

DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA



**BIRLA INSTITUTE OF TECHNOLOGY  
MESRA**

**RANCHI, INDIA**

**MASTERS**

**IN**

**URBAN PLANNING**

**DEPARTMENT OF ARCHITECTURE**

**Effective from academic year 2014**

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**Detailed syllabus of Master's in Urban Planning Programme w.e.f. 2014**

Code	Name	L	T	P	Credit
<b>1<sup>st</sup> Semester</b>					
<b>[Departmental] Theory Subjects</b>					
MUP1101	History of Human Settlement & Planning Principles	3	0	0	3
MUP1103	Housing & Community Planning	3	0	0	3
MUP1105	Planning Theory and Techniques	3	0	0	3
<b>[Non-Departmental] Breadth Subject 1</b>					
	<i>Any, as available</i>	3	0	0	3
<b>Sessional / Laboratory Subjects</b>					
MUP1102	Planning Studio / Workshop (With Field Study)	0	0	6	6
MUP 1104	Urban Design	0	0	2	2
<b>Semester Total of Credits</b>					
		<b>12</b>		<b>8</b>	<b>20</b>
<b>2<sup>nd</sup> Semester</b>					
<b>[Departmental] Theory Subjects</b>					
MUP2101	Urban Ecology & Environment Planning	3	0	0	3
MUP2103	Transportation Planning	3	0	0	3
MUP2105	Urban Infrastructure Planning	3	0	0	3
<b>[Departmental] Elective 1</b>					
MUP 2207	Techniques of Analysis & Population Studies	3	0	0	3
MUP2109	Socio-Economic Basis for Planning				
MUP2111	Urban & Rural Sociology				
MUP2113	Introduction to Regional Planning				
<b>[Non-Departmental] Breadth Subject 2</b>					
	<i>any as available</i>	3	0	0	3
<b>Sessional / Laboratory Subjects</b>					
MUP2102	Planning Studio / Workshop II (With Field study)	0	0	6	6
<b>Semester Total of Credits</b>					
		<b>15</b>		<b>6</b>	<b>21</b>
<b>3<sup>rd</sup> Semester</b>					
MUP3101	Planning Legislation & Professional Practice	3	0	0	3
MUP3103	Urban Land Economics, Development Management & Finance	3	0	0	3
<b>[Departmental] Elective 2</b>					
MUP 3105	Urban Regeneration & Conservation Techniques				
MUP 3107	Urban Development Models				
MUP 3109	City & Metropolitan Planning				
MUP 3111	Research Methodology				
<b>Sessional / Laboratory Subjects</b>					
MUP 3104	Thesis / Dissertation & Planning Seminar	0	0	10	10
<b>Semester Total of Credits</b>					
		<b>9</b>		<b>10</b>	<b>19</b>
<b>4<sup>th</sup> Semester</b>					
<b>Sessional / Laboratory Subjects</b>					
MUP 4102	Thesis / Dissertation	0	0	20	20
<b>Semester Total of Credits</b>					
					<b>20</b>
<b>Total of 4 Semesters</b>					
					<b>80</b>

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**Course objective:**

1. To impart an historic and comparative perspective on the evolution of urban and regional development
2. To examine the theoretical and empirical literature on settlements system, urbanization, and the internal structure of the city.
3. To develop indepth knowledge about spatial, cultural, and political factors, issues, and conditions associated with the history planning

**Learning outcomes:**

Upon completion of the course the students will be able to :

1. Have a good exposure to the principles, practices, and theory of Human settlement Planning.
2. Analyse issues of ethics and diversity as they relate to planning theory and practice.
3. Examine the major principles, events, outcomes, and design elements, among others, of development periods in planning history

**Course structure**

1. Relevance of evolution of human settlements in modern context. Historic determinants, settlement types: ancient, medieval, renaissance and industrial age.
2. Origin and evolution of planning: Impacts of Industrial revolution on town planning and regional planning. Contemporary developments in planning in India; formation of metropolitan areas; socio-economic impacts of growth of population; rural-urban migration.
3. Contributions of Ebenezer Howard, Patrick Geddes, Tony Garnier, Lewis Mumford, Le-Corbusier and others in planning.
4. The fundamental problems of the city; changes with time and growth; technological, social and other changes in size and scale.
5. Physical nature and characteristics of the urban environment and its components; Land uses, physical structure and relationship between parts of city. Land use planning information system.
6. Models of the planning process, Goals of land policy, the interim and comprehensive plans: Structure Plan, Master Plan, Zonal Development Plan and Action plan their purpose and contents.
7. System approach and physical planning, Choice theory and Advocacy planning.

**Reference Books:**

1. *The Urban pattern: City planning and design* / GALLION, A B.
2. *Introduction to Town Planning* / CATANES, A & SNYDER J
3. *Design of cities* / BACON, EDMUND N
4. *Ekistics : An introduction to the science of human settlement* / Doxiadis, C. A
5. *Garden cities of tomorrow* / HOWARD, EBENZER
6. *The city in history* / MUMFORD, LEWIS
7. *The Image of the City* / LYNCH, KEVIN

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**MUP 1103 HOUSING AND COMMUNITY PLANNING**

**L-T-P: 3-0-0, CREDIT: 3**

**Course Objectives:**

1. To understand the unique nature of housing and urban community
2. To develop sensitivity and communication for working with future urban population.
3. To provide knowledge on the government and voluntary efforts towards housing development
4. To promote specific skills and techniques of working with urban communities.

**Learning outcome:**

Upon completion of the course the students will be able to :

1. Examine the land development process and the impact of economic forces
2. Understand the process of delivery of housing in urban and regional context.
3. Equip themselves with experiences of working with communities.

**Course structure:**

1. Concepts, definitions and components of Housing. Role of housing in socioeconomic development of a nation. Housing in relation to non-residential components of settlement.
2. Effects of Urbanization & Industrialization in Housing including problems and possibilities of Slums and Squatters settlement in India and abroad.
3. Theories and approaches to housing. Housing process and sequence of development. Housing need, demand and supply, formal and non-formal housing.
4. Housing characteristics and situation (indices and statistics), Housing in five year plans and social housing programmes.
5. Social aspects: built environment and human behavior, Evaluation of user's satisfaction.
6. Major elements of a housing policy, land, finance, legislation for institutions and housing development, approaches and contents of National Housing Policy.
7. Housing norms, design and standards, units of housing design, layouts, densities and neighborhood units; infrastructure and community facilities, form and structure of housing as shaped by socio-economic and physical parameters.
8. Finance for housing: priority in the national plans – role of public and private agencies, role of cooperatives and various institutions.
9. Materials, technology and housing production, Industrialization and future of housing, including cost reduction techniques in housing.

**Reference Books:**

1. *Financing of Housing and community Improvement Programmers / United Nation*
2. *Housing Act / H.M.O.S*
3. *Housing and town and country planning: Urban land Problems and Policies / ABRAMS, C.*
4. *Town and Country Planning and Housing / MODAK, N.V.*
5. *Low Cost housing in development countries / MATHUR, G C*
6. *Sustainable housing: Principles and Practice / EDWARDS, BRIAN*
7. *The Economics of Housing Policy / STAFFORD, D C.*
8. *Urban Housing in Third World / Payne, G K.*

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**MUP1105 Planning Theory and Techniques**

L-T-P: 3-0-0, Credit: 3

**Course Objectives:**

1. To introduce to various models of planning and their methods of selection.
2. To familiarise to planning practices in India and their manifestations in urban and regional front.
3. To develop skills to analyse various planning determinants

**Learning outcome:**

Upon completion of the course the students will be able to :

1. Have indepth knowledge about existing planning models and their range of applications.
2. Examine existing objectives of planning practices in India
3. Apply analytical tools and techniques for assessing health of planning areas.

**Course structure:**

1. Aims and objectives of planning, Levels of planning in India and their interrelationship, Planning administration.
2. Models of planning processes, components of settlement structures; models of urban structure; demand and supply of land for urban use, means and mechanism; impact on urban structure; goals of land policy.
3. Concept of landuse, locational attributes of landuse, landuse planning information system, activity system and choice of space qualities.
4. System approach and physical planning; approach to landuse planning; introduction to spatial planning at regional level; choice theory and advocacy planning and their application; action plan and its relevance; development plan types – scope and objectives.
5. Planning practices in India, method of identifying urban and regional problem, setting of goals objectives and priorities; performance standards, spatial standards and standard for utilities.
6. Classification of regions, regionalization and delineation techniques for various types of regions, cluster and factor analysis method.
7. Analysis for understanding structure of urban areas; land value and density patterns, locational dimensions of population groups; forces of concentration and dispersal, social area analysis, strategic choice approach and technique of interconnected decision area analysis.
8. Introduction to (I) techniques of system simulation; Grain Lowry model (II) linear programming (III) threshold analysis; preparation of urban and regional development plans – various approaches; case studies identifying use of techniques.

**Reference Books:**

1. *An introduction to town planning technique* / MARGARET, ROBERT
2. *Planning and forecasting technique: an introduction to macroeconomics applications* / RABINSON, J N
3. *Planning Theory* / FALUDI, ANDREAS
4. *Landuse Planning: Techniques of Implementation* / PATTERSON, T WILLIUM
5. *Planning Theory /Techniques ITPI Reader volume*

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**MUP 1102 Planning Studio / Workshop I (With Field study)**

**L-T-P: 0-0-6, Credit: 6**

**Course Objectives:**

1. To address the many facets of city and regional development including financial, social, and environmental concerns
2. To develop sensitivity and communication for working with future urban population.
3. To develop skills to propose development, land use programming and physical built form on an area-wide basis.

**Learning outcome:**

Upon completion of the course the students will be able to :

1. Work on actual planning projects in various cities.
2. Collaboratively develop planning solutions to real situations confronted by communities.
3. Carry out policy analysis and policy planning.

**Course structure:**

1. Skill formation and Community Planning exercise.
2. Orientation Workshop through reference studies and introductory graphic course.
3. Identification of needs of a community through socio-economic and physical survey, including updating of given base map.
4. Housing cluster and residential sector studies – layout, density, utility net-work and community facilities locations.
5. Introduction to special area problems (slum / new town / rural area) and preparation of their plan program.
6. Land use interaction studies of a small urban area and its environment

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**MUP1104 Urban Design**

**L-T-P: 0-0-2, Credit: 2**

**Course Objective:**

1. To expose students to basic design, communication and presentation techniques commonly used in the urban design field;
2. To develop skills to use of basic spatial analysis methods, synthesise material and its relation to urban design decision-making;
3. To promote development of basic spatial critical thinking and the ability to articulate spatial systems thinking.

**Learning outcomes:**

Upon completion of the course the students will be able to :

1. Demonstrate the capacity to improve society and to contribute to the community;
2. Understand the nature and fundamental theories of community planning, and its evolution, contemporary and future development;
3. Work on urban design problems at multiple scales, from small elements like pedestrian improvements, parks, and streetscapes that contribute to the public realm, to larger scale such as neighborhoods and regional networks.

**Course structure:**

1. Early examples of Urban Design in classical and pre-industrial cities – Heritage and the roots of our modern concepts in urban design.
2. Objectives and scope of urban design, Basic functions, principles and techniques. Value enhancement, aesthetics and conservation aspects.
3. Surveys in Urban Areas, Scale in Urban design, urban mass, perceiving & mapping a city, Urban Space. Urban activity & circulation. Examples at regional, metropolitan, Urban and project level.
4. Designing the parts of city - central areas, the town center, civic spaces, shopping centers, Industrial Areas and estates. Residential areas & Housing.
5. Techniques of Urban Design with emphasis on public policies, conservation and economic considerations, Road forms, serial, grid-iron, Hierarchy of access routes - Pedestrian areas and malls & Urban elements.
6. Legal aspects with respect to Land Acquisition Act and Town Planning acts - financing for Project realization – Agencies involved in the execution – coordinating role of planning authorities. Working of Urban Arts commission.
7. Planning and Design parameters for New towns

**Reference Books:**

1. *Urban Design: The architecture of towns & cities* / SPREIREGEN, PAUL. D.
2. *Town Scape* / GORDEN GULLEN
3. *The Urban Experience* / FISCHER, CLAUDE S
4. *Design of cities* / BACON, EDMUND N
5. *Town Design* / FREDERICK GIBBERD
6. *The urban pattern: city planning and design* / GALLION, A B.
7. *The Image of the City* / LYNCH, KEVIN

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**MUP 2101**

**Urban Ecology & Environment Planning**

**L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To develop a thorough understanding of the influence of urbanization and urbanized areas on ecosystems and environments
2. To enrich knowledge on development of sustainable communities.
3. To develop skills to address issues of climate change through strategic development, policy-making and decision-making for urban and rural environments.

**Learning outcomes:**

Upon completion of the course the students will be able to :

1. Understand the origins, applications, and policy implications of environmental planning.
2. Examine issues of sustainable planning and climate change
3. Interpret findings presented in environmental impact assessments conducted for planning projects and assess the environmental, political, and policy implications of such findings.

**Course Structure:**

1. Components of natural and built environment, Eco-systems and their relevance to environment, resources and human settlements, Modifications in natural environment, causes and consequences.
2. Impact of urbanization and industrialization on nature, urban ecosystem approach, evolution and significance.
3. Preparation and analysis of resource inventories and resource matrices, Resource regions in India, their problems and potentials, Integrated resource planning approach.
4. Sustainability and environmental criteria for location of human settlements, Ecological parameters for planning at different levels: site planning, settlement planning and regional planning.
5. Pollution types, sources and remedies, Environmental impact assessment methods.
6. Energy and human settlements.
7. Objectives of environmental planning and design, Integration of environmental assessments and planning options, Environmental management approach.
8. Global concerns for environment and bio-diversity, International treatises, Overview of Government of India's policies.

**Reference Books:**

1. *Energy, Ecology & Environment* / WILSON, RICHARDS & JONES WILLIUM
2. *Handbook of Environmental Planning* / McENRO, JAMES
3. *Environmental Science* / CUNNINGHAM, W.P.
4. *Integrated Environmental Planning* / LEIN, J.K.
5. *Sustainable Development* / Khanna, D.D.
6. *Man & the changing Environment* / FRANK, R. G & FRANK D. N



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**MUP 2103 Transportation Planning**

**L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To introduce students with basic principles in transportation planning, the interaction between transportation and land use.
2. To develop knowledge to analyze and evaluate transportation systems
3. To provide the student with an experience-based understanding of planning theory and practice through exposure to concepts, methodologies, field techniques and applications
4. To equip students for future sustainable transportation developments

**Learning outcomes:**

Upon completion of the course the students will be able to

1. Develop capacity to characterize, describe, analyze and propose various dimensions of transportation planning.
2. Relate with experience-based understanding of planning theory and practice through exposure to concepts, methodologies, field techniques and applications.
3. Integrate urban transportation and the planning process within the limits and possibilities of transportation planning.

**Course Structure:**

1. Transportation Systems: technological characteristics of transport models and systems: the nature of demand and supply of transport services.
2. Land use- transportation inter-relationships; transportation planning process: Transport survey, analysis, Travel demand forecasting, Trip assignment.
3. Planning of public transports stems: local area traffic management.
4. Planning considerations for goods transportation.
5. Traffic analysis and design considerations; design of intersections; traffic signals and street lighting.
6. Recent innovations in technologies and its probable impacts on future urban forms.
7. Environmental impacts of traffic; energy issues in transportation; transportation safety.
8. Government transport policies and evaluation of transportation proposals.

**Reference Books:**

1. *Fundamental of Transportation Engineering* / HENNES, ROBERT G AND EKSE, MARTIN
2. *Information and pricing in road transportation* / EMMERING, RICHARD H M.
3. *Principles of Urban Transport Systems Planning* / HUTCHINSON, B G.
4. *The value of time in passenger transportation* / GRONAU, R
5. *Transportation engineering and planning* / PAPACOSTAS, C S
6. *Transportation Network analysis* / BELL, MACHAEL G
7. *Transportation Planning, Policy and Analysis* / STARKIE, D N M
8. *Transport Planning and engineering* / KADIYALI.

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**MUP 2105 Urban Infrastructure Planning**

**L-T-P: 3-0-0, CREDIT: 3**

**Course objectives:**

1. To understand the importance of Urban infrastructure
2. To analyze the impact of infrastructure, pricing and demand for settlements
3. To develop knowledge in planning and management concepts to provide efficient infrastructural services

**Learning outcomes:**

Upon completion of the course the students will be able to:

1. Estimate infrastructure requirements in urban areas.
2. Have knowledge concerning process of delivery of urban services and mitigating gaps in infrastructure provision.
3. Take up real time projects for delivery of urban services

**Course Structure:**

1. Understanding of different types of urban infrastructures in planning, layout of service lines and interface.
2. Water supply systems: quality and quantity requirements; sources; collection and conveyance of water; treatment methods; treatment plant location; planning distribution systems and their zoning with respect to urban structure.
3. Waste water disposal systems: separate and combined systems; characteristics of waste water; Industrial pollutants and their effects; waste water treatment methods; planning and location of treatment plants; disposal of municipal and industrial effluents, effects of rivers and water bodies; legal aspects.
4. Solid waste collection and disposal: Elements of solid wastes management; classification and properties of solid wastes; on site collection, storage, transportation and disposal of solid wastes; processing and treatment of solid wastes; various social aspects of the solid waste management.
5. Power and communication system: source and distribution networks with safety norms applicable.

**Reference Books:**

1. *Solid waste management: The Regional approach* / CLAYTON, C K
2. *Water supply, waste disposal & Environmental Engineering* / CHATTERJEE, AK
3. *Street Lighting* / WALDRAM, J M
4. *Municipal and Rural Sanitation* / EHBEN, V M
5. *Solid Liquid flow Slurry pipeline Transportation* / WASPE, E J

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**MUP 2207 Techniques of Analysis and Population Studies (Elective)      L-T-P: 3-0-0, Credit: 3**

**Course Objective**

1. To introduce methods in analyzing demographic conditions, land use and housing trends, employment and business changes, community and neighborhood development.
2. To understand the components of population change
3. To develop skills to use population information in the planning process
4. To analyze the impact of planning activities on population size, composition, and distribution

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Identify the overall strengths and weaknesses of quantitative, qualitative, experimental, and survey research methods; and assess which research method/s, given the resource constraints, are most appropriate for answering the research question.
2. Develop research question worthy of informing public policy, and identify the statistical tool appropriate for answering the research question.

**Course structure:**

1. Introduction of Statistics: Statistical data and method of analysis Types of Data. Designing a questionnaire, Tabulation and representation of data: Line diagram, Pie diagram, Frequency distribution, Histogram, Radar diagram
2. Significance of Averaging and Variation. Calculation of Mean Median and Mode for Ungrouped and Grouped data. Merits and limitations. Variance and standard deviation of Ungrouped and Grouped data, Lorenz Curve, Skewness, Moments and Kurtosis
3. Significance of study of Correlation. Types of Correlation, Karl Pearson's Coefficient of Correlation, Properties of Correlation Coefficient, Rank Correlation. Partial and Multiple Correlation
4. Introduction and difference between Correlation and Regression analysis. Linear Bivariate Regression model, Coefficient of Regression and its properties, Computation of Regression equation, Multiple Regression analysis and application.
5. Requirement and methods of Forecasting system. Types of time series data. Method of Trend analysis: Semi-average, Moving-average and method of Least Square. Analysis and measurement of Seasonal and Cyclical variations, Introduction to Non-linear Trends
6. Linear programming and its application in Planning, Graphical method and Simplex Method
7. Population Pyramid: Types and Properties, Human Sex Ratio, Dependency Ratio, Components of Population Growth: Birth and Mortality Rate, Age composition, Migration, Population forecasting method using statistical theories.

**Reference Books:**

1. Urban Planning: use of critical path Method / WORD, SOL A.
2. Operation research : an introduction / TAHA, H H

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**MUP 2109 Socio-economic Basis for Planning (Elective)**

**L-T-P: 3-0-0, Credit: 3**

**Course Objective:**

1. To develop knowledge to identify and address the needs of various segments of the population so as to ensure that all have an equal opportunity to both change and benefit.
2. To analyze social planning theory and practice at the local, regional and national level.
3. To enrich contemporary study of socio-economic issues and problems commonly encountered in an urban environment and how they're integrated into and addressed through land use planning

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Incorporate the knowledge of different planning theories and paradigms in approaching socio-economic planning process.
2. Address planning needs of different segments of the population and their distinctive issues and needs with respect to living and working in the urban environment.

**Course structure:**

1. Man and environment. Traditional patterns and trends of change in Indian society, concept of social structure, culture and social institutions.
2. Relation between social structure and spatial structure. Social aspects of housing. Social problems of slums.
3. Economic resource, Typology of goods, production economics, process, laws, product and costs. Economies of scale, external economies, valuation, typology of markets land and real estate markets, macro and micro economic concepts.
4. Basic economic analysis, economic principles, and land use, economic rent, land use pattern and land values.
5. Development of land and real property, financial balance sheet of land development.
6. Land and real property markets: private ownership and social control over land

**Reference Books:**

1. *Social areas in cities: Spatial processes and form* / HERBART, D T
2. *Social Theory for Planning* / NAILY, JOE
3. *Economic Planning* / AGARWAL, A.N.
4. *Economic Planning in Developing Countries* / JOSEPH, BONGER
5. *Economic for Urban Social Planning* / HENDON, WILLIUM. S
6. *Economics of Regional Development & Planning in Third World Countries* / PATTANAİK, S.C

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**MUP 2111 Urban and Rural Sociology (Elective)**

**L-T-P: 3-0-0, Credit: 3**

**Course objective:**

1. To develop concepts and role of culture, environment, society, groups in planning process.
2. To understand social dimensions and the role of public in planning.
3. To analyze the socio – physical impacts of urbanisation process

**Learning outcomes:**

Upon successful completion of the course, students will be able to:

1. Develop capacity to characterize, describe, and analyze the role of society in urban planning.
2. Relate with experience-based understanding of participatory planning to real scale design.
3. Integrate socio-physical dimensions of attributes in planning process.

**Course structure:**

1. Concepts of culture, environment, society, groups. Rural – urban continuum, dichotomy. Physical and Social settings; concepts of little community, peasant society, resources – production system production relation; relationship between village and town today.
2. Dynamics of rural society: Institutions, leadership changing power structure with special reference to Panchayati Raj system.
3. Social aspects of spatial planning; significance of public participation in planning.
4. Social dimensions in rural and urban poverty in India.
5. Urbanization and urban living: trends in urbanization and urban development; migration, population growth and its impact (social and physical); Policies of urban development.

**Reference Books:**

1. *An introduction to Sociology* / VIDYA, BHUSAN
2. *Building & Society* / KING, ANTHONY. D
3. *Social Theory & Urban Question* / SAUNDERS, PETER
4. *Social Theory for Planning* / NAILEY, JOE
5. *Societal Systems: Planning, Policy, & Complexity* / WARFIELD, J.N.

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**MUP 2113 Introduction to Regional Planning (Elective)**

**L-T-P: 3-0-0, Credit: 3**

**Course objective:**

1. To develop an understanding of the basic elements of contemporary planning practice, including key models and theories used by planners and the basic institutional settings in which they work.
2. To constitute introductory-level knowledge of the historical roots of modern city planning practice.
3. To introduce the variety of tools used in planning practice: administrative, political, economic, physical, environmental, etc.

**Learning outcomes:**

Upon successful completion of the course, students will be able to:

1. Learn the major concepts and techniques of regional analysis.
2. Examine historical, political, legal, social, and environmental contexts that surround and affect regional planning.
3. Apply them to assess and solve current planning problems.

**Course content:**

1. Overview of planning: various types and levels of planning in India and their interrelationship. Concepts of Sectoral & Spatial Planning, Single and multi-level planning processes.
2. Aims, objectives and evolution of Regional Planning - Review of contemporary thoughts
3. Introduction to Regional planning techniques; classification of regions, regionalization and delineation techniques for various types of regions.
4. Techniques of understanding spatial structure of regions; Analysis of structure of Nodes, hierarchy, nesting and rank-size
5. Cluster and Factor analysis methods; use of Remote Sensing in Regional Planning.
6. Regional Planning Theories: Growth pole theory, Christaller's theory, Weber's theory of Location; Core-periphery theory and Spread and Back Wash theory.
7. National Development issues and Key policies in regard to Regional disparities and imbalances; Urbanization, industrialization and related issues; poverty and unemployment, urban and rural programs and strategies for poverty eradication.
8. Regional planning efforts in India, critical appraisal, Regional Development Plans – types, scopes and objectives, case studies.
9. Regional development models: their structure and characterization and construction; delineation of regions and regionalization methods and techniques: Economic regionalization, composite regionalization.
10. Cost-benefit analysis, dynamics of project analysis, financial feasibility, cost allocation and pricing.

**Reference Books:**

1. Introduction to Regional planning / GLASSON J
2. An Approach to Planning / BURROUGH, T H B
3. Development Planning, Models and Methods / TODARO, MICHAEL P
4. Disaster Planning: Preservation of Life and Property / FOSTER, HAROLD D.
5. Economic Planning; Principles, Techniques and Practice / AGARWAL, A N.

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6. Regional Development Planning in India / MISRA, R P

**MUP 2102 Planning Studio / Workshop II (With Field study)**

**L-T-P: 0-0-6, Credit: 6**

**Course Objectives:**

1. To address the many facets of city development including infrastructural, financial, social, and environmental concerns
2. To develop sensitivity and communication for working with future urban population.
3. To develop skills to propose development, land use programming and physical built form on an area-wide basis.

**Learning outcome:**

Upon completion of the course the students will be able to :

1. Work on actual planning projects in various cities.
2. Collaboratively develop planning solutions to real situations confronted by communities.
3. Carry out policy analysis and policy planning.

**Course Structure:**

1. Integrated plan for urban region, including 2 weeks field survey.
2. Theories and principles of urban development plan and preparation for survey and data collection.
3. Field survey of the study area.
4. Analysis of data and information
5. Planning for urban area and its region (structure plan / Development plan) with emphasis on:
  - Land use and transportation network
  - Infrastructure plan
  - Action area programs and urban renewal plan
  - Capital budget and financing
  - Administrative and management backup for implementation

**DEPARTMENT OF ARCHITECTURE  
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**MUP 3101 Planning Legislation & Professional Practice**

**L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To constitute knowledge of planning legislation practices in India and development of various acts.
2. To develop an understanding of planning law that enables competent professional practice in addressing a range of complex planning issues.
3. To understand and appreciate various decision making processes and role of professional institutes.

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Demonstrate knowledge of how planning intentions are implemented through policies, instruments and controls; Establish knowledge of how planning law shapes practice;
2. Apply awareness of the importance of evidence and argument in preparing planning proposals.
3. Propose planning solutions within the domain of various acts controls and legislations.

**Course structure:**

1. The meaning, significance and objectives of planning legislation, constitutional basis and provisions relating to land, its development and use, concept of eminent domain, police power and taxation powers as basis of legislation.
2. Evolution of planning legislation in India. An overview of legal tools connected with urban planning & development. Town & Country Planning Organization, Improvement Trust, Development Authorities etc. – objectives, contents and procedures for preparation & implementation of Regional Plans, development plans, town planning schemes.
3. Land Acquisition Act of India, its provision and limitation. Urban Land (Ceiling & Regulation) Act – objectives, contents & planning implications.
4. Legislation on Conservation of natural resources including Mining & Forestry Acts, Conservation and Management of Archaeological sites.
5. Significance of Land Development Control – objectives and legal tools, critical evaluation of Zoning, subdivision regulations, building regulations and byelaws.
6. Urban Arts Commission Act, Transportation, Landscape, housing and slum clearance legislation.
7. National Environment Policy Act.
8. Aims & Objectives of Professional institute, sister bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charges.
9. Role of interdisciplinary groups; Appreciation of the decision-making processes, and the process in relation to varied consultancy assignments of planning.

**Reference Books:**

1. *The Municipal administration in India: A Sociological analysis of rural & urban India* / BHARDWAJ, R K
2. *Guide to practical project appraisal, Social benefit, Cost analysis in Developing Countries* / UNITED NATION



**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 3103 Urban Land economics, Development management & Finance      L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To introduce the concept of urban land market and real estate market characteristics
2. To develop sensitivity about financial systems and system of local government in India
3. To equip with techniques of monitoring and personnel management.

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Explore efforts to manage, finance, and regulate delivery of services in planning units.
2. Relate established projects on project management aspects
3. Implement the required management and financial techniques for successful implementation of projects.

**Course structure:**

1. Urban land market and real estate market characteristics, Socio-economic and political factors influencing urban land markets, Urban land supply and demand conditions, Land pricing and transactions.
2. Techniques of land assembly: acquisition, readjustment, pooling, sharing, plot reconstitution, land lease, cooperative of landowners.
3. Local financial system in India: Taxation and fees, state and local fiscal relations, financing local fiscal services, local expenditure, capital budgeting, performance budgeting, Financial resource mobilization, Policies and programs of related institutions.
4. Systems of local governments in India, Development administration at National, state, district, local level, Functions, powers, Organizational structure and resource of local governments.
5. Non-government development organizations and their relationship with local government, Citizen Participation.
6. Personnel management: Manpower planning, performance appraisal, motivational aspects. Behavior organization theory: authority and conflict, administration communication, leadership in administration, organizational changes.
7. Techniques of Monitoring: Integrated reporting system, works standard oriented cost control, turnkey system, inventory cost control technique, unified status index technique.

**Reference Books:**

1. *Urban land Economics* / RATCHIFF, RICHARD U.
2. *Urban Law Economics: Principle and Policy* / HALLETT, GRAHAM
3. *Planning for Profit* / HOLDEN I & MALLORY K. PETER

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 3105 Urban Regeneration & Conservation Techniques (Elective) L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To develop knowhow of growth of historic preservation across the world
2. To enrich students with Identification of preservation techniques, of state and private preservation agencies and legislation; value and objectives of preservation
3. To emphasis on the use of historic preservation planning as a strategy for community revitalization

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Identify the legal and legislative framework of historic preservation on the local, state and federal levels, and the public and private sector players.
2. Articulate how historic preservation is integrated into land use and comprehensive planning.
3. Assess the requirements for projects involving historical and cultural resources.
4. Articulate the role historic preservation plays in economic development and revitalization.

**Course structure:**

1. Quality of historic cities and areas: problems and issues, cultural resource management.
2. Integrated urban conservation: principles, international charters, guidelines and standards for conservation of historic monuments, sites and heritage zones; aesthetic and social dimensions, economic, legal and tourism aspects.
3. Planning procedures: inspection and surveys, investigation techniques, methods for inventories and documentation, identification and reporting on heritage zones; programs for adaptive reuse, restoration, rehabilitation and infill or new constructions.
4. Implementation of plans and urban management: phasing, resource mobilization, incentives, acts and legal tools; people's awareness and participation, role of various action groups.
5. Concept of urban redevelopment, Urban Renewal. Urban reconstruction, urban rejuvenation.
6. Symptoms and pre-conditions that warrant the need for regeneration of cities. Economic, social and physical environmental aspects. Perception of urban regeneration in the context of evolution of selected urban centers of the West and the East.
7. National urbanization policy, goals and objectives of urban regeneration of Indian cities. Process to evolve a feasible set of goals and objectives for urban regeneration.

**Reference Books:**

1. *Conservation & Planning* / ALAN, DOBBY

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 3107 Urban Development Models (Elective) L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To develop knowledge mathematical models used in planning.
2. To enrich students available techniques of analysis.
3. To promote model development in planning research.

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Analyse scenarios using existing models.
2. Develop new models as applicable to planning

**Course structure:**

1. Meaning and definitions of model, Classification of models, Mathematical models as a special class of models. Role of different types of models used in urban planning process.
2. Brief overview on mathematical and statistical techniques as an aid to model building, recent developments in spatial data analysis and management, Design of models: formulation of objective, theoretical structure, mathematical formulation, methodology, empirical testing, application and limitations.
3. Explanation of some operational models: land use, transportation planning, allocation of location of activities, land value, accessibility simulation, etc. Future scope of model building in the planning profession.

**Reference Books:**

1. Urban Planning analysis: Methods and Models / KRUECKEBERG, D A
2. Urban & regional models in geography & planning / WILSON A G

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 3109 City & Metropolitan Planning (Elective)**

**L-T-P: 3-0-0, Credit: 3**

**Course objectives:**

1. To develop knowledge on issues related to growth of urban areas and their complexities.
2. To enrich students with patterns and policies of urban development and related problems
3. To present studies of various metropolitan planning initiatives in India.

**Learning outcome:**

Upon successful completion of the course, students will be able to:

1. Learn the aspects related to growth of urban areas.
2. Examine problems of urban development and relate possible solutions.
3. Apply knowledge derived from various case studies to solving real-time problem.

**Course structure:**

1. Urban growth and system of cities: growth of metropolitan and mega cities – scale, complexity and its impact on national development.
2. National and international concepts of human settlement planning and urban development, relevance to Indian context.
3. Metropolitan growth – trends, characteristics, problems. Socio-economic and political issues in India.
4. Changing urbanity between a city and a metropolis. Anatomy, growth and trends of metropolitan development, components of metropolitan plan; economics, transportation, etc. in evolving metropolitan framework.
5. Multi-nuclei developments: hierarchy of urban centers and their functional linkages.
6. Metropolitan region and problems of major agglomerations, studies in conjunction with the theories of major cities, Dynapolis and Megalopolis, special problems of the central area; migration and sub-urban development; emerging social and economic characteristics of the central city and the suburbs; impact on government systems and public services.
7. Patterns and policies of urban developments and decentralization as alternative to metropolitan growth, their merits and demerits.
8. Inter-city issues and problems, approach to development, urban redevelopment and renewal – goals, objectives, costs and benefits.
9. Alternative strategies to metropolitan growth - planning for New towns: types, design criteria, development process and issues. New town approach in India: small and medium town development.
10. Case studies of metropolitan planning in India and abroad. The inter-disciplinary policy issues and public action for guiding metropolitan development, including inter-governmental relations and national urban policy.

**Reference Books:**

1. The Urban pattern: City planning & design / GALLION, A B
2. Design of cities / BACON, EDMUND N
3. The Image of the City / LYNCH, KEVIN
4. The Building of Cities: Development and Conflict / KALSER HARVEY H
5. Cities in Evolution / GEDDES, P
6. City Planning: Problems and Prospects / YADAV C S
7. Morphology of Indian cities / TANEJA, K L
8. Metropolitan planning – the planning system of Greater London / PETER, S

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 3111 Research Methodology (Elective)**

**L-T-P: 3-0-0, Credit: 3**

**Course Objectives:**

1. To impart research skills to the beginners and help improve the quality of Research
2. To enable the researchers to develop the most appropriate methodology for their Research Studies
3. To equip students with systematic investigation into study of materials and sources in order to establish facts and reach new conclusions

**Learning outcomes:**

Upon successful completion of the course, students will be able to:

1. Find solutions to scientific, nonscientific and social problems
2. Develop new scientific tools, concepts and theories to solve and understand scientific and nonscientific problems
3. Overcome or solve the problems occurring in our everyday life.

**Course structure:**

- 1: Introduction to Research Methodology : Definition of Research, Qualities of Researcher, , Objectives of research, Various Steps in Scientific Research, Types of Research; Hypotheses Research Purposes - Case Study Research.
- 2: Research Problem: Components of Research Problem Research Problem and Selection of Research Problem, Need for defining the Problem, Techniques for defining a Problem, Development of hypothesis
- 3: Research Design: Research & Survey Design, Meaning and Need of Research Design , Features of a good Research Design, Types of Research Design-Exploratory, Descriptive and Experimental Research, Bias, Collecting Samples.
- 4: Referencing Information Sources: Overview of major data sources including definitions of variables, and problems with data. Using secondary sources of information: using an Encyclopedia, bibliography card, translation card catalogue information, periodic indexes and usage, compiling a preliminary bibliography; Referencing documentation sources: styles of footnotes, endnotes etc., model bibliography entries.
- 5: Sampling Design: Census and Sample survey, Implication of Sample design, Steps in Sampling Characteristics of a good Sample design, Types of Sample design.
- 6: Scaling Techniques & Data Collection: Attitude Measurement and Measurement in Research, Measurement Scales, Scaling, Scale Classification Bases, Concept of important Scaling Techniques; Data Collection: Primary and Secondary data, Observation Method , Survey Method, Collection of data through Questionnaire and Schedule distinction, Selection of appropriate method of Data Collection
- 7: Processing Operations and Report Writing: Processing Operations, Problem in Processing, Types of Analysis, Application of some Multivariate tools of data analysis Report Writing: Writing and Formulating of Reports, Steps in Report Writing, Types of Report, Introduction to SPSS

**Reference Books:**

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

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 3104 Thesis / Dissertation & Planning Seminar**

**L-T-P: 0-0-10, Credit: 10**

**Course Objectives:**

1. To provide students with the skills and knowledge to prepare the preliminary research proposal.
2. To enable students to frame effective researches questions and identify appropriate peer-reviewed literature relevant to their research topic.
3. To equip students to identify which research methods might be appropriate to answer a research question.

**Learning outcomes:**

Upon successful completion of the course, students will be able to:

1. Conceptualize problems from complex, real-world situations so the problems are meaningful to the intended audience and research-worthy.
2. Identify and summarize appropriate peer-reviewed literature relevant to a proposed area of research.
3. Prepare constructive, tactful feedback to help colleagues improve their writing.

**Course structure:**

1. Each student is required to prepare a thesis on a subject concerning urban planning and development, (presented through a seminar) and under the guidance of an advisor, approved by the department.
2. The objective of the thesis is to provide an opportunity to each student to undertake in-depth and original study and research in the field of his / her interest. The thesis also provides an opportunity to synthesize the knowledge and skills, acquired through the learning of various theories and practices during the three semesters.
3. The subject of the thesis may be conceptual, historical analytical, comparative or in any other area related to urban planning and development, which will be approved by the departmental jury, in stages.
4. Development of the thesis is to be done at this stage through delineation of project area, case studies, literature studies, survey and data collection only.
5. Seminar is to be presented regarding tool and techniques to be applied in the dissertation project.

**DEPARTMENT OF ARCHITECTURE  
BIRLA INSTITUTE OF TECHNOLOGY, MESRA**

**MUP 4102 Planning project / Thesis**

**L-T-P: 0-0-20, Credit: 20**

**Course Objectives:**

1. To provide students with the skills and knowledge to prepare the preliminary research proposal.
2. To enable students to frame effective researches questions and identify appropriate peer-reviewed literature relevant to their research topic.
3. To equip students to identify which research methods might be appropriate to answer a research question.

**Learning outcomes:**

Upon successful completion of the course, students will be able to:

1. Conceptualize problems from complex, real-world situations so the problems are meaningful to the intended audience and research-worthy.
2. Identify and summarize appropriate peer-reviewed literature relevant to a proposed area of research.
3. Prepare constructive, tactful feedback to help colleagues improve their writing.

**Course Structure:**

In continuation to the previous semester thesis, the student is required to analyze the collected data and formulate strategies, policies, principles for the development of the analyzed scenario.

The student is also required to prove the validity of the proposal on any chosen action area within the study zone.

Each student is required to defend his / her thesis through a presentation to external panel of experts.