act), 1960, Sitaraman and Co., Madras.
2. GopalBhargava, 1983, 'Socio-economic and legal implications of urban land ceiling and regulations', Abhinav Publishing Company, New Delhi.
3. Government of Tamilnadu, 1976,'The Tamilnadu Town and Country Planning Act, 1971, Government of Tamilnadu.
4. B.I.S., 1980, "National Building Code of India', ISI, New Delhi.
5. The Land Acquisition Act, 1894, Govt. of India, New Delhi.
6. Anil Chaturvedi, 1988, District Administration, Sage Publications India Pvt.Ltd, New Delhi, 1988.

PAP 209	**PLANNING PROJECT-II (Practical)**	**8 Credits**	**L T P C** **0 0 14 7**
Goal	To create the awareness and comprehensive knowledge in development planning		

The candidates are focused to learn to prepare Plan for a medium urban settlement such as Development Plan / Master Plan / Structure Plan. The components such as physical characteristics, natural resources, demographic characteristics, economic base, employment, shelter, transportation, social and infrastructure facilities, finance, institutional set-up etc. are to be learned. Depending on the selection criteria an urban settlement would be selected and the information regarding the components stated above would be collected both form the primary and secondary sources and analyzed. A report / maps / charts are the media through which the case study are expected to be presented.

Total 240

PAP 301	**RESEARCH METHODOLOGY IN PLANNING**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To develop a research culture among the students and study, use and understand appropriate methods in formulating problems and conduct surveys, analyse data and prepare a research report.		

Objectives	**Outcomes**
To enable the student to: • Understand the research process. • Learn sources and methods of data collection. • Learn techniques of analysis and methods of report writing.	The student should be able to: • Orient towards how to do a research. • Define the research problem and the procedure to do a good research work and writing the best report.

1. Research and Planning **8**

Research- definitions, types, purposes and application.Research as a way of thinking. Research processes. 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.

2. Sources of Data **8**

Data, and information. Access to Information, Nature, types and sources.Census and

sample surveys and case studies.Secondary sources and its availability in terms of form, time and reliability. Organizations deals with secondary data generation and dissemination. 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

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 questionnaire.Merits and demerits.Schedule, Difference between Questionnaire and Schedule.Administration of Field Survey- pre requisites and preparations.

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.Univariate, Bi-variate and Multi-variate analysis of data. Draw conclusions and Interpretation of the analysis. Link interpretation to policy, and design.

5. Report Writing 9

Contents,and preliminaries. Writing reports when to start and finish. Language structure, and report format. Presentation of graphs, tables, maps and illustrations.Citation, Referencing and Indexing.Format for preparing Bibliography.Production of report.

Total 45

Reference

1. Gurumani, "Scientific Thesis Writing and Paper Presentation", MJP Publishers, Chennai, 2010.
2. Richard. A. Krueger and Mary Anne Casey, "Focus Groups – Third Edition – A Practical Guide for Applied Research, Sage Publications, Inc, London, 2000.
3. Leonard Cargen, "Doing Social Research", Rawat Publications, New Delhi, 2008.
4. Nagarajan (et al), "Research methodology", SKM Publications, Chennai, 2008.
5. Bridget Somekh and cathy Lewin, "Theory and Methods in Social Research, Second Edition", SAGE, Los Angeles, 2012.

PAP 302	**URBAN FINANCE AND GOVERNANCE**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To make the students understand the structure of urban finance through different mechanisms.		
Objectives		**Outcomes**	

To enable the student to:	The student should be able to:
• Understand local self-government and urban development. • Learn municipal financing methods. • Understand institutional capacity management.	• Learn about the revenue and expenditure pattern of expenditure finance. • Learn the agencies involved and their roles while planning municipal finance.

1. Municipal Finance **9**

Nature and Composition of Income and expenditure, Limitations and Need for Revenue Enhancements, Expenditure Control Methods and Mechanisms, Budgetary Allocation from Central and State Governments for Urban Development, Assistance from Foreign Donors and Multilateral Agencies, Non traditional Sources of Funding – Market Access – Pool Finance – Pre-requisite Conditions for Accessing Non-Traditional Funds.

2. Additional Funding Sources **9**

Types of Partnership Approaches, Privatization of Civic Services, Public Private Partnership Mechanisms, Types of Contracts and Ownerships, Emerging Cost-Effective Technology Interventions, User Charged Projects – Pricing of Services.

3 Resources Based on Achievement of urban Reforms **6**

Role of State Government and Urban Local Bodies, City's Challenge Fund, urban Reforms – Implications on Resources, Incentive Fund, State Level Pooled Finance Development Fund.

4. Institutional Capacity Enhancement **12**

Better Finance Management, Management Process – Accounting and Budgeting, Asset Management, receivables Management, Cost Centre Approach – Financial Operating Plan, City Corporate Plan, Development of Urban Indicators, Computerization, Management Information System.

5. **Urban Governance** **9**

Basic Concepts of Governance.Governance and Urban Governance, Definitions, Principles and practice regarding urban governance.Evolution and Processes.Governance and Change. New forms of Governance

Total 45

References

1. Govinda Rao, "Development, Poverty and Fiscal Policy – Decentralization of Institutions", Oxford University Press, New York, 2002.
2. Malcom Harper, "Practical Micro-Finance – A Training Guide for South Asia", Vistaar Publicaitons, New Delhi, 2003.
3. Sonalde. B. Doshi (et al), "Human Development in India – Challenges for a Society in Transistion", Oxford University Press, New York, 2010.
4. Barudeb Guha (et al), "linking formal and informal Economy – Concepts and Policies", Oxford University press, New York, 2007.

5. Janak Raj Gupta, "Privatization of Municipal Finance in India", Atlantic Publishers and Distributors (P) Ltd, Chennai, 2009.
6. Ravi Kumar Jain Bandamutha, "Internet Governance – An Introduction", ICFAI Books, the ICFAI University press, Hyderabad, 2010.
7. Niraja Gopal Jayal, Amit Praksah and Pradeep. K. Sharma, "Local Governance in India – Decentralization and Beyond", Oxford University Press, New York, 2007.
8. Pranab Bradhan and Dilip Mookherjee, "Decentralization and Local Governance in Developing countries – A Comparative Perspective", Oxford university press, New York, 2007.
9. Ramesh (et al), "Urban Infrastructure and Governance", Routledge Taylor and Francis Group, London, 2010.
10. M. R Biju, "Rural Development – under Decentralized Governance", Concept Publishing Company Pvt Ltd, New Delhi, 2012.

PAP 308	**DISSERTATION**	**5 Credits**	**L T P C** **0 0 8 4**
Goal	Expose the students to scientific research on a particular topic		

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 with or without research hypothesis. 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.

Total - 120

PAP 309	**PLANNING PROJECT III**	**8 Credits**	**L T P C** **0 0 14 7**
Goal	To create the awareness and comprehensive knowledge in Block development or Regional planning		

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. Studies and analysis would consist of survey, local renewable development, settlement distribution pattern, environmental protection, institutional and implementation framework. Identification of projects, programmes and schemes with funding sources.

Total – 240

PAP 401	**SUSTAINABLE PLANNING AND PRACTICES**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To introduce the concept of sustainable development as a tool to establish functional linkages among the social, economic and environmental issues.		
Objectives		**Outcomes**	

To enable the student to:	The student should be able to:
• Be acquainted with the concept of sustainable development based on global environmental issues. • Learn the steps of action plan for implementation of sustainable development. • Be familiar with the contribution of developed countries on sustainable development.	• Utilize sustainable development concepts while preparing plans. • Identify the steps in action plan for implementation of sustainable development. • Relate to the integrated approach for resource protection and management.

1. Concept and Issues **9**

Changing perspectives in man-environment relationship with focus on issues of population, urbanization, resource depletion and pollution; limits to growth vis-a-vis sustainable economy; growth and environmental imperatives of developing vs. developed countries; definitions, concepts and parameters in sustainable development with particular reference to Brundtland Commission, Eco-City approach, etc.

2. Methods and Techniques **9**

Application of ecological principles in sustainability: energy and resource cycles, food webs, ecological pyramids and evolution and succession of natural ecosystems; Carrying Capacity based planning: concept, parameters and indicator measures, models and case studies in urban and regional development; Environmental Impact and Strategic Environmental Assessment for urban areas; Ecological Footprint Analysis of cities; Sustainable Lifestyle Assessment and behavioral modifications at household levels.

3. Land, and Energy Resources **9**

Land capability and suitability analysis in location and planning of urban land uses; implications of urban form, density, land use pattern and transportation system in land and energy conservation

4. Sustainable development of socio-economic systems **8**

Demographic dynamics of sustainability – Policies for socio-economic development – Strategies for implementing eco-development programmes – Sustainable development through trade – Economic growth – Action plan for implementing sustainable development – Urbanization and Sustainable cities – Sustainable energy and agriculture – Sustainable livelihoods.

5. Sustainable development and international response **10**

Role of developed countries in the development of developing countries – International summits – Stockholm to Johannesburg – Rio principles – Agenda 21 – Conventions – Agreements – Tokyo Declaration – Doubling statement – Transboundary issues – Integrated approach for resource protection and management.

Total = 45

References

1. Sayer, J. and Campbell, B., The science of sustainable development: Local livelihoods and the Global Environment (Biological Conservation, Restoration & Sustainability), Cambridge University Press, London, 2003.
2. Riley. E. Dunlap and William Michelson, "Handbook of Environmental Sociology", Rawat Publications, New Delhi, 2008.
3. Rawat, "Sociology – Basic Concepts", Rawat Publications, New Delhi, 2007.
4. Vandana Shiva and Gitanjali Bedi, "Sustainable Agriculture and Food Security – The impact of Globalization", Sage Publications, New Delhi, 2002.
5. Rao, "Sustainable Development – Economics and Policy", Blackwell Publishers Inc, USA, 2001.
6. Ghosh Raj, "Sustainable Development- Environment, Energy and Water Resources", Ane Books Pvt Ltd, New Delhi, 2011.
7. Pati (et al), "Sustainable Development – Issues and Perspectives", D. K. print world (P) Ltd, New Delhi, 2007.
8. Madhyartha and shrihari, "Synergic solutions for sustainable development – prescription for prosperity", Research Publications, Chennai, 2007.
9. Angela (et al), "Evaluation for participation and Sustainability in Planning", Routledge Taylor and Francis Group, London, 2010.

PAP 409	**THESIS**	**16 Credits**	**L T P C** 00 28 14
Goal	To test whether a student has acquired the requisite skill and competence in planning to be awarded a Master Degree.		

Students shall be required to undertake thesis studies 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. Heritage and Conservation in Historical environment.
6. Mass Housing in special cases (Disaster and Geographical conditions)
7. Any other emerging areas in the field of urban and regional planning

The thesis shall be submitted in the form of report, drawing sheet, charts, CDs and Slides if any.

ELECTIVES

PAP 701	URBAN AND RURAL HOUSING	3 Credits	L T P C 3 0 0 3
Goal	To understand the fundamentals of housing concepts, existing conditions and policies and strategies adopted by the various agencies for the development in the contemporary scenario.		

Objectives	Outcome
• To draw on the literature to understand the fundamentals to housing practice. • To highlight the existing housing conditions and related issues and study the various plans and policies for the development of the same. • To introduce to the students, the institutional framework for development and finance in this field	The students should be able to: • Understand the role of central and state governments in developing the housing industry. • Understand the current situation of conditions of housing in India. • To know the different housing development programmes announced in our country from time to time. • To know the different agencies of the government and how they are working to improve the housing conditions in India. • How to get the finance for building a house and what are the various measures taken by the government in providing finance to the housing industry.

1. HOUSING AND DEVELOPMENT 9

Importance and Reflections of Housing on Social, Cultural and Economic Development – Role of Central Government and its Public Agencies in Housing Development – National Housing Policy in India – Comparison of Housing Policies and Programmes of Developed and Developing Countries

2. HOUSING SCENARIO IN INDIA 9

Housing Stock and its Adequacy in Urban & Rural Settlements – Housing Quality and its Determinants – Housing Supply and Demand Assessments – External and Internal factors of influence on Housing Development – Trends in Housing Market – Five Year Plans of GOI.

3. HOUSING PROGRAMMES IN INDIA 9

Nature and Type of housing development Programmes - Sites and Services, LIG, MIG, HIG Schemes, - Rural Housing Schemes - Slum Housing Programmes - Cooperative and Private Sector Housing ,

4. INSTITUTIONAL FRAMEWORK 9

Housing agencies for Policymaking, Programme Formulation, and Implementation, - Objectives and Functioning of agencies like TNHB, TNSCB, CMDA, Cooperatives and other Department Agencies – Support of the National and State Governments - Housing

Programmes announced from time to time.

5. HOUSING FINANCE **9**

Formal and Informal Systems of Finance - Financing agencies and their Terms of Lending – Direct and Indirect Incentives for Housing Development - Housing Affordability in relation with demographic, social and economic status.

TOTAL: 45

References

1. KavitaDatta and G.A. Jones (1999), 'Housing and Finance in Developing Countries', Routledge, London.
2. Annual Report 2010-2011, Ministry of Housing & Urban Poverty Alleviation, Government of India.
3. National Urban Housing and Habitat Policy – 2007, Government of India, Ministry of Housing & Urban Poverty Alleviation, New Delhi.
4. Manual under right to information act, 2005, Government of Tamil Nadu, Tamil Nadu Housing Board, Chennai.
5. Manual under right to information act, 2005, Government of Tamil Nadu, Tamil Nadu Slum Clearance Board, Chennai.
6. Manual under right to information act, 2005, Government of Tamil Nadu, Directorate of Town and Country Planning, Chennai.
7. Manual under right to information act, 2005, Government of Tamil Nadu, Corporate Housing, Chennai.

PAP 702	**PROJECT FORMULATION AND IMPLEMENTATION**	**3 Credits**	**L T P C** 3 0 0 3
Goal	To examine techniques and procedures relevant for project planning and implementation in developing countries, including project identification, feasibility analysis, design and implementation monitoring.		

Objectives	**Outcomes**
To enable the student to: • To understand Project Cycle • Learn project selection and appraisal. • Learn the method of project monitoring and evaluation.	The student should be able to: • Evaluate economic and distributive effects of completed or ongoing infrastructure development projects. • Understand how institutional setting and other practical influences affect the use of conventional analytical tools.

1. Introduction to Project Formulation **9**

Types of Project, Project Cycle, Identification, Selection, Preparation, Appraisal techniques, Monitoring, Evaluation

2. Project Selection Criteria **9**

Capital Investment Programme, Internal Rate of Return, Net present Value, Cost-Benefit & Analysis, Social Cost Benefit analysis, Budgeting, Tender procedures

3. Project Appraisal **9**

Appraisal techniques – Project Proposal and objectives, Current base line conditions, Financial and Economical Appraisal, Socio cultural assessment, Findings, Conclusions and Recommendations, Preliminary framework for project monitoring and evaluation and Case studies

4. Project Monitoring **9**

Framework, Planning and Management, Monitoring, Performance monitoring – Design, Software components, Data Collection, Potential Problems and Possible solutions and Reports monitoring, Process Monitoring – Key issues, Monitoring Schedule, Data collection, Design , strategy, CPM, PERT

5. Project Evaluation **9**

Framework, Impact Evaluation – Approaches, Key issues, Alternative to large scale qualitative Evaluation designs, Quantitative estimates of Net project Impacts, Comparison of the effectiveness of different projects, Management, Evaluation of Non shelter Urban Projects(Case studies)

Total 45

References

1. Michael Bambarger and Eleanor Hewitt, January, 1985, Monitoring and Evaluating, Urban Development Programmes: A hand book for program managers and Researchers, The World Bank, 1988
2. Warren C. Baum, 1993, The project cycle, World Bank – Economic Development Projects, Washington
3. Henderson PD, Investment Criteria for Public Enterprises, Penguin Books
4. Jagdish Chandra, "Project Planning and Control", Alfa Publications, New Delhi, 2008.
5. Prasanna Chandra, "Projects- Planning, Analaysis, Selection, Financing, Implementation and Review – Seventh Edition", Tata Mcgraw hill education Private Limited, New Delhi, 2010.

PAP 703	**LAND ECONOMICS AND REAL ESTATE DEVELOPMENT**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	This course applies the latest economic thinking and research to the task of analyzing realestate markets and forecasting supply or demand.		

Objectives	**Outcomes**
To enable the student to: • Understand trends in real estate. • Learn Laws related to real estate development and housing markets. • Learn real estate project formulation.	The student should be able to: • Understanding of current real estate scenario in markets. • Better understanding off housing market. • Apply laws and policies to real estate markets.

1. INTRODUCTION TO REAL ESTATE **9**

Introduction to real estate - Definition, principles of real estate - Value concepts - Methods ofvaluation - Introduction to real property ownership - Leasing property and succession – Methods of sale/purchase and title search

2. INVESTMENT AND LAWS **9**

Real estate investment and feasibility 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.

3. REAL ESTATE PROJECT FORMULATION **9**

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, rating, and risk assessment.

4. HOUSING MARKETS **10**

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.

5. CASE STUDIES **8**

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.

TOTAL: 45

REFERENCES:

1. David J. Lynn, ’Emerging Market Real Estate Investment: Investing in China, India, andBrazil’ ; 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 &FrancisGroup, London, 2009.
5. Narayan LaxmanRao, ‘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

PAP 704	**WEB BASED APPLICATIONS IN URBAN AND REGIONAL PLANNING**	**3 Credits**	**L T P C** **2 0 2 3**

	(PRACTICAL)		
Goal	To train the candidate the use of web for Urban and Regional Planning Applications and to train them to build case based web development		

Objectives	**Outcomes**
To enable the student to: • Learn the role of web-based technology in planning. • Understaddissimnation of onformation through internet and iintranet.	The student should be able to: • Apply web-based technology in urban and regional planning. • Better planning process through technology. • Prerequisite: • INTERNET, Windows / NT OS, HTML etc.

1. **Role of WEB based technology in Planning** **20**
   Information need and the role of Web in Planning – Public participation – Information transparency – Current trends.

2. **Information Dissemination through INTRA and INTERNET** **20**
   INFOCITY – Knowledge sharing – E- governance – Information kiosks – digital planning

3. **Planning information across INTERNET** **20**
   Web sites and information sources in urban and regional Planning-virtual reality in planning applications.

Total 60

Reference

1. www.infocity.com
2. www.esri.com and number of such sites as and when developed would be used as the resource for the course.
3. Kim T.J., (1999) "Expert systems : Applications to Urban Planning, Springer-Verleg, New York
4. Arnum E. & Conti S., 1998, "Internet Deployment Worldwide: The New Superhighway Follows the Old Wires, Rails and Roads", INET'98: The Internet Summit, 21-24th July 1998, Geneva, Switzerland
5. Carriere J. &Kazman R., 1997. "WebQuery : Searching and Visualizing the Web through Connectivity", Sixth International World Wide Web Conference.
6. Abbate J., 1999, Inventing the Internet, (MIT Press: Cambridge, MA.).
7. Dodge, M &Kitchin, R., 2001, Atlas of Cyberspace, Addison-Wesley, London.
8. Downey G., 2001, "Virtual Webs, Physical Technologies and Hidden Workers", Technology and Culture, Vol. 42, No. 2, pages 209-235.
9. Graham S. & Marvin S., 1996, "Telecommunications and the City: Electronic Spaces, Urban Places", Routledge : London

PAP 705	**GIS MODELLING IN URBAN AND REGIONAL PLANNING (PRACTICAL)**	**3 Credits**	**L T P C** **2 0 2 3**

Goal	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
Objectives	**Outcomes**
To enable the student to: • Learn the functions of GIS models in Urban and regional planning. • Learn Spatial data input using GIS. • Understand spatial analysis using GIS.	The student should be able to: • Consolidate spatial data using GIS. • Better planning approach through technology.

1. Introduction **8**

Definition, map and map analysis, automated cartography, history and development of GIS, Hardware requirement, system concepts, co-ordinate systems, standard GIS Packages.

2. Data Entry, Storage and Maintenance – In Urban and Regional Planning 10

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 date – application of spatial date in urban and regional planning – objectives and functions of GIS models in urban and regional planning.

3. Spatial Data Input **10**

Defining the objectives of a GIS planning problems – Identification of required spatial data layers – coding schemes – digitisation of spatial date – editing spatial date usable for the given planning problem.

4. Attribute Date Input **10**

Role of attribute data in defining geographic features – adding attribute data file – topology generation – joining attribute data to its geographic features.

5. Spatial Analysis using GIS **7**

Performing overlay functions – manipulating attribute data – GIS modeling – map and report generation – case problems on regional analysis, impact assessment study, project formulation and land suitability analysis.

TOTAL – 45 hours

Reference:

1. Brail. K. R. (1990), "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. (1991), "Information Systems for Urban and Management in Developing countries. The concept and reality, computers, environment and urban systems", Vol: 15, 1991.

3. Jeffrey Star and John Estes, "Geographical Information System – An Introduction", Prentice Hall Inc., Engelwood cliffs, New Jersy, 1990.
4. Klosterman RE. (1990), "Micro Computer packages for planning analysis", Americal Planning Association Journal, Autrenn, 1990.
5. B. Bhatta, "Remote Sensing and GIS", Oxford University Press, New Delhi, 2009.
6. Ian Heywood, Sarah Cornelius and Steve Carvee, "An Introduction to Geographical Information System, Longman, England, 2000.
7. Earl Gose, Richard Johnson Baugh and Steve Jost, "Pattern Recognition and Image Analysis", Prentice Hall of Indian Private Limited, New Delhi, 1999.
8. Itzhak Benenson and Paul. M. Torrens, "Geo-simulation – Automate based Modeling of urban Phenomena", John Wiley and Sons Ltd, England, 2004.
9. Paul. A. Longey (et al), "Geographic Information System and Science", John Wiley and Sons Ltd, New York, 2001.

PAP 706	**ICT BASED CITY AND INFRASTRUCTURE PLANNING**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To make students aware and exposed to changing scenario in the spatial order of cities andregions as well as the emergence of virtual societies in the world.		

Objectives	**Outcomes**
To enable the student to: • Learn the difference between traditional planning and modern planning. • Learn about digital and virtual cities. • Understand the importance off governance in virtual/smart cities.	The student should be able to: • Understand the use and power of emerging new technologies and social networks among communities across the city, country and globe. • Make a Paradigm shift in the spatial planning outlook and governance edge. • Better planning approach through technology.

1. PLANNING VS TECHNOLOGY **10**

Tradition to modernity – Spatial planning and technology interface - Socio-economic planningand technology interface – Planning cities and local technologies - Technological innovationsand responsive city planning - Planning responsive technology Vs technology responsiveplanning.

2. CITIES-TECHNOLOGIES-INFRASTRUCTURE **12**

Transportation and technology, water, sanitation and technology, energy efficient technology forhome, street, neighborhoods and city - Telecommunication, health and education – Security andsafety for buildings and people in cities.

3. TECHNO CITIES **8**

Digital cities, virtual cities, technology parks - Smart planning and infill development – Planning,design and communication system - Socio-economic and environmental Impact of techno cities.

4. GOVERNANCE **8**

Role of law and technology, administration and organization, industry and corporate, communities and people in building smart cities and smart communities.

5. CASE STUDIES **7**

Best practices in India and around the world.

TOTAL: 45

References:

1. Elizabeth, S. Frans, V. 'IDENSITY: Planning Paradigms for the Information CommunicationAge', Isocarp Congress, 2001.
2. Intelligent Community forum, 'Innovation and Employment in the Intelligent Community",Intelligent Community forum, 2012
3. Komakech, D., 'Achieving More Intelligent Cities", Municipal Engineer, 2005.
4. Peng, L., Tao, Z., 'Establish the Intelligent City System and Realize its Level Analysis",Telematics and Informatics, 2010.
5. Wendy Sarkissian, 'Creative Community Planning' Earthsacn Ltd London, 2010.

PAP 707	**URBAN DISASTER MANAGEMENT**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To expose the students to different types of technological hazards and enable them to take various strategic and mitigative measures for disaster resistant planning.		

Objectives	**Outcomes**
To enable the student to: • understand the nature and importance of disaster management. • To gain an understanding of the tools for hazard and vulnerability assessment at the settlement level, structural mitigative measures, infrastructure and critical Facilities. • To gain an understanding of different types of technological hazards, their association, risk and assessment and control measures. • To increase the knowledge of the theory and practice of community based approach to disaster management.	The student should be able to: • Be Equipped for the prevention of the hazards. • Apply safety strategies during hazards. • Prepare the community towards hazard management.

1. INTRODUCTION **5**

Introduction to the concept of disaster management and mitigation.

2. RISK EDUCATION **9**

Trend in urban development and challenges before urban administrators in risk reduction.

3. PREVENTION OF HAZARD **13**

Natural disaster : Nature, causes, impact.Hazard and vulnerability assessment, concepts, tools and techniques. Pre-disaster mitigation and protection of lifelines and critical facilities against natural hazards.Concepts and overview of technological hazards at the city level. Major accident hazards in industries, storages and ports.

4. SAFETY STRATEGIES **8**

Safety management system: Strategies for implementation.Fire safety at the city level.Emergency planning, preparedness and response at the city level.

5. METHODS OF COMMUNITY BASED DISASTER MANAGEMENT **10**

Principles and methods of community based approaches for urban disaster management.Community based disaster management practice. Building community capability. Education and training on mitigation and emergency planning.

TOTAL : 45

References

1. Sinha, "Disaster, Vulnerabilities and Risks – Trends, Concepts, Classification and Approaches", SBS Publishers and Distributors Pvt Ltd, New Delhi, 2007.
2. Naseem Ahmed, "Managing Disasters", Kilaso Books, New Delhi, 2003.
3. Prabhas. C. Sinha, "Disaster Mitigation, preparedness, recovery and Response", SBS Publishers and Distributors Pvt Ltd, New Delhi, 2006.
4. Judy. L. Baker, "Climate change, Disaster Risk and the urban poor – cities building resilience for a changing world", the world Bank, Washington DC, 2012.
5. Parag Diwan, "A Manual on Disaster Management", Pentagon Earth, Pentagon Press, New Delhi, 2010.

PAP 708	**FUTURE CITIES**	**3 Credits**	**L T P C** **3 0 0 3**
Goal	To develop a fundamental understanding of the major issues that are behind the emerging concept of Smart Cities that will see the simultaneous presence and interactions of highly distributed generation, demand response, storage, multi-energy networks, smart devices, and new business models.		

Objectives	**Outcomes**
To enable the student to: • Understand the impact of IT in city planning. • Understand the change in social life and future of cities. • Understand the future of urban and regional planning.	The student should be able to: • Learn the dimensional change in the future of cities through IIT • Better planning of futuristic cities.

1. Factors that Impact Future Cities **8**

Computers, telemetric, IT, Climate change, Demographic changes and its impact on

city land use

2. **Futuristic Trends** **10**
   Future cities, Redevelopment strategies, SIMcity, Transport and the future city, new Transport Technology, Integrated transport and infrastructure

3. **Changing Socio-Economic Life** **8**
   Gated communities, Future of communities, future family structure, Economic Base, Case Studies - Examples

4. **Future regional planning** **10**
   Technological / Climatic change / Depletion of Resources/ Socio-economic / Demography impact on regional scale, Wired offices, Small Office Home Office, Global city, Convergences of activities, Settlement structures in the new era.

5. **Urban Utopia** **9**
   Contemporary Visionaries of urban utopia like Kenzo Tange, Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier, Under ground cities, Floating cities, Under water cities, clean air Parks, skyscraper world, Visionary city, Case studies.
   Total 45

References:

1. Clements D, Donald A , Earnshaw M and Williams A (2008) The Future of Community, Pluto Press, London
2. Wagner CG (ed) (2008) Seeing thr Future Through New Eyes World Future Society
3. Mack CT (ed) (2008) Hopes and Visions for the 21st Century, World Future Society
4. Mack TC (ed) (2006) Creating Global Strategies for Humanity's Future World Future Society