

Second Year: Third semester									
Subject Code	Subject	Teaching Hours			Maximum Marks			Credits	ESE Duration in Hrs
		L	S/T	Total	ESE		Total		
BPLN0301	Planning Studio - III (neighbourhood and site planning)	2	9	11	-	VV	100	4	-
BPLN0302	Planning Theory - I	3	1	4	WR	-	100	1.5	3
BPLN0303	Settlement Geography	3	0	3	WR	-	100	1.5	3
BPLN0304	Techniques of Planning -II	2	1	3	WR	-	100	1.5	3
BPLN0305	Computer Aided Drawing applications in Planning	1	2	3	-	VV	100	1.0	3
BPLN0306	Demography and Urbanization	3	0	3	WR	-	100	1.5	3
BPLN0307	Traffic and Transportation Planning - I	3	1	4	WR	-	100	1.5	3
	Total	17	14	31				12.5	

Second Year: Fourth semester									
Subject Code	Subject	Teaching Hours			Maximum Marks			Credits	ESE Duration in Hrs
		L	S/T	Total	ESE		Total		
BPLN0401	Planning Studio- IV (transportation Planning)	2	9	11	-	VV	100	4	-
BPLN0402	Planning Theory - II	4	0	4	WR	-	100	1.5	3
BPLN0403	Planning Practice - I	3	0	3	WR	-	100	1.5	3
BPLN0404	Traffic and Transportation Planning II	3	0	3	WR	-	100	1.5	3
BPLN0405	Ecology, Environment and Resource Development	3	0	3	WR	-	100	1	3
BPLN0406	Housing and Community Planning	3	1	4	WR	VV	100	2	3
BPLN0407	Settlement Sociology	3	0	3	WR	-	100	1	3
	Total	21	10	31				12.5	

ESE- END SEMESTER EXAMINATION

VV- VIVA- VOCE

WR-WRITTEN EXAM

L - LECTURES

S/T- STUDIO/TUTORIAL

## SECOND YEAR: THIRD SEMESTER

### **BPLN-0301: Planning Studio - III (Neighbourhood and Site Planning)**

#### **Unit 1: Designing and Planning**

Design and preparation of plan, sections and elevation of low rise and high rise apartments taking into account the building byelaws and zoning regulations; Preparation of presentation drawings;

#### **Unit 2: Planning Working Drawings**

Introduction to the working drawings; Preparation of plans, sections, elevations and important details of an apartment unit

#### **Unit 3: Site Analysis**

Site analysis, development standards and preparation of the design brief; various considerations for site layout, conceptual approach to site planning;

#### **Unit 4: Layouts**

Preparation of preliminary layout and area analysis; Final layout showing the circulation and basic infrastructure;

#### **Unit 5: Costing**

Rough costing of the scheme, preparation of the model to an appropriate scale

### **BPLN-0302: Planning Theory - I**

#### **Unit 1: Defining Planning Theory**

Definitions of theory in general; Definitions of planning theory including theory of planning, theory in planning and theory about planning; Definition of paradigm and its various stages of development by Kuhn; Significance of planning theory; Espoused theories and theories in use

#### **Unit 2: Participation and Planning**

Public interest and its forms; History and significance of public participation; Methods of public participation; Impediments to public participation and conditions for effective public participation; Public participation and empowerment; Participation, policy formulation and implementation

#### **Unit 3: Sustainability, Rationality and Globalization**

Sustainability and rationality in planning; Components of sustainable urban and regional development; Globalization, internationalization, modernism and postmodernism debate; Pragmatism in planning; Regime theory and urban politics

#### **Unit 4: Theories of City Development**

Compact city approach: concept, advantages and limitations; Forms of cities in developing world, Forms of cities in the developed world; Forms of cities in the former and present socialist countries

## **Unit 5: Planning, Implementation and Evaluation**

Need for evaluation; Inseparability of planning and evaluation; Planning theories and evaluation; Methods of evaluating development plans; Theories of implementation of planning policies and development plans

## **BPLN-0303: Settlement Geography**

### **Unit: 1 Introduction**

Need for study of settlement geography; definition of settlement; ranking of towns; site and situation patterns; settlement morphology.

### **Unit: 2 Spatial Distribution of Settlements**

Settlement in regional; context; spatial models of location, size and spacing of settlements; Central Place Theory; Characteristic of rural-urban fringe; rural-urban continuum; inter-urban inequalities; Interaction among settlements; Gravity model, classification of settlements.

### **Unit: 3 Urban Land Use Studies**

Classification of land use in urban area; analysis of location and structure and models of growth patterns of CBD, industrial areas and residential areas; intra - urban inequalities

### **Unit: 4 Image of the City**

Typology of urban perception, impact of socio-economic status of people on the image of a city; components forming the image of a city; land marks, edges etc.

### **Unit: 5 Regions**

Types of regions, delineation of regions, city region, structure of city region, area of influence and dominance, shadow regions Trickle down effect and Trickle down effects, rural-urban fringe, its structure and growth.

## **BPLN-0304: Techniques of Planning - II**

### **Unit: 1: Methods of Analysis**

Methods of analysis of Socio-Economic and Physical data; Use of techniques of Location Quotient, Coefficient of Localization; Locational attributes of activity and population; Techniques for understanding structure of urban areas, land values and density patterns;

### **Unit 2: Spatial Standards**

Formulation of spatial standards for residential, industrial, commercial and recreational areas, space standards for facility areas, utilities and networks; Population, Distance criteria; Performance standards; Case studies.

### **Unit 3: Regional Surveys**

Concept and need for Regional Planning, Region, Fact or Fallacy; Formal, Functional, Planning Regions; Regional delineation techniques, Factor analysis, Cluster analysis; Row analysis; Case studies in regional delineation.

#### **Unit 4: Plan Preparation Techniques**

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

#### **Unit: 5 Introduction to Advanced Techniques**

Thresholds analysis, retail location and industrial location analysis; intervening opportunity models; Linear programming; Simulation, Gravity Models; Applications in planning.

### **BPLN-0305: Computer Aided Design (CAD) in Planning**

#### **Unit 1: Drafting in CAD**

Need for automated design and drafting; Tools for automated designs and drafting; Elements of spatial data in CAD - Arcs, lines, rectangles, poly-lines, points, circles, donuts, layers, grids, snaps and object snaps, etc.

#### **Unit 2: Editing and Controlling Display in CAD**

Move, scale, copy, offset, change, trim, extend, mirror, divide, measure, array, break, hatch, block, zoom, regen, view, pan, fonts, etc.

#### **Unit 3: Case Studies of Lay-out Plans**

Paper maps, digital layout maps, on screen digitization; 2D and 3D conversion, perspective view, walk through of layout.

#### **Unit 4: Case Study of a Regional Plan**

Base map evaluation, scanning the maps, digitization, scale conversion, symbolization, layer control, plotting.

#### **Unit 5: Limitations**

Limitations of Computer Aided Design and Drafting in Planning; Non-linking of spatial and attribute data; Need for GIS packages for handling spatial and attribute data.

### **BPLN-0306: Demography and Urbanization**

#### **Unit 1: Study of Population**

Demographic variables: fertility, mortality, migration; evolution of population study, contribution of Malthus; mortality-trends, biological and social factors and mortality-gender, race, social structure, life style, social status, occupation etc; measures of mortality-crude and age-specific death rates; infant mortality, adjusted or standardized death rates; neonatal mortality rate; fertility-fertility trends, fertility and social and biological behaviour; differential fertility, ethnic groups, socio-economical group mobility, location etc.; measures of fertility, crude birth rate; Age-specific fertility rate; total fertility rate, net reproduction rate; migration-causes and consequences of population movement; reasons and types of migration trends; methods of measuring volumes of migration; direct and indirect measures; effect of migration of composition of population.

#### **Unit 2: Study of Demography.**

Source of demographic data; senses of India in conducting censuses and its role as a data warehouse population structure and composition, age sex composition, sex ratio, dependency ratio, child woman ratio; measures of age-sex structure, age-sex pyramid, population composition; marital status, cast region, literacy level, etc; life table techniques; techniques in preparing life table, abridged life table; population estimation, projection and population forecasting; basic cohorts survival model, inter regional cohorts survival model.

### **Unit 3: Urbanization in India**

A brief history of urbanization in India; Mughal and British influences of India cities; post-independence urbanization; urbanization process as influenced by socio-cultural, political, economic and administrative factors; definition of urban centres, concepts of rural-urban continuum and dichotomy; census definition of urban places town, cities, town groups, urban agglomeration, standard urban area metropolis, megalopolis etc. functional classification of urban places.

### **Unit 4: Settlement Systems and Role of Urban Area**

Settlement system, senses classification of settlements, primate city, rank-size rule, central place concept, concepts of complementary area, central goods and services, range, threshold etc; city-region relationship; structure of city regions, area of influence, dominance; rural-urban fringes; its structure, stages of growth, its role in urban growth; urbanization, industrialization and urban development; push and pull factors; migration trends and impacts on urban and rural development

### **Unit 5: Policies and Strategies for Directing Urbanization Trends in India**

Over view of world urbanization, National Urbanization policy, basic issues in urbanization policy; role of national and state level policies; five year plans, latest attempts at urbanization policy formulation in the country; salient features of the report of the national commission of urbanization

## **BPLN-0307: Traffic and Transportation Planning-I**

### **Unit 1: Transport Development**

Economic, political and social significance and transport development; Characteristics and role of various forms of transport, road, railways, waterways and airways; Transport policies and programmes in India before and after independence; Transport co-ordination

### **Unit 2: Road Development**

Historical perspective of road development in India; Scope and content of Nagpur, Mumbai and Lucknow road development plans; Current trends in road development; accessibility and priority index in traffic network planning

### **Unit 3: Geometric Design**

Highway classification, design control and criteria, sight distances and control of access; At-grade and grade separated intersections.

### **Unit 4: Traffic Surveys**

Volume count, Origin-Destination, Speed and delay, Parking and accidents surveys their need, design of proforma, methods of conducting surveys, analysis and interpretation.

### **Unit 5: Highway Capacity**

Early studies, concept of PCU and level of service; Capacity of uninterrupted flow conditions, factors affecting capacity and level of service; Capacity of rural and urban roads and capacity at intersections.

## SECOND YEAR: FOURTH SEMESTER

### **BPLN-0401: Planning Studio - IV (Transportation Aspects)**

#### **Unit 1: Classification of Roads**

Understanding of functional and geometric classifications of urban and rural roads and their cross-sectional elements

#### **Unit 2: Types of Transport Surveys**

Methods, surveys, analysis, presentation of data and also to prepare reports relating to different types of transport surveys

#### **Unit 3: Road Geometries and Surveys**

Road geometries and road components, traffic volume, origin destination, spot speed, speed and delay, parking and pedestrian;

#### **Unit 4: Road Layouts**

Design and preparation of layout for road intersections, rotaries and signalized intersections

#### **Unit 5: Area Circulation Plan**

Preparation of an area circulation plan by studying the existing land use, existing circulation pattern, geometric design, level of services for a small area through networks improvement and low cost traffic management measures

### **BPLN-0402: Planning Theory - II**

#### **Unit 1: Scientific Rationalism and Planning**

Defining instrumental rationality; Systems view of planning with a focus on contributions of J.B. McLoughlin and others; Chief characteristics of Comprehensive Rational Planning Model and implications for planning practice; Systemic change

#### **Unit 2: Advocacy Planning, Pluralism and Equity Planning**

Meaning, historical background and purposes of Advocacy Planning Model; Main features of Advocacy Planning Model; Relevance for planning practice; Equity and its various definitions; Major components of the Equity Planning Model; Implications on the role of planners in planning practice

#### **Unit 3: Political Economy Theories and the City**

Defining the term political economy; Role of the state in planning; Contributions of David Harvey, Manuel Castells and others; Richard Foglesong and the property contradiction

#### **Unit 4: Collaborative and Communicative Planning**

Various components of Collaborative Planning Model; Contributions of Patsy Healey and Judith Innes and others; Deliberative policy analysis; Role of trust in planning; Planning as persuasive storytelling

#### **Unit 5: Capabilities, Race, Gender, Religion and Caste**

Defining functioning and capabilities; Exploring relevance of Sen and Nussbaum's capabilities to planning; Role of planning and planners in enhancing capabilities of the poor; Capabilities perspective on slums and squatters; Feminist planning theory; Planning, caste and religion; Planning rights and responsibilities

### **BPLN-0403: Planning Practice - I**

#### **Unit 1: Framing Planning Policies**

Role of Town and country planning organization at central level and town and country planning department at state level. Actors framing public planning policies; Influences of various stakeholders on policy formulation; Implementation of public policies

#### **Unit 2: Development Authorities**

Types, functions and spatial jurisdictions of development authorities; Reasons for the establishment of development authorities; Place of development authorities in local government

#### **Unit 3: Development and Development Regulations**

Working of building bye-laws in planning practice; Requirements for grant of building permissions; Streamlining the development control regulations; Making development control regulations work for the poor. UDPI Guidelines; National Building Code and its implementation

#### **Unit 4: Coordination in Planning Practice**

Meaning and types of coordination; Mechanisms of coordination; Case examples of coordination from planning practice

#### **Unit 5: Privatization of Planning Practice**

History of privatization of planning; Special Economic Zones; Retail sector developments; Infrastructure development by the private sector.

Note: It is preferable that this course is delivered by practitioners having considerable experience in planning practice.

### **BPLN-0404: Traffic and Transportation Planning - II**

#### **Unit 1: Evaluation of Urban Structures**

Transport systems, infrastructure and management, transport systems and their types, design and operating characteristics, urban road hierarchy, planning engineering and management criteria for road and junction improvements, arterial improvement techniques.

## **Unit 2: Planning and Management of Transport System**

Study area definitions, surveys and their types, sampling of travel methods, survey techniques; programming and scheduling, processing of travel data, analysis and interpretation of traffic studies; introduction to transport planning process; trip generation, trip distribution, trip assignment, model split, land use transportation models; existing organizational and legal framework, traffic and environmental management techniques; review of the existing traffic management schemes in case cities.

## **Unit 3: Regional Transport Systems**

Importance of accessibility in regional transport planning, role of road, rail, air and water transport systems, regional transport systems planning; road network planning for micro regions.

## **Unit 4: Transport and Environment**

Traffic noise, factors affecting noise, noise abatement measures, standards; air pollution standards; traffic safety; accident reporting and recording systems, factors affecting road safety; transport planning for target groups- children adults, handicapped and women; norms and guidelines for highway landscape; street lighting types, standards and design considerations.

## **Unit 5: Economic - Evaluation and Transport Policies**

Pricing and funding of transport service and systems, economic appraisal of highway and transport projects; techniques for estimating direct and indirect road user costs benefits, value of time; review of national, state and local level transport policies and their relevance in spatial and economic planning, pricing and funding of transport systems; energy and environmental implications in transport; transport policy planning; Transport planning in developing countries.

## **BPLN-0405: Ecology, Environment and Resource Development**

### **Unit 1: Introduction**

Meaning and scope of ecology; evolution of ecology; man, environment and ecosystem; components of nature and basis concepts and processes of ecology; flow of material water energy, invasion, succession, predation, regulatory forces, adaptation, trophic levels, food chain, food web, ecological pyramids; Environmental zones.

### **Unit 2: Ecosystem and its Relevance to Environment**

Resources and human settlements impact of advanced agricultural methods, urbanization and industrialization on nature; urban ecosystem approach evolution and significance; soil, water, land, vegetation and solar, biomass, wind, hydro energy resources; settlement planning and energy conservation; development and management

### **Unit 3: Quantitative Ecology**

Introduction to quantitative ecology, identification of ecological parameters for planning at different levels; site planning, settlement planning and regional planning; data needs and format for data collection; types of analysis required to evolve ecological parameters. Planning for environmentally sensitive areas.

#### **Unit 4: Environmental Impact Studies**

EIA - meaning, significance and framework; Methodologies - checklist, matrices, network and social cost-benefit analysis; sources and acquisition of environmental information; Environmental land use classification; Environment impact studies of development projects.

#### **Unit 5: Environmental Policies**

Global and national policies on environment; Five year plans in relation to environmental aspects; Legal measure for protection of environment; Environmental awareness and education in India; Agencies involved in environment protection; Public participation; Role of planners in shaping the future environment

### **BPLN-0406: Housing and Community Planning**

#### **Unit 1: Introduction**

Significance of housing in National Development Goals; Equity and efficiency parameters of housing; Current issues in housing

#### **Unit 2: Assessing Housing**

Existing Housing Statistics; definitions; urban and rural housing statistics; Introduction to concepts of Housing Shortage, Housing Need, quantitative and qualitative aspects of housing; Housing Demand - Understanding current methods of demand assessment; Knowledge of data sources and their use and interpretation; census, NSSO and other data; Limitations of existing methods of assessments.

#### **Unit 3: Housing Development Process**

Understanding of factors affecting residential location, theoretical knowledge of ecological, neo-classical, institutional approach to housing; Housing subsystems and their characteristics: formal and non-formal housing; Process of Public and private sector housing development process; policy context, actors and their interrelationships; Inner city housing, Slums, Squatter housing, Unauthorized Housing; Role of different institutions in housing; International agencies, NGOs, State, Financing Organizations, Private developers, cooperatives.

#### **Unit 4: Housing Standards and Design**

Factors determining residential densities; Densities, costs and development control regulations; Housing designs parameters and their relationship to costs; Housing design and climate; Housing for disaster prone areas. Communities; its characteristics and housing; socio-economic implication of slums, clearance/ improvement of slum; sites and services schemes, squatter upgrading, incremental approach

#### **Unit 5: Housing Policy Analyses**

Understanding and evaluation of Housing Policy and programmes in India; five year plans, Central government policy; Policy framework for urban and rural housing; Comparative policy analysis; Housing for the low income groups; Cooperative housing, objectives and principles; management and financing of housing projects; investment in housing in public and private sectors.

## **BPLN-0407: Settlement Sociology**

### **Unit 1: Understanding Sociology**

Sociology as a science; Sociological imagination and rethinking; Applied sociology

### **Unit 2: Sociological Perspective and Organizing Social Life**

Functionalist perspective, Conflict perspective, Internationalist perspective; Culture of space and cultural ecology; Social structure and social control; Stratification and social inequality; Social mobility and Social defiance

### **Unit 3: Social Institutions**

Family, kinship pattern and authority; Religion as social work and significance in planning; Voluntary associations (identifying NGOs and involving them as partners of development, operational issues); Groups (primary, secondary and reference groups)

### **Unit 4: Community Development**

Development induced displacement (anthrop-social considerations); Resettlement and rehabilitation; Neighbourhood pattern and development strategy; Rural and urban issues; Community based and workshop based methods; Qualitative data Analysis; Report writing

### **Unit 5: Gender and Development**

Gender and sex; Gender sensitive; Gender and development planning; Gender and implications for spatial planning

## **THIRD YEAR: FIFTH SEMESTER**

## **BPLN-0501: Planning Studio V (Area Planning)**

### **Unit 1: Approaches to Plan Making**

The different approaches to plan making; the concepts of master plan, comprehensive development plan - the structure plan, the sector plan, the *area* / zonal plan, and other types of plan making processes

### **Unit 2: Relationship among Plans**

Relationship of higher order plans with lower order plans

### **Unit 3: Framework for Zonal Plans**

The approach to developing the *area* / zonal plan in the framework of a given master plan

### **Unit 4: Planning Standards**

The study and development of the relevant planning standards for different land uses

### **Unit 5: Zonal Plans/Area Plans**

Detailing of specific sites in the proposed area / zonal plans, covering different land uses