Town Planning Section
Civil Engineering Department

Proposed Revised Structure of M. Plan.(Town & Country Planning) Program (Academic Year 2019-20)

Duration: Two years **Program Credits: 76**

Semester -I

Sr. No	Course Code	Course Title	Contact hours per week			Credits
			L	T	P	
01	MPL-19001	Quantitative Methods in Planning	3	-	-	3
02	MPL-19002	Planning Techniques	3	-	-	3
03	MPL-19003	Geoinformatics	3	-	-	3
04	MPL-19004	Traffic and Transportation Planning	3	-	-	3
05	MPL-19005	Planning Theories	3			3
06	ML-19012	Effective Communication Skill	1			--
07	MPL-19006	Planning Studio- I (Area appreciation, LAP)	-	-	10	4
08	ML-19011	Research Methodology and Intellectual Property Rights	-	2	-	-
		Total	**16**		**10**	**19**

Semester –II

Sr. No	Course code	Course Title	Contact hours per week			Credits
			L	T	P	
01	MPL-19015	To be selected from IOC list	3	-	-	3
02	MPL-19007	Planning legislation	3	-	-	3
03	MPL-19008	Socio-Economic Aspects of Planning	3	-	-	3
04	MPL-19009	Utilities and Services Planning	3			3
05	MPL (DE)-19001/ MPL (DE)-19002	Departmental Elective Course-I	3	-	-	3
06	MPL-19010	Planning Studio-II	-	-	10	4
07	LL-19001	Liberal Learning Course	-	-	-	1
		Total	**15**		**10**	**20**

Semester –III

Sr. No	Course code	Course Title	Contact hours per week			Credits
			L	T	P	
01	MPL-20001	Professional Training	-	-	-	1
02	MPL-20002	Urban Governance and Management	3	-	-	3
03	MPL-20003	Land economics and Management	3	-	-	3
04	MPL (DE)-20001/ MPL (DE)-20002	Departmental Elective Course-II	3			3
05	MPL-20004	Planning Studio-III (Regional Planning)	-	-	10	4
06	MPL-20005	Planning Thesis –I	-	-	5	**5**
		Total	**9**		**15**	**19**

Semester –IV

Sr. No	Course code	Course Title	Contact hours per week			Credits
			L	T	P	
01	MPL-20006	Professional Practice and Ethics	3			3
02	MPL-20007	Planning Thesis–II	-	-	5	15
		Total	**3**	**00**	**5**	**18**

Total Credits: 19+20+19+18 = 76

List of Departmental Electives

Sr. No	Course Code	Course Title	Contact hours per week			Credits
			L	T	P	
01	MPL (DE)-19001	Place Making and Urban Design	3	-	-	3
02	MPL (DE)-19002	City and Metropolitan Planning	3	-	-	3
03	MPL (DE)-20001	Sustainable Urban Planning and Development	3	-	-	3
04	MPL (DE)-20002	Urban Poverty and Inclusive Planning	3	-	-	3
05	DEC-IV	Conservation in Planning	3	-	-	3
06	DEC-V	Urban Regeneration and Renewal	3	-	-	3
07	DEC-VII	Real Estate Development	3	-	-	3
08	DEC-VIII	Resource Mobilisation	3	-	-	3
09	DEC-IX	Policy Planning and Politics	3	-	-	3
10	DEC-X	Smart Data and City Planning	3	-	-	3
11	DEC XII	Housing Policy and Planning	3	-	-	3
12	DEC XIII	Rural Development	3	-	-	3
13	DECXIV	Decentralized Liquid waste Management	3	-	-	3

List of Interdisciplinary Open Courses

Sr. No	Course Code	Course Title	Contact hours per week			Credits
			L	T	P	
01	OEC-I	Sustainable and Smart Cities	3	-	0	3
02	OEC-II	Project Management in Planning	3	-	0	3
03	MPL-OEC-19015	Planning for Urban Transformation	3	-	0	3

MOOC courses offered from NPTL as additional.

Program objectives (PO)

POs

1. Providing students with entry-level skills as well as the knowledge needed to progress in the field of town and country planning.

2. Enhance the knowledge, learning, and awareness of important urban and regional planning issues and the planning practices.

3. Continue to Improve the quality of practice in the planning profession, through research, professional, and service activities.

4. To collaborate with ITPI and planning schools in India and abroad as well as planning-related study abroad programs offered by other universities.

SEMESTER – I

Quantitative Methods in Planning (MPL-19001)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective :

The primary objective of this course is to provide understanding of the application of quantitative techniques to analysis of planning problems

Course outcome

The student will learn to analysis of data and drawing inferences. They will also learn forecasting of future trends and Hypothesis Testing. The course also highlights the various types of data available to planners and its sources in India.

Unit 1 **(7)**

Data Collection and Presentation

- Data Collection: Primary and Secondary Sources of data, Survey Design, sources of various data in India
- Data Presentation: Classification of Data, Tabulation of Data, Charting of Data, Choice of Suitable Diagrams, etc.

Unit 2 **(8)**

Data Analysis

- Measures of Central Tendency: characteristics of a Good Average, Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean, etc.
- Measures of Variation: Significance of Measuring Variation, Methods of Studying Variation, Average Deviation, Standard Deviation, etc.
- Skewness, Moments and Kurtosis: Measures of Skewness, Moments, Kurtosis, etc.

Unit 3 **(6)**

Probability and Data Sampling

- Probability: Types of Probability, Random Variable, Probability Function,
- Sampling: Purpose and Principle of Sampling, Methods of Sampling, Size of Sample, Merits and Limitations of sampling, Sampling Distribution, etc.

Unit 4 **(8)**

Statistics

- Correlation Analysis: Significance, Correlation & Causation, Types of Correlation, Methods of Studying Correlation, Multiple Correlation, etc.
- Regression Analysis: Difference between Correlation and Regression, Linear Bivariate Regression Model, Regression Lines, Equations, Coefficients, etc.
- Index Numbers: Use of Index Numbers, Unweighted Index Numbers, Weighted Index Numbers, Quantity Index Numbers, Volume Index Numbers, Test for Perfections, etc.

Unit 5 **(6)**

Forecasting and Time Series Analysis

- Forecasting: Introduction, Steps in Forecasting, Methods of Forecasting, etc.
- Time Series Analysis: Components of Time Series, Straight Line Trends, Non-Linear Trend, etc.

Unit 6 **(7)**

Linear Programming & Hypothesis Testing

- Linear Programming: methods for maximizing, methods for minimizing, etc.
- Input-Output Analysis
- Hypothesis Testing: The Chi ($\chi 2$) Test, The Z-Score Test, The T-Test, Test for Proportion

References

- Connor, L R and Morreu, A J H (1964): Statistics in Theory and Practice, Pitman, London

- Kruckerberg and Silvers (1974): Urban Planning Analysis: Methods and Models, John Wiley & Sons, New York
- Mode, E B (1961): Elements of Statistics, Prentice Hall, New Jersey Naiman, Rosenfeld, Zirekel (1972): Understanding Statistics, McGraw Hill, USA
- Wannacott and Wannacott (1969): Introductory Statistics, John Wiley & Sons, New York
- Willams, Ken (ed) (1975): Statistics and Urban Planning, Charles Knight & Co. Ltd, London
- Yamane, Taro (1964): Statistics – An Introductory Analysis, Harper, New York
- Gupta S. P. and Gupta M. P. (2005), Business Statistics, Sultan Chand & Sons, New Delhi.

Planning Techniques (MPL-19002)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective:
The objective is to build a strong background in social research procedures and other methods useful in contemporary planning practice.

Outcome :
This course helps students to build a depth understanding of spatial and non-spatial data collection, presentation and interpretation in context for physical planning. In this students learn various techniques for effective data identification and collection through current practices.

Unit 1 **(6)**

Unit 1: Techniques of Preparation and collection of spatial data (Base map), Non spatial data (Socio Economic survey and Physical survey)

Base map, Plan, General features of bas map, scale, type of scales for different hierarchy of Plans, data requirements for urban and regional planning, sources and methods of data collection, questionnaire design, sampling techniques, interview, technique of conducting surveys for landuse, building use, density, structural condition of building

Unit 2 **(6)**

Unit 2: Techniques of Graphic Presentation of Spatial Data

Land use classification, coding and analysis; residential and non-residential density patterns and analysis; colour, black and white presentation techniques; basis disciplines of illustration; Presentation of spatial data, analysis and proposals.

Unit 3 **(6)**

Unit: 3: Methods of Analysis

Methods of analysis of Socio-Economic and Physical data; Use of techniques of Location Quotient, Coefficient of Localization; Locational attributes of activity and population; Techniques for Understanding structure of urban areas, land values and density patterns; Formulation of spatial standards for residential, industrial, commercial and recreational areas, space standards for facility areas, utilities and networks; Population, Distance criteria; Performance standards; Case studies.

Unit 4 **(8)**

Unit 4: Regional Planning

Concept and need for Regional Planning, Region, Formal, Functional, Planning Regions; Regional delineation techniques, Case Studies in regional delineation. SWOT analysis Spatial Structure of Regions. Nodes, Growth poles, Hierarchy, Nesting Functions, Rank size Rules, Multiplier Effects Etc. Factor analysis, Cluster analysis; Flow analysis

Unit 5 **(7)**

Unit 5: Plan Preparation Techniques

Setting of Goals and Objectives; Methodologies for preparation of urban/ regional development plans, master plans, structure plan and strategy plan techniques; plan implementation techniques; public participation and plan implementation; techniques of urban renewal and central area redevelopment; Contents of a Master Plan, Regional Plan, etc.

Unit 6 **(6)**

Introduction to Advanced Techniques
Thresholds analysis, retail location and industrial location analysis; intervening opportunity models; Gravity Models; Applications in planning.

References :

- Urban Planning methods: research and Policy analysis by Ian Bracken, Methuen and Co. Ltd. London ISBN0-416-74870-8
- Urban Land Use Planning by F. Stuart Chapin Jr., Harper 7 Brothers, Publishers, New York, USA

Geoinformatics **(**MPL-19003)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective :

To study GIS and remote sensing is tool which can help planers in enhancing decision-making capabilities.

To learn to use GIS software used for comprehensive planning, zoning, land use inventories, site suitability assessments, and socio-demographic analysis,

Course outcome

After learning this course the students will understand fundamentals of remote sensing and GIS and its application in the field of urban and regional planning.

Unit 1 **(08)**

Remote Sensing

- Introduction to Remote Sensing – Aerial photography, photogrammetry, Definition of Remote sensing, A tool for resource surveys, Application in land use, land cover analysis and town planning.
- Electromagnetic Energy – Definition, Properties velocity, wavelength, frequency. Electromagnetic spectrum: definition, wavelength regions, Imaging system, satellite images.

Unit 2 **(08)**

- Aerial photography – Types of aerial cameras, Types of photographs, vertical, horizontal, oblique. Geometry of Aerial photographs – Tilt, Swing, Photonadir, Principle points, principal distance, flying height, air base, overlaps, sidelaps, methods of scale determination, Image displacement due to relief and tilt, stereoscopic vision.
- Satellite Imageries – Satellite platforms and orbit patterns, optical, mechanical, scanners, Infrared scanners, earth resource technology satellite, LANDSAT, SPOT, and IRS.

Unit 3 **(08)**

GIS

- Introduction – Definition and meaning, Application to town planning.
- GIS Vs. Maps – Advantages and disadvantages
- Date Modes for GIS –
  a) Raster based date – Rasterization using toposheets, isolines maps and urban maps. Nature of remote sensing data, resolution.
  b) Vector based data – Digitization of point, line aerial boundaries using graphs

Unit 4 **(08)**

- Components of GIS – (1) Input (2) Preprocessing (3) Spatial data base – point, line, polygon (4) Analysis (5) Output
- Introduction to one Raster based and one vector based GIS package. Application of special functions and compatibility for various types of database.

References :

- **Interpretation of Aerial Photography** by Thomas Eugene Avery: Bungress Pub. Co., Minnesota.
- **Remote Sensing, Principles and Applications** by Floyd Sabins; Freeman and Co, New York.
- **Principles of Remote Sensing** by P. J. Carran : (ELBS).
- **Remote Sensing and Image Interpretation** by Lillesand Thomas M. & Kiefer Ralph W: (John Wiley & Sons Inc. New York)
- **Geographical Information System** by D. Hall & R. Babbage (1989) :
- **Bihar – GIS** by Lahiri M. (1993)

Traffic and Transportation Planning (MPL-19004)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective :

This course is designed to explore the capacities for planners to work collaboratively in addressing transportation and urban infrastructure challenges.

Course Outcome

The students will develop ability to conduct transportation planning, analysis and evaluation of systems. They will learn short & long range planning for alternative transport systems while designing for present and future cities and regions.

Unit 1 **(08)**

Transportation Systems

- Transport Systems**:** National, Regional and Local requirements for Transport by road, rail, water and air both for passengers and goods.
- Traffic Engineering**:** Urban road hierarchy, Road geometric and cross-sectional elements of urban roads, Traffic surveys and their interpretation, traffic capacity, level of service concept, traffic regulation and control, requirements of different types of traffic moving and stationary.

Unit 2 **(06)**

- Design of Urban Roads in relation to different types of traffic, segregation of traffic, canalization.
- Parking needs, on and off street parking, estimation of short term and long term parking demand and planning including planning of terminals.
- Planning, engineering and management criteria for road junction.

Unit 3 **(06)**

- Traffic management, principles, methods
- Traffic operation plan, its scope and objective.
- Non-Motorize transportation

Unit 4 **(06)**

- Transport and Environment**:**
- Detrimental effects of traffic on human life,
- traffic noise, noise abatement measures.

Unit 5 **(08)**

Analytical Transport Planning**:** The quantitative transport planning process, surveys, zoning and network building. Transport model, prediction of future use of transportation systems, transport policy and evaluation.

Unit 6

- Role and level of Intermediate Transport mode (IPT), Public transport and private mode in Indian Scenario
- Types of Public Mass transport: Mass Rapid Transit System (MRTS), BRTS, LRT, RRTS and its role in transport system.
- Land use transport Cycle
- Transit Oriented Development

Intelligent transport system (ITS), its component and its applicability in Indian scenario.

References :

- Traffic Engineering and Transport Planning by L. R. Kadiyali
- Principals of Urban Transport Systems Planning by B. G. Hutchinson
- Introduction to Transport Planning by B. J. Bruton

- Space Standards for Roads in Urban Areas by IRC 69-1977
- Guidelines on Regulations and Control of Mixed Traffic in Urban Areas by IRC 70-1977
- Geometric Design Standards for Urban Roads in Plain by IRC 86-1983

Planning Theories (MPL-19005)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective :

The course is intended to develop: an appreciation of the scope and breadth of planning practice as it has emerged historically and in its contemporary manifestation in India and abroad.

Course Outcome

The course is intended to provide the students an overview and understanding of the History of Town Planning Politics and policy making in modern cities and to assess modern and contemporary theories of Town and Country Planning.

History

Unit 1 **(06)**

Introduction

- Theoretical aspects of Planning, interrelationships amongst physical planning, environment, economy and society.
- Planning theory: shift from rural to urban, the meaning and function of cities, the separation of space and community, economic advantage of cities.

Unit 2 **(08)**

Cities in history

- The colonial city- effects of colonization on third world urban pattern and city structure- planning under colonial rule.
- Garden city and regional perspective- Garden city idea and new towns, regional planning Ideas and Practices- Anarchist tradition.
- Garden-Regional city in India, New Towns and Integrated development of small and medium town schemes in regional context of metropolitan plans.
- The City of neighborhoods and communities- neighborhoods in planning and development of neighborhood idea.
- Indian Neighborhood- urban renewal and its aftermath.

Unit 3 **(08)**

Planning Theories.

- Urban concentrations and growth characteristics factors, historical, administrative, location, economic, socio-economic consequences. The essential characteristics of city/town, importance of morphological aspects in town planning.
- Geological factors affecting urban development. Urban geological factors governing the growth of ancient cities.

Unit 4 **(08)**

Urban Models

- Urban models, Hot. Urges, Hams and Ulan, Mogen, Indian Model-Small.
- Classification of towns by form, function,
- The city and its region, Dickson, Smailes, Location, spacing and size of urban settlements, Christaller Theory, etc.

Unit 5 **(12)**

Advocacy and Participatory Planning

- NGOs in Planning: rise of advocacy planning
- Changing role of NGOs in India, Urban Social Movement in India.
- Sectoral urban planning process, district planning committee-role and functions: planning process through state planning and commission, planning commission, NIT Ayog and other bodies: roles, functions and process.
- Participatory planning process.

References :

- The Urban Pattern by A. B. Gallion, S. Eisner. (Van Nostrand Reinhold Company)
- Text Book of Town Planning by G. K. Bandopadhyaya
- Urban and Regional Planning by Peter Hall
- Geography of Settlements by F. S. Hudson, Macdonald and Evans Ltd. Estover, Plymouth PL 6 7 PZ UK

Effective Communication Skills (ML-19012)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	-	Assignment/Test, 40 End-Sem Exam- 60

Effective Technical Communication

Teaching Scheme:
Lectures: 1hr / week

Evaluation Scheme:
100M: 4 Assignments (25M each)

Course Outcomes (COs):

After successful completion of the course, students will be able -

1. To produce effective dialogue for business related situations
2. To use listening, speaking, reading and writing skills for communication purposes and attempt tasks by using functional grammar and vocabulary effectively
3. To analyze critically different concepts / principles of communication skills
4. To demonstrate productive skills and have a knack for structured conversations
5. To appreciate, analyze, evaluate business reports and research papers

Unit 1: Fundamentals of Communication [4 Hrs]

7 Cs of communication, common errors in English, enriching vocabulary, styles and registers

Unit 2: Aural-Oral Communication [4 Hrs]

The art of listening, stress and intonation, group discussion, oral presentation skills

Unit 3: Reading and Writing [4 Hrs]

Types of reading, effective writing, business correspondence, interpretation of technical reports and research papers

Reference Books

1. Raman Sharma, "Technical Communication", Oxford University Press.
2. Raymond Murphy "Essential English Grammar" (Elementary & Intermediate) Cambridge University Press.
3. Mark Hancock "English Pronunciation in Use" Cambridge University Press.
4. Shirley Taylor, "Model Business Letters, Emails and Other Business Documents" (seventh edition), Prentise Hall
5. Thomas Huckin, Leslie Olsen "Technical writing and Professional Communications for Non-native speakers of English", McGraw Hill.

Planning Studio – I (Area appreciation, LAP) (MPL-19006)

Teaching Scheme	Credit	Examination Scheme
Studio : 8 hrs/week	4	Internal Submission – 30 % Jury-60 % Studio Performance: 10 %

Objective :

Main objective of this course is to develop planning insight and make acquaintance with various planning related exercises, such as, Layout Planning, Neighborhood Planning, Urban Renewal / Redevelopment, etc. The course further gives emphasis on site visits related with planning related exercise.

Respective weightage 10 %

Assignment-I

Film Appreciation (Individual Assignment)

Films related to city development and socio-economic issues will be screened for students. The purpose
of these films is to educate the students' understanding of various development issues and to absorb
them in the planning practice. At the end of the film, a discourse around the film will also be held.
After viewing the films, each student is expected to write about its main focus, city / region context, its
applicability to Indian environment by answering the given questions in not more than half a page.

Assignment -II Respective weightage 10 %

Literature Review (Individual Assignment)

Each student is expected to read the article given from a journal / book and write a summary of not
more than a page (250 words only) highlighting the problem, approach, methodology, analysis, how the
author arrived at the conclusion and its relevance to Indian context. There will be a negative marking for
writing the same text as in the original (that is copying from the original text given to them).

Assignment -III Respective weightage 20 %

Area Appreciation

The aim of the area appreciation exercise is to enable the students to understand and contextualize the location of the area in relation to the city, zone and area in which the particular place is situated. This is done in relation to the socio-economic, spatial and cultural characteristics of that city, zone, location, etc. The main purpose is to make the students appreciate the locational attributes of land parcels for future development in a city.
Due to the size of the area, this exercise is done in groups of students being assigned to a particular
area.
The following planning issues at area level should be identified:

- Review of the Master Plan / Zonal / Area plan in relation to the selected areas.
- Appreciation / Analysis of ward level data.
- Perception of areas in terms of legal / illegal / authorized / unauthorized, Slums, Urban Aesthetics.

- Social Categorizations of people - Type of population living, people's perception about area and
- its planning problems.
- Land use including Agriculture land and land use conflicts, extent (%) of broad land use such as
- commercial, industrial, residential, institutional and recreational.
- Extent of formal / informal activities present in the area including their location and conflicts.
- General land tenure of the area and land value for different uses.
- Major types of transport, type of roads, hierarchy of roads, type of transport modes used.
- Amenities: Location of Social and Physical infrastructure and their problems as perceived by
- local population. Look for specific infrastructure such as Water supply, drainage (water logging
- areas), waste collection and disposal system, sanitation, etc.
- Environmental Issues: Open Spaces – Availability and extent of open space to built-up area,
- garbage disposal, encroachment (through photographic evidences and sketches).
- Locating the study area in the zone, city and regional context with respect to all the above
- aspects.

Respective weightage 30 %

Assignment -IV

Site Planning (Individual Assignment)

Site planning is a process whereby the optimum utilization of potential of site is considered recognizing the constraints the site has. It uses 3 dimensional space of the site and the associated locational advantages, human activities and the regulations that are assigned to a particular site.

The site is developed using a set of standards / norms in a given context which varies from location to location. A student is expected to understand the intricacies and interface between various variables such as soil conditions, topography, environmental dimensions, location, spatial standards applicable to the site, etc.

Assignment –V

Respective weightage 30%

Neighborhood planning/Area Level Planning

References

Site Planning by Lynch, Kevin

Residential Landscape– A Checklist Tool by Smith, Carl, et. al., publication Blackwell Pub., Oxford

Chapter 11, handbook, PWD, Govt. of Maharashtra,

Infrastructure Planning

Research Methodology and Intellectual property rights (ML- 19011)

Teaching Scheme	Credit	Examination Scheme
Lectures : 2 hrs/week	--	Assignment/Test, 40 End-Sem Exam- 60

Unit 1:
Introduction to Research Methodology :
Definition of Research, Qualities of Researcher, , Objectives of research, Various Steps in Scientific Research, Types of Research; Hypotheses Research Purposes - Case Study Research.

Unit 2:
Research Problem:
Components of Research Problem Research Problem and Selection of Research Problem, Need for defining the Problem, Techniques for defining a Problem, Development of hypothesis

Unit 3:
Research Design :
Research & Survey Design, Meaning and Need of Research Design , Features of a good Research Design, Types of Research Design-Exploratory, Descriptive and Experimental Research, Bias, Collecting Samples.

Unit 4:
Referencing Information Sources:
Using secondary sources of information: using an Encyclopedia, bibliography card, translation card catalogue information, periodic indexes and usage, compiling a preliminary bibliography; Referencing documentation sources: styles of footnotes, endnotes etc., model bibliography entries.

Unit 5: Report Writing
Report Writing: Writing and Formulating of Reports, Steps in Report Writing, Types of Report, Introduction to SPSS

Unit 6:
Intellectual property rights
Introduction to the concepts Property and Intellectual Property, Nature and Importance of Intellectual Property Rights, Objectives and Importance of understanding Intellectual Property Rights. Understanding the types of Intellectual Property Rights: -
Patents-Indian Patent Office and its Administration, Administration of Patent System – Patenting under Indian Patent Act , Patent Rights and its Scope, Licensing and transfer of technology, Patent information and database. Provisional and Non Provisional Patent Application and Specification, Plant Patenting, Idea Patenting,
Integrated Circuits, Industrial Designs, Trademarks (Registered and unregistered trademarks), Copyrights, Traditional Knowledge, Geographical Indications, Trade Secrets, Case Studies

Reference Books:
1. Wilkinson & Bhandarkar: METHODOLOGY AND TECHNIQUES OF SOCIAL RESEARCH. 2. Pauline Vyoung: SCIENTIFIC SOCIAL SURVEYS AND RESEARCH. 3. Panneerselvam, R., RESEARCH METHODOLOGY, Prentice Hall of India, New Delhi, 2004.
4. C.R.KOTHARI, Research Methodology; New Age International (P) Ltd
5. D.K.BHATTACHARY, Research Methodology; Excel Books

SEMESTER – II

To be selected from IOC list (MPL-19015)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Planning legislation (MPL-19007)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective :

This course introduces students to the legal principles governing the protection of the environment in India. An examination of the Indian legal system, including the structure and functioning of law-making institutions.

Course outcome:

The student will understand the implication of law relating to planning and land development and local government, with an emphasis on statutory authority, finance, and land use control.

Unit 1 **(08)**

Planning Legislation

- Concept of Law, source of Law (Constitution, custom, legislation & precedent - case law), meaning of norms of Law, legislation, ordinance bill, Act, President's consent, Regulations and Bye-Laws etc.

Unit 2 **(08)**

- Significance of law and its relationship to Urban Planning, Statutory basis for planning. Urban & Rural relationship in planning. Indian Constitution concepts and contents, provision regarding property rights, legislative competence of state and central governments to enact town planning legislation.
- History of planning legislation in India and other countries, concept of structure, plans, local plan and action plan under the English Law. Current planning Acts and current legal machinery.

Unit 3 **(08)**

- An overview of other Acts so far as they are related to the physical planning. Acts relating to slum clearance, improvements and rehabilitation, housing development authorities, Improvements Trusts, Urban Land Ceiling Act, 1976, urban conservation and restoration, historical monuments, archaeological monuments and sites and remains, landscape and traffic – transportation. Tree Preservation Act 1975, Transfer of Property Act, M.L.R. Code 1965, B. P. M. C. Act 1949, M. M. Council Act, 1965 etc

Unit 4 **(08)**

- Concept of Arbitration and its related law. Betterment levy and development charge-cess, public participation in statutory planning process.
- Acts dealing with compulsory acquisition of lands for public purposes. Payment of compensation as per market value, enhancement of compensation by the Court etc. Complete land acquisition procedure and method under L. A. Act 1894. Acquisition of lands for public purpose under other related statutes.

Unit 5 **(08)**

- Significance of land development control, objectives and legal tools, critical evaluation of zoning, sub-division regulations, building regulations and bye-laws. Law relating to peripheral development control. Coastal Area Development (C.R.Z.), T.D.R. concept and its legal status etc.

Unit 6 **(08)**

- Statutory planning procedure and conduct of planning inquiries stipulated under M.R.T.P. Act 1966 or such other planning laws prevailing in the State.

- 73rd and 74th Amendment to the Constitution and its related impact on the planning process in the State

References :

- Model state zoning enabling law and model zoning regulations by India. Town and

Country Planning Organisation. (TCPO) New Delhi
- Town and Country Planning by TCPO, New Delhi
- Maharashtra Regional and Town Planning Act 1966
- Land Acquisition Act 1984

Socio- Economic Aspects of Planning (MPL-19008)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective:

Main objective of the course is to understand subject matter of Economics and its relevance in 'Planning'. It includes appraising of nature of Indian Economy, Land Economics along-with Land Use & Land Values. Further it elaborates on approaches to Valuation and Public Finance.

Unit 1 **(4)**

Nature and Scope of Sociology

Sociological concepts and methods, man and environment relationships; Sociocultural profile of Indian society and urban transformation; Tradition and modernity in the context of urban and rural settlements; Issues related to caste, age, sex, gender, health safety, and marginalized groups; Displacement, resettlement and rehabilitation due to compulsory land acquisition.

Unit 2 **(7)**

Community and Settlements

Social problems of slums and squatters communities, urban and rural social transformation and their impact on social life, safety, security; Crimes in urban areas and their spatial planning implications, social structure and spatial planning; 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 and experiences from developing countries regarding settlement structure, growth and spatial distribution.

Unit 3 **(6)**

Elements of Micro and Macro Economics

Concepts of demand, supply, elasticity and consumer markets; concept of revenue costs; Economies of scale, economic and social costs, production and factor market; Different market structures and price determination; market failures, cost-benefit analysis, public sector pricing; Determinants of national income, consumption, investment, inflation, unemployment, capital budgeting, risk and uncertainty, and long-term investment planning.

Unit 4 **(7)**

Land economics

Cost, price and value of commodities, Perfect Market Conditions, Concept of Pareto Optimality, Welfare Economics, Land Characteristics: immobility, Divisibility, Modification, Non standardized commodity, etc,; Attributes of land: Location, Area, Configuration, Permissibility, Restrictions etc,; Effect of Govt. Policies and taxation on Land as a Resource etc.

Unit 5 **(7)**

Development Economics and Lessons from Indian Experiences

Economic growth and development, quality of life; Human development index, poverty and income distribution, employment and livelihood; Economic principles in land use planning; Policies and strategies in economic planning, balanced versus unbalanced growth, public sector dominance; changing economic policies, implications on land.

Unit 6 **(7)**

Nature of Indian Economy

Stages of development: undeveloped, underdeveloped, developed etc, different criteria of

underdeveloped, poverty, Ignorance, diseases, mal distribution of national Income, Administrative Incompetence, social disorganization etc, Characteristics of underdevelopment country: poverty, Dualistic economy, unemployment and disguised unemployment, backwardness, etc: obstacle of economic development, vicious circles of poverty, market imperfection

References

Urban Sociology by N. Jayapalan, Atlantic Publishers & Distributors, New Delhi 2002

Principles of Economics, by Dr. D N Dwivedi, Vikas Publishing House, 2006

The Economics of Development and Planning by Jhingan, M, Vrinda Publications, Delhi, 1998

Sustainability and Human Settlements: Fundamental Issues, Modeling and Simulation by Mani Monto, L.S. Ganesh & K. Verghese, SAGE Publications Pvt. Ltd, New Delhi, 2005

Aspects of Land Economics by W. Lean & B. Goodall.

Economic Development , Cities and Planning by M. Harris: Oxford University Press , Mumbai 1978

Urban Economic Development in India, by V.V. Subrahmanyam and R.L. Bawa, Vedam Books Pvt. Ltd, New Delhi

Indian Economy by S. K. Misra & V. K. Puri, Himalaya Publishing House, Delhi.

Economics of Cities edited by Jean-Marie Huriot & Jacques-Francois Thisse, Cambridge University Press.

Utilities and Services Planning (MPL-19009)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective:

Infrastructure plays important role in urban development. The main objective of this course to study various infrastructure systems and its importance.

Outcome :

At the end of the course, students will demonstrate the ability to:

- Graduates will learn to address urban infrastructure challenges.
- Graduates will do short and long range planning for alternative infrastructure systems while designing for present and future cities and regions.

Unit 1 **(6)**

Planning for Urban Infrastructure

- Urban Infrastructure , Role of Planner in provision of urban networks and services, feasibility studies for infrastructure projects, Planning for major infrastructure projects, Various Infrastructure Programmes and policies by MOUD, PPP in infrastructure projects

Unit 2 **(6)**

Water Supply

- Urban Infrastructure , Role of Planner in provision of urban networks and services, feasibility studies for infrastructure projects, Planning for major infrastructure projects, Various Infrastructure Programmes and policies by MOUD, PPP in infrastructure projects

Unit 3 **(6)**

Sewage &Sanitation

- Collection, transportation and treatment of sewage, Different methods of sewage treatments.
- Biological/ Environmental/ Cultural concepts in environmental sanitation, low cost sanitation technologies and concepts as related to Indian context.

Unit 4 **(6)**

Electricity & Fire services

- Planning for fire protection services and space standards, Planning for electrification, general scenario, services and space standards of Transformers space standards for electricity networks, space standards for burial around cemetery etc.

Unit 5: **(6)**

Solid waste management

- Planning for solid waste; Types of solid waste- organic & inorganic; Solid waste generation, collection and transportation; Methods of treatment and disposal of solid waste - composting, incineration, landfills and biogas plants; Consideration for location of these sites, conversion of garbage into usable forms.

Unit 6: **(6)**

Urban Energy systems

- Energy Management, energy requirement, non conventional energy systems, management of solar energy, wind energy, tidal energy, biomass energy, energy from waste.

References :

- Infrastructure Planning Handbook by Alvin S. Goodman & Makarand Hastak
- Infrastructure Management by W.R. Hudson ,R.C.G. Hass, W. Uddin
- Water Supply and waste water Engg. By B S N Raju
- Central Public Health and Environmental Engineering Organization (CPHEEO)

Manual

- URDPFI Guidelines

Departmental Elective Course – I (MPL (DE)-19001 / MPL (DE)-19002)

Place Making and Urban Planning MPL (DE)-19001

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	**3**	Assignments/Test -40 End-Sem Exam- 60

City and Metropolitan Planning MPL (DE)-19002

Teaching Scheme	Credit	Examination Scheme
	3	
Lectures : 3 hrs/week		Assignments/Test -40 End-Sem Exam- 60

Objective :

To study the Growth of Metro and Mega Cities and their relationship with their respective Regions; and spatial planning approaches for their Planned Development.

Course Outcome

Student will understand City – Region Linkages and problems of Metro and Mega Cities and role of urban development Policies and problems.

Unit 1 **(06)**

Urban Growth and System of Cities

Growth of cities scale, complexity and its impact on national development, cities as engines of growth, cities as ecosystems, resources in cities.

Unit 2 **(06)**

City – Region Linkages

City, fringe and the periphery - physical and functional linkages, peri-urban development.

Unit 3 **(06)**

Metro and Mega Cities: Problems and Issues

Growth trends and processes, characteristics, problems, concepts and concerns of urban sustainability, issues related to diversity and unintended growth, economic, social and environmental sustainability, quality of life, inclusivity and equity, climate change,

Unit 4 **(06)**

Role of transit oriented development, participatory planning. Inner city – issues and problems, approach to development.

Unit 5 **(06)**

Human Settlement Planning,

Concepts, approaches, strategies and tools; Policies and programs at various levels, impact on metro and mega city development.

Unit 6 **(06)**

Urban Development Policies and Programs

Government policies for cities and town, International examples of best practices,

References :

Urbanization and Urban Systems in India by Ramachandran, R, Oxford University Press, New Delhi, 1998

Indian Metropolis: Urbanization, Planning and Management by Bawa, V. K., Inter-India Publications, New Delhi, 1997

City and Metropolitan Planning and Design, ITPI, New Delhi

Madras 2011: A New Perspective for Metropolitan Management by MMRDA, Chennai

Planning Studio-II (MPL-19010)

Teaching Scheme	Credit	Examination Scheme
Studio : 8 hrs/week	4	Internal Submission – 30 % Jury-60 % Studio Performance: 10 %

Objective :

Main objective of course is to undertake real-time exercise of Development Plan as academic exercise and to apply planning concepts as a part of Development Proposal.

Course outcome:

Student will able to carry out surveys and frame proposals, such as, Junction Improvement for Urban Landscape, Town Planning Scheme for Planned Urban Extension, Conservation-Preservation of Old Core, etc. along-with phasing, funding and implementation mechanism.

Exercise-I Respective weightage 60 %

- Preparation of a Development Plan for a town or city including surveys, analysis, costing, phasing and methodology of implementation.

Exercise-II Respective weightage 20 %

- Town Planning schemes including costing & phasing as part of Development Proposal for extended area of case study

Exercise-III Respective weightage 10 %

- Improvement of traffic junctions for urban landscape including costing and phasing

Exercise-IV Respective weightage 10 %

- Conservation and Preservation of old core as a port of Development Proposal for Old Core in case study

Methodology

- For the purpose of Development Plan, case study will be taken within Maharashtra State or outside. Considering, strength of students, group of @ 10 students will be formed for the assignment purpose and each faculty per group will be deputed for the purpose of site visit.

Liberal Learning Course (LL-19001)

Teaching Scheme	Credit	Examination Scheme
Lectures : 1 hrs/week	1	Assignment/Test, 40 End-Sem Exam- 60

SEMESTER – III

Professional Training (MPL-20001)

Teaching Scheme	Credit	Examination Scheme
	1	Seminar/Report submission

Objective :
This course is designed to give students an opportunity to obtain practical field experience / exposure by applying the knowledge they have gained in previous year.

Course Outcome:
By doing internship; students is expected to participate in practical activities related with various aspects / domains of Urban and Regional Planning.

Methodology

- Students have to undertake 60 days (six weeks) Summer Internships during summer vacation after completion of first year course.
- It is enviable to complete Summer Internships in institutes / organizations / departments / local bodies / authorities etc. related with various aspects / domains of Urban and Regional Planning.
- Students are required to submit report based on Summer Internship they have undertaken and give presentation on experience they have gained through this.

Urban Governance and Management (MPL-20002)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Land Economics and Management (MPL-20003)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Departmental Elective Course – II (MPL (DE)-20001 / MPL (DE)-20002)

Sustainability and Urban Planning MPL (DE)-20001

Teaching Scheme	Credit	Examination Scheme
	3	
Lectures : 3 hrs/week		Assignments/Test -40 End-Sem Exam- 60

Objective:

To study the principles and practice of sustainable development, within the context of planning.

To learn different tools of sustainability planning

Course Outcome

Student will learn how to implement sustainability in planning process at different spatial scales.

Unit 1 **(06)**

- Introduction to Course**,** Introduction to Sustainable Development Concepts and Theory, current urban problems and opportunities, History, definitions, and perspectives on Sustainability Theory and Background to Sustainability Planning, The Three E's: Environment, Economics, ethics, and ecology of sustainable development,

Unit 2 **(06)**

- Analyzing the Three E's within an urban development debate, Ethics, Worldviews, and Sustainability, Tools for Sustainability Planning: indicators, ecological footprint, other mechanisms, Planning, planners, and sustainability plans

Unit 3 **(06)**

- Planning for Sustainability at Different Scales, Regional Planning and Sustainability, Municipal Planning and Sustainability, Implementing sustainability, Sustainable Transportation Planning, Concept of New Urbanism and Smart Growth,

Unit 4 **(06)**

- Materials, Energy, and Food, The Natural step, Environmental issues, Concepts and Theory: Industrial Ecology and Green Development,

Unit 5 **(06)**

- Neighborhood Planning and Sustainability, Ecological Site Design and Architecture, Sustainable building, Green building concept, assessment,

Unit 6 **(06)**

- International development on Sustainability in Planning, International Institutions; Sustainability Planning in western world, Sustainability Planning in Developing Countries

References :

- The Ecology of Place: Planning for Environment, Economy, and Community. Beatley, Timothy and Kristy Manning. 1997 Washington, D.C. Island Press
- Sustainable Cities in developing Countries. Cedric Pugh. 2000 London, UK. Earthscan
- Regenerative design for Sustainable Development, John Tillman Lyle. 1994. New York, John Willy & Sons
- City-Region 2020, Joe Ravetz. 2000 London, UK, Earthscan

Urban Poverty and Inclusive Planning MPL (DE)-20002

Teaching Scheme	Credit	Examination Scheme
	3	
Lectures : 3 hrs/week		Assignments/Test -40 End-Sem Exam- 60

Objective :

The main objective of this course is to study urban poverty and its linkages with informal sector activities.

Course Outcome

The student will understand how the role of the informal sector in a developing economy has been conceptualized in different ways and its linkages to urban poverty.

References :

Planning Studio-III (Regional Planning) (MPL-20004)

Teaching Scheme	Credit	Examination Scheme
Studio : 10 hrs/week	4	Internal Submission, Jury and Studio Performance

Objective :

1. To understand Role and Relevance of Regional Planning in general and the Context of 73rd and 74th CAA in particular.

2. To make the students understand the ways of planning for a Region (District / Mega / Metro) and to take up a case study and prepare a Regional Plan.

Course outcome:

After doing this studio students will learn to carry out various surveys for regional planning and frame development proposals for selected region.

Unit 1: Context of Regional Plans

Role and relevance of regional planning at district or block level for regional planning, critical appraisal of district or block level plans; Understanding the contents of various types of regional plans and their linkages with higher and lower order plans

Unit 2: Constitutional Provisions

District planning in the context of 73rd and 74th Constitution Amendment Acts; District Planning Committees (DPCs); Metropolitan Planning Committees (MPCs) and Ward Committees

Unit 3: Organization of Field Surveys

Formulation of goals, objectives, methodologies; identification of data and sources of information; Collection of secondary and primary data for sectoral and spatial planning; detailed data analysis,

Unit 4: Analysis and Synthesis

Identification of development issues, potential thrust areas and constraints: sectoral and spatial; designing of alternative planning strategies, settlement patterns and development strategies; Sectoral and spatial prioritization, phasing, financial plans, institutional mechanisms, legislative framework, management plans

Unit 5: Plan, Policies and Proposals

Preparation of Regional Plan Document along with drawings, etc; Preparation of policies and proposals
with different scenarios and identification of priority areas; phasing and monitoring; governance structures for implementation; regional land utilization plan and the plan document

Reference

- Social Research Methods, by Bryman Alan, Oxford University Press, 2008
- Manual of Integrated District Planning, Planning Commission, New Delhi
- Regional Planning, John Glasson, Taylor and Francis, UK
- Regional Planning in India, Mahesh Chand and V.K. Puri, Allied Publisher Pvt. LtD, New Delhi

Planning Thesis-I (MPL-20005)

Teaching Scheme	Credit	Examination Scheme
Studio : 3 hrs/week	5	As per the Department Policy

Objective :

The main objective of dissertation is application of knowledge gained by the students to produce a piece of research work on their own effort under the guidance of a supervisor.

Course Outcome;

By doing one year research work students will be able to research problem identification, problem analysis and drawing of conclusions.

Work to be completed:

- Finalization of topic,
- Review of literature pertaining to topic,
- Identification of scope / gap based on literature review
- Framing of Aim & Objectives,
- Scope & Limitation,
- Methodology to be followed,
- Identification of case study areas

Methodology

Allocation of supervisor will be done at the end of Semester-II based on availability of supervisor, domain expertise of the supervisor, student's performance in the previous semester and interests / preferences. The students will have to choose the topic for dissertation during the Semester-III in consultation with the supervisor. Dissertation shall be a work in the application or development of new concepts of planning at different levels of original nature. The originality of the work will be the key of this dissertation. Performance of the students will be evaluated as per the Departmental Policy in this regards.

SEMESTER – IV

Professional Practice and Ethics (MPL-20006)

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignment/Test, 40 End-Sem Exam- 60

Objective:

1. To study the Role of Government, Private Sector and the Third Sector for Governance of Cities and Regions.
2.To learn the Scope, Nature and Procedure of Professional Practice; prepare consultancy proposals and Quote Fees and Charges for Professional Work.

Course outcome:

This course emphasizes the practice aspects of planning processes, and the political, institutional and legal systems that direct and/or inform planning. At the end of course the student learn current practices and able to use it in their professional self design.

Unit 1 **(6)**

Overview of Governance

Definition, concepts, components, government and governance, hierarchy and structure, forms of governance, process of inclusion and exclusion,

Unit 2 **(6)**

Legislations pertaining to Governance

Institutional frame and mechanism for governance as envisaged in the 73rd and 74th Constitution Amendment Acts.

Process of decision making in the process, further implementation and execution and management process. Functions and powers, structure and funding resources to the local Government and their performance.

Unit 3 ***(6)***

Institutions and Organizations

Differences between institutions and organizations; approaches to understanding organizations; types, structure and functions, their interface and conflicts, reach, and their effectiveness; Methods, process and evaluation; Present organizations and involved in urban governance.

Unit 4 ***(6)***

Professional Practice

Aims and objectives of professional Institutes, sister bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charges; Formulation of project proposal and outlines, consultancy agreements and contracts, managerial aspects; Role in inter disciplinary groups: Appreciation of the decision-making processes and the process in relation to varied consultancy assignments of planning.

Unit 5 **(8)**

Public relation and their effective participation in planning and implementation process. Citizens approach to the planning process and their effective participation in the process.

Personnel management, manpower planning, performance appraisal, motivation, monitoring and improvement in moral etc.

Unit 6 **(08)**

Project Formulation

Introduction to the plan preparation life cycle of the project, project identification, importance of the projects implementation timely, quick formulation of the project and its appraisal, monitoring and evaluation etc.

Important role of PPM method i.e. planning, programming and its effective management for implementation and execution, costs saving etc. O-error methods, PERT and CPM application. Stages in Project Evaluation, Methods of Project Evaluation

- Planning Legislation and Professional Practice, by Institute of Town Planners, India, New Delhi
- Reading Material on Project Formulation & Appraisal, by Dr. A. N. Sachithanandan, by Institute of Town Planners, India, New Delhi.
- The Economics of Development & Planning by M. L. Jhingan
- Urban and Regional Planning in India: Handbook for Professional Practice, Kulshrestha, S. K. Sage Publications, New Delhi

Planning Thesis – II (MPL-20007)

Teaching Scheme	Credit	Examination Scheme
Studio : 5 hrs/week	15	As per the Department Policy

Objective :

Same as Dissertation I

Methodology

- This is in continuation of Dissertation-I. Students are required to carryout site visits of case study area and present findings based on site visits, surveys conducted, data collection and analysis, result & discussion, etc. before the Departmental Committee and submit draft report. The student has to defend his or her work before a Jury comprising Chairman, Supervisor, Internal and External Examiners. Students required to submit final dissertation report incorporating comments given by Jury, if any.

Work to be completed:

- Site visits to case study area
- Reconnaissance / Preliminary survey
- Conducting detailed survey
- Analysis of data collected
- Hypothesis testing, if any
- Result & discussion
- Submission of dissertation report

DEPARTMENTAL ELECTIVE COURSES (DEC) OFFERED BY TOWN PLANNING SECTION

TP-515 Rural Development

Teaching Scheme	Credit	Examination Scheme
	3	
Lectures : 3 hrs/week		Assignments/Test -40 End-Sem Exam- 60

Objective :

To study rural development is about progress and change in the rural areas of India.
Learn to understand concerned with the factors that effect rural change, to define progress, and what can be done to bring about the overriding objective of rural development

Course Outcome

The student will learn the designing of appropriate rural development policies and programs and need for integrated approach to planning.

Unit 1 **(06)**

- National planning and rural development
- Concepts of planning for rural settlements
- Urban-rural relationship and theories of rural development push and pull factors

Unit 2 **(06)**

- Agro based industries, agricultural development, rural transportation and social services
- Communications with rural areas and amenities
- Legislation and existing methodology for rural planning

Unit 3 **(06)**

- Energy needs of the rural sector
- Environmental and ecological considerations in rural planning
- Area, district and block level development planning and implementation

Unit 4 **(06)**

- Public participation in rural development process and the role of voluntary organizations.
- Rural settlement patterns

  Methods, role of stakeholders (including civil society organizations), etc.; Related Acts, Five year plans, policies and programs at various levels.

Unit 5 **(06)**

- Planning principles of village planning and norms
- Rural settlement evolution and historic perspective

References :

- Rural Development in India Past, Present, & Future, Dr Vasant Desai, Publisher Himalaya,
- Dynamics Of Rural Development, by Keshav Dev Gaur ,
- Peoples' Participation in Rural development in India, Durgadas Roy, Publisher Gangchil
- Document Published by Ministry of Rural development, Govt. of India

Urban Design and Landscape Design

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignments, /Test -40 End-Sem Exam- 60

Objective :

To introduces contemporary Urban Design ideas through an exploration of theory and practice since the nineteenth century.

Course Outcome:

The students will able to use local urban environment as a laboratory to assist in the understanding of cultural landscapes (including Indigenous land values), Urban Design concepts, spatial literacy, density and urban form options, mixed use versus zoning. Practical exercises provide a basic grounding in Urban Design graphic techniques.

Unit 1 **(06)**

Urban Design

- Urban Design terminologies & definition
- Relevance of Urban design in Planning & Architecture
- Urban Renewal, Rehabilitation, Revitalization, Redevelopment and Conservation
- Urban design – an integral part of Urban planning
- Urban design Theory and Principles

Unit 2 **(06)**

- Urban form and its determinants by inter – play of masses, voids, building typology
- Scale, harmony, symmetry, colour, texture, light and shade
- Dominance, height, urban signage and graphics
- Public Realm, organization of spaces and their articulation in the form of squares, streets, vistas and focal points
- Image of the city and its components such as edges, paths, landmarks, street features, sky– line

Unit 3 **(06)**

- Survey techniques for urban aesthetics
- Steps to carry out Visual survey and its recordings
- Contents and development of an aesthetic plan, urban design schemes.
- Case studies of urban design characteristics of cities in India and abroad
- Related issues for public intervention.

Unit 4 **(06)**

- Survey techniques for urban design, documentation and representation
- Contents and development of an aesthetic plan, urban design schemes.
- Townscape Analysis
- Standards and regulatory control on urban design.
- Urban Design in relation to renewal and re-development of central areas.
- Role of urban designer

Unit 5 **(06)**

Landscape Design

- Objective of landscape planning
- Environmental impact on landscape.
- Landscape impact on the environment
- Landscape design and concepts used in different countries.
- Landscape design related to land-use, various landscape plans.

Unit 6 **(6)**

- Norms for open spaces and landscape planning. Types, hierarchy, rules and laws, functions and importance of open spaces.
- Gardens and parks, National and regional parks, Special parks.
- Landscape planning in association with new projects like expressway, river roads, homes for blind, etc.
- Characteristics and components of open space patterns in towns and cities (traditional and contemporary)
- Basic types: streets, squares, plazas, gardens, ghats and play grounds, public parks at district, local and neighborhood levels
- Street furniture as a component of urban landscape
- Process of designing a functional landscape Plan

References :

1. Urban Design: The architecture of towns & cities / SPREIREGEN, PAUL. D.
2. Townscape / GORDEN GULLEN
3. The Urban Experience / FISCHER, CLAUDE S
4. Design of cities / BACON, EDMUND N
5. Town Design / FREDERICK GIBBERD
6. The urban pattern: city planning and design / GALLION, A B.
7. The Image of the City / LYNCH, KEVIN
8. Urban design: Street and square / CLIFF MOUGHTIN
9. The Urban Design Reader/ MICHAEL LARICE, ELIZABETH MACDONALD, ROUTLEDGE
10. Sustainable Urbanism: Urban Design with Nature / DOUGLAS FARR, JOHN WILEY & SONS
11. Landscape Planning: Environmental Applications/ WILLIAM M. MARSH

Conservation & Preservation in Planning

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignments, /Test -40 End-Sem Exam- 60

Objective :

To study Historic preservation is a movement in planning designed to conserve old buildings and areas in an effort to tie a place's history to its population and culture.

Course outcome

In doing so, students will be able to identify and work around the protected places. At the end of course students gain with knowledge of conservation, methods of analysis, effective means of communication, planning processes, and creative strategies for implementation.

Unit 1 **(08)**

Introduction To Conservation

- Through the study of city's history,- its past and present Its need - causes of deterioration
  a) Natural - earthquake, age, fire
  b) Manmade - vandalism, industrialization
- Overview of conservation - Concept of conservation- an action to prevent decay and includes all acts that prolongs the life, not static, accepts changes, difference bet archeology and conservation., concept of historic building. Values attached -emotional, functional, cultural.

Unit 2 **(08)**

Ways of Conservation / Degrees of Intervention

- Prevention of decay - regular maintenance, Preservation of existing state - necessary repairs
- Consolidation- physical addition, Restoration, reviving original concepts, Rehabilitation - adaptive reuse, Reproduction, copying, Reconstruction, new materials, Introduction to the concept of heritage zones - concept of monument and historic fabric, ambience of an age, heritage zone.

Ethics of Conservation

- ***Principles to be followed in the process of conservation detail documentation,***
- Retaining historic evidence.
- Minimum intervention
- Respect to aesthetics, historic and physical integrity of cultural property

Unit 3 **(08)**

Care to be taken while carrying out any intervention

a) Reversible
b) Maximum originality
c) Harmonious changes.

Study of Historic Cities

- Evolution of city -like temple towns (Madurai), princely states (Pune, Kolhapur)
- Study of morphology - features - characteristic planning, human scale, and materials, Present condition.

Unit 4 **(08)**

Social and Economic Aspects of Historic Cities

- In past - specific occupation, castes, economy etc. ,At present

Identification of Heritage Areas

Issues in Historic Cities

- Introduction of modern services, traffic, Industries/ commercial activities
- change in population, moving out of elites, lack of maintenance due to poor economy, rent control act etc encroachments
- Development Management In Historic Cities

Unit 5 **(08)**

Methodology And Techniques Of Conservation

- Planning procedure - study of morphology
- Detail documentation by,
  a) Preparation of inventory format for listing buildings.
  b) Conducting various surveys like socio-economic, traffic, buildings ht, period etc.,
- Identifying potential, Study of values attached, Identification of issues, Formation of conservation strategy

Introduction To The Statutory Framework For Conservation In India & Abroad

- Legislation and implementing agencies, introduction to Venice and ICOMOS charter, introduction of voluntary and government agencies like INTACH, Archaeological survey of India

Unit 6 **(08)**

Appraisal of Existing Legislation, D.C Rules

- Study of Legislation - gradation of structures, conservation legislation by Mumbai Corporation, Norms laid down by HUDA.
- D.C Rules - Study of critical factors like F.S.I. , sizes of openings, form of open spaces etc

Urban Management

Formulation of plans. Establishing norms and guidelines, Implementation - identification of executing agencies, Fiscal management, Phasing of work - urgent, immediate, long term

References :

- **Guidelines For Conservation** by Bernald Fieldon.
- **Planning For Conservation** by Roger Kaine.
- **Conservation Planning** by Alan Dobby
- **Urban Landscape** by Conzen.
- **Reports On Fort Area In Mumbai**, Booklet Of HUDA.

TP Urban Regeneration and Renewal

Teaching Scheme	Credit	Examination Scheme
Lectures : 3 hrs/week	3	Assignments, /Test -40 End-Sem Exam- 60

Objective

The objective of this course is to present an opportunity for student to think critically about urban regeneration and renewal.

Course Outcome:

At the end of the course, Students should be able to explain the forces that produced urban renewal, describe a variety of strategies used to revitalize cities, and think critically about their objectives, goals, and intended and unintended consequences.

Unit 1 **(06)**

- Definition of urban regeneration and renewal
- Surveys for renewal and sources of data
- Methods of analysis

Unit 2 **(06)**

- Problems and prospects of renewal in Indian cities
- Urban renewal a comparative study

Unit 3 **(06)**

- Policies for urban renewal
- Legislation for renewal

Unit 4 **(07)**

- Methodology for urban renewal
- Alternative strategies for urban renewal

Unit 5 **(07)**

- Preparation of plans, implementation, costing and phasing
- Case Study and Report Writing.

References :

- Compendium in town renewal and urban planning Gehl, J. Gemzoe, L. 1996
- Urban regeneration in Europe.
- Designing high-density cities, edited by Edward Ng. Earthscan

- JNURM, Govt of India

TP Advanced Transportation Planning

Teaching Scheme	Credit	Examination Scheme
	3	
Lectures : 3 hrs/week		Assignments/Test -40 End-Sem Exam- 60

Objective: Transportation planning studies are an important component of virtually every major transportation project. The aim this course is learn advance planning techniques, models and sets of solutions for addressing transportation problems.

Unit 1 **(08)**

- Advanced transportation planning system. Approach to transport policies and their implications on planning approach.

Unit 2 **(08)**

- Design of survey pro-forma for the study areas, traffic zones, defining the network, data requirements, surveys, travel demand, factors affecting travel demand, aggregate and disaggregate modal and their relevance to Indian situation.

Unit 3 **(08)**

- Demand Forecasting Techniques, Transport planning terminologies, sequential and simultaneous models and use models, Trip distribution, Model split, types, data requirements and factors affecting choice, Network planning concepts, traffic assignment techniques, Need for long range plan, phasing techniques.

Unit 4 **(08)**

- Economic feasibility of transport projects at macro and urban level, Rural roads and special features of village transport needs, Terminals, services and their integration with other transport model.

Unit 5 **(08)**

- Regional input and output model, multi sector consistency and optimizing models.

References :

• Traffic engineering and Transport planning-L.R.Kadiyali
• Principles of Urban Transport Systems Planning-B.G.Hutchinson
• Introduction to transport Planning –B.J.Bruton.
• Space Standards for roads in urban areas-IRC 69-1977
• Guidelines on regulations and control of Mixed Traffic in Urban areas-IRC 86-1983.
• Geometric Design Standards for Urban Roads in Plain-IRC 86-1983.

TP- Models in Planning & System Analysis

Teaching Scheme	Credit	Examination Scheme
	3	
Lectures : 3 hrs/week		Assignments/Test -40 End-Sem Exam- 60

Objective :

To understanding the urban growth system is a prerequisite for modeling and forecasting future trends of urban land use/cover change and its ecological impacts.

Course Outcome

Student will learn theoretical analysis which can provide a guideline for selecting modeling methods currently available in complexity modeling. At the end of this course they will

understand the concepts of systems thinking and use System Dynamics as a tool in planning.

Unit 1 **(06)**

Models in Planning

- Systems view of planning and use of quantitative models in planning
- Role of models in the planning process – different types of models
- Principles for the Design and use of models
- Models formulation, simulation and validation and application
- Linear models, simple and multiple variable models

Unit 2 **(08)**

- Gravity models and lowery model
- Optimizing models – Linear programming
- Specific models like models for population growth, transportation land use etc.
- Use of computers
- Case study and evaluation

Unit 3 **(08)**

System Analysis

- Systems view of urban and regional planning
- Planning as a conceptional systems
- Various concepts and ideas developed by different authors.
- Terms and Terminology
- Evaluation Technique
- Traditional urban and rural systems in India and Developing countries

Unit 4 **(08)**

- Integration of systems approach in the traditional methodology of urban and rural planning
- Development of planning criteria Systems view of urban rural linkages
- Development of goals, objectives, values and welfare theories for systems application with a view to evolve ideal planning techniques
- Programming and dimension of time in systems approach and use of flow charts
- Case study and report writing

References :

- Complex spatial system: the modeling foundation of urban and regional analysis by A.G. Wilson
- Mathematical analysis of urban spatial network by Philippe Blanchard And Dimitry Volchenkov
- Cities and regions as self organizing system : models of complete city by Peter M. Allen.