# Proceedings of the Board of Studies in Urban and Regional Planning (UG & PG) meeting held on 15th May 2025 at 11.00 AM at Board Room, School of Planning and Architecture, Manasagangotri, University of Mysore, Mysuru

**Members Present:**

| Sl. No. | Name and Designation | Position | Signature |
|---|---|---|---|
| 1 | Prof. H.S. Kumara<br>Chairman, BOS<br>HOD & Professor - Planning, School of Planning and Architecture, Manasagangotri, University of Mysore, Mysuru | Chairman | 15/05/2025 |
| 2 | Prof. Nagendra H.N.<br>Senior Professor, Urban and Regional Planning<br>School of Planning and Architecture, Manasagangotri, University of Mysore, Mysuru | Member | |
| 3 | Sri. S.K. Shrimali<br>Council Member, Institute of Town Planners New Delhi.,#404, Sector-II, Hiranmagri, Udaipur-313001, Rajasthan,ITPI Nominee | Member | ONLINE MODE |
| 4 | Prof. Dr. Ashwani Luthra<br>Professor and Head of the Department<br>Guru Ramdas School of Planning<br>Guru Nanak Dev University, G.T.Road<br>Amritsar-143005, Punjab | Member | ONLINE MODE |
| 5 | Prof. Dr, C.K. Ajai Chandran<br>Professor, School of Architecture<br>Christ University (Deemed to be University)<br>Kengeri Campus, Kanminike,Kumbalgodu,<br>Mysuru Road, Bengaluru | Member | ONLINE MODE |
| 6 | Dr. S. Uma.<br>Head of the Department<br>Department of Architecture, JSS Polytechnic for Differently Abled, JSS Technological University Campus, Mysuru. | Member | |

**Members Absent : Nil**

15/05/2025

CHAIRMAN
Board of Studies
School of Planning and Architecture
University of Mysore, Manasagangotri
Mysuru-570 006. INDIA

The Chairman, Board of Studies, Urban and Regional Planning formally welcomed the members present in the meeting and taken deliberate discussion on agenda.

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| **Agenda 1:** | **Introducing New Specialization - M.Tech in Housing.** |
| **Decision:** | All the committee members have agreed to start new specialization - M.Tech in Housing as per the ITPI, New Delhi in line with NEP 2020 |
| **Agenda 2:** | **Revised and New Syllabus and Course Structure as per ITPI, New Delhi Orienting Planning Education in line with NEP 2020.**<br>- **M.Tech in Housing.**<br>- **M.Tech in Urban and Regional Planning.** |
| **Decision:** | All the members have approved the Syllabus and Course Structure as per ITPI, New Delhi Orienting Planning Education in line with NEP 2020. First semester is common (integrated) for both the specialization of M.Tech in Housing and M.Tech in Urban and Regional Planning and Second semester onwards orientating to the different specialization. The committee members suggested that, Value Added Course should be select from the list of Courses approved from ITPI, New Delhi in both the specialization. The committee members suggested that teaching hours for each programme need to be maintained as per the UGC and AICTE norms. |
| **Agenda 3:** | **Revised Syllabus for Admission to M.Tech in Urban and Regional Planning and M.Tech in Housing programme entrance examination for the Academic Year 2025-26.** |
| **Decision:** | All the members have approved common syllabus for admission to M.Tech in Urban and Regional Planning and M.Tech in Housing programme entrance examination for the Academic Year 2025-26. |
| **Agenda 4:** | **Finalizing the Panel of Examiners for the Academic Year 2025-26 Both UG & PG courses with specialization.** |
| **Decision:** | All the members have approved the panel of examiners for the academic year 2025-26 |
| **Agenda 5:** | **Any other subject with the permission of the Chairman** |
| Decision: | The eligibility criteria and equivalent qualification for admitting to M.Tech in Housing and M.Tech in Urban and Regional Planning need to be incorporated B.E. Construction Technology and other equivalent programmes at the bachelors level. The committee members suggested that, write letter to ITPI, New Delhi in this regard.<br><br>As there is no additional agenda for discussion, the meeting is ended with vote of thanks by the Chairman |

Chairman

Board of Studies in Urban and Regional Planning

CHAIRMAN
Board of Studies
School of Planning and Architecture
University of Mysore, Manasagangotri
Mysuru-570 006, INDIA

# UNIVERSITY OF MYSORE

## (Estd. 1916)

## SCHOOL OF PLANNING AND ARCHITECTURE

## M.TECH. IN HOUSING

*(Two years Standalone –Semester Scheme under CBCS in line with NEP -2020 -ITPI, New Delhi)*

## Program Details

| | |
|---|---|
| **Name of the Department** | **: School of Planning and Architecture** |
| **Name of the Program** | **: M.Tech. in Housing** |
| **Faculty** | **: Faculty of Science and Technology** |
| **Duration of the course** | **: 2 Years semester scheme** |

## 1.0. PREAMBLE

The postgraduate program in M.Tech in Housing programme to be offered by the School of Planning and Architecture, University of Mysore, Mysuru (SPAM) from the academic year 2025-26 in response to the growing demand for qualified planners in the area of Housing in consonance with the accelerating pace of urbanization within the country.

The NEP, 2020 has come up in an apt time to bring in the reforms by revamping the planning education system in the country. The Institute of Town Planners, India (ITPI), New Delhi is the recognition body for the Planning Courses in the entire country. The ITPI has come up with report of ***'Orienting Planning Education in Line with NEP, 2020'***. The curriculum for the program has been designed to impart such basic skills that would help students later in their careers to serve in various professional capacities in planning, development and management agencies in the public sector as well as private consultancy organizations.

This course structure has been adopted from the report, ***'Orienting Planning Education in Line with NEP, 2020'*** suggested by the **ITPI, New Delhi** and ***Model curriculum of M.Tech in Urban and Regional Planning -2023*** prescribed by the **AICTE, New Delhi.**

## 2.0. GENERAL PROGRAMME STRUCTURE AND CREDITS

Composition of Structure of Planning Programme

The structure of the ***M.Tech in Housing*** discipline will comprise of the following categories of courses:

- Major Courses
- Minor Courses
- Inter-Disciplinary/ Multi-disciplinary Courses (decided by the respective educational institution as per its policy), which can be through MOOC/NTPEL course also.
- Skill Enhancement Courses such as Internship/Studio/Thesis/Dissertation
- Ability Enhancement Courses
- Value Added Course Elective Courses (decided by the respective educational institution as per its policy)

**Course Code Definitions**

L Lecture
T Tutorial
S Studio
C Credits

**Definition of Credit**

1 Hour Lecture per week 1 Credit
1 Hour Tutorial per week 1 Credit
2 Hour Studio per week 1 Credit

## 2.1. Eligibility conditions for M.Tech in Housing

**PG (Two Years) Program**: All candidates should have passed Bachelor degree in Planning/ Architecture/ Civil Engineering

Or

Master Degree in Geography/Economics/Sociology or equivalent degree

Or

Other equivalent courses as prescribed/approved by the ITPI, New Delhi

Sponsored/deputed Candidates from Government/Semi-Government/Quasi Government/College/Department teachers sponsored from Engineering Colleges with any one of the above said qualifications with a minimum of 2 years of working experience are also eligible for admission under the quota reserved for them.

## 2.2. Awarding Degree for the PG Program of M.Tech in Housing

The total number of credits proposed for the two-year Standalone M.Tech in Urban and Regional Planning is 82.

**Range of Credits**

2 Years (standalone) M.Plan/M.Tech in any Specialization in Planning 82 Credits*

* Planning Education Institutes may introduce additional credits, grand total to be maximum upto 90 credits (ITPI, New Delhi).

## 3.0 Marking and Grading System: As per the CBCS regulation of University of Mysore, Mysuru

# M.TECH. IN HOUSING

## SYLLABUS FOR THE BATCH 2025- 26

### (CHOICE BASED CREDIT SYSTEM)

### (SEMESTER: I-IV)

**The degree is offered under M.Tech. In Housing** (M.Tech. Housing) (2 years duration). The Structure of M.Tech. in Housing Program shall have essentially the following categories of courses with the breakup of credits as given below:

### PROGRAMME STRUCTURE AND CREDIT SYSTEM

| Semester | Discipline Specific Courses – Major | Minor | Skill Enhancement Courses (Studio/ Thesis)/ Internship | Common Value- Added Courses (Compulsory/ Additional) | Grand Total of Credits | Inter- Disciplinary/ Multi- Disciplinary/Elective Courses |
|---|---|---|---|---|---|---|
| I | 2 Courses (6 Credits) | 3 Courses (6 Credits) | 2 Course (8 Credits) | 1 Course (2 Credits) | 22 | 1 Course (2 Credits) |
| II | 2 Courses (6 Credits) | 2 Courses (4 Credits) | 2 Course (8 Credits) | 1 Course (2 Credits) | 20 | 1 Course (2 Credits) |
| III | 2 Courses (6 Credits) | 2 Courses (4 Credits) | Thesis Preliminaries (2 Credits) + 1-2 Course (8 Credits) + Internship (Audit) | - | 20 | 1 Course (2 Credits) |
| IV | 2 Courses (6 Credits) | 1 Course (2 Credits) | Thesis (12 Credits) | - | 20 | 1 Course (2 Credits) |
| **Grand Total** | | | | | **82** | |

Note:

- The Model PG Programmes in Planning are proposed for 82 credits. However, the Planning Education Institutes may introduce additional credits, grand total to be maximum up to 90 credits.
- The Planning Education Institutes may select the Value-Added Courses from the basket proposed herewith.
- The Planning Education Institutes may select the departmental/ institutional electives from the basket proposed herewith.

### PROGRAMME STRUCTURE AND CREDIT SYSTEM

| Semester | Credits & Marks | Theory | Planning Studio (Practical) | Planning Studio Thesis (Practical) | Internship | Total |
|---|---|---|---|---|---|---|
| I SEMESTER | Credits | 14 | 08 | - | - | 22 |
| | Marks | 600 | 300 | - | - | 900 |
| II SEMESTER | Credits | 12 | 08 | - | - | 20 |
| | Marks | 500 | 300 | - | - | 800 |
| III SEMESTER | Credits | 10 | 10 | - | - | 20 |
| | Marks | 400 | 400 | - | - | 800 |
| IV SEMESTER | Credits | 08 | - | 12 | - | 20 |
| | Marks | 300 | - | 500 | - | 800 |
| **Total Credits** | | **44** | **26** | **12** | **-** | **82** |
| **Total Marks** | | **1800** | **1000** | **500** | **-** | **3300** |

## Mandatory First Semester (Common) for all the Specialized Programmes

| First Semester (Common) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Course Code | Nature of Course | Title of the Course | Hours/Week | | | Total Credits | ESE | IA | EJ | Total Marks |
| | | | L | T | S[1] | | | | | |
| (MTIS -11) | Major | Planning History & Theory | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTIS - 12) | Major | Principles & Techniques of Planning | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTIS - 13) | Minor | Transport Planning | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS - 14) | Minor | Housing & Community Planning | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS - 15) | Minor | Infrastructure Planning | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS – 16) | Value Added Course | Environmental Studies | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS– 17) | Skill Development (Practical) | Planning Studio - IA (Local Area Planning) | 0 | 0 | 10 | 5 | - | 75 | 75 | 150 |
| | | Planning Studio - IB (Applied Socio-Economic Tools for Planning) | 0 | 0 | 4 | 2 | - | 50 | 50 | 100 |
| | | Planning Studio - IC (Spatial Technologies) | 0 | 0 | 2 | 1 | - | 25 | 25 | 50 |
| | | **Total Credits/Marks** | | | | **22** | **300** | **450** | **150** | **900** |

IS-Integrated Semester, VAD- Value Added Course, SD-Skill Development

ESE-End Semester Exam, IA-Internal Assessment, EJ-External Jury.

| Second Semester | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Course Code | Nature of Course | Title of the Course | Hours/Week | | | Total Credits | ESE | IA | EJ | Total Marks |
| | | | L | T | S | | | | | |
| MTH-21 | Major | Urban and Rural Housing Policies and Programmes | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| MTH-22 | Major | Housing Standards, Design and Projects | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| MTH-23 | Minor | Sustainable Materials and Technology | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| MTH-24 | Minor | Housing Finance | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| MTH-25 | Value Added Couse | Ethics and Human & Constitutional Values | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| MTH-26 | Skill Development (Practical) | Planning Studio – 26A Housing Survey Techniques | 0 | 0 | 4 | 2 | - | 50 | 50 | 100 |
| | | Planning Studio – 26B Housing Options and Strategy | 0 | 1 | 10 | 6 | - | 150 | 150 | 300 |
| MTH-27 | Skill Development | Internship (8 weeks) To be undertaken by the students during summer vacations after 2nd semester and credits will be included in the 3rd semester | | | | Audit | | | | |
| | | **Total Credits/Marks** | | | | **20** | **250** | **450** | **200** | **800** |

[1] S- Studio i.e. Practical - Planning Studio IA-IC Skill Development

| Third Semester | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Course Code | Nature of Course | Title of the Course | Hours/Week | | | Total Credits | ESE | IA | EJ | Total Marks |
| | | | L | T | S | | | | | |
| MTH-31 | Major | Real Estate and Housing Markets | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| MTH-32 | Major | Informal Housing, Slums and Poverty | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| MTH-33 | Minor | Urbanization and Land Management | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| MTH-34 | Minor | Research Methodology | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| MTH-35 | Skill Development (Practical) | Planning Studio – 35A Thesis Preliminaries | 0 | 2 | 0 | 2 | - | 50 | 50 | 100 |
| | | Planning Studio – 35B Housing Scenario of a Mega City | 0 | 2 | 0 | 2 | - | 50 | 50 | 100 |
| | | Planning Studio – 35C Project Formulation and Design | 0 | 1 | 10 | 6 | - | 100 | 100 | 200 |
| MTH-36 | Skill Development (Practical) | **Internship (8 weeks)** To be undertaken by the students during summer vacations after 2nd semester and credits will be included in the 3rd semester | | | | Audit | | | | |
| | **Total Credits** | | | | | **20** | **200** | **400** | **200** | **800** |

| Fourth Semester | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Course Code | Nature of Course | Title of the Course | Hours/Week | | | Total Credits | ESE | IA | EJ | Total Marks |
| | | | L | T | S | | | | | |
| MTH-41 | Major | Governance and Management for Housing | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| MTH-42 | Major | Legislation and Professional Practice | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| MTH-43 | Minor | Housing for Special Areas | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| MTH-44 | Skill Development (Practical) | Planning Studio - Thesis | 0 | 0 | 12 | 12 | - | 250 | 250 | 500 |
| | | **Total Credits** | | | | **20** | **150** | **400** | **250** | **800** |

## Programme Objectives

• To expose and familiarize the students with the multifaceted nature of the housing sector within the broader context of human settlement and town planning.

• Equip the students with specialized skills and knowledge to understand and address the complexities of housing and urban development.

• To stimulate research interest and foster academic exploration, encouraging students to delve deeper into various topics for further study.

•To prepare the students for diverse career opportunities, enabling them to take on roles in government, parastatal organizations, corporate industries, community-based organizations, NGOs, or pursue professional private practice.

## Course Outcomes

• To achieve an all-rounded perception into the students about the spatial structure of a city into the multi-dimensional and dynamic aspects of it.

• To initiate the students into the key elements of city planning: "what," "where," "why," and "how" in the urban development strategy, apart from acquiring the skills to apply different tools and techniques necessary for effective planning.

• To attain ability to explain the problems facing the worldwide and local housing industries in detail.

• To be able to critically analyze and come up with solutions to housing issues across different contexts. There will be better expertise to develop strategic plans and housing projects that are both sustainable and contextual in nature at the course.

• To develop awareness of best practices in the housing sector and be equipped with the ability to work within an interdisciplinary environment and strengthen ways of collaboration across different fields.

• To develop confidence and expertise required to undertake independent work to equip them for wide-ranging professional opportunities in urban planning and housing development.

# SYLLABUS

## FIRST YEAR: SEMESTER I

| | |
|---|---|
| Course Code | (MTIS-11) |
| Nature of Course | Major |
| Course Title | **PLANNING HISTORY AND THEORY** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand economic, political, cultural, social and other forces shaping built environments in history.
- To understand the significance of theories in planning of settlements.

**Course Contents**

**Unit 1: Evolution of Planning**

Significance of the study of evolution of settlements; Cosmological and other influences, origins and growth of cities, effects of cultural influence on physical form; Evolution of Planning thought from ancient texts and treatise in India (Vedic Literature), Classification of settlements and plans of ancient Indian villages and towns.

Planning Characteristics in Indus valley civilization: Case Studies- Harappa and Mohenjo- Daro, Dolavera, Egyptian, Mesopotamian Greek and Roman Civilizations, BC period Towns in India, Silk Route Cities: Vaishali, Bhaghalpur, Kushinagar, Sravasti, Kaushambi, Ram nagar, Barreilly, Sanghol, Kaveripattinam, J&K: Harwan, and Indraprastha in Delhi. Medieval Town Planning in India; Chola, Chera and Pandiya's and Town planning in ancient Deccan, Hyosalas, Vijaya nagara dynasties in town planning. Examples of Sri Rangam, Kancheepuram, and port town of Poompugar; Influence of Rajputs in Western India and their contribution to planning. Ancient river valley civilizations (Egyptian, Mesopotamian, Indus valley, Gangetic Region, Chinese and South American).

**Unit 2: Dimensions of Planning**

Urban Processes Criteria of location and development of towns in history, Political, economic, technological, social and cultural factors which have shaped settlements through history, Indian city typologies and study of urban growth, decline, renewal in different cities based on function, location etc.,

Renaissance; Industrial and postindustrial cities; Model and New Town Movements; Town Improvement and City Beautiful Movements, Colonial cities in India and provision of infrastructure.

**Unit 3: Theories of Settlement Planning**

Planning Theories by Ebenezer Howard, Camillo Sitte, Patrick Geddes and Clarence Perry, C.A. Doxiadus, Lewis Mumford, F.L. Wright, Le Corbusier and Peter Hall; City as a living spatial entity; Concepts of landmark, axis, orientation; City form as a living space; City as a political statement: New Delhi, Chandigarh. (Case studies: Chandigarh, Gandhinagar, Bhuvaneshwar, Industrial Towns, Amaravati, special Zones (SEZ) etc.).

Modernism and Post-Modernist Planning Thought; Neo-Marxist and Neo Liberal

perspectives in Planning; Post positivist typology of planning theory, Comprehensive Rational Planning Approaches; Disjointed Incrementalism and Mixed Range Approach, Strategic Spatial Planning, Advocacy and Pluralism, Collaborative and Communicative Planning, New economic geography and city region, Global cities, 15 minute city, Sustainable Cities, Healthy City, Resilience City, New Urbanism and Smart Growth Developments.

**Unit 4: Planning in India**

Post-independence Indian Planning and concept applications. Capital City (an amalgamation of cities) – Delhi; Chandigarh, Gandhi Nagar and Bhuvaneshwar, Steel Cities, New Cities: Raipur; New Mumbai, New Okhla Development Authority, Greater Okhla Development Authority, National Urbanisation Policy (1988) and urban direction. Corridor Urbanisation (DMIC, Eastern Corridor, Quadrilateral and their influence in urban form and direction. Concept of City within City, Expanded Cities, and Census Towns concept. Geography of Gateway city region (High Power Committee, MoHUA).

**Course Outcomes:** Upon the completion of this course, the students will be able

- To demonstrate appreciation and knowledge about history and theory of ancient cities' planning and development.
- To analyse various city planning concepts, physical forms and abstract theoretical formulations.

**References:**


1. Hall P. (2014). Cities of Tomorrow: An Intellectual History of Urban Planning and Design since 1880. Wiley and Sons. Hoboken, New Jersey.
2. Levy J. (2006). Contemporary Urban Planning. Prentice Hall, New Jersey.
3. Ayyar V. (1915). Town Planning in Ancient Deccan. Law Printing Housing, Madras.
4. Hall P. (2002). Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the 21st Century. Blackwell Publications, Oxford.
5. Ward S. (2002). Planning the Twentieth Century City: The Advanced Capitalist World. John Wiley & Sons. England.
6. Hall P. (1998). Cities in Civilization: Culture Technology and Urban Order. Weidenfield and Nicolson, London.
7. Stein M. J. (1995). Classic Readings in Urban Planning. McGraw-Hill, New York.
8. Nath R. (1995). Medieval Indian History and Architecture. APH Publishing Pvt. Ltd, New Delhi.
9. Lynch K. (1981). A Theory of Good City Form. Cambridge Publications, London.
10. Gallion A. (1963). The Urban Pattern: City Planning and Design. D.V. Nostrand Company Inc, New York.
11. Pojani Dorina (2023). Alternative Planning History and Theory. Routledge, London.
12. Beauregard Robert A. (2020). Advanced Introduction to Planning Theory. Edward Elgar Publishing, Cheltenham.
13. Dr. Singh Satvir (2019). Settlement Patterns and Planning in India. Akinik Publications, Delhi.


**Recommended Journals**

1. Jill G. (2023). Planning Theory and Practice. Taylor and Francis Online.
2. Whittemore Andrew H. and Brent D. Ryan (2024). Journal of Planning History. Volume 23, Issue 4. Sage Journals.
3. Pengjun Zhao (2017). Cities: The International Journal of Urban Policy and Planning. Elsevier

4. Professor Eddie Chi-Man Hui (2020). Habitat International. ElsevierBlack Shameem, Priya Chacko, Jason Cons and Ali Usman Qasmi (2020). Journal of South Asian Studies. Taylor and Francis Online.

| | |
|---|---|
| Course Code | (MTIS – 12) |
| Nature of Course | Major |
| Course Title | **PRINCIPLES AND TECHNIQUES OF PLANNING** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the various concepts in planning, categories of planning (economic, social and physical) and their integration at various level National, State and Local.
- To understand the tools and the process of making a spatial plan from site to regional level and how to implement and monitor a plan at various scales.

**Course Contents**

**Unit 1: Fundamentals of Urban Planning**

Planning definitions and concept, Categories of Planning (economic, social and physical) and their integration; Planning at different levels, Town as a physical, social, economic and functional entity, Town typology and their characteristics, Urbanization and Urban Growth, Identification of problems and priorities, Preparation of plans; Perspective Plan, Master Plan, Development Plan, Zonal Plans, Project Plans/Schemes, Concepts of land use, zoning regulations, Delineation of Local Planning Area . Example of GIS Based Master Plan, SVAMITVA and other programmes using urban and rural areas for spatial planning.

**Unit 2: Fundamentals of Regional Planning**

Concept of Regional Planning and development. Aims & Objectives of Regional planning, classification of regions, regionalization and delineation techniques for various types of regions, regional planning vis-vis National Five-Year Plans, Regional economic activities such as primary, secondary, tertiary – factors governing & influencing the size, structure of these activities, Role of public participation in plan formulation and implementation.

Scale of Delineation: Village, Block, District, Urban/city, Metro region, Meso and Macro regions and why do we need to delineate planning area. Dynamic regions and measuring the delineations. Use of existing administrative boundaries, Urban Agglomerations, existing and future dedicated urban planning areas, Built-up-area using remote sensing and drones, mobility surveys, Analysis of structure of nodes, hierarchy, nesting and rank size.

**Unit 3: Sources of Information**

Physical Surveys and Secondary Sources for Maps: Techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of buildings, land utilization and physical features of land; Data requirements for various types of regional plans; Techniques for conducting regional surveys. Use of NASA, Google, NRSA, and other sources for Remote Sensing and Drones, Survey of India, NIC classification of map codes, and Agricultural and Forest Ministry sources.

Data requirements for urban and regional planning; Sources of primary and secondary data; Quantitative and Qualitative methods of data collection, Validity and reliability of data, Questionnaire design, measurement scales and their applications, sampling techniques, types of socio-economic surveys; Self-surveys, interviews, mailed questionnaires and observer participation, focus groups etc. Use of Digital tools for Quantitative and Qualitative Surveys – Use of mobile network, sensors, drones, and other tools.

Sources of Demographic data for planning- Population structure and Characteristics such as age, sex, occupation, educational attainment etc. Birth and Death rates.

**Unit 4: Data Analysis and Presentation Techniques**

Land suitability analysis, Land use classification, coding and analysis; residential and non- residential density patterns and their analyses; population and economic analysis. Tabulation of data, graphical presentation of data; Preparing pie diagrams, histograms, bar charts, normal, semi-log and double log graphs and their uses; colour, black and white presentation techniques; Understanding the discipline of illustrations and tables; Colour, black and white presentation techniques; Basic discipline of presenting illustrations; Presentation of spatial data, analysis and proposals.

Population policies- World Population policy, National population policy. Methods of population projections; Migration and Migration analysis, classification and factors influencing migration. Migration types and its impact on Urban Growth and Urbanization. Migration and its implications in spatial planning.

Scalogram, sociogram, etc. Threshold analysis; Input Output analysis, SWOT analysis. Methods of population forecasts and projections, Planning Standards Spatial standards, performance standards and benchmarks, and variable standards. URDPFI, RADPFI, SVAMITVA guidelines

**Course Outcomes:** Upon the completion of this course, the students will be able

- To acquire knowledge about the planning tools that were introduced in India from that of land acquisition to TPS, ToD, Accommodation Reservation, etc.
- To demonstrate appreciation of the types of data required (qualitative and quantitative) for planning and the various methods that are used for data collection.
- To use and interpret various spatial and non-spatial data by the application of statistical, GIS/Drones, etc., tools for data acquisition, analysis, mapping, and interpretation.

**References:**


1. Kulshrestha S.K. (2006). Dictionary of Urban and Regional Planning. Kalpaz Publications, New Delhi.
2. Greed Clara, (2004). Introducing Planning. Continuum, London.
3. Ministry of Urban Affairs & Employment (2014). Urban Development Plans Formulation and Implementation Guidelines. Government of India, New Delhi.
4. Kopardekar S.H. & Diwan G.R. (1994). Urban and Regional Planning: Principles, Practice and Law. Kopardekar, Talegaon, Maharashtra.
5. Saini N.S. & Mahavir (1985). Urban Development Planning Strategies and Techniques. School of Planning and Architecture, New Delhi.
6. Goode W.J. & Hatt P.K. (1982). Methods in Social Research. McGraw-Hill Inc., New York.
7. Keeble L (1972). Principles & Practice of Town and Country Planning. The

Estates Gazette Ltd., London.
8. Roberts Margaret. (1991). An Introduction to Town Planning Techniques. 2nd Edition. Routledge, England.
9. Fainstein S. (2012). Readings in Planning Theory. 3rd Edition. Blackwell Publishing, Oxford.
10. United Nations. (2009). Planning Sustainable Cities. United Nations Human Settlement Program. Earthscan, London.
11. Cambbell Scott and Fainstein S. (2003). Readings in Planning Theory. Second Edition. Blackwell Publishing, Oxford.
12. Freestone. R. (2000). Urban Planning in a Changing World. E&FN SPON, London.
13. Ellin N. (1999). Postmodern Urbanism. Princeton, Architectural Press, New York.
14. Gupta S.P. (2024). Statistical Methods. Sultan Chand and Sons, New Delhi.
15. Kulshrestha S.K. (2022). Urban and Regional Planning in India: A Handbook for Professional Practice. Sage Publications, New Delhi.
16. Taherdoost Hamed (2022). Data Collection Methods and Tools for Research. Elvedit, Pully.

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|---|---|
| Course Code | (MTIS – 13) |
| Nature of Course | Minor |
| Course Title | **TRANSPORT PLANNING** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- to understand concepts and components of transportation planning and establish its significance in urban planning

**Course Contents**

**Unit 1: Basics of Transportation Planning**

Meaning, scope, objectives and components of transportation planning and its importance in urban planning; Importance of traffic and travel characteristics in transportation planning; Relationship between traffic volume, concentration, and speed; Urban and Regional Hierarchy of Roads and their Norms and Standards; Highway capacity and level of service; Transport problems and mobility issues.

**Unit 2: Traffic Engineering**

Cross Sectional and longitudinal elements of urban roads: right of way, carriageway, median, service lane, footpath, curb, camber, side slope, service road, horizontal curves, vertical curves, super elevation, sight distance, access control; Intersections and interchanges: types, capacity, and design principles; Traffic controls and regulation devices: traffic signs, signals, and markings; Road infrastructure and road landscape design features.

**Unit 3: Transport Planning Process and Surveys**

Transport plan and management: comprehensive traffic & transportation plan, city mobility plan, transport system management; Urban form and transport patterns; Land use – transport integration; Accessibility and mobility issues in transportation planning; Transportation planning process: stages and surveys/ studies; Traffic surveys, presentation and analysis- traffic volume, parking, origin & destination, speed & delay, accidents; Planning considerations, norms and designs of bus and truck terminals.

**Unit 4: Transport Systems and Policies**

Transport system and urban structure; Transport systems: meaning, types, characteristics of BRTS, LRTS, MRTS and NMTS; City size and sustainable transport options. Intelligent transport system: meaning, components, characteristics, and guidelines; Smart transport solutions; Legal and organizational framework for transportation; Funding of transportation systems; Transport technologies and environmental impacts: relevance in urban transportation planning; Urban transport policies in India; Transport, environment, and safety issues; Principles and approaches of traffic management, transport system management.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To understand the concepts of mobility, transport modes, travel patterns, and transport networks.
- To understand key techniques for management and enhancement of transport.
- To identify traffic and transportation planning problems of a human settlement.

**References:**


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2. Pande Anurag and Brian Wolshon. (2016). Traffic Engineering Handbook. Seventh Edition. Institute of Transportation Engineers, New Delhi.
3. Sarkar P.K, Vinay Maitri and G.J. Joshi. (2015). Transportation Planning: Principles, Practices and Policies, Prentice. Hall of India Pvt. Ltd., New Delhi.
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5. Kadiyali L.R. (2014). Traffic Engineering and Transport Planning. Khanna Publishers, New Delhi.
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7. Hutton, Barry. (2013). Planning Sustainable Transport. Routledge, England.
8. Papacostas C.S. and Prevedouros P.D. (2001). Transportation Engineering and Planning. Prentice Hall, England.
9. Joshi G.J., Pradip Kumar Sarkar, Vinay Maitri (2022). Transportation Planning: Principles, Practices and Policies. PHI Learning, New Delhi.
10. Boada B.L. (2021). Intelligent Transportation Systems (ITS). MDPI, Basel.
11. U.S. Department of Transportation and Federal Highway Administration (2023). Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD).


**Recommended Journals**

1. Wong S.C. and Keecho Choi (2024). International Journal of Sustainable Transport. Volume 18. Taylor and Francis Online.
2. Simon Blainey (2022). Journal of Transport Planning and Technology. Taylor and Francis Online.

| | |
|---|---|
| Course Code | (MTIS – 14) |
| Nature of Course | Minor |
| Course Title | **HOUSING AND COMMUNITY PLANNING** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the nature of housing problems, and various programmes and policies initiated to deal with these problems in Indian cities and villages.

**Course Contents**

**Unit 1: Fundamentals of Housing**

Housing definition and subject matter; Modernist and post-modernist Housing thought; Housing Ideologies: their assumptions related to poverty, housing issues, housing interventions, modernization, redistribution with growth, neo-liberal, pragmatic neo-liberal, Critique of ideologies and way forward; Housing need, demand and supply: definitions, factors affecting them, theoretical models and dynamics.

**Unit 2: Land and Housing**

Residential mobility: impacting factors and models (invasion and succession, filtering, housing chains, gentrification, life cycle and trade off model); Slums: causes and consequences and approaches; Housing area planning consideration and modules; Residential densities; Low cost housing: methodologies of cost reduction in housing, Low cost and eco-friendly building materials (indigenous, agricultural, industrial, others); Land for housing: formal and informal conduits of land supply, land partnership models for affordable housing provision (land pooling and readjustment, land reconstitution, land sharing).

Inclusive Housing: public policy and implementation, private housing for the differentially abled, single women, aged (senior citizen homes), working women and men hostels by public and private. Special Housing for migrant workers.

**Unit 3: Housing Institutions**

Role of Institutions in housing generation and upgrading: Housing and Urban Development Corporation, Building Materials Training and Promotion Council, Central Building Research Institute; Participatory models and their application in housing; Conducting social audits in housing; Housing and community development schemes; Formal housing finance outreach and the urban poor in India, Role of informal housing finance.

**Unit 4: Housing Finance and Policies**

Housing finance networks and institutions; Community micro-finance institutions: Self Employed Women Association Bank, Grameen Bank, Habitat International Coalition, International Slum Dwellers Federation; Urban Housing and Habitat Policy; International Agencies in Housing and Community Development; Best practices in Housing (slum upgrading, city wide networking, affordable housing provision). Cooperative Housing Societies in Indian Cities.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To analyse the existing housing situation in a city.
- To show familiarity with national housing policies and other related housing provisions.

- To demonstrate an understanding of the relationships between housing markets, housing standards and incomes.
- To develop knowledge about housing needs for the poor in India.
- To develop knowledge about housing programmes and projects for the poor and their outcomes.

**References:**


1. Aldrich B.C and R.S. Sandhu (2015). Housing for the Urban Poor in Developing Countries. Rawat Publications, Jaipur.
2. Aldrich B.C and R.S. Sandhu (1995). Housing for the Urban Poor. Sage Publications, New Delhi.
3. Ling J. and Ronald R. (2014). Housing East Asia. Macmillan, New York.
4. Banarjee A.V and E. Duflo. (2013). Poor Economics. Random House Limited, London.
5. Chattopadhyay S. (2009). New Essays on Inclusive Housing. Macmillan, Delhi.
6. Dwivedi R.M. (2007). Urban Development and Housing in India 1947 to 2007. New Century Publications, New Delhi.
7. Payne G. (1999). Making Common Ground. Intermediate Technology Publications Ltd, London.
8. Mathey K. (1992). Beyond Self-help Housing. Mansell Publishing Ltd., London.
9. Aromar R. (1990). Shelter in India: Sustainable Development Series. Har-Anand Publications, New Delhi.
10. Hardoy J. and D. Satterthwaite. (1989). Squatter Citizen. Earth Scan Publications, London.
11. Poulouse T. (1989). Reading Material on Housing. ITPI Publication, New Delhi.
12. Jain A.K. (2019). Housing for All. Khanna Book Publishing Co., New Delhi.
13. Kohli V.K. (2007). Housing Finance Agencies in India. Deep and Deep, New Delhi.
14. Jenkins P., H. Smith and Y.P. Wang (2007). Planning and Housing in the Rapidly Urbanizing World. Routledge, New York.
15. Rees Geneth and Chloe Roberts (2024). Housing: Architecture and Urban Planning. Knowledge Baker, Greater Noida.
16. Jill G. (2022). Planning the Good Community. Taylor and Francis Ltd, London.
17. Sengupta Urmi, Annapurna Shaw and Debolina Kundu (2024). Housing India: Programmes, Policies and Governance. Routledge, London.


**Recommended Journals**

1. Ruonavaara H. (1998). Housing Theory and Society. Taylor and Francis Online.
2. Çelik Özlem, Andrew Clarke, Rory Coulter and Damian Collins (2018). Journal of Housing Studies. Taylor and Francis Online.
3. Boelhouwer Peter J. and Queena Qian (2023). Journal of Housing and Built Environment. Springer

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|---|---|
| Course Code | (MTIS – 15) |
| Nature of Course | Minor |
| Course Title | **INFRASTRUCTURE PLANNING** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To provide knowledge about the historical evolution and significance of various infrastructure systems, including water supply, sewerage, and transportation.
- To analyze and classify different types of infrastructure (physical, social,

economic) and their current development status.

**Course Contents**

**Unit 1: Typology and Significance of Infrastructure**

Types of Infrastructure and existing development status: physical, social and economic infrastructure; Urban Infrastructure and Regional infrastructure: water supply, SWM, sewerage, urban transport, Regional infrastructure at micro, meso and macro levels: Transport and freight, communication, pipelines, ICT.

**Unit 2: Infrastructure Planning Process**

History of infrastructure: significance of infrastructure and it evolution, origins of different types of infrastructure as water supply, sewerage, transportation via road, rail, air, waterways; Role of national planning process in infrastructure development; Introduction to infrastructure planning: physical, social, economic and digital infrastructure and the norms associated with it at various scales.

**Unit 3: Physical Infrastructure**

Water supply sources (surface and underground), collection, conveyance, distribution, treatment (sedimentation, coagulation, filtration, disinfection).; Water Quality & Demand: sanitation systems (conservancy, water carriage), disposal (septic tanks, privies), sewerage systems, collection patterns, treatment (screening, sedimentation, activated sludge, sludge treatment); Urban stormwater collection, drainage systems, rainwater harvesting, water reuse/recycling; Solid Waste Management: Generation to disposal (composting, incineration, sanitary landfills); Energy infrastructure and its distribution, Alternative energy sources and carbon reduction energy options.

**Unit 4: Social and Economic Infrastructure**

Infrastructure in context of urban and regional settlements: Educational including schools, colleges, technical education etc., Health facilities including dispensaries, health centre, general hospital etc., Socio-Cultural including police, religious places, etc. Recreational including parks, amusement parks, mela grounds, stadiums etc. their hierarchies, provision and location criteria, Norms and standards etc.

Public Distribution System, ports, rail and airport infrastructure, logistic hubs, storage facilities, banking system networks & financial hubs, and digital infrastructure planning; Huge power storage planning, carbon sink areas; Markets at various levels (organized and unorganized).

**Course Outcomes:** Upon the completion of this course, the students will be able to articulate the history and impact of infrastructure development.

- To classify and evaluate infrastructure systems and their status.
- To understand technical processes related to water supply and waste management.
- To apply infrastructure planning principles to urban and regional settings, considering norms and standards.

**References:**


1. Ilesanmi Felix Aromo. (2013). Regional Infrastructure Development Intervention LAP. Lambert Academic Publishing, Germany.
2. Bhattacharyay, Biswa Nath, Masahiro Kawai and Rajat M. Nag, (2012). Infrastructure for Asian Connectivity. Edward Elgar Publishing Limited, USA.
3. Birdie G.S. (2012). Water Supply and Sanitary Engineering. Dhanpat Rai Publications, New Delhi.

4. IDFC Foundation. (2023) India Infrastructure Reports: 1996 to 2023. Oxford University Press, New Delhi.
5. Jetti K.N. and Vishal Sethi (2007). Infrastructure Development in India. New Century Publications, New Delhi.
6. Ministry of Urban Development. (2011). Report on Indian Urban Infrastructure and Services. Government of India, New Delhi.
7. Ministry of Urban Affairs & Employment. (2014). Urban & Regional Development Plans Formulation and Implementation Guidelines. Government of India, New Delhi.
8. Birdie G.S. (2012). Water Supply and Sanitary Engineering. Dhanpat Rai Publications, New Delhi.
9. Trifunovic N. (2006). An Introduction to Urban Water Distribution. Taylor & Francis, England.
10. Hussain S.K. (2006). Water Supply and Sanitary Engineering. Oxford Publications, New Delhi.
11. CPHEEO. (1997). Manual of Sewage and Sewage Treatment. Ministry of Housing & Urban Development. Government of India, New Delhi.
12. CPHEEO. (1997). Manual of Water Supply in Water Treatment. Ministry of Housing & Urban Development. Government of India, New Delhi.
13. Jadhav Pravin and Rahul Nath Chaudhary (2024). Infrastructure Planning and Management in India: Opportunities and Challenges. Rawat Publications, New Delhi.
14. Proag Virendra (2021). Infrastructure Planning and Management: An Integrated Approach. Springer Nature, Berlin.
15. Renner Theresa, Leonhard Plank and Michael Getzner (2024). Handbook of Social Infrastructure. Edward Elgar Publishing, Basel.

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|---|---|
| Course Code | MTIS – 16 |
| Nature of Course | Value Added Course |
| Course Title | **ENVIRONMENTAL STUDIES** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the scope and importance of environmental studies, different natural resources (forests, minerals, energy, water, land, food, biodiversity) and their utilization as well as conservation methods.
- To understand the importance of ecosystem structure and function; different types of environmental pollution (air, water, soil, thermal, nuclear and noise), environmental law and remedial methods.
- To introduce various acts.
- To make aware of the consequences of population explosion; diseases such as HIV/AIDS and various family welfare programs.

**Course Contents**

**Unit 1: Basics of Environment**

Definition, scope and importance, Need for public awareness Natural resources and associated problems.

a. Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
b. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
c. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
d. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
e. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
f. Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
g. Role of an individual in conservation of natural resources; Equitable use of resources for sustainable lifestyles.

**Unit 2: Ecosystem**

Concept of an ecosystem; Structure and function of an ecosystem: Producers, consumers and decomposers; Energy flow in the ecosystem; Ecological succession; Food chains, food webs and ecological pyramids; Introduction, types, characteristic features, structure and function of the following ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

Introduction and Definition: genetic, species and ecosystem diversity; Bio-geographical classification of India; Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values; Biodiversity at global, national and local levels; India as a mega- diversity nation; Hot-spots of biodiversity; Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts, Endangered and endemic species of India; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

**Unit 3: Environment related Legislations**

Definition, Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution; Solid waste management: Causes, effects and control measures of urban and industrial wastes; Role of an individual in prevention of pollution; Pollution case studies; Disaster management: floods, earthquake, cyclone and landslides

From unsustainable to sustainable development; Urban problems related to energy, Water conservation, rain water harvesting, watershed management; Resettlement and rehabilitation of people: its problems and concerns; Case studies and environmental ethics: Issues and possible solutions; Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust; Case studies: Wasteland reclamation, Consumerism and waste products; Environmental Protection Act, 1986, Air (Prevention and Control of Pollution) Act, 1981; Water (Prevention and control of Pollution) Act, 1974; Wildlife Protection Act; Forest Conservation Act; Issues involved in enforcement of environmental legislation, Public awareness

**Unit 4: Case Studies**

Population growth, variation among nations Population explosion: Family Welfare

Programmes; Environment and human health; Human Rights; Value Education, HIV / AIDS, Women and Child Welfare; Role of Information Technology in Environment and Human Health; Case Studies; Healthy Cities; Sustainable Development Goals; Climate Change and adaptation at micro to macro level measures.

**Field Work**

- Visit to a local area to document environmental assets river/forest/ grassland/ hill/ mountain
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the effects of environmental pollution and remediation.
- To identify the causes, effects and remedial measures.
- To follow sustainable lifestyle patterns.
- To appreciate the environmental Acts and Rules.

**References**:


1. Bharucha E. (2005). Textbook of Environmental Studies. Universities Press, Hyderabad.
2. Joseph K. and R. Nagendran. (2004). Essentials of Environmental Studies. Pearson Education (Singapore) Pvt. Ltd., New Delhi.
3. Kaushik A. and C.P. Kaushik. (2004). Perspective in Environmental Studies. New Age International (P) Ltd, New Delhi.
4. Rajagopalan R. (2011). Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.
5. Sharma J. P., N.K. Sharma and N.S. Yadav. (2005). Comprehensive Environmental Studies. Laxmi Publications, New Delhi.
6. Sharma P. D. (2009). Ecology and Environment. Rastogi Publications, Meerut.
7. Subramanian V. (2002). A Text Book in Environmental Sciences. Narosa Publishing House, New Delhi.
8. CSE (2024) State of India's Environment. Centre for Sciences and Environment, New Delhi.
9. Kumar Santosh, M.P. Poonia and S.C. Sharma (2021). Environmental Studies. Khanna Book Publishing Co. (P) Ltd., New Delhi.
10. Gupta Susmita and Abhik Gupta (2021). Environmental Studies: Principles and Practices. Sage Publications, New York.
11. Dr. Saran R.K. (2023). Environmental Laws and Legislations in India: Futuristic Research Trends. Notion Press, Chennai.


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|---|---|
| Course Code | (MTIS – 17) |
| Nature of Course | Skill Development |
| Course Title | **Planning Studio - IA**<br>**LOCAL AREA PLANNING** |
| No. of Credits | 5 (L: 0; T:0; S: 10) |
| Internal Assessment | 75 Marks |
| External Jury | 75 Marks |

**Course Objectives:** The student will be enabled

- To conduct thorough site analysis and assess site suitability for development and existing infrastructure integration.

- To design comprehensive physical and social infrastructure solutions by applying relevant planning guidelines and standards.

**Course Contents**

Each student in a group or individually shall be required to prepare infrastructure plan for an Urban Area/ Village**.** The exercise shall cover the following aspects:

a. Preliminary site investigation and analysis:

    a. Site inventory: topography, soil characteristics, site resources and physiographic conditions
    b. Site suitability for development – slope, drains
    c. Site in relation to its surrounding and city/village level infrastructure lines
    d. The proposed layout and population distribution.

The students will visit the selected area of the study for the exercise as decided by the concerned teacher(s).

a. General planning guidelines

b. Application of norms and standards

c. Requirements

d. Design considerations and conceptual plans

e. Proposals for infrastructure: Physical - water supply, sewerage network, drainage, rain water harvesting, street & street furniture, solid waste management; Social – education, health, recreational, postal, religious

The plan shall be suitably presented in the form of a report illustrated with necessary drawings, maps charts, diagrams and photographs.

**Course Outcomes:** By the end of this course the students will be able

- To demonstrate effective site analysis and evaluation.
- To develop well-integrated and feasible infrastructure designs.
- To apply planning norms and standards accurately.
- To present infrastructure plans clearly and utilize site visit data to refine infrastructure proposals.

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|---|---|
| Course Code | (MTIS – 17) |
| Nature of Course | Skill Development |
| Course Title | **Planning Studio - IB**<br>**APPLIED SOCIO-ECONOMIC TOOLS FOR PLANNING** |
| No. of Credits | 2 (L: 0; T:0; S: 4) |
| Internal Assessment | 50 Marks |
| External Jury | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand socio-economic tools and data to analyse them to interpret to implement projects.
- To expose the students to know about the sources of information (census, un, nfhs, nsso, cso, etc.) For projections and how to use them.
- To train the students about the statistical tools for the analysis of current conditions and future projections and for modelling the future scenario.

**Course Contents**

**Concepts in Sociology and Tools for Planning**

Sociological concepts and methods, man and environment relationships; Socio-cultural 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.

**Community and Settlements**

Social problems and 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; FGD, Stakeholders meetings, Perception and Vision Analysis, and other social tools for social analysis.

**Concepts in Economics & Its Applications in Planning**

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, Determinants of national income, consumption, investment, inflation, unemployment, long-term investment planning. Fiscal Budget Responsibility Management (FRBM). Agglomeration Economies and Diseconomies and spatial planning.

**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; Economic Policies and strategies in economic planning, balanced versus unbalanced growth, Local Economic Development and sectoral push; Land Value Capture

**Visits to a Village / Small Town to Ascertain Socio-economic Report Course Outcomes**:
By the end of this course the students will be able

a. To design surveys, collecting and analyzing data, and using findings to inform infrastructure planning and policy decisions.
b. To analyse the socio-economic impacts of projects and policies, identifying key issues to enhance social equity and community well-being.

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|---|---|
| Course Code | (MTIS – 17) |
| Nature of Course | Skill Development |
| Course Title | **Planning Studio - IC**<br>**SPATIAL TECHNOLOGIES** |
| No. of Credits | 1 (L: 0; T:0; S: 2) |
| Internal Assessment | 25 Marks |
| External Jury | 25 Marks |

**Course Objectives:** The student will be enabled

- To expose students to drone data processing techniques
- To use geospatial technology for urban mapping
- To understand remote sensing and image analysis for urban areas
- To provide technical inputs for the use of GIS in planning and perform planning

analyses using Geographic Information Systems as a tool.

**Course Contents**

**Basic Principles of Remote Sensing**

Concept and Scope of Remote Sensing: Definitions, Process, and Characteristics of Remote Sensing System, Advantages and Limitations; Types and Characteristics of Sensor: Imaging and non-imaging sensors, Active and passive sensors, Resolution of Sensors: Spectral, Spatial, Radiometric & Temporal; Swath, coverage, Scale, Mapping unit, multiband concepts, False Colour Composites, Multispectral and Hyper-spectral Remote Sensing. Drone Image Capturing, types of drones, Scale and Regulations; Show Remote Sensing, Drone data and GIS software platforms and students can get a hang of the new software and its UI. Downloading Satellite imagery, File import and conversion, Layer stack, Mosaic, creation of AOI and image subsets/clipping

**Advanced Remote Sensing Analysis Techniques**

Indices (NDVI, NDBI, etc.); Supervised and unsupervised classification with accuracy assessment, kappa coefficient, and matrix; Pattern recognition (Spatial and temporal); Time series and Change detection techniques.

**Basic Concepts for Working in GIS**

Definition and Components of Geographic Information System, Functionality, and Areas of GIS Application, Advantages and Limitations of GIS; Variables: points, lines, polygon; Spatial and Attribute Data, Data Structures: Raster and Vector data structures, Spatial and non-spatial data of GIS, and formats, Geo-database, Digitization, and geo-referencing

**Geography Required for GIS**

Coordinate system and its types: Cartesian, Geographic, Projected; Northing & Easting and Latitudes & longitudes: conversion of latitude-longitude between different formats; Difference between real earth surface, geoid, and ellipsoid; Concept of horizontal datum, vertical datum, UTM and UTM Zones; Map projections and their various types

**AutoCAD Software and its Application in Planning**

AutoCAD is a computer-aided design software developed by the company Autodesk (hence the name AutoCAD). The AutoCAD software is primarily used to create and represent detailed 2D and 3D drawings, plans, and models in a variety of industries, such as Architecture, Planning, Engineering, and Construction. It allows the planners to create precise and accurate drawings using a range of tools and features. The errorless presentation of the overlays of various drawings, details and blow-ups not only help in enhancing the explanatory skills but also enables the implementation and execution team to flawlessly accomplish large scale projects with large efficiency.

The manual drawings can work upto a limited scale whereas the AutoCAD drawing allows you to design down to fractions. Thus, creating a more accurate design in all dimensions. Once the design is created, it can be bedded into a 3D printer or a machine for a prototype to be created and the measurements from the drawing can be used to create parts of something that can be built such as a building or house.

**Course Outcomes:** By the end of this course the students will be able

- To use various commands, digitization tools, preparation of various plans, and analyse/ interpret the data using the software to produce the desired results.
- To present of problems, potentials, future projections, and spatial proposals

through various maps based upon aims and objectives of a project for the study area.

## FIRST YEAR: SEMESTER II

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|---|---|
| Course Code | MTH-21 |
| Nature of Course | Major |
| Course Title | **URBAN AND RURAL HOUSING POLICIES AND PROGRAMMES** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the basic premises for policy preparation and content of housing policies and programmes.
- To familiarize with the real-world issues and evaluate success and failure of policies and programmes

**Course Contents**

**Unit 1: Introduction**

Urban and Rural Housing Policies and its role in national development; Objectives of policy in relation to settlement planning; Basic components of housing policy and programmes formulation in urban and rural areas; Housing policies in India and abroad: its impact and consequences on housing development; Housing policy and their focus in different developing and developed countries: their significance in provision of housing programmes for low- income groups, their formulation implementation and evaluation role of international and national funding agencies in housing programmes special housing programmes in different countries.

**Unit 2: Housing in Rural India**

Socio-economic profile of rural India and rural housing conditions; Types of traditional building materials and construction methods; House types; Rural housing norms; Standards and design; Access to infrastructure; Improvement in quality of life in rural areas; Rural health and sanitation; Environmental improvement in villages; Concept of integrated rural housing development; Rural housing schemes; Impact of large development projects and community development in rural areas; Special needs for housing for tribal.

**Unit 3: Global Overview**

Review of urban and rural housing policies in developed and developing countries with case studies from Asian countries.

**Unit 4: Policies and Programmes**

Housing policies and programmes by the central and state governments.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To gain understanding of the foundational concepts and principles guiding housing policies and programs.

- To identify and analyse key housing issues, such as affordability and access, within various contexts.
- To develop skills to assess the success and failure of housing policies by examining detailed case studies.
- To utilize analytical tools to measure and interpret the effectiveness of housing policies.
- To formulate and recommend practical improvements to housing policies based on comprehensive evaluations and emerging trends.

**References:**


1. Ministry of Housing and Urban Poverty Alleviation. (2007). National Urban Housing and Habitat Policy, Government of India, New Delhi.
2. Glaesar Bernhard. (1995). Housing, Sustainable Development and Rural Poor. Sage, New Delhi.
3. Friedrichs, J. (1988). Affordable Housing and the Homeless. Walter de Grugten and Co, Berlin.
4. Rao, P.S.N. (2005). Urban Governance and Management. Kanishka Publication and IIPA, New Delhi.
5. Albrecht E. Don, Scott Loveridge and Stephen Goetz and Rachel Welborn. (2018). Rural Housing and Economic Development. Routledge, London.
6. Bhattacharya Rajesh and Annapurna Shaw. (2021). Urban Housing, Livelihoods and Environmental Challenges in Emerging Economies. Orient Blackswan Pvt. Ltd., Hyderabad.
7. Sengupta Urmi, Annapurna Shaw and Debolina Kundu (2024). Housing India: Programmes, Policies and Governance. Routledge, London.
8. Singh Katar and Anil Shishodia (2024). Rural Development: Principles, Policies and Management. Atlantic Publishers and Distributors Pvt. Ltd., New Delhi.


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|---|---|
| Course Code | MTH -22 |
| Nature of Course | Major |
| Course Title | **HOUSING STANDARDS, DESIGN AND PROJECTS** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand neighbourhood planning, design standards with significance to housing.
- To understand technique of site analysis and development controls required for plotted development and group housing.

**Course Contents**

**Unit 1: Introduction**

Neighbourhood planning: design standards and their significance in housing process; Socio-economic and aesthetic; Environmental factors affecting layouts; various concepts of layout planning; Row and multi storied housing; Layout optimization techniques, appropriate DU design.

**Unit 2: Site Planning**

Site analysis; Visual design factors; Consideration for infrastructure; Organization of space; Criteria for location of blocks and landscape elements; Energy efficient design; Methodology for formulation of housing projects; Design considerations in housing projects.

**Unit 3: Infrastructure Design**

Detailed analysis on water supply, sewerage, drainage solid waste disposal, electricity, roads and transportation and all community facilities; Standards for physical and social infrastructure layouts; Development controls and phasing; Specific consideration for plotted development and group housing; Site and services project.

**Unit 4: Case Studies**

Case studies of government and private housing projects; Global housing standards, designs and project case studies.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To implement principles and guidelines for creating well-designed and functional residential neighbourhoods.
- To perform thorough evaluations of site conditions, including environmental and infrastructure factors for design decisions.
- To gain knowledge of zoning laws and building regulations to guide plotted and group housing developments.
- To combine insights from planning standards, site analyses, and regulations to develop cohesive housing projects.
- To tackle real-world issues in housing projects, such as environmental constraints and regulatory compliance, effectively.

**References:**


1. Rohe William M. and Lauren B. Gates. (1985). Planning with Neighbourhoods. University of North Carolina Press, North Carolina.
2. Peterman William. (2000). Neighborhood Planning and Community Based Development. Sage Publications India Pvt. Ltd., New Delhi.
3. Khanna P.N. (1999). Indian Practical Civil Engineers' Handbook. Engineers Publishers, New Delhi.
4. LaGro Jr. James A. (2008). Site Analysis: A Contextual Approach to Sustainable Land Planning and Site Design. John Wiley and Sons, Inc., Hoboken, New Jersey.
5. Levitt David and Jo McCafferty. (2018). the Housing Design Handbook: A Guide to Good Practice. Routledge, London.
6. Jones Mark Tewdwr and Nick Gallent. (2021). Housing, Planning and Design. Taylor & Francis, London.
7. Habinteg Housing Association (2024). The Inclusive Housing Design Guide. Routledge, London.

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|---|---|
| Course Code | MTH -23 |
| Nature of Course | Minor |
| Course Title | **SUSTAINABLE MATERIALS AND TECHNOLOGY** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To expose the students to traditional and conventional building materials.
- To understand cost reducing and environment friendly technologies for housing projects

**Course Contents**

**Unit 1: Introduction to Materials and Technology**

Building materials traditional and conventional; Low cost materials; Significance of technology for housing development: conventional technologies and modern technologies, appropriate technology; Technology for housing in the context of housing development in India and the third world.

**Unit 2: Prefabrication and Industrialization and Construction Industry**

Concept of prefabrication, industrialization and system building; Various open and closed systems; Choice of various systems of building; Concept of intelligent building; Organization of the construction industry in India; Significance of Housing construction industry: its characteristics and role of various factors involved; Small scale enterprises in the housing construction industry: building material manufacturers, sellers and small contractors; Significance of resources and manpower in housing construction; Need for imparting in housing building; Concept Nrimithi Kendras.

**Unit 3: Cost Optimization**

Cost reducing techniques; Environmental friendly technologies; Role of technology in housing projects formulation: cost time and other implications; Emerging technological perspectives for house construction, infrastructure and housing area planning.

**Unit 4: Alternative Technologies**

Role and significance of Physical infrastructure in housing development; Characteristics of various components of physical planning and design of infrastructure; Appropriate technology for infrastructure development: rain-water harvesting, use of solar energy, wind energy and other appropriate technologies; Role of BMTPC and other organizations in promotion of new and alternative technologies.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To assess the performance, durability, and cost-effectiveness of these materials to determine their appropriateness for housing projects.

- To implement building technologies that provide value while staying within budget constraints, ensuring both efficiency and affordability.
- To use sustainable and eco-friendly technologies to minimize the environmental impact of housing projects, promoting green building practices.
- To create housing designs that effectively combine traditional materials with modern, sustainable technologies to achieve both economic and environmental benefits.

**References:**


1. BMTPC. Brochures of Building Materials and Technology Promotion Council (BMTPC). Government of India, New Delhi.
2. BMTPC. (2009). Directory of Indian Building Materials and Products. BMTPC, New Delhi.
3. Government of India. (2011). Report of High Powered Expert Committee for Estimating Investment Requirements for Urban Infrastructure and Services. Government of India.
4. Day Christopher. (2018). The Eco-Home Design Guide: Principles and Practice for new- build and retrofit. Green Books, New Delhi.
5. Keena Naomi and Avi Friedman. (2024). Sustainable Housing in a Circular Economy. Routledge, London.
6. Paul Foulkes-Arellano (2024). Materials and Sustainability: Building a Circular Future. Taylor and Francis Group Limited, London.


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|---|---|
| Course Code | MTH - 24 |
| Nature of Course | Minor |
| Course Title | **HOUSING FINANCE** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the basic terminology and concepts of housing finance.
- To understand housing finance methodologies and emerging issues.

**Course Contents**

**Unit 1: Economic, Social and Financial Environment**

Economic, Social and Financial environment at the national level, financial system and regulation; Housing economics; Characteristics of housing finance; Policy for housing finance in national plans.

**Unit 2: Sources and Methods of Financing**

Sources of finance; Public and private sector investment in housing; Finance in urban and rural sector implications of long-term and short term financing; Fiscal aspects of subsidizing public and private housing; Housing finance requirements of economically weaker sections; Methods of financing; Specialized finance institutions; Mortgage financing systems; Non-institutional

financing; Present trend in housing finance in India and in other countries; Fiscal incentives in annual budgets; Direct and indirect tax proposals.

**Unit 3: Roles of Organizations**

Role of HUDCO, NHB, HFIs; Various international donor/financing agencies; Micro finance institutions; Rural housing finance.

**Unit 4: Projects and Financial Feasibility**

Financial feasibility of projects; Various financial instruments; Concepts of IRR and NPV; Basics of cash flow analysis; Financial structuring of projects; Preparation of DPR.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To learn the essential terms and principles of housing finance
- To analyse and compare various financing methods, assessing their effectiveness and suitability for different contexts.
- To recognize new developments and issues in housing finance sector
- To make informed decisions in financial planning and management.
- To develop strategies and recommendations to address current and future challenges in housing finance, aiming to enhance accessibility and sustainability.

**References:**


1. Watanabe Masakazu. (2000). New Directions in Asian Housing Finance IFC. World Bank, Washington.
2. Subbulakshmi V. (2004). Housing Finance in India. ICFAI University Press, Hyderabad.
3. Cha Prasanna. (2010). Project Formulation. McGraw Hill, New York.
4. Kothari V. (2017). Guide to Housing Finance: A Comprehensive and Analytical Commentary on Mortgage Lending. Lexis Nexis, Gurgaon.
5. Lewis James P. (2023). Project Planning, Controlling and Scheduling. McGraw Hill. New York.
6. Baxamusa M. (2020). A New Model for Housing Finance: Public and Private Sectors Working Together to Build Affordability. Taylor and Francis Group, London.


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|---|---|
| Course Code | MTH - 25 |
| Nature of Course | Value Added Course |
| Course Title | **Ethics and Human & Constitutional Values** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** This course intends to develop sensitivity to ethical issues in planning and development and develop an understanding of processes of ethical decision making.

**Course Contents:**

**Unit 1: Introduction to Constitutional Values of India**

Constitutional Values - Meaning, Nature, Scope and Relevance, Sources of Constitutional Values, Features of Indian constitution, making of Indian Constitution, Preamble of Constitution- Sovereignty, Socialism, Secularism, Democracy and Republicanism; Justice, Liberty, Equality, and fraternity; Dignity of Individual, Unity and Integrity of the Nation.

**Unit 2: Constitutional values in practice**

Citizenship and the role of citizens in Democracy and Nation Building; Fundamental Rights and Fundamental Duties as values; Additional Rights-Right to Education, Right to Health, Right to Information and Right to Privacy; Directive Principles of State Policy as instructive values.

**Unit 3: Understanding Ethics**

Defining ethics; Human values and moral reasoning; Perspectives on ethics; Branches of ethics; Ethics and social identities; Defining the idea of a profession and ethics in the modern professions.

**Unit 4: Understanding Ethical Decision Making**

Understanding human behavior; Substance of ethical behavior; Development stages of ethical behavior; Ethical decision making: power of frames, routines and strong situations; Examples of ethical and unethical decision making in planning organizations.

**Course Outcomes:** Upon the completion of this course, the students would be able:

- To demonstrate familiarity with different philosophical approaches to ethical behavior.
- To show knowledge about the various elements of ethical reasoning.
- To develop the ability to recognize an ethical dilemma.
- To show knowledge about the ethical decision making processes.

**References:**


1. Singer, P. (2010) *Practical Ethics*, Cambridge University Press, Cambridge.
2. Richards, J.R. (1980) *The Skeptical Feminist*, Routledge, New York.
3. Harding, C.G. (ed.) (2017) *Moral Dilemmas and Ethical Reasoning*, Routledge, New York.
4. Paul, R. and Elder, L. (2013) *The Thinker's Guide to Ethical Reasoning: Based on Critical Thinking Concepts and Tools*, Foundation of Critical Thinking, Tomales, CA. Second Edition.
5. Barrett, C.D. (2017) *Everyday Ethics for Practicing Planners*, Routledge, New York.
6. D. D. Basu. Introduction to the Constitution of India.
7. Norman D. Palmer. The Indian Political System.
8. Dr. M. V. Pylee. India's Constitution..
9. Dr .B.L.Fadia. Indian Government and Politics.
10. Dr.A.P .Avasthi. Indian Government and Politics.
11. J.C. Johari. Indian Government and politics.
12. Vidhya Bhushan and Vishnu Bhagawan,Indian Constitution.

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|---|---|
| Course Code | MTH - 26 |
| Nature of Course | Skill Development |
| Course Title | **PLANNING STUDIO–26A**<br>**HOUSING SURVEY**<br>**TECHNIQUES** |
| No. of Credits | 2 (L: 0; T:0; S: 4) |
| Internal Assessment | 50 Marks |
| External Jury | 50 Marks |

**Course Objectives:** The student will be enabled

- To learn the aerial photography, remote sensing, images geometry and conceptual models of spatial and non-spatial information system.

**Course Contents**

Using various remote sensing, drones, and other techniques including visual images/sketches are to be used with the assistance of the faculty to carry out the survey for assessing the various categories of housing conditions in a city. Students will be imparted socio-economic and other survey techniques and come out with a map incorporating all the dimensions of physical, social, economic and digital aspects in House development area.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To learn the basics of aerial photography and remote sensing, including their techniques and how they are used to collect spatial data.
- To study the geometric properties of images, such as distortion and correction methods, to ensure accurate spatial representations.
- To understand and apply conceptual models for integrating spatial and non-spatial data
- To effectively combine spatial (geographic) and non-spatial (attribute) information to create comprehensive datasets and analyses.
- To apply knowledge of aerial imagery, remote sensing, and data models to analyse spatial data and solve practical problems.

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|---|---|
| Course Code | MTH - 26 |
| Nature of Course | Skill Development |
| Course Title | **PLANNING STUDIO-26B**<br>**HOUSING OPTIONS AND STRATEGY** |
| No. of Credits | 6 (L: 0; T:1; S: 10) |
| Internal Assessment | 150 Marks |
| External Jury | 150 Marks |

**Course Objectives:** The student will be enabled

- To appraise the students about estimating housing shortage, projecting alternative scenarios for housing development.

**Course Contents**

Based on previous assignment based on Surveys and techniques, in this studio students will be imparted techniques of scenario building for Housing area (layout/Township/city), housing data analysis and alternative options for a given solution. They will be helped to prepare a strategy from the alternatives they have simulated.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To collect and evaluate data on demographics, development plans, economic background, policies, and tourism to gain a comprehensive understanding of the city's housing landscape.
- To undertake an in-depth analysis of the housing subsystem to estimate housing shortages and project future housing needs and demand.
- To create and explore alternative scenarios for sustainable housing development tailored to the city's unique challenges and opportunities.
- To develop a detailed housing development strategy that addresses existing shortages and anticipates future needs while promoting sustainability.
- To utilize insights gained from field visits and stakeholder engagements to inform strategy development, ensuring that the proposed solutions are practical and responsive to local needs.

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| Course Code | MTH - 27 |
| Nature of Course | Skill Development |
| Course Title | **INTERNSHIP (8 WEEKS)**<br>To Be Undertaken By The Students During Summer Vacations After 2nd Semester And Credits Will Be Included In The 3rd Semester |
| No. of Credits | AUDIT (L: -; T: -; U: -) |
| Internal Assessment | - |
| End Semester Assessment | - |

**Course Objectives:** The student will be enabled

- To get exposed the current policies, programmes, and projects in the field of Urban/Metro region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Contents**

Knowledge on current policies, programmes, and projects in the field of Urban/Metro region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To get the current knowledge in the field of urban/metro region planning, projects, etc.

## SECOND YEAR: SEMESTER III

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|---|---|
| Course Code | MTH-31 |
| Nature of Course | Major |
| Course Title | **REAL ESTATE AND HOUSING MARKETS** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the basic definitions and concepts related to real estate legislation, planning and management and housing markets.
- To familiarize the students with the real world issues through case studies with particular reference to Indian cities.

**Course Contents**

**Unit 1: Introduction**

Introduction to real estate: definition, principles of real estate value concepts; Methods of valuation; Introduction to real property ownership; Leasing property succession; Methods of sale/ purchase; title search.

**Unit 2: Investment and Laws**

Real estate investment analysis and portfolio management; Foreign direct investment (FDI); Role of NRIs and PIOs in the investment market; Marketing and brokerage; Introduction to various laws related to real estate.

**Unit 3: Real Estate Project Formulation**

Real estate project formulation; Real estate development process; Asset management; Property insurance; Real estate case studies; Taxation and fiscal incentives; Government policies and industry organization; Public-private partnerships and JV'S; Rating; Risk assessment.

**Unit 4: Housing Markets**

Concepts and definitions; Housing market: area, the purpose and 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 framework.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To gain foundational knowledge of real estate legislation, planning, management, and housing markets, including key terms and principles.
- To apply concepts related to real estate laws, planning processes, and management practices to various scenarios.

- To explore and interpret housing market dynamics, trends, and challenges, focusing on their impact on real estate development.
- To investigate and strategies for real-world issues and challenges in Indian cities.

**References:**


1. Ratcliff John. (3rd Edition). Urban Planning and Real Estate Development. Routledge, London.
2. Weimer Arthur M. and Homer Hoyt. (6th Edition). Principles of Real Estate. The Ronald Press Co., New York.
3. Grigsby William G. (1963). Housing Markets and Public Policy. Pennsylvania Press, Pennsylvania.
4. Ram Padmini. (2021). The Affordable Housing Market in India: Institutional Constraints, Informal Sector and Privatization. Taylor & Francis, London.
5. Dr. Adv. Savla Harshul. (2021). Real Estate Laws: Compendium of Indian Real Estate Laws. Notion Press Media Pvt Ltd, Chennai.


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|---|---|
| Course Code | MTH-32 |
| Nature of Course | Major |
| Course Title | **INFORMAL HOUSING, SLUMS AND POVERTY** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the problems and issues of informal sector and their housing conditions.
- To understand various strategies of government and NGOs for the improvement of slums.

**Course Contents**

**Unit 1: Overview of Informal Housing**

Emergence and growth of Informal Housing in third world cities and formal regulatory framework; Diversity of housing needs of urban poor and informal housing options: pavement dwelling, squatting, illegal land-subdivision, inner-city organic housing, and urban villages, causes of growth and perpetuation and impacts of illegality.

**Unit 2: Informal Economy**

Linkages of informal economy-supportive policies of settlement upgrading and options of tenure security; Impacts and obstacles to regularization; Integrated and participatory improvement approaches.

**Unit 3: Slums and Government Intervention**

Process of slum formation: causes and consequences, approaches to tackle the challenge of slums, relocation, rehabilitation, in-situ upgradation, etc.

**Unit 4: Civil Society and Poverty**

Role of NGO's and CBO's in the improvement process; Dimensions of poverty and its manifestation in the housing sector, indicators, programmes specifically targeted towards slums and the urban poor, shelter less population.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To identify and evaluate the problems and challenges faced by the informal sector,

particularly regarding their housing conditions.

- To analyse specific housing conditions within informal settlements, including infrastructure, living standards, and access to services.
- To critically assess the effectiveness of different interventions and strategies used to address slum development and housing issues.
- To develop informed recommendations for improving housing conditions in the informal sector.

**References:**


1. Programme UNHS. (2003). The Challenge of Slums Global Report on Human Settlements. UN-Habitat. Earth scan Publishing, London.
2. Dr. Goswami D. (2012). Housing and Urban Poverty Alleviation. SAAD Publications, Delhi.
3. Sharma Kalpana. (2000). Rediscovering Dharavi: Stories from Asia's Largest Slum. Penguin Books, London.
4. Samal Kishor C. (2008). Informal Sector: Concept, Dynamics, Linkages & Migration Concept. Publishing Company, New Delhi.
5. Aldrich Brian C. And Ranvinder S. Sandhu. (2015). Housing for the Urban Poor in Developing Countries. Rawat Publications, New Delhi.
6. Reid J., Matthew French and Claudio Acioly Jr. (2014). A Practical Guide to Designing, Planning, and Executing Citywide Slum Upgrading Programmes. United Nations Human Settlements Programme, Kenya.
7. Grashoff Udo (2020). Comparative Approaches to Informal Housing around the Globe. UCL Press, London.
8. Panwar N.S. (2023). Urbanization, Migration, Slums and Poverty in India. Lambert Academic Publishing, Riga.


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| Course Code | MTH-33 |
| Nature of Course | Minor |
| Course Title | **URBANIZATION AND LAND MANAGEMENT** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand urbanization with reference to Asia and pacific.
- To understand land policies and various approaches for land management

**Course Contents**

**Unit 1: Overview of Urbanization**

Global population change and urbanization, regional perspectives on population and urbanization with special reference to Asia and Pacific; Emergence of large cities; Impact of urbanization, globalization and economic policies.

**Unit 2: Peculiarities of Land in India**

The status of land in the Constitution of India; Peculiar nature of land markets; Factors affecting supply and demand of land for housing; Role of Fiscal policies and development regulations of land market.

**Unit 3: Land Policies**

Land policy objectives and policy options for public intervention; Techniques of land assembly and expropriation; Development components and financing land

development; Institutional and political concerns in land management.

**Unit 4: Types of Land Management**

Various approaches viz. land pooling/land readjustment, TP Schemes; Public Private Partnerships for land assembly; Role of the private sector in land assembly; Land management thru' Township Policies of various state governments, international and domestic case studies.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To study the patterns and growth of urbanization in Asia and the pacific, focusing on population shifts and urban expansion.
- To evaluate the effects of urbanization on infrastructure, economic development, environmental sustainability, and social structures.
- To examine and critique land policies in urban areas to understand their effectiveness and implications for development.
- To investigate different land management strategies and practices, such as zoning and land use planning, and their impact on urban growth.
- To use insights from urbanization trends and land management to recommend strategies for achieving sustainable urban development.

**References:**


1. Sivaramakrishnan, K.C. (2005). Handbook of Urbanization in India. Oxford University Press, Oxford.
2. Wajahat Habibullah. (2005). Land Reforms in India. Sage Publications, New Delhi.
3. Soliman Ahmed M. and Ramin Keivani (2024). Innovations for Land Management, Governance, and Land Sustainable Urban Transitions. Springer, Berlin.
4. Mishra Gaurav, Krishna Giri, Sanjay Singh and Manoj Kumar (2024). Sustainable Land Management in India: Opportunities and Challenges. Springer Nature, Berlin.
5. Mathur O.P. and Rakesh Mohan (2024). Changing Paradigms of Urbanization: India and Beyond. Academic Foundation, New Delhi.


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|---|---|
| Course Code | MTH-34 |
| Nature of Course | Minor |
| Course Title | **RESEARCH METHODOLOGY** |
| No. of Credits | 2 (L: 1; T:1; U: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand various types of research methods and research design both quantitative and qualitative for carrying out research in the real field.

**Course Contents**

**Unit 1: Introduction to Research**

Definition and needs of research; Types of research used in urban planning; Importance of research methodology in urban planning; Scientific research and methods; System approach of research; Levels of research: micro and macro; Major steps in the conduct scientific research, induction, deduction & verification; Selection and formulation of research problems; Difference between research methodology and research methods;

Data types and sources: primary and secondary; Sampling types and techniques.

**Unit 2: Paradigm, Hypothesis and methods of testing the Hypothesis**

Research paradigm and procedural methods: theoretical meaning, importance and different concept of hypothesis; Formulation of hypothesis; Role of statistical measures in hypothesis testing; Measures of central tendencies, standard deviation and correlation and regression; Qualitative scales.

**Unit 3: Qualitative and Quantitative research, and Report Writing**

Qualitative and quantitative approach to research: review of literature, content analysis and thematic analysis; Research compilation and report: contents and style, factors in the organization of a research report, writing of foot notes, quoting styles, references, cross referencing and bibliography; Issues & areas of urban planning research and data; Introduction of Qualitative and Quantitative software.

**Unit 4: Theorising, Modelling, applications and validation**

Definition of Concept, Theory and facts; Process of theorization: Meaning. definition and classification of Model; Understanding, evaluation and validation of models related to land use, transportation, location/allocation of activities, land value, accessibility; simulation of urban growth in terms of their objectives, theoretical structure, mathematical formulation, applications and limitations; Validation of Research and its presentation techniques.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To use the various research methods both qualitative and quantitative
- To use the various research design methods
- To appreciate the art of report writing
- To use various methods to conduct scientific research

**References**:


1. Kumar Ranjit. (2005). Research Methodology: An Introduction. Pearsons Education. Baba Balak Nath Printers, New Delhi.
2. Crotty Michael. (2003). The Foundations of Social Research: Meaning and Perspective in the Research, Sage Publishers, London.
3. Gomm Roger. (2003). Social Research Methodology: A Critical Introduction. Palgrave Macmillan, Manchester.
4. Wilkiinson T.S. and P.L. Bhandarkar. (1984). Methodology and Techniques of Social Research. Himalaya Publishers, New Delhi.
5. Goode, W.J. and P. K Hatt. (1982). Methods in Social Research. McGraw-Hill Inc., New York.
6. Keeble Lewis. (1972). Principles & Practice of Town & Country Planning. Estates Gazette, London.
7. Gopal M.H. (1970). An Introduction to Research Procedures in Social Sciences. ASIAN Publication House, Delhi.
8. Gibbs Jack P. (1960). Urban research Methods. D. Van Nosttrand Co. Inc., New York.
9. Kothari C.R. and Gaurav Garg (2023). Research Methodology: Methods and Techniques. New Age International Publishers, New Delhi.
10. Aguinis Herman (2024). Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research. SAGE Publications, London.
11. Introducing Research Methodology: Thinking Your Way through Your Research Project. SAGE Publications, London.

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|---|---|
| Course Code | MTH-35 |
| Nature of Course | Skill Development SD - 31 |
| Course Title | **PLANNING STUDIO - 35A**<br>**THESIS PRELIMINARIES** |
| No. of Credits | 2 (L: 0; T:2; S: 0) |
| Internal Assessment | 50 Marks |
| External Jury | 50 Marks |
| External Jury | 50 Marks |

**Course Objectives:** The student will be enabled

- to understand current issues & research areas in the relevant field of urban planning

**Course Contents**

Students undertake an independent study/research to explore and develop an area of his/her own choice. It should cover identification of thesis topic after scanning later literature and identifying gaps, typology of research, Methods of research, time scheduling, preparation of samples, questionnaires/interview schedules, identifying stakeholders/sample, area/case study, and preparation of organizing the interview /notes, report, and abstract for canvassing during interviews.

The theme of the thesis should adopt a fresh approach in formulating a concept of developing an effective and useful methodology. Each student shall prepare a thesis abstract on a selected topic under the supervision of a supervisor.

At the end of the thesis preliminaries, the students are required to submit a hard copy of the abstract

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the process & importance of literature survey in identifying research areas to finalize the methodology of research and preparation of work schedule.
- To finalize the sample size, questionnaires, and models for analysis.

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|---|---|
| Course Code | MTH-35 |
| Nature of Course | Skill Development SD - 31 |
| Course Title | **PLANNING STUDIO-35B**<br>**HOUSING SCENARIO OF A MEGA CITY** |
| No. of Credits | 2 (L: 0; T:2; U: 0) |
| Internal Assessment | 50 Marks |
| External Jury | 50 Marks |

**Course Objectives:** The student will be enabled

- To learn the geo-spatial analysis, customization of geo-information.

**Course Contents**

Considering the scale of a metro/mega city, students will be trained to assess the demand for housing, existing quality of housing including slum housing, which areas within the city to assess, Renewal/Redevelopment Strategies and their applicability, and build a housing Scenario for the city. They will be trained to come out with product mix within housing sector (residential: EWS, LIG, MIG and HIGH) and where to place them as per social reengineering strategies.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To integrate internet GIS and decision support systems (DSS) into planning and decision- making processes to enhance the efficiency and accuracy of spatial analyses.
- To gain an overview of open GIS platforms and customize geo-information systems to meet specific project needs.
- To apply knowledge of geospatial analysis and tools to the formulation and design of housing projects, incorporating relevant spatial data to improve project outcomes.

| | |
|---|---|
| Course Code | MTH-35 |
| Nature of Course | Skill Development SD - 31 |
| Course Title | **PLANNING STUDIO- 35C**<br>**PROJECT FORMULATION AND DESIGN** |
| No. of Credits | 6 (L: 0; T:1; U: 10) |
| Internal Assessment | 100 Marks |
| External Jury | 100 Marks |

**Course Objectives:** The student will be enabled

- To undertake housing project involving site selection, analysis; project formulation and design of selected area.

**Course Contents**

Using the Project Formulation Appraisal, Evaluation and Monitoring techniques, students will be imparted the knowledge of developing a project till its implementation frame including design for a given area. This knowledge includes pricing policy, cross subsidization, marketing, etc and ready to present to a client.

**Course Outcomes**: Upon the completion of this course, the students will be able

- To develop comprehensive project proposals including design, costing, and implementation strategies.
- To conduct feasibility studies
- To prepare a detailed case study report integrating findings from city and zone-level analyses, and propose actionable project and design solutions

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|---|---|
| Course Code | MTH-36 |
| Nature of Course | Skill Development SD- 32 |
| Course Title | **INTERNSHIP (8 WEEKS)**<br>To Be Undertaken By The Students During Summer Vacations After 2nd Semester And Credits To Be Included In The 3rd Semester |
| No. of Credits | AUDIT |
| Internal Assessment | - |
| End Semester Assessment | - |

**Course Objectives:** The student will be enabled

- To get exposed the current policies, programmes, and projects in the field of Urban/Metro region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Contents**

Knowledge on current policies, programmes, and projects in the field of Urban/Metro

region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To get the current knowledge in the field of urban/metro region planning, projects, etc.

## SECOND YEAR: SEMESTER IV

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|---|---|
| Course Code | MTH-41 |
| Nature of Course | Major |
| Course Title | **GOVERNANCE AND MANAGEMENT FOR HOUSING** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- to understand the role of the state in the housing sector at national, state and local levels.
- to learn how to prepare a fully integrated housing project from inception to implementation.

**Course Contents**

**Unit 1: Introduction**

Principles of good governance; Public governance in India; Overview of urban governance structure in India; Governance for the housing sector.

**Unit 2: Organizations**

Definition and concepts in organization; Factors affecting organizational structure administrative context of housing organization in India; Organizational theories and their effectiveness; Housing organizations in India at national, state and local level; Role of improvement trusts, housing boards, development authorities and slum improvement boards and cooperatives.

**Unit 3: Partnerships**

Role of private sector and NGOs; Role of financing agencies and linkages with other agencies; Relationship between housing and non-housing organizations; Internal administrative problems of housing agencies: public – private partnerships, joint ventures, organizational reforms and privatization; Outsourcing and contracts; Facility management.

**Unit 4: Management Concepts and Project Management**

Need for housing management; Basic elements of management, planning, organization, staffing, coordination and monitoring and its relevance of housing sector; Importance of leadership development, communication and motivation; National goals, political system affecting development management; Managing and monitoring housing projects; Participatory management processes and managing joint ventures; Post occupancy management of housing estates.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To analyse the functions and impact of government at the national, state, and local levels in shaping housing policies, regulations, and initiatives

- To develop skills to prepare a fully integrated housing project, covering all phases from inception through implementation.
- To utilize understanding of state roles to align housing projects with relevant policies and regulations at different governmental levels.
- To effectively manage the planning, design, and execution of housing projects, ensuring coordination between various stakeholders and adherence to regulatory requirements
- To apply learned strategies to create cohesive housing solutions that address community needs, policy frameworks, and practical challenges in project implementation.

**References:**


1. Rhodes R.A.W. (1997). Understanding Governance: policy networks, governance, reflexivity and accountability. Open University Press, Maidenhead, GB, Philadelphia.
2. Pugh C. (2001). The Theory and Practice of Housing Sector Development for Developing Countries – 1999. Housing Studies, Vol.16, Issue 4, pp.399-423. Taylor and Francis, London.
3. Baud I.S.A. and J. Wit (2008). New Forms of Urban Governance in India: shifts, models, networks and Contestations. Sage, New Delhi.
4. Jayal, N.G., A. Prakash, and P.K. Sharma. (2006). Local Governance in India: decentralization and beyond. Oxford University Press, New Delhi.
5. Sengupta Urmi, Annapurna Shaw, and Debolina Kundu (2024). Housing India: Programmes, Policies and Governance. Routledge, London.
6. Kingston Talbot B. (2024). Good Governance: Principles and Practices for Modern States. Book Lovers HQ, North Carolina.
7. Lee Edward Kwok-yu and Wai-wan Vivien Chan (2024). Inclusive Housing Management and Community Wellbeing. Springer Nature, Berlin.


| | |
|---|---|
| Course Code | MTH-42 |
| Nature of Course | Major |
| Course Title | **LEGISLATION AND PROFESSIONAL PRACTICE** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand, the interface between legislation and urban planning and to educate students regarding basic concept of law and Indian constitution and the requirements of various acts, laws, rules and regulations related to housing and urban planning
- To understand the scope, nature and procedure of professional practice; prepare consultancy proposals and quote fees and charges for professional work in housing and spatial planning.

**Course Contents**

**Unit 1: Introduction**

Concept of law, legislation, ordinance, bill, Act Regulation and by-laws, provision regarding property rights, legal right, legislative competence of state and central

Government to enact town planning legislation, concept of Eminent Domain and Policy Powers.

**Unit 2: Law and Urban Planning**

Significance of law and its relationship to urban planning benefits of statutory backing of planning schemes, public participation in statutory planning process, evolution of planning legislation and overview of legal tools connected with urban planning and development.

**Unit 3: Professional Practice**

Aims and objectives of professional institute 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, role in interdisciplinary groups, role in decision making processes and the process in relation to varied consultancy assignment of planning.

**Unit 4: Various Acts**

Urban planning and development authority act, housing board act. Improvement trust act, Slum clearance act, Apartment act, Rent control act, Municipal act introduction to property law, property tax, assessment, lease, registration, etc., cooperative act.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To comprehend the interaction between legislation and urban planning, including how legal frameworks influence urban development and planning processes.
- To acquire foundational knowledge of legal concepts, the indian constitution, and specific acts, laws, rules, and regulations related to housing and urban planning.
- To identify the scope, nature, and procedural aspects of professional practice in housing and spatial planning.
- To develop skills to prepare detailed consultancy proposals, including project scopes, objectives, and methodologies.
- To appreciate to accurately quote fees and charges for professional services in housing and spatial planning, ensuring transparent and competitive pricing

**References:**


1. Institute of Town Planners, India. Planning Legislation and Professional Practice. ITPI, New Delhi.
2. Bijlani, H.U. and Balachandran. (1978). Law and Urban Land. Indian Institute of Public Administration, New Delhi.
3. Ministry of Urban Development. (1996) UDPFI Guidelines Vol. 2A. Government of India, New Delhi.
4. Kulshrestha, S. K. (2012) Urban and Regional Planning in India: Handbook for Professional Practice. Sage Publications, New Delhi.
5. Institute of Town Planners, India (2011). Conditions of Engagement of Professional Services and Scale of Professional Fee and Charges. ITPI, New Delhi.
6. Central Public Works Department. (2012). CPWD Manual. Director General CPWD, New Delhi.
7. Central Public Works Department. (2022). CPWD Manual. Director General CPWD, New Delhi.
8. Mishra G.K. and P.S.N. Rao. (2000). Housing Legislation in India. Kanishka Publications, Delhi.

9. Agarwal V.K. (2005). Environment Laws in India: Challenges for Enforcement Bulletin of the National Institute of Ecology, Jaipur.
10. Ministry of Rural Development. (2011). Land Acquisition, Rehabilitation and Resettlement Bill. Government of India.
11. Government of India. (1872). Indian Contract Act No. 9 of 1872. Government of India.
12. Government of India. (1996). The Arbitration and Conciliation Act. Government of India.
13. Government of India. (2015). The Arbitration and Conciliation (Amendement) Act. Government of India.
14. Government of India. (1996). The Arbitration and Conciliation Act. Government of India.
15. Constitution of India. (1992). 73rd & 74th Amendment Acts. Government of India.

| | |
|---|---|
| Course Code | MTH-43 |
| Nature of Course | Minor |
| Course Title | **HOUSING FOR SPECIAL AREAS** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To introduce the basic characteristics of special areas and groups with reference to housing.
- To study the real world issues through case studies with particular reference to Indian cities.

**Course Contents**

**Unit 1: Special Areas**

Inner City Housing: Evolution and Historical Background, community, spatial Characteristics; Housing transformation of core city, impact of transformation; Problems of inner cities; Policies and programmes.

Fringes / Peri-urban / Sub-urban Housing: Rural urban linkages, characteristics of fringe areas, development process, various modes of land Supply in fringe area, case study with special emphasis on housing.

Arid / Coastal / Hilly Region Housing: Settlement and shelter characteristics, Materials and technology, design standards, climatic factors, danger of hazards, Settlement planning, development policies and programmes

**Unit 2: Special Groups**

Housing for Aged / Physically Challenged: Concept and definition of old age characteristics of aging population; Profile and growth of elderly persons; Classification of elderly population; Problems of elderly planning and design considerations for elderly; Case study with special reference to housing.

**Unit 3: Housing for Women, Children and Refugees**

Importance of gender in housing; Housing planning and design considerations with women perspective: hierarchy of spaces at macro and micro level; Shelter for low income women; Design considerations for urban and rural women; Housing options for different categories for single women; Government schemes; Case study with special reference to housing; Concept of refuges, types of refuges, norms for treatment of refugees, refugees law, refugees and housing, problems of refugees,

planning considerations for the refugees, case study areas with reference to housing.

**Unit 4: Shelterless and Tribal Housing**

Shelterless in the context of urban poor; Psychological and social implications of poverty on homeless; Homeless in metropolis; Problems of homelessness, various interventions; Night shelters, case studies; Socio cultural and economic profile, settlement characteristics; Housing typology; Housing schemes; Polices and programmes for tribal upliftment; Case study area.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To identify and describe the basic characteristics and unique needs of special areas and groups in the context of housing, including marginalized and vulnerable populations.
- To utilize findings from case studies to understand the complexities of housing in different contexts and develop targeted solutions for special groups.
- To evaluate the effectiveness of existing housing policies and interventions in addressing the needs of special areas and groups.
- To develop practical recommendations and strategies to improve housing conditions and address issues identified in case studies, considering the specific needs of different populations.

**References:**


1. Davis Ian. (1981). Disasters and the Small Dwelling. Pergamon Press, New York.
2. Gilroy Rose and Toberta Woods. (1984). Housing Women. Routledge, London.
3. Chant Sylvia. (1996). Gender, Urban Development and Housing. United Nation Development Program, New York.
4. Airea. (1957). Single Family Dwellings. CRC Press, Chicago.
5. Musson N. (1963). Building for the Elderly. Reinhold Publications, New York.
6. Jain A.K. (2020). Housing for All: Design, Construction and Management. Khanna Books Publishing, New Delhi.
7. Boston Redevelopment Authority (2022). Tree of Life: Transitional Housing for Homeless Women and Children. Legare Street Press, London.
8. Kant Krishna (2021). Housing for Elderly and Differently-Abled. Notion Press Media Pvt Ltd, Chennai.


| | |
|---|---|
| Course Code | MTH-44 |
| Nature of Course | Skill Development and practical's |
| Course Title | **PLANNING STUDIO THESIS** |
| No. of Credits | 3 (L: 0; T:0; S: 12) |
| Internal Assessment | 250 Marks |
| External Jury | 250 Marks |

**Course Objectives:** The student will be enabled

- To develop a basic understanding of the area chosen for study (by carrying out a detailed literature review)
- To undertake detailed exploration of the topic (by way of surveys and studies)
- To identify issues and concerns those emerge out of the study and suggest recommendations.

**Course Contents**

Guided research by a student under the supervision of an individual/group of faculty from formulation to submission of the research.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To enhance ability to critically analyse complex housing issues and data, developing a keen understanding of underlying problems and trends
- To advance research skills, including designing studies, collecting and analysing data, and synthesizing information from multiple sources.
- To improve problem-solving abilities, with a focus on developing practical and innovative solutions to housing challenges
- To increased attention to detail in conducting research, analysing data, and presenting findings, ensuring accuracy and thoroughness
- To experience in managing a research project from inception to completion, including planning, executing, and reviewing progress.

# BASKET OF VALUE-ADDED AND ELECTIVES

**List of Value-Added Courses (AS PER NEP NORMS)**

1. Environmental Studies
2. Drug Abuse
3. Ethics and Human & Constitutional Values
4. Gender Sensitivity
5. Indian Languages and Knowledge System
6. Global Citizenship Inclusion and Equity
7. Creativity and Critical Thinking
8. Health and Yoga

**Basket of Electives (Common for All M.Plan/M.Tech Programmes)**

1. Construction Technology Innovation and its Impact on Real Estate
2. Designing for Real Estate (Urban Design, and Landscape)
3. Facility Management
4. Land value capture ToD, TDR & Commercial Real Estate Management
5. Housing Portfolio Investment
6. Stakeholder Management and Governance
7. Project Implementation and Management
8. Global Real Estate Economics and Economics Development
9. Data Analytics
10. Land Economics
11. Planning for Tourism
12. Landscape Planning and Design
13. Community Participation in Planning
14. Heritage and Conservation
15. Urban Future
16. Urban Mobility & Intelligent Transport System
17. Peri-Urban Development Planning
18. Urban Design
19. Big Data and Python
20. Planning for Sustainable Settlements
21. Environment Management Conservation
22. Citizen Social Science in Spatial Governance
23. Green Governance: Behaviour, Leadership and Entrepreneurship
24. State and Market Decisions
25. Disaster Management
26. Future Cities
27. Legal Studies
28. Healthy Cities and Spatial Policy
29. Fiscal Policy and Governance Decentralisation
30. Circular Economy, Spatial Governance and Policy
31. SIS for Emergency Response Planning
32. Spatial Data Security
33. Spatial Data Driven Journalism
34. Facility Management

35. Land Value Capture Tod, TDR & Commercial Real Estate Management
36. Housing Portfolio Investment
37. Project Implementation and Management
38. Stakeholder Management and Governance
39. Citizen Social Science in Spatial Governance
40. State and Market Decisions
41. Risk and Disaster Management
42. Healthy Cities and Spatial Policy
43. Fiscal Policy and Governance Decentralisation
44. Circular Economy and Spatial Governance And Policy
45. SIS For Emergency Response Planning
46. Spatial Data Security
47. Spatial Data Driven Journalism
48. Sustainable Real Estate Development
49. Disaster and Resilience
50. Inclusion, Participation and Communication
51. Inclusive Planning
52. Advanced Environmental Impact Assessment
53. Eco-System Services for Settlement Planning
54. Infrastructure Policy (Energy, Water and Transport)
55. Degraded Land Management
56. Strategic science and spatial planning

UNIVERSITY OF MYSORE
(Estd. 1916)

# SCHOOL OF PLANNING AND ARCHITECTURE

# M.TECH. IN URBAN AND REGIONAL PLANNING

*(Two years Standalone –Semester Scheme under CBCS in line with NEP -2020 -ITPI, New Delhi)*

## Program Details

| | |
|---|---|
| **Name of the Department** | **: School of Planning and Architecture** |
| **Name of the Program** | **: M.Tech. In Urban and Regional Planning** |
| **Faculty** | **: Faculty of Science and Technology** |
| **Duration of the course** | **: 2 Years semester scheme** |

## 1.0. PREAMBLE

The postgraduate program in M.Tech in Urban and Regional Planning programme has been offered by the School of Planning and Architecture, University of Mysore, Mysuru (SPAM) since academic year 1972-73 in response to the growing demand for qualified planners in consonance with the accelerating pace of urbanization within the country.

The NEP, 2020 has come up in an apt time to bring in the reforms by revamping the planning education system in the country. The Institute of Town Planners, India (ITPI), New Delhi is the recognition body for the Planning Courses in the entire country. The ITPI has come up with report of ***'Orienting Planning Education in Line with NEP, 2020'***. The curriculum for the program has been designed to impart such basic skills that would help students later in their careers to serve in various professional capacities in planning, development and management agencies in the public sector as well as private consultancy organizations.

This course structure has been adopted from the report, '***Orienting Planning Education in Line with NEP, 2020'*** suggested by the **ITPI, New Delhi** and ***Model curriculum of M.Tech in Urban and Regional Planning -2023*** prescribed by the **AICTE, New Delhi.**

## 2.0. GENERAL PROGRAMME STRUCTURE AND CREDITS

Composition of Structure of Planning Programme

The structure of the ***M.Tech in Urban and Regional Planning*** discipline will comprise of the following categories of courses:

- Major Courses
- Minor Courses
- Inter-Disciplinary/ Multi-disciplinary Courses (decided by the respective educational institution as per its policy), which can be through MOOC/NTPEL course also.
- Skill Enhancement Courses such as Internship/Studio/Thesis/Dissertation
- Ability Enhancement Courses
- Value Added Course Elective Courses (decided by the respective educational institution as per its policy)

**Course Code Definitions**

L Lecture

T Tutorial

S Studio

C Credits

**Definition of Credit**

1 Hour Lecture per week 1 Credit

1 Hour Tutorial per week 1 Credit

2 Hour Studio per week 1 Credit

## 2.1. Eligibility conditions for M.Tech in Urban and Regional Planning

**PG (Two Years) Program**: All candidates should have passed Bachelor degree in Planning/ Architecture/ Civil Engineering

Or

Master Degree in Geography/Economics/Sociology or equivalent degree

Or

Other equivalent courses as prescribed/approved by the ITPI, New Delhi

Sponsored/deputed Candidates from Government/Semi-Government/Quasi Government/College/Department teachers sponsored from Engineering Colleges with any one of the above said qualifications with a minimum of 2 years of working experience are also eligible for admission under the quota reserved for them.

## 2.2. Awarding Degree for the PG Program of M.Tech in Urban and Regional Planning

The total number of credits proposed for the two-year Standalone M.Tech in Urban and Regional Planning is 82.

**Range of Credits**

2 Years (standalone) M.Plan/M.Tech in any Specialization in Planning 82 Credits*

* Planning Education Institutes may introduce additional credits, grand total to be maximum upto 90 credits (ITPI, New Delhi).

## 3.0 Marking and Grading System: As per the CBCS regulation of University of Mysore, Mysuru

# M.TECH. IN URBAN AND REGIONAL PLANNING

## SYLLABUS FOR THE BATCH 2025- 26

**(CHOICE BASED CREDIT SYSTEM)**

**(SEMESTER: I-IV)**

**The degree is offered under M.Tech. In Urban and Regional Planning** (M.Tech. URP) (2 years duration). The Structure of M.Tech. In Urban and Regional Planning Program shall have essentially the following categories of courses with the breakup of credits as given below:

### PROGRAMME STRUCTURE AND CREDIT SYSTEM

| Semester | Discipline Specific Courses – Major | Minor | Skill Enhancement Courses (Studio/ Thesis)/ Internship | Common Value- Added Courses (Compulsory/ Additional) | Grand Total of Credits | Inter- Disciplinary/ Multi- Disciplinary/Elective Courses |
|---|---|---|---|---|---|---|
| I | 2 Courses (6 Credits) | 3 Courses (6 Credits) | 3 Course (8 Credits) | 1 Course (2 Credits) | 22 | 1 Course (2 Credits) |
| II | 2 Courses (6 Credits) | 2 Courses (4 Credits) | 2 Course (8 Credits) | 1 Course (2 Credits) | 20 | 1 Course (2 Credits) |
| III | 2 Courses (6 Credits) | 2 Courses (4 Credits) | Thesis Preliminaries (2 Credits) + 1 Course (8 Credits) + Internship (Audit) | - | 20 | 1 Course (2 Credits) |
| IV | 2 Courses (6 Credits) | 1 Course (2 Credits) | Thesis (12 Credits) | - | 20 | 1 Course (2 Credits) |
| **Grand Total** | | | | | **82** | |

Note:

- The Model PG Programmes in Planning are proposed for 82 credits. However, the Planning Education Institutes may introduce additional credits, grand total to be maximum upto 90 credits.
- The Planning Education Institutes may select the Value Added Courses from the basket proposed herewith.
- The Planning Education Institutes may select the departmental/ institutional electives from the basket proposed herewith.

### PROGRAMME STRUCTURE AND CRDITE SYSTEM

| Semester | Credits & Marks | Theory | Planning Studio (Practical) | Planning Studio Thesis (Practical) | Internship | Total |
|---|---|---|---|---|---|---|
| I SEMESTER | Credits | 14 | 08 | - | - | 22 |
| | Marks | 600 | 300 | - | - | 900 |
| II SEMESTER | Credits | 12 | 08 | - | - | 20 |
| | Marks | 500 | 300 | - | - | 800 |
| III SEMESTER | Credits | 10 | 10 | - | - | 20 |
| | Marks | 400 | 400 | - | - | 800 |
| IV SEMESTER | Credits | 08 | - | 12 | - | 20 |
| | Marks | 300 | - | 500 | - | 800 |
| **Total Credits** | | **44** | **26** | **12** | **-** | **82** |
| **Total Marks** | | **1800** | **1000** | **500** | **-** | **3300** |

## Mandatory First Semester (Common) for All the Specialized Programmes

| First Semester (Common) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Nature of Course** | **Title of the Course** | **Hours/Week** | | | **Total Credits** | **ESE** | **IA** | **EJ** | **Total Marks** |
| | | | **L** | **T** | **S[1]** | | | | | |
| (MTIS -11) | Major | Planning History & Theory | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTIS - 12) | Major | Principles & Techniques of Planning | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTIS - 13) | Minor | Transport Planning | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS - 14) | Minor | Housing & Community Planning | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS - 15) | Minor | Infrastructure Planning | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS – 16) | Value Added Course | Environmental Studies | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTIS– 17) | Skill Development (Practical) | Planning Studio - IA (Local Area Planning) | 0 | 0 | 10 | 5 | - | 75 | 75 | 150 |
| | | Planning Studio - IB (Applied Socio Tools for Planning) | 0 | 0 | 4 | 2 | - | 50 | 50 | 100 |
| | | Planning Studio - IC (Spatial Technologies) | 0 | 0 | 2 | 1 | - | 25 | 25 | 50 |
| | | **Total Credits/Marks** | | | | **22** | **300** | **450** | **150** | **900** |

IS-Integrated Semester, VAD- Value Added Course, SD-Skill Development

| Second Semester | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Nature of Course** | **Title of the Course** | **Hours/Week** | | | **Total Credits** | **ESE** | **IA** | **EJ** | **Total Marks** |
| | | | **L** | **T** | **S** | | | | | |
| (MTURP-21) | Major | City and Metropolitan Planning | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTURP-22) | Major | Regional Planning | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTURP-23) | Minor | Real Estate Market and Land Management | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTURP-24) | Minor | Urban & Regional Infrastructure | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTURP-25) | Value Added Couse | Ethics and Human & Constitutional Values | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTURP-26) | Skill Development (Practical) | Planning Studio – 26A Quantitative Methods | 0 | 0 | 4 | 2 | 0 | 50 | 50 | 100 |
| | | Planning Studio – 26B Village, Cluster and Block Planning | 0 | 1 | 10 | 6 | 0 | 100 | 100 | 200 |
| (MTURP-27) | Skill Development (Practical) | Internship (8 weeks) To be undertaken by the students during summer vacations after 2nd semester and credits will be included in the 3rd semester | | | | Audit | - | - | - | - |
| | | **Total Credits/Marks** | | | | **20** | **250** | **400** | **150** | **800** |

ESE-End Semester Exam, IA-Internal Assessment, EJ-External Jury.

[1] S- Studio i.e. Practical - Planning Studio IA-IC Skill Development

| Third Semester | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Nature of Course** | **Title of the Course** | **Hours/Week** | | | **Total Credits** | **ESE** | **IA** | **EJ** | **Total Marks** |
| | | | **L** | **T** | **S** | | | | | |
| (MTURP-31) | Major | Institutions and Governance | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTURP-32) | Major | District Planning and Rural Development | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTURP-33) | Minor | Transport Corridors and Regional Development | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTURP-34) | Minor | Research Methodology | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTURP-35) | Skill Development (Practical) | Planning Studio - 35A Thesis Preliminaries | 0 | 2 | 0 | 2 | - | 50 | 50 | 100 |
| | | Planning Studio – 35B Regional Planning | 0 | 0 | 16 | 8 | - | 150 | 150 | 300 |
| (MTURP-36) | Skill Development (Practical) | Internship (8 weeks) To be undertaken by the students during summer vacations after 2nd semester and credits will be included in the 3rd semester | | | | Audit | | | | |
| | | **Total credits/Marks** | | | | **20** | **200** | **400** | **200** | **800** |

| Fourth Semester | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Nature of Course** | **Title of the Course** | **Hours/Week** | | | **Total Credits** | **ESE** | **IA** | **EJ** | **Total Marks** |
| | | | **L** | **T** | **S** | | | | | |
| (MTURP-41) | Major | Development Finance | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTURP-42) | Major | Legislation and Professional Practice | 2 | 1 | 0 | 3 | 50 | 50 | - | 100 |
| (MTURP-43) | Minor | Project Planning and Management | 1 | 1 | 0 | 2 | 50 | 50 | - | 100 |
| (MTURP-44) | Skill Development (Practical) | Planning Studio Thesis | 0 | 0 | 12 | 12 | - | 250 | 250 | 500 |
| | | **Total credits/Marks** | | | | **20** | **150** | **400** | **250** | **800** |

## Programme Objectives

- The Programme of master's in planning Urban and Regional Planning is designed to prepare students in the skills of analysing the physical, social, cultural, economic and ecological dimensions of urban and rural settlements.
- To comprehend the issues in cities/towns, city regions, and rural areas, to plan and design for the current and future of metropolitan cities, towns and rural areas new innovative

tools and policies needs to be developed and imparted to the new generation of planners. Along with a group of core courses common to all planning programmes, specializations are built around courses such as city and metropolitan planning, urban infrastructure, municipal finance, urban information system, GIS, community participation, disaster risk reduction and resilience, District Planning and rural development, Resettlement and redevelopment, development management and governance, project planning, policies and laws, professional practice and ethics.

- The programme includes studio exercises in plan preparation through live case studies related to comprehensive and micro level - urban development, regional level, including metro regional level - issues, and problems related to various cities, towns and rural areas in the country.

## Programme Outcomes

- At the end of this course, a student may be well equipped to prepare a Master Plan/City Development Plan/Metropolitan Regional Plan, District Planning and Village Planning, can make the plan at various scales such as site planning to regional level plans. They can be employed from Central government, State departments, District Planning Authority/Board, Municipality/Municipal Corporations/Towns Panchayats, Metropolitan Development Authority, SEZ, Investment Zones, etc. for plan preparation, plan implementation, monitoring and evaluation.

# SYLLABUS

# FIRST YEAR: SEMESTER I

| | |
|---|---|
| Course Code | (MTIS-11) |
| Nature of Course | Major |
| Course Title | **PLANNING HISTORY AND THEORY** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand economic, political, cultural, social and other forces shaping built environments in history.
- To understand the significance of theories in planning of settlements.

**Course Contents**

**Unit 1: Evolution of Planning**

Significance of the study of evolution of settlements; Cosmological and other influences, origins and growth of cities, effects of cultural influence on physical form; Evolution of Planning thought from ancient texts and treatise in India (Vedic Literature), Classification of settlements and plans of ancient Indian villages and towns.

Planning Characteristics in Indus valley civilization: Case Studies- Harappa and Mohenjo- Daro, Dolavera, Egyptian, Mesopotamian Greek and Roman Civilizations, BC period Towns in India, Silk Route Cities: Vaishali, Bhaghalpur, Kushinagar, Sravasti, Kaushambi, Ram nagar, Barreilly, Sanghol, Kaveripattinam, J&K: Harwan, and Indraprastha in Delhi. Medieval Town Planning in India; Chola, Chera and Pandiya's and Town planning in ancient Deccan, Hyosalas, Vijaya nagara dynasties in town planning. Examples of Sri Rangam, Kancheepuram, and port town of Poompugar; Influence of Rajputs in Western India and their contribution to planning. Ancient river valley civilizations (Egyptian, Mesopotamian, Indus valley, Gangetic Region, Chinese and South American).

**Unit 2: Dimensions of Planning**

Urban Processes Criteria of location and development of towns in history, Political, economic, technological, social and cultural factors which have shaped settlements through history, Indian city typologies and study of urban growth, decline, renewal in different cities based on function, location etc.,

Renaissance; Industrial and postindustrial cities; Model and New Town Movements; Town Improvement and City Beautiful Movements, Colonial cities in India and provision of infrastructure.

**Unit 3: Theories of Settlement Planning**

Planning Theories by Ebenezer Howard, Camillo Sitte, Patrick Geddes and Clarence Perry, C.A. Doxiadus, Lewis Mumford, F.L. Wright, Le Corbusier and Peter Hall; City as a living spatial entity; Concepts of landmark, axis, orientation; City form as a living space; City as a political statement: New Delhi, Chandigarh. (Case studies: Chandigarh, Gandhinagar, Bhuvaneshwar, Industrial Towns, Amaravati, special Zones (SEZ) etc.).

Modernism and Post-Modernist Planning Thought; Neo-Marxist and Neo Liberal

perspectives in Planning; Post positivist typology of planning theory, Comprehensive Rational Planning Approaches; Disjointed Incrementalism and Mixed Range Approach, Strategic Spatial Planning, Advocacy and Pluralism, Collaborative and Communicative Planning, New economic geography and city region, Global cities, 15 minute city, Sustainable Cities, Healthy City, Resilience City, New Urbanism and Smart Growth Developments.

**Unit 4: Planning in India**

Post-independence Indian Planning and concept applications. Capital City (an amalgamation of cities) – Delhi; Chandigarh, Gandhi Nagar and Bhuvaneshwar, Steel Cities, New Cities: Raipur; New Mumbai, New Okhla Development Authority, Greater Okhla Development Authority, National Urbanisation Policy (1988) and urban direction. Corridor Urbanisation (DMIC, Eastern Corridor, Quadrilateral and their influence in urban form and direction. Concept of City within City, Expanded Cities, and Census Towns concept. Geography of Gateway city region (High Power Committee, MoHUA).

**Course Outcomes:** Upon the completion of this course, the students will be able

- To demonstrate appreciation and knowledge about history and theory of ancient cities' planning and development.
- To analyse various city planning concepts, physical forms and abstract theoretical formulations.

**References:**


1. Hall P. (2014). Cities of Tomorrow: An Intellectual History of Urban Planning and Design since 1880. Wiley and Sons. Hoboken, New Jersey.
2. Levy J. (2006). Contemporary Urban Planning. Prentice Hall, New Jersey.
3. Ayyar V. (1915). Town Planning in Ancient Deccan. Law Printing Housing, Madras.
4. Hall P. (2002). Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the 21st Century. Blackwell Publications, Oxford.
5. Ward S. (2002). Planning the Twentieth Century City: The Advanced Capitalist World. John Wiley & Sons. England.
6. Hall P. (1998). Cities in Civilization: Culture Technology and Urban Order. Weidenfield and Nicolson, London.
7. Stein M. J. (1995). Classic Readings in Urban Planning. McGraw-Hill, New York.
8. Nath R. (1995). Medieval Indian History and Architecture. APH Publishing Pvt. Ltd, New Delhi.
9. Lynch K. (1981). A Theory of Good City Form. Cambridge Publications, London.
10. Gallion A. (1963). The Urban Pattern: City Planning and Design. D.V. Nostrand Company Inc, New York.
11. Pojani Dorina (2023). Alternative Planning History and Theory. Routledge, London.
12. Beauregard Robert A. (2020). Advanced Introduction to Planning Theory. Edward Elgar Publishing, Cheltenham.
13. Dr. Singh Satvir (2019). Settlement Patterns and Planning in India. Akinik Publications, Delhi.


**Recommended Journals**


1. Jill G. (2023). Planning Theory and Practice. Taylor and Francis Online.
2. Whittemore Andrew H. and Brent D. Ryan (2024). Journal of Planning History. Volume 23, Issue 4. Sage Journals.
3. Pengjun Zhao (2017). Cities: The International Journal of Urban Policy and

Planning. Elsevier

4. Professor Eddie Chi-Man Hui (2020). Habitat International. ElsevierBlack Shameem, Priya Chacko, Jason Cons and Ali Usman Qasmi (2020). Journal of South Asian Studies. Taylor and Francis Online.

| | |
|---|---|
| Course Code | (MTIS – 12) |
| Nature of Course | Major |
| Course Title | **PRINCIPLES AND TECHNIQUES OF PLANNING** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the various concepts in planning, categories of planning (economic, social and physical) and their integration at various level National, State and Local.
- To understand the tools and the process of making a spatial plan from site to regional level and how to implement and monitor a plan at various scales.

**Course Contents**

**Unit 1: Fundamentals of Urban Planning**

Planning definitions and concept, Categories of Planning (economic, social and physical) and their integration; Planning at different levels, Town as a physical, social, economic and functional entity, Town typology and their characteristics, Urbanization and Urban Growth, Identification of problems and priorities, Preparation of plans; Perspective Plan, Master Plan, Development Plan, Zonal Plans, Project Plans/Schemes, Concepts of land use, zoning regulations, Delineation of Local Planning Area . Example of GIS Based Master Plan, SVAMITVA and other programmes using urban and rural areas for spatial planning.

**Unit 2: Fundamentals of Regional Planning**

Concept of Regional Planning and development. Aims & Objectives of Regional planning, classification of regions, regionalization and delineation techniques for various types of regions, regional planning vis-vis National Five-Year Plans, Regional economic activities such as primary, secondary, tertiary – factors governing & influencing the size, structure of these activities, Role of public participation in plan formulation and implementation.

Scale of Delineation: Village, Block, District, Urban/city, Metro region, Meso and Macro regions and why do we need to delineate planning area. Dynamic regions and measuring the delineations. Use of existing administrative boundaries, Urban Agglomerations, existing and future dedicated urban planning areas, Built-up-area using remote sensing and drones, mobility surveys, Analysis of structure of nodes, hierarchy, nesting and rank size.

**Unit 3: Sources of Information**

Physical Surveys and Secondary Sources for Maps: Techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of buildings, land utilization and physical features of land; Data requirements for various types of regional plans; Techniques for conducting regional surveys. Use of NASA, Google, NRSA, and other sources for Remote Sensing and Drones, Survey of India,

NIC classification of map codes, and Agricultural and Forest Ministry sources.

Data requirements for urban and regional planning; Sources of primary and secondary data; Quantitative and Qualitative methods of data collection, Validity and reliability of data, Questionnaire design, measurement scales and their applications, sampling techniques, types of socio-economic surveys; Self-surveys, interviews, mailed questionnaires and observer participation, focus groups etc. Use of Digital tools for Quantitative and Qualitative Surveys – Use of mobile network, sensors, drones, and other tools.

Sources of Demographic data for planning- Population structure and Characteristics such as age, sex, occupation, educational attainment etc. Birth and Death rates.

**Unit 4: Data Analysis and Presentation Techniques**

Land suitability analysis, Land use classification, coding and analysis; residential and non- residential density patterns and their analyses; population and economic analysis. Tabulation of data, graphical presentation of data; Preparing pie diagrams, histograms, bar charts, normal, semi-log and double log graphs and their uses; colour, black and white presentation techniques; Understanding the discipline of illustrations and tables; Colour, black and white presentation techniques; Basic discipline of presenting illustrations; Presentation of spatial data, analysis and proposals.

Population policies- World Population policy, National population policy. Methods of population projections; Migration and Migration analysis, classification and factors influencing migration. Migration types and its impact on Urban Growth and Urbanization. Migration and its implications in spatial planning.

Scalogram, sociogram, etc. Threshold analysis; Input Output analysis, SWOT analysis. Methods of population forecasts and projections, Planning Standards Spatial standards, performance standards and benchmarks, and variable standards. URDPFI, RADPFI, SVAMITVA guidelines

**Course Outcomes:** Upon the completion of this course, the students will be able

- To acquire knowledge about the planning tools that were introduced in India from that of land acquisition to TPS, ToD, Accommodation Reservation, etc.
- To demonstrate appreciation of the types of data required (qualitative and quantitative) for planning and the various methods that are used for data collection.
- To use and interpret various spatial and non-spatial data by the application of statistical, GIS/Drones, etc., tools for data acquisition, analysis, mapping, and interpretation.

**References:**


1. Kulshrestha S.K. (2006). Dictionary of Urban and Regional Planning. Kalpaz Publications, New Delhi.
2. Greed Clara, (2004). Introducing Planning. Continuum, London.
3. Ministry of Urban Affairs & Employment (2014). Urban Development Plans Formulation and Implementation Guidelines. Government of India, New Delhi.
4. Kopardekar S.H. & Diwan G.R. (1994). Urban and Regional Planning: Principles, Practice and Law. Kopardekar, Talegaon, Maharashtra.
5. Saini N.S. & Mahavir (1985). Urban Development Planning Strategies and Techniques. School of Planning and Architecture, New Delhi.
6. Goode W.J. & Hatt P.K. (1982). Methods in Social Research. McGraw-Hill Inc.,

New York.
7. Keeble L (1972). Principles & Practice of Town and Country Planning. The Estates Gazette Ltd., London.
8. Roberts Margaret. (1991). An Introduction to Town Planning Techniques. 2nd Edition. Routledge, England.
9. Fainstein S. (2012). Readings in Planning Theory. 3rd Edition. Blackwell Publishing, Oxford.
10. United Nations. (2009). Planning Sustainable Cities. United Nations Human Settlement Program. Earthscan, London.
11. Cambbell Scott and Fainstein S. (2003). Readings in Planning Theory. Second Edition. Blackwell Publishing, Oxford.
12. Freestone. R. (2000). Urban Planning in a Changing World. E&FN SPON, London.
13. Ellin N. (1999). Postmodern Urbanism. Princeton, Architectural Press, New York.
14. Gupta S.P. (2024). Statistical Methods. Sultan Chand and Sons, New Delhi.
15. Kulshrestha S.K. (2022). Urban and Regional Planning in India: A Handbook for Professional Practice. Sage Publications, New Delhi.
16. Taherdoost Hamed (2022). Data Collection Methods and Tools for Research. Elvedit, Pully.

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|---|---|
| Course Code | (MTIS – 13) |
| Nature of Course | Minor |
| Course Title | **TRANSPORT PLANNING** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand concepts and components of transportation planning and establish its significance in urban planning

**Course Contents**

**Unit 1: Basics of Transportation Planning**

Meaning, scope, objectives and components of transportation planning and its importance in urban planning; Importance of traffic and travel characteristics in transportation planning; Relationship between traffic volume, concentration, and speed; Urban and Regional Hierarchy of Roads and their Norms and Standards; Highway capacity and level of service; Transport problems and mobility issues.

**Unit 2: Traffic Engineering**

Cross Sectional and longitudinal elements of urban roads: right of way, carriageway, median, service lane, footpath, curb, camber, side slope, service road, horizontal curves, vertical curves, super elevation, sight distance, access control; Intersections and interchanges: types, capacity, and design principles; Traffic controls and regulation devices: traffic signs, signals, and markings; Road infrastructure and road landscape design features.

**Unit 3: Transport Planning Process and Surveys**

Transport plan and management: comprehensive traffic & transportation plan, city mobility plan, transport system management; Urban form and transport patterns; Land use – transport integration; Accessibility and mobility issues in transportation planning; Transportation planning process: stages and surveys/ studies; Traffic surveys,

presentation and analysis- traffic volume, parking, origin & destination, speed & delay, accidents; Planning considerations, norms and designs of bus and truck terminals.

**Unit 4: Transport Systems and Policies**

Transport system and urban structure; Transport systems: meaning, types, characteristics of BRTS, LRTS, MRTS and NMTS; City size and sustainable transport options. Intelligent transport system: meaning, components, characteristics, and guidelines; Smart transport solutions; Legal and organizational framework for transportation; Funding of transportation systems; Transport technologies and environmental impacts: relevance in urban transportation planning; Urban transport policies in India; Transport, environment, and safety issues; Principles and approaches of traffic management, transport system management.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To understand the concepts of mobility, transport modes, travel patterns, and transport networks.
- To understand key techniques for management and enhancement of transport.
- To identify traffic and transportation planning problems of a human settlement.

**References:**


1. Khisty C.J. and B.K. Lall (2016). Transportation Engineering: An Introduction. Prentice Hall of India Pvt. Ltd., New Delhi.
2. Pande Anurag and Brian Wolshon. (2016). Traffic Engineering Handbook. Seventh Edition. Institute of Transportation Engineers, New Delhi.
3. Sarkar P.K, Vinay Maitri and G.J. Joshi. (2015). Transportation Planning: Principles, Practices and Policies, Prentice. Hall of India Pvt. Ltd., New Delhi.
4. Slinn Mike, Paul Matthews and Peter Guest. (2015). Traffic Engineering Design: Principles and Practice, Elsevier, Butterworth-Heinemann. Burlington, MA.
5. Kadiyali L.R. (2014). Traffic Engineering and Transport Planning. Khanna Publishers, New Delhi.
6. Chennai Municipal Corporation. (2014). Non-Motorized Transport Policy. Government of Tamil Nadu, Chennai.
7. Hutton, Barry. (2013). Planning Sustainable Transport. Routledge, England.
8. Papacostas C.S. and Prevedouros P.D. (2001). Transportation Engineering and Planning. Prentice Hall, England.
9. Joshi G.J., Pradip Kumar Sarkar, Vinay Maitri (2022). Transportation Planning: Principles, Practices and Policies. PHI Learning, New Delhi.
10. Boada B.L. (2021). Intelligent Transportation Systems (ITS). MDPI, Basel.
11. U.S. Department of Transportation and Federal Highway Administration (2023). Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD).


**Recommended Journals**

1. Wong S.C. and Keecho Choi (2024). International Journal of Sustainable Transport. Volume 18. Taylor and Francis Online.
2. Simon Blainey (2022). Journal of Transport Planning and Technology. Taylor and Francis Online.

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|---|---|
| Course Code | (MTIS – 14) |
| Nature of Course | Minor |
| Course Title | **HOUSING AND COMMUNITY PLANNING** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the nature of housing problems, and various programmes and policies initiated to deal with these problems in Indian cities and villages.

**Course Contents**

**Unit 1: Fundamentals of Housing**

Housing definition and subject matter; Modernist and post-modernist Housing thought; Housing Ideologies: their assumptions related to poverty, housing issues, housing interventions, modernization, redistribution with growth, neo-liberal, pragmatic neo-liberal, Critique of ideologies and way forward; Housing need, demand and supply: definitions, factors affecting them, theoretical models and dynamics.

**Unit 2: Land and Housing**

Residential mobility: impacting factors and models (invasion and succession, filtering, housing chains, gentrification, life cycle and trade off model); Slums: causes and consequences and approaches; Housing area planning consideration and modules; Residential densities; Low cost housing: methodologies of cost reduction in housing, Low cost and eco-friendly building materials (indigenous, agricultural, industrial, others); Land for housing: formal and informal conduits of land supply, land partnership models for affordable housing provision (land pooling and readjustment, land reconstitution, land sharing).

Inclusive Housing: public policy and implementation, private housing for the differentially abled, single women, aged (senior citizen homes), working women and men hostels by public and private. Special Housing for migrant workers.

**Unit 3: Housing Institutions**

Role of Institutions in housing generation and upgrading: Housing and Urban Development Corporation, Building Materials Training and Promotion Council, Central Building Research Institute; Participatory models and their application in housing; Conducting social audits in housing; Housing and community development schemes; Formal housing finance outreach and the urban poor in India, Role of informal housing finance.

**Unit 4: Housing Finance and Policies**

Housing finance networks and institutions; Community micro-finance institutions: Self Employed Women Association Bank, Grameen Bank, Habitat International Coalition, International Slum Dwellers Federation; Urban Housing and Habitat Policy; International Agencies in Housing and Community Development; Best practices in Housing (slum upgrading, city wide networking, affordable housing provision). Cooperative Housing Societies in Indian Cities.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To analyse the existing housing situation in a city.

- To show familiarity with national housing policies and other related housing provisions.
- To demonstrate an understanding of the relationships between housing markets, housing standards and incomes.
- To develop knowledge about housing needs for the poor in india.
- To develop knowledge about housing programmes and projects for the poor and their outcomes.

**References:**


1. Aldrich B.C and R.S. Sandhu (2015). Housing for the Urban Poor in Developing Countries. Rawat Publications, Jaipur.
2. Aldrich B.C and R.S. Sandhu (1995). Housing for the Urban Poor. Sage Publications, New Delhi.
3. Ling J. and Ronald R. (2014). Housing East Asia. Macmillan, New York.
4. Banarjee A.V and E. Duflo. (2013). Poor Economics. Random House Limited, London.
5. Chattopadhyay S. (2009). New Essays on Inclusive Housing. Macmillan, Delhi.
6. Dwivedi R.M. (2007). Urban Development and Housing in India 1947 to 2007. New Century Publications, New Delhi.
7. Payne G. (1999). Making Common Ground. Intermediate Technology Publications Ltd, London.
8. Mathey K. (1992). Beyond Self-help Housing. Mansell Publishing Ltd., London.
9. Aromar R. (1990). Shelter in India: Sustainable Development Series. Har-Anand Publications, New Delhi.
10. Hardoy J. and D. Satterthwaite. (1989). Squatter Citizen. Earth Scan Publications, London.
11. Poulouse T. (1989). Reading Material on Housing. ITPI Publication, New Delhi.
12. Jain A.K. (2019). Housing for All. Khanna Book Publishing Co., New Delhi.
13. Kohli V.K. (2007). Housing Finance Agencies in India. Deep and Deep, New Delhi.
14. Jenkins P., H. Smith and Y.P. Wang (2007). Planning and Housing in the Rapidly Urbanizing World. Routledge, New York.
15. Rees Geneth and Chloe Roberts (2024). Housing: Architecture and Urban Planning. Knowledge Baker, Greater Noida.
16. Jill G. (2022). Planning the Good Community. Taylor and Francis Ltd, London.
17. Sengupta Urmi, Annapurna Shaw and Debolina Kundu (2024). Housing India: Programmes, Policies and Governance. Routledge, London.


**Recommended Journals**

1. Ruonavaara H. (1998). Housing Theory and Society. Taylor and Francis Online.
2. Çelik Özlem, Andrew Clarke, Rory Coulter and Damian Collins (2018). Journal of Housing Studies. Taylor and Francis Online.
3. Boelhouwer Peter J. and Queena Qian (2023). Journal of Housing and Built Environment. Springer

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|---|---|
| Course Code | (MTIS – 15) |
| Nature of Course | Minor |
| Course Title | **INFRASTRUCTURE PLANNING** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To provide knowledge about the historical evolution and significance of various

infrastructure systems, including water supply, sewerage, and transportation.

- To analyze and classify different types of infrastructure (physical, social, economic) and their current development status.

**Course Contents**

**Unit 1: Typology and Significance of Infrastructure**

Types of Infrastructure and existing development status: physical, social and economic infrastructure; Urban Infrastructure and Regional infrastructure: water supply, SWM, sewerage, urban transport, Regional infrastructure at micro, meso and macro levels: Transport and freight, communication, pipelines, ICT.

**Unit 2: Infrastructure Planning Process**

History of infrastructure: significance of infrastructure and it evolution, origins of different types of infrastructure as water supply, sewerage, transportation via road, rail, air, waterways; Role of national planning process in infrastructure development; Introduction to infrastructure planning: physical, social, economic and digital infrastructure and the norms associated with it at various scales.

**Unit 3: Physical Infrastructure**

Water supply sources (surface and underground), collection, conveyance, distribution, treatment (sedimentation, coagulation, filtration, disinfection).; Water Quality & Demand: sanitation systems (conservancy, water carriage), disposal (septic tanks, privies), sewerage systems, collection patterns, treatment (screening, sedimentation, activated sludge, sludge treatment); Urban stormwater collection, drainage systems, rainwater harvesting, water reuse/recycling; Solid Waste Management: Generation to disposal (composting, incineration, sanitary landfills); Energy infrastructure and its distribution, Alternative energy sources and carbon reduction energy options.

**Unit 4: Social and Economic Infrastructure**

Infrastructure in context of urban and regional settlements: Educational including schools, colleges, technical education etc., Health facilities including dispensaries, health centre, general hospital etc., Socio-Cultural including police, religious places, etc. Recreational including parks, amusement parks, mela grounds, stadiums etc. their hierarchies, provision and location criteria, Norms and standards etc.

Public Distribution System, ports, rail and airport infrastructure, logistic hubs, storage facilities, banking system networks & financial hubs, and digital infrastructure planning; Huge power storage planning, carbon sink areas; Markets at various levels (organized and unorganized).

**Course Outcomes:** Upon the completion of this course, the students will be able to articulate the history and impact of infrastructure development.

- To classify and evaluate infrastructure systems and their status.
- To understand technical processes related to water supply and waste management.
- To apply infrastructure planning principles to urban and regional settings, considering norms and standards.

**References:**


1. Ilesanmi Felix Aromo. (2013). Regional Infrastructure Development Intervention LAP. Lambert Academic Publishing, Germany.
2. Bhattacharyay, Biswa Nath, Masahiro Kawai and Rajat M. Nag, (2012). Infrastructure for Asian Connectivity. Edward Elgar Publishing Limited, USA.

3. Birdie G.S. (2012). Water Supply and Sanitary Engineering. Dhanpat Rai Publications, New Delhi.
4. IDFC Foundation. (2023) India Infrastructure Reports: 1996 to 2023. Oxford University Press, New Delhi.
5. Jetti K.N. and Vishal Sethi (2007). Infrastructure Development in India. New Century Publications, New Delhi.
6. Ministry of Urban Development. (2011). Report on Indian Urban Infrastructure and Services. Government of India, New Delhi.
7. Ministry of Urban Affairs & Employment. (2014). Urban & Regional Development Plans Formulation and Implementation Guidelines. Government of India, New Delhi.
8. Birdie G.S. (2012). Water Supply and Sanitary Engineering. Dhanpat Rai Publications, New Delhi.
9. Trifunovic N. (2006). An Introduction to Urban Water Distribution. Taylor & Francis, England.
10. Hussain S.K. (2006). Water Supply and Sanitary Engineering. Oxford Publications, New Delhi.
11. CPHEEO. (1997). Manual of Sewage and Sewage Treatment. Ministry of Housing & Urban Development. Government of India, New Delhi.
12. CPHEEO. (1997). Manual of Water Supply in Water Treatment. Ministry of Housing & Urban Development. Government of India, New Delhi.
13. Jadhav Pravin and Rahul Nath Chaudhary (2024). Infrastructure Planning and Management in India: Opportunities and Challenges. Rawat Publications, New Delhi.
14. Proag Virendra (2021). Infrastructure Planning and Management: An Integrated Approach. Springer Nature, Berlin.
15. Renner Theresa, Leonhard Plank and Michael Getzner (2024). Handbook of Social Infrastructure. Edward Elgar Publishing, Basel.

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| Course Code | MTIS – 16 |
| Nature of Course | Value Added Course |
| Course Title | **ENVIRONMENTAL STUDIES** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the scope and importance of environmental studies, different natural resources (forests, minerals, energy, water, land, food, biodiversity) and their utilization as well as conservation methods.
- To understand the importance of ecosystem structure and function; different types of environmental pollution (air, water, soil, thermal, nuclear and noise), environmental law and remedial methods.
- To introduce various acts.
- To make aware of the consequences of population explosion; diseases such as HIV/AIDS and various family welfare programs.

**Course Contents**

**Unit 1: Basics of Environment**

Definition, scope and importance, Need for public awareness Natural resources and associated problems.

a. Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
b. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
c. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
d. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
e. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
f. Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
g. Role of an individual in conservation of natural resources; Equitable use of resources for sustainable lifestyles.

**Unit 2: Ecosystem**

Concept of an ecosystem; Structure and function of an ecosystem: Producers, consumers and decomposers; Energy flow in the ecosystem; Ecological succession; Food chains, food webs and ecological pyramids; Introduction, types, characteristic features, structure and function of the following ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

Introduction and Definition: genetic, species and ecosystem diversity; Bio-geographical classification of India; Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values; Biodiversity at global, national and local levels; India as a mega- diversity nation; Hot-spots of biodiversity; Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts, Endangered and endemic species of India; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

**Unit 3: Environment related Legislations**

Definition, Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution; Solid waste management: Causes, effects and control measures of urban and industrial wastes; Role of an individual in prevention of pollution; Pollution case studies; Disaster management: floods, earthquake, cyclone and landslides

From unsustainable to sustainable development; Urban problems related to energy, Water conservation, rain water harvesting, watershed management; Resettlement and rehabilitation of people: its problems and concerns; Case studies and environmental ethics: Issues and possible solutions; Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust; Case studies: Wasteland reclamation, Consumerism and waste products; Environmental Protection Act, 1986, Air (Prevention and Control of Pollution) Act, 1981; Water (Prevention and control of Pollution) Act, 1974; Wildlife Protection Act; Forest Conservation Act; Issues involved in enforcement of environmental legislation, Public awareness

**Unit 4: Case Studies**

Population growth, variation among nations Population explosion: Family Welfare

Programmes; Environment and human health; Human Rights; Value Education, HIV / AIDS, Women and Child Welfare; Role of Information Technology in Environment and Human Health; Case Studies; Healthy Cities; Sustainable Development Goals; Climate Change and adaptation at micro to macro level measures.

**Field Work**

- Visit to a local area to document environmental assets river/forest/ grassland/ hill/ mountain
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the effects of environmental pollution and remediation.
- To identify the causes, effects and remedial measures.
- To follow sustainable lifestyle patterns.
- To appreciate the environmental Acts and Rules.

**References**:


1. Bharucha E. (2005). Textbook of Environmental Studies. Universities Press, Hyderabad.
2. Joseph K. and R. Nagendran. (2004). Essentials of Environmental Studies. Pearson Education (Singapore) Pvt. Ltd., New Delhi.
3. Kaushik A. and C.P. Kaushik. (2004). Perspective in Environmental Studies. New Age International (P) Ltd, New Delhi.
4. Rajagopalan R. (2011). Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.
5. Sharma J. P., N.K. Sharma and N.S. Yadav. (2005). Comprehensive Environmental Studies. Laxmi Publications, New Delhi.
6. Sharma P. D. (2009). Ecology and Environment. Rastogi Publications, Meerut.
7. Subramanian V. (2002). A Text Book in Environmental Sciences. Narosa Publishing House, New Delhi.
8. CSE (2024) State of India's Environment. Centre for Sciences and Environment, New Delhi.
9. Kumar Santosh, M.P. Poonia and S.C. Sharma (2021). Environmental Studies. Khanna Book Publishing Co. (P) Ltd., New Delhi.
10. Gupta Susmita and Abhik Gupta (2021). Environmental Studies: Principles and Practices. Sage Publications, New York.
11. Dr. Saran R.K. (2023). Environmental Laws and Legislations in India: Futuristic Research Trends. Notion Press, Chennai.


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|---|---|
| Course Code | (MTIS – 17) |
| Nature of Course | Skill Development |
| Course Title | **Planning Studio - IA**<br>**LOCAL AREA PLANNING** |
| No. of Credits | 5 (L: 0; T:0; S: 10) |
| Internal Assessment | 75 Marks |
| External Jury | 75 Marks |

**Course Objectives:** The student will be enabled

- To conduct thorough site analysis and assess site suitability for development and existing infrastructure integration.

- To design comprehensive physical and social infrastructure solutions by applying relevant planning guidelines and standards.

**Course Contents**

Each student in a group or individually shall be required to prepare infrastructure plan for an Urban Area/ Village**.** The exercise shall cover the following aspects:

a. Preliminary site investigation and analysis:

    a. Site inventory: topography, soil characteristics, site resources and physiographic conditions
    b. Site suitability for development – slope, drains
    c. Site in relation to its surrounding and city/village level infrastructure lines
    d. The proposed layout and population distribution.

The students will visit the selected area of the study for the exercise as decided by the concerned teacher(s).

a. General planning guidelines

b. Application of norms and standards

c. Requirements

d. Design considerations and conceptual plans

e. Proposals for infrastructure: Physical - water supply, sewerage network, drainage, rain water harvesting, street & street furniture, solid waste management; Social – education, health, recreational, postal, religious

The plan shall be suitably presented in the form of a report illustrated with necessary drawings, maps charts, diagrams and photographs.

**Course Outcomes:** By the end of this course the students will be able

- To demonstrate effective site analysis and evaluation.
- To develop well-integrated and feasible infrastructure designs.
- To apply planning norms and standards accurately.
- To present infrastructure plans clearly and utilize site visit data to refine infrastructure proposals.

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|---|---|
| Course Code | (MTIS – 17) |
| Nature of Course | Skill Development |
| Course Title | **Planning Studio - IB**<br>**APPLIED SOCIO-ECONOMIC TOOLS FOR PLANNING** |
| No. of Credits | 2 (L: 0; T:0; S: 4) |
| Internal Assessment | 50 Marks |
| External Jury | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand socio-economic tools and data to analyze them to interpret to implement projects.
- To expose the students to know about the sources of information (census, un, NFHS, NSSO, CSO, etc.) For projections and how to use them.
- To train the students about the statistical tools for the analysis of current conditions and future projections and for modelling the future scenario.

**Course Contents**

**Concepts in Sociology and Tools for Planning**

Sociological concepts and methods, man and environment relationships; Socio-cultural 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.

**Community and Settlements**

Social problems and social structure and spatial planning; Role of socio-cultural aspects on growth patterns of city and neighborhood communities; Social planning and policy, and community participation; Marginalization and concepts of inclusive planning, and gender concerns in planning; FGD, Stakeholders meetings, Perception and Vision Analysis, and other social tools for social analysis.

**Concepts in Economics & Its Applications in Planning**

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, Determinants of national income, consumption, investment, inflation, unemployment, long-term investment planning. Fiscal Budget Responsibility Management (FRBM). Agglomeration Economies and Diseconomies and spatial planning.

**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; Economic Policies and strategies in economic planning, balanced versus unbalanced growth, Local Economic Development and sectoral push; Land Value Capture

**Visits to a Village / Small Town to Ascertain Socio-economic Report Course Outcomes**:
By the end of this course the students will be able

a. To design surveys, collecting and analyzing data, and using findings to inform infrastructure planning and policy decisions.
b. To analyse the socio-economic impacts of projects and policies, identifying key issues to enhance social equity and community well-being.

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|---|---|
| Course Code | (MTIS – 17) |
| Nature of Course | Skill Development |
| Course Title | **Planning Studio - IC**<br>**SPATIAL TECHNOLOGIES** |
| No. of Credits | 1 (L: 0; T:0; S: 2) |
| Internal Assessment | 25 Marks |
| External Jury | 25 Marks |

**Course Objectives:** The student will be enabled

- To expose students to drone data processing techniques
- To use geospatial technology for urban mapping
- To understand remote sensing and image analysis for urban areas
- To provide technical inputs for the use of GIS in planning and perform planning analyses using Geographic Information Systems as a tool.

**Course Contents**

**Basic Principles of Remote Sensing**

Concept and Scope of Remote Sensing: Definitions, Process, and Characteristics of Remote Sensing System, Advantages and Limitations; Types and Characteristics of Sensor: Imaging and non-imaging sensors, Active and passive sensors, Resolution of Sensors: Spectral, Spatial, Radiometric & Temporal; Swath, coverage, Scale, Mapping unit, multiband concepts, False Colour Composites, Multispectral and Hyper-spectral Remote Sensing. Drone Image Capturing, types of drones, Scale and Regulations; Show Remote Sensing, Drone data and GIS software platforms and students can get a hang of the new software and its UI. Downloading Satellite imagery, File import and conversion, Layer stack, Mosaic, creation of AOI and image subsets/clipping

**Advanced Remote Sensing Analysis Techniques**

Indices (NDVI, NDBI, etc.); Supervised and unsupervised classification with accuracy assessment, kappa coefficient, and matrix; Pattern recognition (Spatial and temporal); Time series and Change detection techniques.

**Basic Concepts for Working in GIS**

Definition and Components of Geographic Information System, Functionality, and Areas of GIS Application, Advantages and Limitations of GIS; Variables: points, lines, polygon; Spatial and Attribute Data, Data Structures: Raster and Vector data structures, Spatial and non-spatial data of GIS, and formats, Geo-database, Digitization, and geo-referencing

**Geography Required for GIS**

Coordinate system and its types: Cartesian, Geographic, Projected; Northing & Easting and Latitudes & longitudes: conversion of latitude-longitude between different formats; Difference between real earth surface, geoid, and ellipsoid; Concept of horizontal datum, vertical datum, UTM and UTM Zones; Map projections and their various types

**AutoCAD Software and its Application in Planning**

AutoCAD is a computer-aided design software developed by the company Autodesk (hence the name AutoCAD). The AutoCAD software is primarily used to create and represent detailed 2D and 3D drawings, plans, and models in a variety of industries, such as Architecture, Planning, Engineering, and Construction. It allows the planners to create precise and accurate drawings using a range of tools and features. The errorless presentation of the overlays of various drawings, details and blow-ups not only help in enhancing the explanatory skills but also enables the implementation and execution team to flawlessly accomplish large scale projects with large efficiency.

The manual drawings can work upto a limited scale whereas the AutoCAD drawing allows you to design down to fractions. Thus, creating a more accurate design in all dimensions. Once the design is created, it can be bedded into a 3D printer or a machine for a prototype to be created and the measurements from the drawing can be used to create parts of something that can be built such as a building or house.

**Course Outcomes:** By the end of this course the students will be able

- To use various commands, digitization tools, preparation of various plans, and analyze/ interpret the data using the software to produce the desired results.
- To present of problems, potentials, future projections, and spatial proposals through various maps based upon aims and objectives of a project for the study area.

# FIRST YEAR: SEMESTER II

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|---|---|
| Course Code | **MTURP-21** |
| Nature of Course | Major |
| Course Title | **CITY AND METROPOLITAN PLANNING** |
| No. of Credits | 3 (L: 2; T:1; U: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the problems and concepts of urbanization in various metropolitan cities as well as area of influence of metropolis with understanding of global metropolis as well as Indian cities.

**Course Contents**

**Unit 1: Theories of Development and Urban Structure**

Growth of cities; cities as engine of growth; Urban sprawl; Land value, economic attributes of activity location; Economic forces in urban development; Structure of City Regions, Area of influence; Impact of technology on urban forms; Transportation and urban form; Location characteristics and impact of urban settlements.; Theories of urban structure and land use- Centre place theory, urban realm model; New urbanism; Territorial Development Theory: Growth pole theory, urban bias critique, secondary cities and urban diffusion; System approach to planning; Threshold analysis, retail location and industrial location analysis; Transport system analysis; Desakota model; Emerging Rural Urban Relationship models globalisation and extended metropolitan region; Networked model; Peri- urban Interface (PUI) case studies.

**Unit 2: Planning Norms and Standards**

Land use standards for residential, industrial, commercial, institutional, transport, ecological spaces, recreational areas etc.; Space standards based on population for facility areas, utilities and networks, performance standards; URDFPI, RADFPI, Hill Area Development Guidelines, standards and other model guidelines by State and Central development Ministries (Central) and States; Building Bye-Laws, FSI and Formed based norms and standards.

**Unit 3: Plan Preparation Approaches and Techniques**

Approaches for preparation of Urban development plans, Master Plans, Structure plans and Strategy Plan; Public Participation and Plan Implementation; Zonal and Local Area Plan; Techniques of urban renewal and redevelopment; Special area planning: definition, types, attributes, requirements, planning process; Inner areas, peri-urban areas issues and planning approaches; Smart City: Concepts, Elements, Features, planning approach and strategies, policy efforts in India; Inclusive planning.

**Unit 4: Best Practices in City and Metropolitan Planning**

Best practices of city and metropolitan planning in India and abroad, inter-disciplinary policy issues and public action s for guiding city and metropolitan development.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate urbanization and terminologies regarding urban areas.
- To appreciate the legislative structure for metropolitan planning and development.
- To analyze the nature, form and planning of metropolitan cities and regions in india.

- To have a global perspective regarding planning and development strategies of metropolis

**References:**


1. Aggarwalla Astha. (2011). Agglomeration Economies and Productivity Growth in India. Indian Institute of Management, Ahmadabad.
2. BMRDA (2016). Bangalore Metropolitan Region Revised Structure plan 2031. BMRDA, Bangalore.
3. Board N. C.R. P. Regional Plan 2021. National Capital Region. Government of India, New Delhi.
4. Clark G. and T. Moonen (2014). Mumbai: India's Global City. Brookings Inst Pr., Massachusetts.
5. Glasson J. (1974). An Introduction to Regional Planning. Taylor and Francis ltd., London.
6. HMDA. (2013). Metropolitan Development Plan – 2031 for Hyderabad Metropolitan Development Region. HMDA, Hyderabad.
7. Jaidit Brar S. G. A. M. C. M. S. R. M. S. (2014). India's Economic Geography in 2025: States, Clusters and Cities. McKinsey and Company, Delhi.
8. KMDA. (2000). Perspective Planning for metropolitan Development, Kolkata. KMDA, Kolkata.
9. Ministry of Urban Development. (2014). Regional Planning Approach, URDPFI Vol. I and Vol.2. Government of India, New Delhi.
10. Wheeler S. (2009). Regions, Mega regions, and Sustainability. Regional Studies, Vol. 43.6, pp. 863-876, Routledge Informa Ltd, England.
11. Bhattacharya Shromoyee & Sujaya Rathi (2015). Re-conceptualizing Smart Cities: A reference framework for India. Niti Aayog, Government of India.
12. The World Bank (2015). World: Inclusive Cities Approach Paper. Report No. AUS8539. IBRD, The World Bank, Washington D.C.
13. Deuskar Chandan (2020). Informal Urbanization and Clientelism: Measuring the global relationship. Sage, London.
14. Mahadevia D. (2024). Urban Planning and its Discontents: Practice in Contemporary India. Taylor & Francis Books India Pvt. Ltd, London.
15. Keitel M.L. and Lukas Behrend (2023). The Topology of Planning Theories. Springer, Berlin.


**Recommended Journals:**


1. Jain S, J. Panda, and S. Kant. (2014). Possible Socio-scientific Issues of Land-use and Land-cover Change Impact and Associated Tools of Study with a Special Reference to Delhi-Mumbai Industrial Corridor Region. International Journal of earth and Atmospheric Sciences, Vol. 1, pp. 58-70.
2. Strategia A. (2015). Tools and Technologies for Planning the Development of Smart Cities. Journal of Urban Technologies, Vol. 22, No. 2, pp. 43-62.


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|---|---|
| Course Code | MTURP-22 |
| Nature of Course | Major |
| Course Title | **REGIONAL PLANNING** |
| No. of Credits | 3 (L: 2; T:1; U: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand various types of regions, delineation of various types of regions, and its development.
- To understand the theories of regional development
- To understand indian region typology and its use in the planning process.
- To understand various programmes and projects associated with various types of regions in india.
- To understand the tools of regional development.

**Course Contents**

**Unit 1: Concepts and Typology of Regions**

Basic Concepts in Regions; Defining a region: fluidity and purposiveness; Typology of Regions: Resource Regions, Mega, Macro, Meso, and Micro Regions; Use of clusters in regional planning; Delineation of Regions (Regionalisation); Concept of Global city regions; City beyond region; Rural Settlement Analysis: Types, activity, environment and economic interface in rural habitat; Technology in rural settlement.

**Unit 2: Regional Dynamics**

Growth of Mega and Metro Regions: Scale, Complexity and its impact on national and international scenario, convergence and divergence; International Regions: SAARC, BRICS, Latino Region, EU Region, etc.; Regional Economy, competitiveness among regions, backward and leading regions in development; Special Regions: SEZ, Agro Regions, Ecological regions, etc.; Regional Disparity Analysis (through factor analysis); Regional Interdependence Analysis (through Input- Output model).

**Unit 3: Regions in India and its Planning**

Resource Regions; Corridors as regions: National, Sub-National, State, sub-state level (District), Blocks and Clusters as a region; Macro, Meso and Micro regions in India; Case Studies from India: NCR and Delhi Mega Region, Mumbai Mega Region, Kolkata Metro Region, Chennai Metro Region, and other Metro Regions in India; Western & Eastern Ghats, North Eastern Region, Coastal Regions, and River Valley Regions; Corridors: Golden Quadrilateral, Delhi-Mumbai,Chennai-Bangalore Industrial Corridor, North-South and East- West Corridor Regions; Core, Fringe and Periphery in a Region and its planning.; Tools and techniques available for planning regions in India; Role of 73 and 74 CAA in regional plan preparation and implementation.

**Unit 4: Spatial Inequalities and Regional Disparities**

Indexing Spatial Disparities/Inequalities: District Development Product, State Development Product, and National GDP; Human Development Index, Infrastructure Index, Environmental Index, Social Development Index, and Fiscal Transfers based on Indices. Overcoming inequalities: Spatial, economic, social, infrastructure, governance, etc.; Tools and incentives used for balancing the development, Sectoral push, Investment Regions, etc.; Use of Thermal Imageries and Satellite Imageries for assessing inequalities over space.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate tools and indicators to be used in regional planning.
- To appreciate the programmes and projects associated with various types of regions in India.

**References:**


1. Rengasamy S. (2009). Types of Regions and Regionalization of India. Madurai Institute of Social Sciences.
2. Wheeler S. (2009). Regions, Mega regions, and Sustainability. Taylor and Francis, New York.
3. Department of Town and Country Planning (2005). Decentralised Development Plan. Government of Kerala, Thiruvananthapuram.
4. United Nation Development Program (2008). Decentralised Development Plan. UNDP, New Delhi.
5. GIZ (2018). Regional Development Guidelines: Urban Vertical, Technical Collaboration with Government of India & Germany, New Delhi.
6. Walter Isard (1975). Introduction to Regional Science. Prentice Hall, New Jersey.
7. The World Bank (2009). New Economic Geography. Washington DC.
8. Nallari Raj, Breda Griffith, and Shahid Yusuf (2012). Geography of Growth: Spatial Economics and Competitiveness. The World Bank, Washington DC.
9. Tukker Arnold, and Erik Dietzenbacher. (2013). Global Multiregional Input-Output Frameworks: An Introduction and Outlook. Taylor and Francis, New York.
10. Board N.C.R.P. Regional Plan (2021). National Capital Region. Government of India, New Delhi.
11. Ministry of Panchayati Raj. (2021). Rural Area Development, Formulation, Policy. Government of India.
12. Ministry of Panchayati Raj. (2022). SVAMITVA. Government of India.
13. Jiwan J. (2021). Regional Development and Planning. Rawat Publications, New Delhi.
14. Dr. Ghosh T.K. and Dr. Satyen Sarkar (2022). Regional Disparities in Economic Development: Policies and Prospects for Balanced Development. Serials Publications Pvt. Ltd., New Delhi.


**Recommended Journals:**


1. Farhana, I. (2012). The Region and Its Margins: Re-Appropriations of the Border from 'Mahagujarat' to Swarnim Gujarat. Economic and Political Weekly, Vol.32, pp.66-72.


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|---|---|
| Course Code | MTURP-23 |
| Nature of Course | Minor |
| Course Title | **REAL ESTATE MARKET AND LAND MANAGEMENT** |
| No. of Credits | 2 (L: 1; T:1; U: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand various types of land markets (formal and illegal), supply and demand equations, types of markets, and typology of land uses related to markets and their impact on spatial development. It will also give the tools for land management in urban and rural areas.

**Course Contents**

**Unit 1: Introduction to Land Economics**

Economic Principles of Land use; Real Estate Economy Types: Residential,

Commercial, etc., Market: Types of Markets, Concept of Rent and its application; Demand forecasting for land and Real Estate, factors affecting land and real estate: supply and demand; Interpretation of Revenue Maps (Cadastral maps); Use of GIS Based Mapping and SVAMITVA for land titling, & Property Titling.; Market Conditions: formal and informal, legal and illegal by Markets; Instruments of land policy and impact on markets: Planning instruments, market development instruments, financial development instruments, fiscal instruments, and other supportive instruments; Market by Government and Government Regulation, monopoly power and its use, private development; Rent-seeking and its impact on land supply, access to land by various segments of population and PPP in land; Introduction to Resettlement & Rehabilitation (R&R).

**Unit 2: Demand Side Management**

Income elasticity of land, business cycles and its impact on demand for land; Externalities and internalities in land development and induced demand; Economic growth and demand for land; Changes in tastes and preferences and its effect on type of land; Poor and their demand; Physical, fiscal, financial and legal incentives for inducing or restricting the demand for land; Mega investments and its effect on land; Property Rights: ownership, user and exchange rights: Its implication on land supply; Land Development: Type, cost, methods of disposal; Corruption and land markets: Corruption, black money and land markets; Relation between land, share and gold markets.

**Unit 3: Supply Side Management**

Regulation in Land Markets: Social justice and land distribution: public domain, social-democratic regulation, corporatist regulation, collective action of the state and regulation of its supply of land; Overall impact of regulation on land prices: Master Plan, Zoning and other planning regulations and their impact on supply; Land conversions and its regulation/facilitation in peri-urban areas; Land utilization analysis; Common property and its use, tenancy and ownership, holding size and its relevance; Land Management Techniques: Private land assembly, TPS, co-operatives in land development, FDI in land development, land pooling and plot reconstitution, transfer of development rights, land sharing and land lease.

**Unit 4: Land Pricing & Land Information System (LIS)**

Land valuation techniques; Land pricing; Subsidies; Auctions; Type of development: plotted, flatted system, and their effect on land pricing; Hedonistic pricing; Land price behaviour in urban centres; Constructing the land price index; Government incentives for land supply, assembly and planned development; Sources of information for land information; Land records in Urban and Rural areas: GIS Based property valuation (Unit based pricing, zone based, etc.); Peri-urban areas (SVAMITVA) transparency in land transaction, methods of publicising land price monitoring.

**Course Outcomes:** Upon the completion of this course, the students will be able to

- To assess land development by applying appropriate tools in the core and fringe areas of a city.
- To appreciate typology of markets, and methods to manage the land development for orderly spatial development.

**References:**

1. Pirounakis Nicholas G. (2012). Real Estate Economics a Point-to-point Handbook. Routledge, London.

2. Di Pasquale, Denise, and William Wheaton. (1995). Urban Economics and Real Estate Markets. Upper Saddle River. Prentice Hall, New Jersey.
3. Ling D. C. and R.A. Wayne Real Estate Principles: A Value Approach, McGraw-Hill: New York.
4. Brett, Deborah L., & Schmitz, Adrienne (Second Edition), Real Estate Market Analysis – Methods and Case Studies, Urban Land Institute, Washington D.C.
5. Jacobus, Charles J. (Eleventh Edition), Real Estate Principles, Cengage Learning, Mason, OH, USA.
6. Zachary Grossman, Pincus Jonathan, Shapiro Perry and Yengin Duygu (2018). Second- Best Mechanisms for Land Assembly and Hold-out Problems. Working Paper No. 2018-14. The University of Adelaide, Australia.
7. Moss A. and Kieran Farelly (2024). Global Real Estate Capital Markets: Theory and Practice. Routledge, London.
8. Mohanty K.P. (2021). Land Economics and Policy in Developing Countries. Sage Publications Pvt. Ltd., London.
9. Burman Anirudh (2024). Land Markets. Carnegie India, New Delhi.
10. Nagarajaiah K.S. (2022). Principle and Practice for Valuation of Land and Building. K S Nagarajaiah.

**Recommended Journals**

1. Yavas A., B. W. Ambrose, J. B. Kau and R. K. Pace (2023). The Journal of Real Estate Finance and Economics. Springer Nature Link.

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|---|---|
| Course Code | MTURP-24 |
| Nature of Course | Minor |
| Course Title | **URBAN & REGIONAL INFRASTRUCTURE** |
| No. of Credits | 2 (L: 1; T:1; U: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand various types of critical infrastructure for a region such as land development for mega projects i.e., dams irrigation system, agricultural markets, health, education, spatial information system, LIS, public distribution system, and energy in addition to road and railway infrastructure.

**Course Contents**

**Unit 1: Infrastructure Management: Planning Issues**

Equity, Access, level and Efficiency; Quality of Service; Paying Capacity; Pricing of Infrastructure Services; Ownership and Control: Public, Private, SPV, and PPP Models; Infrastructure provision; Multi-service providers and their operation at various levels; Infrastructure Policy: Regulatory and Facilitative; Investment Requirement at various levels and actual investments in Infrastructure; Infrastructure Index.

**Unit 2: Role and Functions of Infrastructure in an Urban and Region**

Role of Infrastructure in urban and regional development; Critical Infrastructure in Urban and regional development and Indicators of infrastructure development in defining regional development; Standards and benchmarks for infrastructure provision and delivery at various levels; Role of Spatial Information Technology in the planning, provision, and monitoring infrastructure; Regional Resource Mapping across forest resource, mineral resource, agricultural resource, water resource etc.

**Unit 3: Physical Infrastructure**

Water and Sanitation: Policies, Programmes, urban and rural variations in water, sanitation; Multi-purpose of demand for water in rural areas, irrigation: demand and supply, and pricing; Policies and Programmes in the provision of Sanitation at various levels: Rajiv Gandhi Technology Mission on Water supply and Sanitation (Urban & Rural), City Sanitation Plan, and State Sanitation Strategies; Sanitation and MDG; Resource Commitment for Sanitation; Access to Sanitation: Cost and Coverage; Role of Institutions: Public, Private and community; Sanitation and environment; Sanitation and health; Solid and liquid Waste Management; Urban and rural solid and liquid waste management policy, collection, treatment and disposal from rural area, urban areas and associated environmental issues.

**Unit 4: Social, Economic and Digital Infrastructure**

Health: Provisions, availability, access and future requirement, government policies; Education: Provisions, availability, access and future requirement, government policies; Socio- Cultural and Recreational: Provisions, availability, access and future requirement, government policies; Agriculture Extension Centres; Agriculture Marketing/ storage; Banking and Insurance; Tourism Infrastructure: Ports, Airports, Inland Waterways, Special Economic Zones (SEZ). Energy, Railways and Digital infrastructure; Roads: Provision and institutions involved, Investment, pricing and maintenance, Access, Coverage and conditions; National, State and District Policies towards Roads. National Highway Project: Golden Quadrilateral, North-South and East-West Corridors and its impact on regional space; PMGSY and its impact on village connectivity; BRDO and International Roads: border roads, international roads and backward regions; Forward and Backward regions in terms of road provision; Railways: Goods and passengers train, dry ports, container depot etc., high-speed connectivity and Metro and Supply projections; Investment and pricing; Trans-boundary issues in production and sharing; Privatization issues; Nuclear Energy: issues involved and probable spatial impact.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the regional infrastructure for the preparation of regional development plan at metro regional and other regions.

**References:**


1. Sethi V.K. (2007). Infrastructure Development in India. New Century Publications, New Delhi.
2. Ministry of Urban Development (2011). Report on Indian Urban Infrastructure and Services. The High Powered Expert Committee (HPEC) for Estimating the Investment Requirements for Urban Infrastructure Services, Government of India
3. National Institute of Urban Affairs (1997). Financing Urban Infrastructure in India: Research Study Series 59. NIUA, New Delhi.
4. Venugopal R.A. (2009). State of Urban services in Indian cities. Oxford University Press, New Delhi.
5. Ministry of Urban Affairs & Employment (2014). Urban & regional Development Plans Formulation and Implementation Guidelines. Government of India, New Delhi.
6. McLoughlin Brian J. (2019). Urban and Regional Planning: A Systems Approach. Rawat Publications, New Delhi.
7. Heathcott Joseph , Jonathan Soffer and Rae Zimmerman (2022). Urban Infrastructure: Historical and Social Dimensions of an Interconnected World.

University of Pittsburgh Press, Pennsylvania.
8. Rana Muhammad Ehsan and Manoj Jayabalan (2023). Emerging Technologies for Digital Infrastructure Development. Bentham Books, Sharjah.

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|---|---|
| Course Code | MTURP-25 |
| Nature of Course | Value Added Course |
| Course Title | **Ethics and Human & Constitutional Values** |
| No. of Credits | 2 (L: 1; T:1; U: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** This course intends to develop sensitivity to ethical issues in planning and development and develop an understanding of processes of ethical decision making.

**Course Contents:**

**Unit 1: Introduction to Constitutional Values of India**

Constitutional Values - Meaning, Nature, Scope and Relevance, Sources of Constitutional Values, Features of Indian constitution, making of Indian Constitution, Preamble of Constitution- Sovereignty, Socialism, Secularism, Democracy and Republicanism; Justice, Liberty, Equality, and fraternity; Dignity of Individual, Unity and Integrity of the Nation.

**Unit 2: Constitutional values in practice**

Citizenship and the role of citizens in Democracy and Nation Building; Fundamental Rights and Fundamental Duties as values; Additional Rights-Right to Education, Right to Health, Right to Information and Right to Privacy; Directive Principles of State Policy as instructive values.

**Unit 3: Understanding Ethics**

Defining ethics; Human values and moral reasoning; Perspectives on ethics; Branches of ethics; Ethics and social identities; Defining the idea of a profession and ethics in the modern professions.

**Unit 4: Understanding Ethical Decision Making**

Understanding human behavior; Substance of ethical behavior; Development stages of ethical behavior; Ethical decision making: power of frames, routines and strong situations; Examples of ethical and unethical decision making in planning organizations.

**Course Outcomes:** Upon the completion of this course, the students would be able:

- To demonstrate familiarity with different philosophical approaches to ethical behavior.
- To show knowledge about the various elements of ethical reasoning.
- To develop the ability to recognize an ethical dilemma.
- To show knowledge about the ethical decision making processes.

**References:**

1. Singer, P. (2010) Practical Ethics, Cambridge University Press, Cambridge.
2. Richards, J.R. (1980) *The Skeptical Feminist,* Routledge, New York.
3. Harding, C.G. (ed.) (2017) *Moral Dilemmas and Ethical Reasoning*, Routledge, New York.
4. Paul, R. and Elder, L. (2013) *The Thinker's Guide to Ethical Reasoning: Based on Critical Thinking Concepts and Tools*, Foundation of Critical Thinking,

Tomales, CA. Second Edition.
5. Barrett, C.D. (2017) *Everyday Ethics for Practicing Planners*, Routledge, New York.
6. D. D. Basu. Introduction to the Constitution of India.
7. Norman D. Palmer. The Indian Political System.
8. Dr. M. V. Pylee. India's Constitution..
9. Dr .B.L.Fadia. Indian Government and Politics.
10. Dr.A.P .Avasthi. Indian Government and Politics.
11. J.C. Johari. Indian Government and politics.
12. Vidhya Bhushan and Vishnu Bhagawan,Indian Constitution.
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|---|---|
| Course Code | MTURP-26 |
| Nature of Course | Skill Development |
| Course Title | **PLANNING STUDIO – 26A**<br>**QUANTITATIVE METHODS** |
| No. of Credits | 2 (L: 0; T:0; S: 4) |
| Internal Assessment | 50 Marks |
| External Jury | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the statistical tools for the analysis of current conditions and future projections and for modelling the future scenario.

**Course Contents**

**Unit 1: Introduction to Statistics, Organizing Surveys & Data Collections**

Statistics, Functions of Statistics, Applications and Limitations of Statistics; Organizing a statistical survey: Techniques of data collection, choice of frame, Degree of accuracy desired, Design of forms, field investigators; collection of Data: Primary and Secondary Data, Drafting the questionnaire, Sources of Secondary data, Editing primary and secondary data.; Census of India tables and its usage in planning; CSO/NSSO/NFHS data and its usage in planning; linking Census of India to NSSO tables.

**Unit 2: Sampling, Sample Designs and Classification & Tabulation of Data**

Census and Sample Method; Theoretical basis of sampling, Methods of sampling, Size of sample; Classification and Tabulation of data: Meaning and classification of objectives, types of classification, Frequency Distribution; Tabulation of Data: Difference between classification and tabulation, types of tables; soft wares for tabulation.

**Unit 3: Measures of Central Value, Dispersion & Skewness, Moments, Kurtosis**

Types of Averages: Arithmetic Mean, Median, Mode, Geometric Mean, Harmonic Mean, General limitations of average. Measures of Dispersion: Measuring Variation: Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variations, Chebyshev's theorem, Lorenz curve. Difference between dispersion and skewness, measures of skewness, Moments, Sheppard's correction; Kurtosis.

**Unit 4: Correlations and Regressions**

Correlation and Causation; types of correlations, Partial and multiple correlation, scattered diagram method, Graphic method; Karl Pearson's coefficient of correlation; Probable Error; Coefficient of Determination, Rank Correlation, Concurrent Deviation

method. Regression: Regression lines, Regression Equation; Regression equations in case of correlation table, Standard Error of Estimate. Time Series: Measurement of Trend, Seasonal, cyclical and irregular variations; Introduction to Interpolation and Extrapolation.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate practical skills in analysing and visualization of data.
- To carry out projections and scenario building.

**References:**


1. Gupta, SP. (2024). Statistical Methods. Sultan and Chand, Delhi.
2. E. Reid and Keunhyunk Park. (2020). Basic Quantitative Research Methods for Urban Planners, Routledge, London.
3. Anusha Illukkumbura (2020). Introduction to Regression Analysis. Amazon Digital Services LLP.
4. Lohr Sharon L. (2022). Sampling Design and Analysis. Routledge, London.


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|---|---|
| Course Code | MTURP-26 |
| Nature of Course | Skill Development |
| Course Title | **PLANNING STUDIO – 26B**<br>**VILLAGE, CLUSTER AND BLOCK PLANNING** |
| No. of Credits | 6 (L: 0; T:1; S: 10) |
| Internal Assessment | 100 Marks |
| External Jury | 100 Marks |

**Course Objectives:** The student will be enabled

- To expose the students in the practical ways of planning for a village, cluster, block, and tehsil.
- To train the students in applied gis based on the case study selected.
- To expose the students to the complexities of planning at various levels i.e. Village, block, tehsil, peri- urban and urban levels.
- To identify data sources, carry out primary surveys, understand sampling methods, stakeholder analysis, techniques of analysis and come out with policy level proposals.

**Course Contents**

Studio will be focusing on Village study, Clusters, Block Development Plan. The studies will focus on spatial, socio-economic, infrastructure, fiscal, institutional governance, legal and financial aspects revealing inter-sectoral issues and challenges to suggest planning measures and strategies for preparing village, cluster, and block development plan based on RADFI and SVAMITVA guidelines.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To analyse the existing baseline situations of the city and identify sectorial issues and challenges of development.
- To carry out forecast, build future scenarios for Master Plan / City Region Plan and detailed out plan proposals.

**References:**


1. Ministry of Housing and Urban Affairs. (1992). 74th Constitutional Amendment Act. Government of India, New Delhi.
2. Ministry of Panchayati Raj. (1992). 73rd Constitutional Amendment Act. Government of India, New Delhi.
3. Ministry of Urban Affairs & Employment (2014). Urban & regional Development Plans Formulation and Implementation Guidelines. Government of India, New Delhi.
4. Ministry of Panchayati Raj (2012). RADFPI Guidelines for Gram Panchayats. Government of India. New Delhi.
5. Ministry of Rural Development (2015). Shyama Prasad Mukerjee Rurbnan Mission. Government of India, New Delhi.


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|---|---|
| Course Code | MTURP-27 |
| Nature of Course | Skill Development |
| Course Title | **INTERNSHIP (8 WEEKS)**<br>To Be Undertaken By The Students During Summer Vacations After 2nd Semester And Credits Will Be Included In The 3rd Semester |
| No. of Credits | AUDIT (L:-; T:-; S:-) |
| Internal Assessment | - |
| External Jury | - |

**Course Objectives:** The student will be enabled

- To get exposed the current policies, programmes, and projects in the field of Urban/Metro region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Contents**

Knowledge on current policies, programmes, and projects in the field of Urban/Metro region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To get the current knowledge in the field of urban/metro region planning, projects, etc.

# SECOND YEAR: SEMESTER III

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| Course Code | MTURP-31 |
| Nature of Course | Major |
| Course Title | **INSTITUTIONS AND GOVERNANCE** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the formal and informal institutions involved in development process, type of governance system, efficiency, and equity.
- To understand with the digital governance at various levels from ward to regional level for governance.

**Course Contents**

**Unit 1: Institutions in Planning**

Type of institutions, their role and relevance (legal, political, social, cultural and economic institutions); Formal and informal institutions and spaces: their interface, conflicts, reach and their effectiveness in planning; Analysing the institutions: Methods, process and evaluation; Role of the State in Planning: Market facilitative, regulatory and monopoly power; Hierarchies, Scales and Levels of Planning Institutions; Formal and informal institutions such as constitutions, electoral rules, property rights, and civil rights; How and why people in different groups, countries, and cultural context of institutions to facilitate collective action; Whether different groups construct distinctly different institutions to deal with similar problems and why similar institutions seem to work differently in differently in distinct societies.

**Unit 2: Institutions, Organisations and Planning Institutions**

Different between organizations and institutions, government and governance; Organisations: types, concepts, theories, structure and functions; approaches to understanding organizations; Town & Country Planning Organization, Urban Development Departments, City Improvement Trust, Development Authorities, Municipal Corporation etc.: objectives, functions and duties, organisational structure, technical capacity, statutory obligations, budgetary outlays, coordination and implementation issues; Institutional building: factors and processes, institution Process and networks: how the network operates; Present Institutions dealing with urban and regional planning; Post 73$^{rd}$ and 74$^{th}$ CAA environment and the modified role and functions of local bodies, local authorities, district authorities and state level agencies; Case studies; Digital Governance.

**Unit 3: Decentralisation of Powers**

Development Planning and Indian state-centralisation, State-Local Governments, powerlessness, decentralization; Institutional frame and mechanism for urban governance as envisaged in 73rd and 74th CAA; Transfer of power from Centre to State and State to Local government; Role of the existing various states in the light of CAA; Role of various institutions in the governance process and access to government by various stakeholders; Digital Governance, E-Democracy, E-Governance and Grievances Redressal system; Case study related to digital and e-governance.

**Unit 4: Participatory Governance & Network Governance**

Benefits of participation in community planning: process and principles of community planning, bottom up planning process, community building process, community planning, partnership; Community rights and physical planning norms/standards; Public distribution system; Community-based evaluation of planned projects; Community Participation Laws, Partnership; Community rights and physical planning norms/standards; Role of the state in relation to other Stakeholders (NGOs, Private Sector, Scientific Network and international institutions); New State Spaces: Invited and contested spaces: changing role of the state- emergence of middle class and its socio-political space, collective bargaining and collective action; Role of donor agencies; Advanced Locality Management, Resident Welfare Associations and other agencies in the governance system; Role of People's participation in planning process: Process of inclusion and exclusion in governance.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To equipped to understand the various hierarchy and typology of institutions and spatial development is govern by them.
- To appreciate the sectoral convergence and divergence for development process in spatial development.

**References:**


1. Klijn E.H. and J.F.M. Koppenjan (2012), Governance network theory: past, present and future, Policy and Politics. Department of Public Administration, Erasmus University Rotterdam, Netherlands.
2. Le Galès, P. (2001). Urban governance and policy networks: on the boundedness of policy networks. A French case. Springer, Berlin.
3. Osborne S.P. (2010). The new public governance: emerging perspectives on the theory and practice of public governance. Routledge, London.
4. Rhodes R.A.W. (1997). Understanding Governance. Open University Press, Buckingham.
5. Rogers D.L. and D.A. Whetten (1982). Inter-organizational Coordination: Theory, Research, and Implementation. Iowa State University Press, Ames.
6. Teisman G.R., A. van Buuren and L. Gerrits (2008). Managing complex governance networks. Routledge, London.
7. Singh Sukhpal, Jyotsna Jha, A. Indira and A.V. Arunkumar. (2024). Institutions and Public Policy for India's Sustainable Development. Routledge, London.
8. Rydin Y., Robert Beauregard, Marco Cremaschi and Laura Lieto (2022). Regulation and Planning: Practices, Institutions, Agency. Routledge, London.
9. Kapucu Naim (2020). Network Governance: Concepts, Theories, and Applications. Routledge, London.


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|---|---|
| Course Code | MTURP-32 |
| Nature of Course | Major |
| Course Title | **DISTRICT PLANNING AND RURAL DEVELOPMENT** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the administrative dimensions of spatial planning in India managed

from the state to gram panchayat through district planning process.

- To understand various spatial districts planning being done in India and how various institutions are involved in the development process including budget preparations.
- To understand the concept of spatial budgeting and its interface with DDP.
- To understand the RUBAN Mission, RADFPI, SVAMITVA and other Gram Panchayat area's spatial development planning.
- To understand various development programmes and projects at district and gram panchayat levels are carried.

**Course Contents Unit1: Introduction**

Decentralised Planning in India: Historical Development in decentralized district level planning: District and Block Planning; 73rd and 74th Constitutional Amendment Acts; Participative District Planning, Role of Planning Commission and an Overview of District Planning Manual of Planning Commission of India; Finance Commissions, and ICT in District Planning.

**Unit 2: District Planning**

Data Management and District Level Visioning; Institutional and other support for District Planning Committee; Bridging gap through district planning, resource mapping and determination of funding sources; Consolidation of urban and rural plans; Multi-Sector and multi-level integrated approach to planning (vertical and horizontal spatial integration); Rural- Urban spatial relationship; District Development Plans: Guidelines for District Planning: Content, context and methodologies; Village Development Plans: an Integrated approach, rural norms and standards (spatial); Capacity Building for Decentralised Planning; Democratising Information: using media for district development; Special Component Plan: Tribal Sub Plan and Weaker Sector Plan allocation, Direct Cash Transfer, Affirmative Action etc., implementation, monitoring and evaluation; North Eastern Plan

**Unit 3: Rural Planning and Development**

Introduction: Meaning, Scope and overview of rural development; Historical perspective Rural Development Programmes in India, Problem/perception and identification; Rural Area Planning: Programmes/Policies/ Schemes for rural development, their coverage and outcomes; Rural Infrastructure Development Schemes; Rural Employment Schemes; Digital Inclusion for beneficiaries; Micro financing (SHGs): Sustainable Livelihood; Programmes: Command Area Programme, Drought Prone Area Programme, Backward Area Development Programme, North Eastern Development Programme etc.; Technology Missions: Water, Sanitation, etc.

**Unit 4: Transforming Rural Areas of India**

Consumption pattern changes, land utilization changes, cropping pattern changes, holding size change, living standard changes, changes in asset ownership: its implication in the planning process; Aspirational Districts and Blocks, Smart Villages.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the various hierarchy of District planning, budgeting and various government programmes and projects.
- To appreciate the spatial rural development and their programmes and model spatial developments.

**References:**


1. Singh K. and A. Shishodia (2016). Rural Development Principles, Policies, and Management. Sage Publication, New Delhi.
2. Chopra K., G. K. Kadekodi and M. N. Murthy. (1990). Participatory development people and common property resources. Sage Publication, New Delhi.
3. Jin L., Qian, G. and Yan, W. (2012). Industry-city Integrate Development Oriented High- tech District Development and Planning Strategies: Jinan East High-tech District Case.
4. Lekorwe M.H. (1998). Local government and district planning. JL Van, Schaik.
5. Inamdar N.R. and Kshire, V.K. (1986). District Planning in India: A Case Study of Maharashtra, IBH Publishing Company, Oxford.
6. Thakur D. and Singh, S.N. (1991). District Planning and Panchayati Raj. Deep and Deep Publications, Delhi.
7. Yugandhar B.N. and Mukherjee, A. (1991). Readings in Decentralised Planning with Special Reference to District Planning, Vol. 1. Concept Publishing Company, Delhi.
8. Hooja R. and Mathur, P.C. (1991). District and Decentralized Planning. Rawat Publications, New Delhi.
9. Planning Commission India. (2008). Manual for Integrated District Planning, Government of India.
10. Hooja R. (1973). The District as a Planning Unit: Style and Locus. Journal of Public Administration, Indian.
11. UNDP. (2020). Aspirational Districts Programme: An Appraisal, United Nations Development Programme. India Office, New Delhi.
12. Yigitcanlar Tan, Surabhi Pancholi, Niusha Esmaeilpoorarabi, Rosemary Adu-McVie (2024). Innovation District Planning: Concept, Framework, Practice. Routledge, London.
13. Jha S.K. (2022). Rural Development Administration in India. Arjun Publishing House, New Delhi.


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| Course Code | MTURP-33 |
| Nature of Course | Minor |
| Course Title | **TRANSPORT CORRIDORS AND REGIONAL DEVELOPMENT** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the concept of corridor development, which has been influencing urban development.
- To understand the influence of national highways on industrial corridors, investment corridors, and other special corridors, and urban and regional development.
- To understand the growth drivers and how it stimulates the urban and regional dimensions through growth nodes/foci.

**Course Contents**

**Unit 1: Importance of Land Use- Transport Integration**

Land use and mobility patterns in cities; Implications of land use patterns on transport

and mobility; Land use and transport decisions; Need for sustainable development and sustainable transport; Need and benefits of land use transport integration; Case cities of land use–transport integration.

**Unit 2: Principles of Land use – Transport Integration and linked Transport Model**

Land use transport integration: definition and concept, land use transport cycle, importance of accessibility, factors affecting land use transport integration, tools for Land use-Transport Integration, key elements of integration; Integrating land use and transport in the planning process; Institutional integration and legal mechanism; Components of Land use transport model, accessibility: concept, measures and quantification; Types of land use transport model: Density saturation gradient method, Hansen's accessibility model, intervening opportunity model, Garin Lowry model, strategic land use transport model.

**Unit 3: Traffic Impact of Land**

Principles of traffic impact analysis; Land development attributes; Traffic generation rates of different land uses; Land development impact on traffic congestion on road segments, intersections and parking; Impact on public transportation, pedestrian traffic, and safety.

**Unit 4: Transit Oriented Development (TOD)**

Transit Oriented Development: Definition, concepts and key components; Principles of TOD; Planning norms and standards of TOD; Pre-requisites of TOD; Financing of TOD; Role of stakeholders; Case studies of TOD; Case Studies on Land use–Transport Integration; Best practices of Land use transport integration in India and abroad; Inter-disciplinary policy issues and public action for guiding land use transport integration; Corridor and emergence of small towns and villages.

**Course Outcomes:** Upon the completion of this course, the students will be able to

- To appreciate the interface between transport corridor and its impact on land use development at regional level and how it triggers other corridors such as industrial, investment, etc.
- To appreciate how to channelize the corridor development for orderly spatial development.

**References:**


1. Ministry of Housing and Urban Affairs (2017). National Transit Oriented Development (TOD) Policy, 2017. Government of India, New Delhi.
2. Prabir De and Kavita Iyengar (2014). Developing Economic Corridors in South Asia. Asian Development Bank, Manila.
3. United Nations Human Settlements Programme (2015). The Role of Transport and Transit Corridors in Fostering International Cooperation for Sustainable Development: Issues and Recommendations. UN- HABITAT, Nairobi.
4. Pokhrel Ramesh, Bertolini Luca and Brommelstroet te Marco (2023). How does transportation facilitate regional economic development? A heuristic Mapping of the literature. Elsevier, Amsterdam.
5. Luis Enrique Ramos-Santiago (2023). Enhancing station level Direct-Demand models with Multi-Scalar accessibility indicators. Elsevier, Amsterdam.
6. UN-OHRLLS (2020). Effective Transit Transport Corridor Development and Management: Report on Best Practices. Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States. New York.

7. Jiwan J. (2021). Regional Development and Planning. Rawat Publications, New Delhi.

**Recommended Journals:**

1. Hilal Yildirir Keser (2015). Importance of Transport Corridors in Regional Development: The Case of TRACECA. Sosyoekonomi
2. Raballand Gael, Jean-Francois Marteau, Charles Kunaka, Jean-Kizito Kabanguka and Oliver Hartmann (2008). Lessons of Corridor Performance Measurement. Published web: https:// gtkp.comknowledge/lessons-of-corridor-performance-measurement/

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|---|---|
| Course Code | MTURP-34 |
| Nature of Course | Minor |
| Course Title | **RESEARCH METHODOLOGY** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand various types of research methods and research design both quantitative and qualitative for carrying out research in the real field.

**Course Contents:**

**Unit 1: Introduction to Research**

Definition and needs of research; Types of research used in urban planning; Importance of research methodology in urban planning; Scientific research and methods; System approach of research; Levels of research: micro and macro; Major steps in the conduct scientific research, induction, deduction & verification; Selection and formulation of research problems; Difference between research methodology and research methods; Data types and sources: primary and secondary; Sampling types and techniques.

**Unit 2: Paradigm, Hypothesis and Methods of Testing the Hypothesis**

Research paradigm and procedural methods: theoretical meaning, importance and different concept of hypothesis; Formulation of hypothesis; Role of statistical measures in hypothesis testing; Measures of central tendencies, standard deviation and correlation and regression; Qualitative scales.

**Unit 3: Quantitative and Qualitative Research and Report Writing**

Qualitative and quantitative approach to research: review of literature, content analysis and thematic analysis; Research compilation and report: contents and style, factors in the organization of a research report, writing of foot notes, quoting styles, references, cross referencing and bibliography; Issues & areas of urban planning research and data; Introduction of Qualitative and Quantitative software.

**Unit 4: Theorising, Modelling, Applications and Validation**

Definition of Concept, Theory and facts; Process of theorization: Meaning. definition and classification of Model; Understanding, evaluation and validation of models related to land use, transportation, location/allocation of activities, land value, accessibility; simulation of urban growth in terms of their objectives, theoretical structure, mathematical formulation, applications and limitations; Validation of Research and its presentation techniques.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To use the various research methods both qualitative and quantitative
- To use the various research design methods
- To appreciate the art of report writing
- To use various methods to conduct scientific research

**References:**


1. Kumar Ranjit. (2005). Research Methodology: An Introduction. Pearsons Education. Baba Balak Nath Printers, New Delhi.
2. Crotty Michael. (2003). The Foundations of Social Research: Meaning and Perspective in the Research, Sage Publishers, London.
3. Gomm Roger. (2003). Social Research Methodology: A Critical Introduction. Palgrave Macmillan, Manchester.
4. Wilkiinson T.S. and P.L. Bhandarkar. (1984). Methodology and Techniques of Social Research. Himalaya Publishers, New Delhi.
5. Goode, W.J. and P. K Hatt. (1982). Methods in Social Research. McGraw-Hill Inc., New York.
6. Keeble Lewis. (1972). Principles & Practice of Town & Country Planning. Estates Gazette, London.
7. Gopal M.H. (1970). An Introduction to Research Procedures in Social Sciences. ASIAN Publication House, Delhi.
8. Gibbs Jack P. (1960). Urban research Methods. D. Van Nosttrand Co. Inc., New York.
9. Kothari C.R. and Gaurav Garg (2023). Research Methodology: Methods and Techniques. New Age International Publishers, New Delhi.
10. Aguinis Herman (2024). Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research. SAGE Publications, London.
11. Flick Uwe (2020). Introducing Research Methodology: Thinking Your Way through Your Research Project. SAGE Publications, London.


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|---|---|
| Course Code | MTURP-35 |
| Nature of Course | Skill Development SD - 31 |
| Course Title | **PLANNING STUDIO - 3A**<br>**THESIS PRELIMINARIES** |
| No. of Credits | 2 (L: 0; T:2; S: 0) |
| Internal Assessment | 50 |
| End Semester Assessment | 50 |

**Course Objectives:** The student will be enabled

- To understand current issues & research areas in the relevant field of urban planning

**Course Contents**

Students undertake an independent study/research to explore and develop an area of his/her own choice. It should cover identification of thesis topic after scanning later literature and identifying gaps, typology of research, Methods of research, time scheduling, preparation of samples, questionnaires/interview schedules, identifying stakeholders/sample, area/case study, and preparation of organizing the interview /notes, report, and abstract for canvassing during interviews.

The theme of the thesis should adopt a fresh approach in formulating a concept of developing an effective and useful methodology. Each student shall prepare a thesis

abstract on a selected topic under the supervision of a supervisor.

At the end of the thesis preliminaries, the students are required to submit a hard copy of the abstract

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the process & importance of literature survey in identifying research areas to finalize the methodology of research and preparation of work schedule.
- To finalize the sample size, questionnaires, and models for analysis.

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|---|---|
| Course Code | MTURP-35 |
| Nature of Course | Skill Development SD - 31 |
| Course Title | **PLANNING STUDIO – 3B**<br>**REGIONAL PLAN** |
| No. of Credits | 8 (L: 0; T:0; S: 16) |
| Internal Assessment | 150 |
| External Jury | 150 |

**Course Objective:** The student will be enabled

- To understand plan preparation for integrated District(s) planning/metro region.
- To understand the sector interface, hierarchy of settlement planning, and local to district spatial budgeting along with fiscal budgeting interlinks.

**Course Contents**

Preparation of Regional Development Plan for District(s): integrate/converge sectors, settlements, and finances; resource flows, plan land use implementation as per the 74h CAA and 73rd CAA, URDFPI, RADFPI guidelines, Source of funding the plan with Integrating District Development and Village Development Pan spatially with phasing, project identification for steering future development, phasing and Evaluation Plan.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To prepare the spatial plan for a district(s)/metro region, and spatial budgeting interface with district budget

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|---|---|
| Course Code | MTURP-36 |
| Nature of Course | Skill Development SD - 32 |
| Course Title | **INTERNSHIP (8 WEEKS)**<br>To Be Undertaken By The Students During Summer Vacations After 2nd Semester And Credits Will Be Included In The 3rd Semester |
| No. of Credits | AUDIT (L:-; T:-; S:-) |
| Internal Assessment | - |
| End Semester Assessment | - |

**Course Objectives:** The student will be enabled

- To get exposed the current policies, programmes, and projects in the field of a region in District Town Planning Department/ District Collectorate/District Development Authority/Zilla Parishad/Block Development Office/Academics/NGOs/Central Ministries.

**Course Contents**

Knowledge on current policies, programmes, and projects in the field of Urban/Metro region in Town Planning Department/ Development Authority/Academics/NGOs.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To get the current knowledge in the field of regional planning, projects, governance system, etc.

# SECOND YEAR: SEMESTER IV

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| Course Code | MTURP 41 |
| Nature of Course | Major |
| Course Title | **DEVELOPMENT FINANCE** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the financing mechanisms of finances for urban and regional development including the Center-State-Local Self Governance fiscal arrangements through Constitution (SFC, CFC, tied and untied grants), through multi-lateral, bi-lateral funding, guarantees, debt equity, taxes and service charges

**Course Contents**

**Unit 1: Overview of Development Finance**

Development Finance: approaches, concepts, components, process, credits rating; Role of Improvement Trusts, Development Authorities, SEZs and Special Purpose Vehicles (SPV) in Equity Finance, Taxes, Fees, Development Charges, Urban Finance Management.

**Unit 2: State and Municipal Finance**

Central Finance Commission (CFC) and State Finance Commission (SFC): Constitution, Powers and Functions; Consolidated Fund (Central and State); Centrally Sponsored Schemes; Municipal Finance: Categorisation of Municipal Sources of Revenue, Internal vs. External Revenue, Capital vs. Revenue Receipt; Municipal Finance Assessment Framework; Reforms in Municipal Finance: Unit Area Method in Property Tax Calculation, Rationalisation of User Charges; Streamlining Municipal Tax Administration

**Unit 3: Public Private Partnership (PPP)**

Concept, need, preconditions for Partnerships; Advantages of Collaboration; Methods of Promoting Participation; Regulations and Administrative Procedures; Role of Government as Partner, Regulator and Enforcer; Principles of PPP: Contractual Framework, Selection of Service Provider, Payment Mechanism, Monitoring and Evaluation, Risk and Revenue Sharing; Regulatory Authority for PPP; Model Contract Agreement.

**Unit 4: Innovative Methods of Financing Urban Development**

Monetary Exaction: Betterment Levy, Impact Fee, External Development Charges and

Vacant Land Development Tax; Land Exactions: TDR, Town Planning Scheme, Monetisation of Underutilised Public Assets, Valorisation Charges; External Finance: Debt Financing, PPP, Financial Intermediaries, Municipal Bond, Pooled Finance.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To appreciate the development finance, its various forms and sources, and techniques to raise funds.
- To appreciate the constitutional provisions of fiscal transfers from centre to state and local self-government, formulas associated with it and its effectiveness.

**References:**


1. Ryan Roberta and Ronald Woods (2015). Decentralisation and Subsidiarity: Concepts and frameworks for emerging economies. Forum of Federations. Ottawa, Ontario.
2. Central Finance Commission (2021). XV Central Finance Commission. Government of India, New Delhi.
3. Participatory Research in Asia (PRIA) (2018). State Finance Commission Recommendations. PRIA, New Delhi.
4. NITI AAYOG (2023): National Multidimensional Poverty Index: A progress Review 2023. NITI AAYOG, Government of India, New Delhi.
5. Isabelle Joumard, Hermes Morgavi and Hugo Bourrousse (2017). Achieving strong and balanced regional development in India. Economics Department, Paris.
6. Statistical Office National (2020). Final Report of the Committee for Sub-National Accounts. Ministry of Statistics and Programme Implementation, Government of India.
7. NITI AAYOG (2023): National Multidimensional Poverty Index: A progress Review 2023. NITI AAYOG, Government of India, New Delhi.
8. Central Finance Commission (2021). XV Central Finance Commission. Government of India, New Delhi.
9. Abor Joshua Yindenaba, Charles Komla Delali Adjasi, Robert Lensink (2021).
10. Contemporary Issues in Development Finance. Routledge, London.


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|---|---|
| Course Code | MTURP 42 |
| Nature of Course | Major |
| Course Title | **LEGISLATION AND PROFESSIONAL PRACTICE** |
| No. of Credits | 3 (L: 2; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand the interface between legislation and urban planning and to educate students regarding basic concept of law and Indian constitution and the requirements of various acts, laws, rules and regulations related to housing and urban planning.
- To understand the scope, nature and procedure of professional practice; prepare consultancy proposals and quote fees and charges for professional work in housing and spatial planning.

**Course Contents**

**Unit 1: Concept of Legislation**

Significance and Objectives of Legislation; Constitutional basis and provisions relating to land, its development and use; Overview of legal tools in various components of Urban Planning and Development.

**Unit 2: Planning Legislation in India and Land Acquisition and Settlement Act**

Evolution of Planning Legislation in India; Types and description of various Acts: Town and Country Planning Acts, Improvement Trust Act, Urban Planning and Development Authorities Act: objectives, contents, procedures for preparation and implementation of regional plans, master plans and town planning schemes; Various Acts related to urban governance; Land resources, environment protection, public participation in statutory process; Land Acquisition and Settlement Act, Town and Country Planning Act, Other Acts related to Infrastructure: NHAI, Port, Airport and Railways.

**Unit 3: Professional Activities and Responsibilities**

Aims and objectives of professional institutes and bodies in planning; Professional roles and responsibilities of planning consultants; Professional ethics; Responsibilities towards clients, fellow professionals and public; Scope of services for different projects.

**Unit 4: Consultancy Agreements and Implementation**

Consultancy agreements and safeguards; Fees and scales of professional charges; Negotiation, liability, code of conduct, arbitration.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To comprehend the interaction between legislation and urban planning, including how legal frameworks influence urban development and planning processes.
- To acquire foundational knowledge of legal concepts, the indian constitution, and specific acts, laws, rules, and regulations related to housing and urban planning.
- To identify the scope, nature, and procedural aspects of professional practice in housing and spatial planning.
- To develop skills to prepare detailed consultancy proposals, including project scopes, objectives, and methodologies.
- To appreciate to accurately quote fees and charges for professional services in housing and spatial planning, ensuring transparent and competitive pricing.

**References:**


1. Kulshrestha S. K. (2012), Urban and Regional Planning in India: A Handbook for Professional Practice. Saga Publications, New Delhi.
2. Naseem Mohammad (2011). Environmental Law in India. Kluwer Law International, Netherlands.
3. Institute of Town Planners, India. (2003). Memorandum Articles of Association and Byelaws. New Delhi.
4. Ministry of Housing and Urban Affairs (2024): 'The Constitution (74$^{th}$ Amendment Act, 1992). Government of India, New Delhi.
5. Ministry of Panchayati Raj (2024). Government of India, New Delhi.
6. Shah Uttam Chand (2023). Planning Legislation covering Urban & Regional Planning and Environmental Laws in India. Notion Press, Chennai.

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|---|---|
| Course Code | MTURP 43 |
| Nature of Course | Minor |
| Course Title | **PROJECT PLANNING AND MANAGEMENT** |
| No. of Credits | 2 (L: 1; T:1; S: 0) |
| Internal Assessment | 50 Marks |
| End Semester Assessment | 50 Marks |

**Course Objectives:** The student will be enabled

- To understand spatial data infrastructure through advanced GIS platform and to simulate planning preparation, manage/monitor and assess evaluation within a short time.

**Course Contents**

**Unit 1: Introduction to Project Appraisal, Project Cycle and Stages of Appraisal**

Relevance of Project in Metro urban region planning, Identification, project cycle, Urban Planning and project appraisal; Stages of Appraisals: Financial, Economic, Social, Institutional and Environmental appraisals; Sensitivity Analysis of each of appraisals.

**Unit 2: Detailed Project Report (DPR)**

Definition of DPR, content in DPR: step by step process; Project Background, Feasibility study approach: Pre-implementation stage, implementation stage, and post-implementation stage; Types of surveys to be carried out for DPR; Team mobilization for DPR making; Financial section of DPR: Fundamentals of audit, costing, and budgeting of urban planning related projects; Processes involved in financial planning including the preparation and analysis of budgets, cost estimation, and financial audits; The role of stakeholder contributions in project financing and management, and strategies for managing emergency risk funds.

**Unit 3: Monitoring and Evaluation**

Project Monitoring and Evaluation: Network analysis (CPM, PERT); Software for Project Appraisal and Monitoring and Evaluation; Types of Evaluation: Concurrent and Post Impact Evaluation.

**Unit 4: DPR for a Utility project for a neighbourhood/precinct & DPR for Industrial townships/Large-scale Infrastructure Project**

A case study of a neighborhood to prepare a step-by-step detailed project report for electricity, water supply and conservation including water treatment plant, rainwater harvesting, Sanitation; Solid Waste Management and policy frameworks using GIS; A case study on an existing planned industrial township or a large-scale regional projects, infrastructure project; single sector vs mixed industries; Industrial corridor projects; The role of NITI Aayog, role of GIS in projects.

**Course Outcomes:**

- To interface the GIS skills to spatial planning to simulate, prepare, manage/monitor and evaluate spatial planning through the digital network system.

**References:**


1. Dasgupta Partha, Sen Amartya and Marglin Stephen (1972). Guidelines for Project Evaluation. UNIDO, Vienna.
2. Hansen R (1986). Guide to Practical Project Appraisal Social Benefit-Cost Analysis in Developing Countries. UNIDO, Vienna.

3. Heng-Kang Sang, Avebury (1995). Project evaluation: Techniques and practices for developing countries. University of California, USA.
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|---|---|
| Course Code | MTURP 44 |
| Nature of Course | Skill Development SD - 41 |
| Course Title | **PLANNING STUDIO THESIS** |
| No. of Credits | 12 (L: 0; T: 0; S: 12) |
| Internal Assessment | As per Institutional Policy |
| End Semester Assessment | As per Institutional Policy |

**Course Objectives:** The student will be enabled

- To develop a basic understanding of the area chosen for study (by carrying out a detailed literature review).
- To undertake detailed exploration of the topic (by way of surveys and studies).
- To identify issues and concerns those emerge out of the study and suggest recommendations.

**Course Contents**

Guided research by a student under the supervision of an individual/group of faculty from formulation to submission of the research.

**Course Outcomes:** Upon the completion of this course, the students will be able

- To enhance ability to critically analyse complex housing issues and data, developing a keen understanding of underlying problems and trends.
- To advance research skills, including designing studies, collecting and analysing data, and synthesizing information from multiple sources.
- To improve problem-solving abilities, with a focus on developing practical and innovative solutions to housing challenges.
- To increased attention to detail in conducting research, analysing data, and presenting

findings, ensuring accuracy and thoroughness.

- To experience in managing a research project from inception to completion, including planning, executing, and reviewing progress.

# BASKET OF VALUE-ADDED AND ELECTIVES

**List of Value-Added Courses (AS PER NEP NORMS)**

1. Environmental Studies
2. Drug Abuse
3. Ethics and Human & Constitutional Values
4. Gender Sensitivity
5. Indian Languages and Knowledge System
6. Global Citizenship Inclusion and Equity
7. Creativity and Critical Thinking
8. Health and Yoga

**Basket of Electives (Common for All M.Plan/M.Tech Programmes)**

1. Construction Technology Innovation and its Impact on Real Estate
2. Designing for Real Estate (Urban Design, and Landscape)
3. Facility Management
4. Land value capture ToD, TDR & Commercial Real Estate Management
5. Housing Portfolio Investment
6. Stakeholder Management and Governance
7. Project Implementation and Management
8. Global Real Estate Economics and Economics Development
9. Data Analytics
10. Land Economics
11. Planning for Tourism
12. Landscape Planning and Design
13. Community Participation in Planning
14. Heritage and Conservation
15. Urban Future
16. Urban Mobility & Intelligent Transport System
17. Peri-Urban Development Planning
18. Urban Design
19. Big Data and Python
20. Planning for Sustainable Settlements
21. Environment Management Conservation
22. Citizen Social Science in Spatial Governance
23. Green Governance: Behaviour, Leadership and Entrepreneurship
24. State and Market Decisions
25. Disaster Management
26. Future Cities
27. Legal Studies
28. Healthy Cities and Spatial Policy
29. Fiscal Policy and Governance Decentralisation
30. Circular Economy, Spatial Governance and Policy
31. SIS for Emergency Response Planning
32. Spatial Data Security
33. Spatial Data Driven Journalism

34. Facility Management
35. Land Value Capture Tod, TDR & Commercial Real Estate Management
36. Housing Portfolio Investment
37. Project Implementation and Management
38. Stakeholder Management and Governance
39. Citizen Social Science in Spatial Governance
40. State and Market Decisions
41. Risk and Disaster Management
42. Healthy Cities and Spatial Policy
43. Fiscal Policy and Governance Decentralisation
44. Circular Economy and Spatial Governance And Policy
45. SIS For Emergency Response Planning
46. Spatial Data Security
47. Spatial Data Driven Journalism
48. Sustainable Real Estate Development
49. Disaster and Resilience
50. Inclusion, Participation and Communication
51. Inclusive Planning
52. Advanced Environmental Impact Assessment
53. Eco-System Services for Settlement Planning
54. Infrastructure Policy (Energy, Water and Transport)
55. Degraded Land Management
56. Strategic science and spatial planning