



# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## MPLN 101 – PLANNING STUDIO – I

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
1	MPLN 101	PL	STUDIO	PLANNING STUDIO - I	0	0	8	8	0	0	0	250	250	500

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

The studio is an introduction to urban planning, aiming at bringing together all the students of different backgrounds to a common platform. The objective of the studio is to **understand urban structure, form and functioning at different scales in a city through various planning related exercises** . The course further gives emphasis on site visits related with Urban planning Perspective .The studio objective is to understand urban structure, form, and functioning at different scales in a city through various urban planning related exercises.

### COURSE OUTCOMES (COS):

After the completion of the course the students will be able to have:

1. Working knowledge of how actual planning projects are functioning.
2. Collaborative development of planning solutions to real situations confronted by communities.
3. Ability to carry out policy analysis and policy planning effectively.

**COURSE CONTENTS:** The studio is based on the learning of following modules-

- Module 1: Analysis of Demography Sources of demographic data in India, Settlement type, growth pattern and structure: urban settlement analysis, Concentration: spatial, vertical and size, peri-urban sprawl, economic base; Rural Settlements – Size, occurrence and character, transformation, Policies towards various size class settlements. Population structure and composition – Age, sex, gender, marital status, caste, religion, literacy level, etc.
- Module 2: Working process for Statistical Applications General concepts - statistical interference, population and samples variables, Sampling, simple statistical models, Measures of central Tendency, Measures of Dispersion, Measures of shape of distribution, Correlation and regression.

### ASSIGNMENTS :

**The whole studio work is divided into three main exercises.**

#### **1 • Area Appreciation (Group assignment) -**

The aim of the area appreciation exercise is to enable the students to understand and contextualize the location of the area in relation to the city, zone and area in which the particular place is situated. This is done in relation to the socio-economic, spatial and cultural characteristics of that city, zone, location, etc.

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The main purpose is to make the students appreciate the locational attributes of land parcels for future development in a city. Due to the size of the area, this exercise is done in groups of students being assigned to a particular area (small scale).

The following planning issues at area level should be identified:

- Review of the Master Plan / Zonal / Area plan in relation to the selected areas.
- Appreciation / Analysis of small scale land parcel level data.
- Perception of areas in terms of legal / illegal / authorized / unauthorized, Slums, Urban Aesthetics.
- Social Categorizations of people - Type of population living, people's perception about area and its planning problems.
- Land use including Agriculture land and land use conflicts, extent (%) of broad land use such as commercial, industrial, residential, institutional and recreational.
- Extent of formal / informal activities present in the area including their location and conflicts.
- General land tenure of the area and land value for different uses.
- Major types of transport, type of roads, hierarchy of roads, type of transport modes used.
- Amenities: Location of Social and Physical infrastructure and their problems as perceived by local population. Look for specific infrastructure such as Water supply, drainage (water logging areas), waste collection and disposal system, sanitation, etc.
- Environmental Issues: Open Spaces – Availability and extent of open space to built-up area, garbage disposal, encroachment (through photographic evidences and sketches).

## 2 • Site Planning (individual assignment)

Site planning is a process whereby the optimum utilization of potential of site is considered recognizing the constraints the site has. It uses 3 dimensional space of the site and the associated locational advantages, human activities and the regulations that are assigned to a particular site. The site is developed using a set of standards / norms in a given context which varies from location to location. A student is expected to understand the intricacies and interface between various variables such as soil conditions, topography, environmental dimensions, location, spatial standards applicable to the site, etc.

## 3 • Outline Development Plan (Group assignment)

An outline plan is a blueprint for development. It provides a detailed description of what a piece of land will look like when it has been fully developed including land uses, open space networks, treatment of environmentally sensitive lands, and park space. An outline plan also establishes the framework for infrastructure requirements including the road network, the servicing of the development, and ensuring the development will align with City plans, policies, and standards.

The studio exercise will focus on preparation of integrated development plan for selected urban area and shall focus on various aspects of physical and socioeconomic planning.

Initial study involves understanding of the exercise through theories, study of similar case studies, awareness of relevant norms and standards through extensive literature search.

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Students are required to prepare a comprehensive list of required data and identify probable sources before making a field visit to the case study town/city. Students are encouraged to translate learning from the core and elective subjects to the studio exercise. The introduction of GIS in the studio enables them to apply it in the studio exercise. Students are expected to analyse the data collected and come out with proposals and recommendations for planned development of the city. The entire exercise is also documented in the form of a technical report.

Prepare a checklist that features the basic requirements for preparing an outline plan. This checklist should be used as a starting point for developing an outline plan. Additional information may be requested by City administration upon review of the documents. And work in groups for the preparation of maps and proposals for the given site input.

**Note :** 90% attendance and above attendance should be observed as compulsory for the studio project course. For the further semester studio works , understanding of the Urban planning projects should be clearly developed till the end of the first semester.

### REFERENCE READINGS

- Bureau of Indian Standards (2005) National Building Code of India, Bureau of Indian Standards, New Delhi Course Code:
- Delhi Development Authority (2007) Master Plan for Delhi, 2021, DDA, New Delhi.
- Singh V., Ahmed A., Sharma Y. (2020) Unified Building Bye-Laws for Delhi 2016, Society for Fundamental Research and Development, New Delhi.
- Ministry of Urban Development (1996) The Urban Development Plan Formulation and Implementation (UDPFI) Guidelines, Government of India, New Delhi.
- Ministry of Urban Development (2015) The Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines, Government of India, New Delhi.

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# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## MPLN 102 – PLANNING HISTORY AND THEORY

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
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									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
2	MPLN 102	PL	THEORY	PLANNING HISTORY AND THEORY	2	0	0	2	20	20	60	0	0	100

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

- The course aims to understand the key concepts in the history of urban planning, in order to develop the ability to compare and position current planning ideas to the historical context.
- The objective is to develop an understanding of common planning tools, their historical development, assumptions and mechanisms.

### COURSE OUTCOMES (COS):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes.

- To demonstrate appreciation and knowledge of theories of historical urban planning.
- In-depth knowledge about existing planning models and their range of applications.
- Knowledge of existing objectives of planning practices across the world.

### COURSE CONTENTS :

#### UNIT I - 4 HRS DURATION

##### DEFINITIONS AND OBJECTIVES OF PLANNING

- Definitions of town and country planning; Orthodoxies of planning; Goal formulation, objective, scope, limitations
- Sustainability and rationality in planning; Components of sustainable urban and regional development.

#### UNIT II - 8 HRS DURATION

##### PLANNING HISTORY

- Town planning in ancient India; Medieval, pre-independence, post-independence cities.
- Concepts of landmark, axis, orientation; City form as a living space; City as an organism: a physical, social, economic and political entity; City as a political statement: New Delhi, Chandigarh, Washington D.C. Brasilia etc.;
- Dynamics of the growing city, impact of industrialization and urbanization, metropolis and megalopolis.

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## UNIT III – 6 HRS DURATION

### THEORIES OF CITY DEVELOPMENT AND PLANNING THEORIES

- Theories of city development including Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory and other latest theories;
- Land use and land value theory of William Alonso; Ebenezer Howard's Garden City Concept; and Green Belt Concept;
- Contribution of individuals to city planning: Lewis Mumford, Patrick Geddes, Peter Hall, etc.;

## UNIT IV - 6 HRS DURATION

### FUTURE SETTLEMENTS AND CONCEPTS

- Emerging Concepts: global city, inclusive city, safe city, etc.; City of the future and future of the city; Shadow cities, divided cities;

## UNIT V – 6 HRS DURATION

### THEORIES OF PLANNING

Models of planning: Advocacy and Pluralism in Planning; Systems approach to planning: rationalistic and incremental approaches, mixed scanning and middle range planning; Equity planning; Political Economy Model; Types of development plans, plan making process.

## REFERENCE READINGS

- Allmendinger, P. (2017) Planning Theory, Macmillan, London. Third Edition.
- Buch, M. N. (1987) Planning the Indian City, Vikas Publishing, New Delhi.
- Fainstein, S.S. and De Filippis, J. (Eds.) (2016) Readings in Planning Theory, Wiley, London. Fourth Edition.
- Friedmann, J. (1987) Planning in the Public Domain, Princeton University Press, Princeton. Second Edition.
- Gooptu, N. (2001) The Politics of the Urban Poor in Early Twentieth - Century India, Cambridge University Press, Cambridge.
- Healey, P. (2010) Making Better Places: The planning project in the twenty-first century, Palgrave Macmillan, London.
- King, A. (1976) Colonial Urban Development: Culture, Social Power, and Environment, Routledge and Kegan Paul, New York.
- Kumar, A., Sanjeev, V., and Prakash, P. (2020) City Planning in India, 1947-2017, Routledge, New York.

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# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## MPLN 103 - ECONOMICS AND URBAN SOCIOLOGY

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
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									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
3	MPLN 103	PL	THEORY	ECONOMICS AND URBAN SOCIOLOGY	2	0	0	2	20	20	60	0	0	100

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\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

- The course aims to introduce the concepts of Economics and Urban Sociology, which are the essential factor in urban planning process.
- To develop knowledge to identify and address the needs of various population segments to ensure that all have an equal opportunity at both change and benefit.

### COURSE OUTCOMES (COS):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes.

- Incorporate the knowledge of different planning theories and paradigms in approaching socio-economic planning process.
- Address planning needs of different segments of the population and their distinctive issues and needs with respect to living and working in an urban environment.
- To develop the basic understanding of some key economic concepts and their application in planning.

### COURSE CONTENTS :

#### UNIT I – 6 HRS DURATION

#### SOCIETY , CULTURE AND THE CITY

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.

#### UNIT II – 4 HRS DURATION

#### SOCIAL PROBLEMS AND CRIME

Social problems of slums and squatters communities, urban and rural social transformation and their impact on social life, safety, security. Crimes in urban areas and their spatial planning implications, social structure and spatial planning. Role of socio-cultural aspects on growth patterns of city and neighbourhood communities. Social planning and policy, and community participation. Marginalization and concepts of inclusive planning, and gender concerns in planning.

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## UNIT III – 8 HRS DURATION

### POLICIES AND CONSIDERATIONS

Settlement Policy: National Commission on Urbanization, Rural Habitat Policy and experiences from developing countries regarding settlement structure, growth and spatial distribution.

## UNIT IV – 8 HRS DURATION

### CONCEPTS OF ECONOMICS

Concepts of demand, supply, elasticity and consumer markets; concept of revenue costs. Economies of scale, economic and social costs, production and factor market.

Different market structures and price determination; market failures, cost-benefit analysis, public sector pricing. Determinants of national income, consumption, investment, inflation, unemployment, capital budgeting, risk and uncertainty, and long-term investment planning.

## UNIT V – 6 HRS DURATION

### POLICIES AND STRATEGIES IN ECONOMIC PLANNING

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

## REFERENCE READINGS

- Sociology, Anthony Giddens, Wiley
- Sociology, John J. Macionis, Pearson
- Urban Sociology : Images and Structure, Flanagan, William G., Prentice Hall
- Urban Problems in Sociological Perspective, Shannon, Thomas R., Waveland Press Inc
- The Metropolis and Mental Life, Simmel, Georg, New York: Free Press
- Key Concepts in Urban Studies, M. Gottdiener, Sage London
- The Sage Handbook of Sociology, Bryn Turner et al, Sage
- Capability and Well-Being, Sen, Amartya and M. Nussbaum. Oxford Clarendon Press
- Inclusive Growth In India, R.U. Singh A.K. Thakur, Deep and Deep Publications
- Sen.'s Capability Approach and Gender Inequality: Selecting Relevant Capabilities. Feminist Economics Robeyns, Ingrid

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## MPLN 104 – PLANNING TECHNIQUES

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
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4	MPLN 104	PL	THEORY	PLANNING TECHNIQUES	2	0	0	2	20	20	60	0	0	100

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

•The course aims at introducing techniques used at various stages in planning, from preliminary to advanced and their methods of selection of data.

•It focuses on familiarising planning practices in India and their manifestations on the urban and regional front.

### COURSE OUTCOMES (COS):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes.

Basic knowledge about existing planning techniques and their range of applications.

- To create base maps and present planning information on maps.
- To have an understanding for methods of data collection and to analyse the types of data required for planning.
- To be able to examine data for understanding the existing situation in a settlement and implementing its analysis to formulate the plans and policies.

### COURSE CONTENT

#### **UNIT I – 4 HRS DURATION**

#### **SCALES AND PREPARATION OF MAPS**

Maps as a representation of reality, Elements of Maps; Graphical, linear and areal scales, Notations involving basic discipline of maps; Measurement of areas; Learning to prepare base maps; Contents of base maps at various scales; Choice of appropriate scales for region and settlement level plans, town development plans, zonal development plans, layout plans.

#### **UNIT II – 6 HRS DURATION**

#### **DATA FOR PLANNING AND SOCIO-ECONOMIC SURVEYS**

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 socioeconomic surveys; Self-surveys, interviews, mailed questionnaires and observer participation, focus groups etc.

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4	MPLN 104	PL	THEORY	PLANNING TECHNIQUES	2	0	0	2	20	20	60	0	0	100

## UNIT III – 6 HRS DURATION

### PHYSICAL SURVEYS

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.

## UNIT IV – 8 HRS DURATION

### ANALYSIS AND PRESENTATION OF DATA

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.

Classification of regions, delineation techniques of various types of regions, • analysis of structure of nodes, hierarchy, nesting and rank size; • Scalogram, sociogram, etc.; • Planning balance sheet; • Threshold analysis; • Input output analysis, SWOT analysis.

## UNIT IV – 6 HRS DURATION

### DEMOGRAPHIC METHODS

Methods of population forecasts and projections; Lorenz Curve, Ginni Ratio, Theil's index, ratios: urban – rural, urban concentration, metropolitan concentration; Location dimensions of population groups – social area and strategic choice approach – inter connected decision area analysis

## REFERENCE READINGS

- Bracken, I. (1999) Urban Planning Methods: Research and Policy Analysis, Methuen, London.
- Berke, P.R. and Goodschalk, D.R., Kaiser, E.J and Rodriguez, D.A (2006) Urban Land Use Planning, University of Illinois Press, U.S.A. Fifth Edition.
- Wang X., Rainer A. and Hofe, V. (2007) Research Methods in Urban and Regional Planning, Springer, Berlin.
- Monmonier, M. (1996) How to Lie with Maps, University of Chicago Press, Chicago.

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# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## MPLN 105 – INFRASTRUCTURE PLANNING

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					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
5	MPLN 105	PL	THEORY	INFRASTRUCTURE PLANNING	2	0	0	2	20	20	60	0	0	100

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

- The course is an introduction to infrastructure planning and its design principles.
- The infrastructure planning section of this course focuses on principles of design for utilities and services in urban and regional context and familiarising with Indian Standards of Design.

### COURSE OUTCOMES (COS):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes.

- Gain Knowledge relating to process of delivery of urban services and mitigating gaps in infrastructure provision.
- Ability to relate with experience-based understanding of planning theory and practice.
- Working through exposure to concepts, methodologies, field techniques and applications.

### COURSE CONTENT :

#### UNIT I – 6 HRS DURATION

#### ROLE OF INFRASTRUCTURE IN DEVELOPMENT

Elements of Infrastructure (physical, social, utilities and services); Basic definitions, concepts, significance and importance; Data required for provision and planning of urban networks and services; Resource analysis, provision of infrastructure, and land requirements; Access to facilities, provision and location criteria, Norms and standards, etc.

#### UNIT II – 6 HRS DURATION

#### WATER SUPPLY SYSTEM

Water supply systems and networks, and network mapping; Water sources, quality and quantity requirements, and water requirement for various land uses; Factors affecting water demand; Storage facilities and distribution systems; Rain

water harvesting systems and locational criteria, implications on land use and density of water harvesting system; Innovative Methods and successful urban water supply system practices; Water programmes and policies.

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Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
5	MPLN 105	PL	THEORY	INFRASTRUCTURE PLANNING	2	0	0	2	20	20	60	0	0	100

## UNIT III – 8 HRS DURATION

### SANITATION AND SEWERAGE SYSTEM AND STORM WATER DRAINAGE

General considerations and principle of sanitation and sewerage systems; Sewage disposal and treatment methods; Characteristics of waste water, industrial pollutants and their affects; Open defecation; Manual scavenging; Innovative approaches of sewage disposal in urban areas and low cost appropriate technologies for sanitation; Storm water drainage networks, and network mapping; Elements of Solid Waste Management, Classification and Characteristics of Solid Wastes; Methods for Solid waste Collection, Storage, transportation and disposal; grey water disposal, DEWATS. institutional arrangements, planning provisions and management issues.

Processing and Treatment of Solid Wastes; Land Filling methods of Solid Waste Management.

## UNIT IV – 4 HRS DURATION

### SOCIAL INFRASTRUCTURE

Social infrastructure typologies; Planning norms and space standards for education, health, recreation and socio-cultural facilities; Amenities for urban and rural settlements; Significance of education and health infrastructure in planning; Locating education and health facilities; Understanding scalogram and other techniques.

## UNIT V – 6 HRS DURATION

### POLICIES, PROGRAMMES AND PROJECTS

Understanding prevalent policies, projects and missions, for example, JNNURM, AMRUT, HRIDAY, Smart Cities Mission, etc.; Norms and standards for different types of infrastructure; Nature and content of infrastructure in development plans at different geographical levels; Making assessment of infrastructure requirements in plans.

## REFERENCE READINGS

- Hudson, W.R., Hass, R.C.G. Uddin, W. (1997) Infrastructure Management, McGraw Hill, London.
- Gifford, J.W. Uzarski, D.R. and McNeil, S. (1993) Infrastructure Planning and Management, American Society of Civil Engineers, Reston, VA.
- Goodman, A. and Hartak, M. (2000) Infrastructure Planning Handbook, ASCE Press, Reston, VA.
- Parkin, J. and Sharma, D. (1999) Infrastructure Planning, Thomas Jelford Publishing, London.

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# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## MPLN 106 – HOUSING AND ENVIRONMENTAL PLANNING

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
6	MPLN 106	PL	THEORY	HOUSING AND ENVIRONMENTAL PLANNING	2	0	0	2	20	20	60	0	0	100

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

- The course is an introduction to the issues of urban development relevant to housing and environmental planning in India.
- The course objective is to acquaint the students with the aspects related to housing scenario, needs, strategies, policies, etc.
- The course creates an understanding of how decision making depends on the natural environment, social, economic, political, and governance factors to achieve sustainable outcomes.

### COURSE OUTCOMES (COS):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes.

- Gathering knowledge about housing supply system and its determining factors in India.
- To examine the housing policies and programmes in India.
- Understanding the impact of environmental planning on various planning techniques and practices.

### COURSE CONTENT :

#### **UNIT I – 6 HRS DURATION**

Housing Shelter as a basic requirement, determinants of housing form, Census of India definitions, Introduction to policies, housing need, demand and supply, dilapidation, structural conditions, materials of constructions, housing age, occupancy rate, crowding, housing shortage, income and affordability, poverty and slums, houseless population.

- Various housing typologies viz. traditional houses, plotted development, group housing, multi-storied housing, villas, chawls, etc., slums and squatters, night shelters, public health issues related to housing, various theories of housing, concept of green housing.

#### **UNIT II – 8 HRS DURATION**

#### **HOUSING INFRASTRUCTURE , POLICY AND FINANCE**

Evolution of housing policy in India, Role of the government and private sector in housing; housing programmes for the poor and night shelters; Examples of housing projects, Introduction to housing finance; Affordability and Cost of housing; Role of Financing Organisation. Critical Review of Current housing programmes.

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6	MPLN 106	PL	THEORY	HOUSING AND ENVIRONMENTAL PLANNING	2	0	0	2	20	20	60	0	0	100

Understanding housing as an important land use component of city plan / master plan, considerations for carrying out city level housing studies, projections, land use provisions; Suitability of land for housing, housing stress identification, projecting housing requirements, calculating housing shortages, housing allocation. Approaches to neighbourhood living in traditional and contemporary societies, elements of neighbourhood structure, Planning and design criteria for modern neighbourhoods, norms and criteria for area distribution, housing and area planning standards, net residential density and gross residential density, development controls and building byelaws, UDPFI guidelines, NBC 2005 provisions and Case studies of neighbourhood planning Environment.

## UNIT III – 4 HRS DURATION

### ENVIRONMENT:

Man and Environment - Changing Perspectives in Man-Environment Relationship with focus on Issues of Population, Urbanization, Resource Depletion and Pollution; Concept of Ecology; Fundamentals of Ecosystem—Its Structure and Function; Environmental Degradation (Environmental Concerns and Challenges) and Its Impact on Various Ecosystems; Planning for Environmentally Sensitive Zones (Resources Availability, Settlements Pattern, Problems and Potentials, Regulating Mechanisms for Development); Tools and Techniques for Environmental Planning and Management- Introduction to Environmental Impact Assessment, Strategic Environment Assessment and Environmental Management Plans; Environmental Policies and Initiatives Including Policies, Strategies, Protocols, Treaties; Sustainable Development (Concept and Methods).

## UNIT IV – 6 HRS DURATION

### ECOSYSTEM, URBAN ECOSYSTEM AND QUANTITATIVE ECOLOGY

Eco-system and their relevance to environment, Impact of advanced agriculture methods, urbanization and industrialization on nature; Pollution, types, sources, remedies; Urban ecosystem approach, evolution and significance; Introduction to quantitative ecology, Identification of ecological parameters for planning at different levels, Site planning, Settlement planning, Regional planning. Data needs, formats for data collection Types of analysis required to evolve ecological parameters; Environmental impact assessment, Methods and their appraisal. preparation and analysis of resource inventories and resource matrices.

## UNIT V – 6 HRS DURATION

### RESOURCE PLANNING AND MANAGEMENT

Finiteness of resources, examples of transfer from one resource to another in history in different parts of world; Development, utilization and conservation of resources, resource planning, integrated resource planning approach; Resource regions, their problems and potentials; Resource management, traditional and contemporary approaches. Resource development in India, some selected areas (energy, water, manpower, etc.); and Government's 8 missions under the National Action Plan on Climate Change.

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6	MPLN 106	PL	THEORY	HOUSING AND ENVIRONMENTAL PLANNING	2	0	0	2	20	20	60	0	0	100

## REFERENCE READINGS

### Housing:

- Housing: Changing Needs and New Directions, V. Gandotra, M. Shukul, N. Jaju and N. Jaiswal, Authors press
- Housing and Urbanisation- A study of India, Cedric Pugh, Sage Publications, New Delhi
- Housing Laws in India- Problems and Remedies, P.K.Sarkar , Eastern Law House Private Ltd.
- National Housing Policy, GOI, New Delhi
- Reading Material on Housing, K. Thomas Poulouse, ITPI, India
- Understanding Housing Policy, Brain Lund, The Policy Press, Great Britain
- Urban Development and Housing in India- 1947 to 2007, Rishi Muni Dwivedi, New Century Publications
- Housing Policies and Related Acts and Schemes of Government of India
- Holding Their Ground: Secure Land Tenure for the Urban Poor in Developing Countries, Durand-Lasserve, Royston L, Earthscan Publication, UK
- Plotting, Squatting, Public Purpose and Politics, Land Market Development, Low Income Housing and Public Intervention in India, Baken, Robert Jan, King's SOAS Studies in Development Geography
- Shadow Cities: A Billion Squatters, a New Urban World, Neuwirth, Robert Taylor & Francis Group
- The Urban Housing Manual: Making Regulatory Frameworks Work for the Poor, Payne, Geoffrey and Majale, Michael, Earthscan Publication, UK
- 

### Environment:

- Fundamentals of Ecology, Odum, E.P., Barrett, G.W., Brewer, R., Thomson Brooks,
- Ecology, Impact Assessment and Environmental Planning, Westman W., John Wiley and Sons
- Integrated Environmental Planning, James K. Lein, Blackwell Publishing
- AITP Reader on Ecology & Resource Development, AITP
- AITP Reading Material on Environmental Planning and Design, Prof A. K. Maitra, SPA Delhi
- Environmental Engineering, Howard S. Peavy, Tata Mc Grawhill

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# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## MPLN 107 – FUNDAMENTALS OF INFORMATION SYSTEMS

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
7	MPLN 107	PL	TUTORIAL	FUNDAMENTALS OF INFORMATION SYSTEMS	0	0	2	2	0	0	0	150	0	150

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

The objective of this course tends to provide a **basic understanding of the computing skills related to drawing and planning tasks** , for bringing students with different backgrounds on a common learning base. Also the fundamental knowledge of GIS planning software starts for the efficiency perspective in studio subject.

### COURSE OUTCOMES (COS):

Through this course students will be able to :

- Develop proficient working skills on software , that can enable them in their urban planning projects .
- Enhance logical thinking through GIS application usage.
- To enable to work and analyze large scale areas.

### COURSE CONTENT:

#### UNIT I – 4 HRS DURATION

#### INTRODUCTION TO INFORMATION SYSTEMS AND COMPONENTS

Definition of information systems , types, concepts, components. Systems approach for Planning relevance, and Basic introduction to Cad, GIS, Remote sensing.

#### UNIT II – 4 HRS DURATION

#### OVERVIEW: PRINCIPLES AND APPLICATIONS OF REMOTE SENSING (RS)

Geographic Information Systems and Type of Required Spatial Data; Raster and Vector Data Structures; Spatial Data Models; Geo-Database; Analyzing Tools and Software.

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Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
7	MPLN 107	PL	TUTORIAL	FUNDAMENTALS OF INFORMATION SYSTEMS	0	0	2	2	0	0	0	150	0	150

## UNIT III – 8 HRS DURATION

### GLOBAL NAVIGATION SATELLITE SYSTEMS

Global Navigation Satellite Systems; Electromagnetic Spectrum, Band Combination, Reflectance; Image Interpretation and Analysis Information Systems - Information Needs .

Introduction to Geo-informatics, introduction to Remote Sensing – Aerial and Satellite; introduction to GIS, Spatial data and Attribute data; Satellite images as input to GIS; Collection and presentation of baseline information.

## UNIT IV – 8 HRS DURATION

### USING PLANNING INFORMATION SYSTEMS; DATA CREATION AND CHECKING

Basic features point, line, polygon creation on GIS. Different methods of creating attributes table , color changing for different features . Different file formats in GIS , Different coordinate systems .

## UNIT V – 6 HRS DURATION

### ADVANCED GIS MAPPING COORDINATE SYSTEM

Geo referencing and geo-coding; GIS data processing (Digitization, topology building and metadata creation), Data structures and modeling, GIS analysis (Buffer, proximity and overlay).

## REFERENCE READINGS

- Advanced Surveying: Total Station, GIS and Remote Sensing, Satheesh Gopi, Pearson
- Applied Remote Sensing in Urban Planning, Governance and Sustainability, Netzbund, Springer, India
- Environmental Modelling with GIS and Remote Sensing, Andrew Skidmore et al, CRC Press
- Geographic Information Systems and Science, PA Longley et al, John Wiley and Sons Ltd.
- GIS, Spatial Analysis, and Modeling, David J Maguire et al, ESRI Press
- Land use Change Detection using GIS, Remote Sensing and Spatial Matrices, Mesfin T Bekalo et al, Lap Lambert Academic Publications

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## MPLN 118 – CORE ELECTIVE

Sr. No.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME /WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
8	MPLN 118 (A)	PL	CORE ELECTIVE	A. SMART CITIES AND URBAN PLANNING POLICIES	0	0	3	3	0	0	0	150	0	150
	B. URBAN INFORMATION SYSTEM AND SPATIAL ANALYSIS													

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio ; C - Credit; MST-Mid Sem Exam, ESUE- End Semester Examination , IA- Internal Assessment , EV – External Viva.

\*Teacher Assessment shall be based following components: Quiz/Assignment/ Project/Participation in Class.

### COURSE EDUCATIONAL OBJECTIVES (CEOS):

To equip the students with knowledge of contemporary and conventional planning concepts, with related urban governance strategies and planning techniques.

This course makes them aware about changing trends and possible new solutions for futuristic works.

### COURSE OUTCOMES (COS):

- By the end of the semester students will be able to draw their own understanding for urban planning spaces, and will be able to work efficiently of spatial data analysis part.
- Students will be a part of the local area development plans , at initial level engagement.
- Students will learn the basics of Live urban site condition analysis with policy framework knowledge.
- 

#### **A. ) SMART CITIES AND URBAN PLANNING POLICIES**

#### **COURSE CONTENT :**

- Introduction to smart city concept – predecessors to smart city, sustainable cities, green cities , digital cities, global cities and smart cities
- Smart city and urban society - smart economy, smart mobility , smart environment , smart lifestyle and smart governance concepts.
- Smart cities around the world - social processes , smart energy – smart buildings , smart transport other related aspects for smart , inclusive and sustainable cities.
- Urban policies and smart city measures
- Future growth and smart city instruments – toolkits , indexes and models developed to measure smartness.

### REFERENCE READINGS

- Planning support systems and smart cities, springer international publishing , Switzerland.
- Manual pedro rodriguez – boliva (201) , transferring city governments for successful smart cities
- Stan geertman , Joseph Ferreira , Jr Robert Goodspeed , John Stillwell Eds (2015).

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					L	T	S		THEORY			PRACTICAL				
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Semester University Exam (60%) (ESUE)	Total	Internal Assessment (50%) (IA)	External Viva (50%) (EV)		
8	MPLN 118 (A)	PL	TUTORIAL	A. CORE ELECTIVE SMART CITIES AND URBAN PLANNING POLICIES	0	0	2	2	0	0	0	0	100	0	100	0
	MPLN 118 (B)	PL	TUTORIAL	B. URBAN INFORMATION SYSTEM AND SPATIAL ANALYSIS												

## B. ) URBAN INFORMATION SYSTEM AND SPATIAL ANALYSIS

### COURSE CONTENT :

- Introduction to Geographic Information System and Geographic Distribution - Analysing Patterns using Spatial Statistics
- GIS applications and, in combination with introductory statistics, for resource allocation in space. Specific applications shall include network analysis; retail site-suitability; spatial housing market analysis; and predictive modelling.
- raster-based analysis related to proximity, density and interspersion
- concepts related to Ordinary Least Squares Regression, Exploratory Regression, Geographically Weighted Regression.

### REFERENCE READINGS

- GIS Fundamentals: A First Text on Geographic Information Systems, Paul Bolstad, XanEdu Publishing Inc; 5th edition;
- Introduction to Geographic Information Systems, Kang-tsung Chang, McGraw-Hill Education;
- Urban Analytics, Alex D. Singleton, Seth Spielman and David Folch
- Modelling Discrete Competitive Facility Location, Athanasia Karakitsiou, 2015, Springer, ISBN: 978-3-319-21340-8

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