

Third Year: Fifth semester									
Subject Code	Subject	Teaching Hours			Maximum Marks			Credits	ESE Duration in Hrs
		L	S/T	Total	ES		Total		
BPLN0501	Planning Studio-V (Area Planning)	2	9	11	-	VV	100	4	-
BPLN0502	Real Estate Planning & Valuation	3	0	3	WR	-	100	1.5	3
BPLN0503	Utilities and Services Planning	3	1	4	WR	-	100	1.5	3
BPLN0504	Planning Legislation	3	0	3	WR	-	100	1	3
BPLN0505	Landscape Planning and Design	3	1	4	WR	-	100	1.5	3
BPLN0506	Geo-Informatics for Planning	1	2	3	WR	-	100	1	3
BPLN0507	Sustainable Urban Development	3	0	3	WR	-	100	1	3
BPLN0508	Training Seminar -1	0	0	0	-	VV	100	1	-
	Total	18	13	31				12.5	

Third Year: Sixth Semester									
Subject Code	Subject	Teaching Hours			Maximum Marks			Credits	ESE Duration in Hrs
		L	S/T	Total	ESE		Total		
BPLN0601	Planning studio - VI (Urban Development Plan)	2	9	11	-	VV	100	4	-
BPLN0602	Urban Management - I	3	0	3	WR	-	100	1	3
BPLN0603	Urban Renewal and Conservation	3	1	4	WR	-	100	1.5	3
BPLN0604	Project Formulation Appraisal and Management	3	0	3	WR	-	100	1.5	3
BPLN0605	Introduction to Urban Design	3	1	4	WR	VV	100	2	3
BPLN0606	Planning and Management of Informal Sector	1	2	3	WR	-	100	1	3
BPLN0607	GIS for Planning	1	2	3	-	VV	100	1.5	-
	Total	16	15	31				12.5	

ESE- END SEMESTER EXAMINATION

VV- VIVA- VOCE

WR-WRITTEN EXAM

L- LECTURE

S/T -STUDIO/TUTORIAL

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

BPLN-0502: Real Estate Planning and Valuation

Unit 1: Land

Economic concepts of land, objectives and scope of land economics; relevance for spatial planning; economic principles of land uses; economic rent, land use and land values, market mechanism and land use pattern.

Unit 2: Developments of Land and Land & Property Valuations

Process, cost of development, source of finance, and financial calculation for real estate development. Valuation of land and property- Discounted Cash Flow Method, Development Method etc.

Unit 3: Real Property Markets

Heterogeneity and imperfections, valuation of real property - principles and practices; private ownership and social control of land; disposal of land; land development charges and betterment levy; land use restrictions, compensation and requisition taxation of capital gain on land versus public ownerships, economic aspects of land policies at various levels of decision making.

Unit 4: Factors Influencing Locational Decisions

Analysis of location of specific uses like residential, industrial, commercial and institutional in the light of location theories in intra-regional and inter-regional context; Techniques of cost benefit analysis of urban development programme.

Unit 5: Case Studies

Case studies of real estate development in public, private, partnership sectors; Real estate as facilitator of development; Development of real estate as a tool for controlling land and property prices; Transaction and renting of real estate, Lease deeds/ sale deeds, sale documents, registration; Mortgage and pledging.

BPLN-0503: Utilities and Services Network Planning

Unit 1: Introduction, Basic Concepts and Theories

Role of physical planner in planning of utilities and services, objectives of utilities and services planning and its implications for public health and environmental protection. Familiarizing to CPHEEO manual and guidance

Unit 2: Storm Water System

Definition of Hydrology, classification, hydrological cycle, urban water cycle; Types precipitation, measurement of precipitation, intensity-duration-frequency relationships, rainfall formula, rainfall maps, significance of interpretation and presentation of rain fall data; Surface water run off, hydrograph, measurement of discharge for small and big rivers, rational method for estimating run off, unit hydrograph and its application, definition of watershed; Flood frequencies, flood protection measures in urban areas. Estimating storm run-off, run-off co-efficient, rainfall intensity, time of concentration; Gravity flow, hydraulic gradient line, Manning's formula and nomographs, full flow and partial flow; layout and design of storm water system; General considerations, inlets, self-cleansing

velocity, non-scouring velocity, physical layout-design principles, data requirement; hydraulic design of storm water system and computation procedure.

Unit 3: Water Supply Systems

Surface and ground water sources, quality and quantity, location of sources and water intakes, area requirements of the components of water intakes; Water requirement for different land uses, factors affecting water demand, per capita requirement and its relationship with population sizes, variation of water consumption; seasonal & hourly, peak factor; demand of water for fire fighting; Water treatment system, location and space requirements; Components of water distribution systems, water storage location, capacity, fire fighting components, fire hydrants location, spacing, pressure requirement in pipe; Pumps types, efficiency, head loss, pump selection criteria, site selection and space requirements for pump house; Planning of water supply system, organizations and their jurisdictions, basic design guide line and layout of water supply distribution system; Financing water supply system, public and private partnership of providing water; Legal aspects and government policy for urban and rural water supply. Case study discussion on innovative methods and successful urban water supply system; Significance and methods and advantages of water harvesting system. Design of Water harvesting systems; Government initiatives for water harvesting system and case study discussion

Unit 4: Sanitation and Sewer Systems

Methods of sanitations, advantages and limitations; On-site detention, design procedure for on-site detention, Off-site and on-site technology up gradation; Low cost appropriate technologies for sanitation; Quantity of sewage, standards for Indian cities; Sanitary sewer system network and layout, data needs and procedure of planning; Sewer appurtenances; sewer lift station, sewer pumping and forced main manholes; Sewage disposal methods and their advantages and disadvantages, location criteria and capacity; Case study of innovative approaches of sewage disposal in urban area; Approaches for financing and cost recovery for sewer system.

Unit 5: Solid Waste Management

Solid waste management for Indian cities, issues and database, quantity of solid waste and its character; Methods of solid waste managements, collection and transportation, disposal of solid waste; Land filling and composting, pre and post treatment; Indore and Bangalore methods, incineration, pyrolysis and recycling park; Area requirements, location and cost aspects of different methods of solid waste disposal systems; Community participation and involvement of Non Governmental Organizations or NGOs in efficient solid waste management.

BPLN-0504: Planning Legislation

Unit 1: Concept of Law

Sources of law (custom, legislation and precedent); meaning of the term of law, legislation, ordinance, bill, act, regulations and bye-laws; significance of law and its relationship to planning; benefits of statutory backing for planning schemes; eminent domain and police powers.

Unit 2: Indian Constitution

Concepts and contents of Indian Constitution; provisions regarding property rights; evolution of planning legislation and overview of legal tools connected with urban planning and development; model town planning laws

Unit 3: Laws and Acts for Planning and Development

Introduction, scope and relevance of various laws and acts relevant to planning; Model Town and Country Planning Acts, Development Authorities Act, 73rd and 74th Constitution (Amendment) Acts; Municipal Acts, Environmental and Pollution Control Acts, etc.; Case studies.

Unit 4: Land Acquisition Act

Introduction to Land Acquisition Act, 1984, Historical background, need, advantages, Limitations; Relevance in today's context; Case studies highlighting nature of contention, parties in dispute and the decisions in specific planning dispute.

Unit 5: Organizations for Plan Implementation

Special purpose bodies for plan implementation such urban metropolitan development authorities, improvement trusts, water and sewerage boards, housing boards, slum improvement, clearance boards, transport undertakings; regional development boards.

BPLN-0505: Landscape Planning and Design

Unit 1: Landscape Elements

Landscape as an outcome of natural processes; principles and techniques of design with landform, water and vegetation; the role of surface materials, outdoor fittings and structures; man-made landscapes in history; a comparative study of the major traditions of landscape design in the east and the west in relation to concepts of space and variations in the use of landscape elements,

Unit 2: Urban Landscape

Characteristics and components of open space patterns in towns and cities (traditional and contemporary) basic types: streets, squares, plazas, gardens, ghats and maidans, public parks at district, local and neighbourhood levels; park systems; landscape design related to land-use, circulation networks and activity; street furniture as a component of urban landscape.

Unit 3: Landscape Aspects of Site Planning - I

Principles of understanding and evaluating and existing landscape; development as a response to constraints and opportunities offered by the site; the landscape concept and open space structure as a basic component of the site plan

Unit 4: Landscape Aspects of Site Planning - II

The role of vegetation: environmental benefits, functional requirements, aesthetic considerations; typical situations and criteria for design with plants and selection of species; grading; in relation to existing contours, plinth levels, road alignment and storm water drainage; principles of cut and fill,

Unit 5: Elements of Landscape Planning

The rural landscape; characteristics, components and change related to agriculture, forestry and development; western experience of landscape planning; landscape assessment techniques; the concept of landscape quality; landscape planning as a component of regional development proposals for industrial location (manufacturing and extractive); environmental conservation, tourism, etc.; landscape planning in the context of urban extensions and new towns; Introduction to landscape ecology, cultural landscapes;

BPLN-0506: Geo-Informatics for Planning

Unit 1: Remote Sensing

Limitations of Traditional Surveys for Planning; Remote Sensing - Definition, Aerial and Satellite Remote Sensing, Aerial Remote Sensing

Unit 2: Photo Interpretation

Aerial Photo-Interpretation, Qualitative and Quantitative Elements of Photo Interpretation; Satellite Remote sensing, Geo-Stationary and Sun-Synchronous Satellites, Principles of Electro-Magnetic Radiations, Resolutions; Introduction to Digital Image Processing; Salient Features of Popular Remote Sensing Satellites; Applications in Planning; Laboratory Exercises

Unit 3: Planning Information Systems

Systems Approach to Planning as basis for Planning Information Systems; Systems, Hierarchy, Types; Data and Information, Value of Information, Information Flows, Loops; Information Security and Sharing; Information Systems, Types, limitations;

Unit 4: Human Settlements and Planning Information Systems

Human Settlements' Information Needs, Scales and Levels, Pre-Conditions for Using Planning Information Systems; Introduction to various Planning Information Systems

Unit 5: Planning Information Systems in India

Planning Information Systems -NNRMS, NUIS, National Urban Observatory, Municipal Information Systems, Land Information Systems, Cadastre Systems; Applications and Limitations; Tools for Spatial Data Handling, Introduction to GISs

BPLN-0507: Sustainable Urban Development

Unit 1: Concept and Issues

Changing perspectives in man-environment relationship with focus on issues of population, urbanization, resource depletion and pollution; limits to growth vis-a-vis sustainable economy; growth and environmental imperatives of developing vs. developed countries; definitions, concepts and parameters in sustainable development with particular reference to Brundtland Commission, Agenda 21, Eco-City approach, etc.

Unit 2: Methods and Techniques

Application of ecological principles in sustainability: energy and resource cycles, food webs, ecological pyramids and evolution and succession of natural ecosystems; Carrying Capacity based planning: concept, parameters and indicator measures, models and case studies in urban and regional development; Environmental Impact and Strategic Environmental Assessment for urban areas; Ecological Footprint Analysis of cities; Sustainable Lifestyle Assessment and behavioral modifications at household levels.

Unit 3: Land, and Energy Resources

Land capability and suitability analysis in location and planning of urban land uses; implications of urban form, density, land use pattern and transportation system in land and energy conservation

Unit 4: Role of Water

Urban interference in hydrological cycle, with particular reference to water pollution, water resources, drainage and natural ecosystems; urban water treatment, recycling and harvesting; use of non-conventional energy sources in urban development.

Unit 5: Air Quality & Solid Waste Management

Sources, types and effects of air pollution and solid waste disposal in cities, urban industrial processes and land use and transportation implications in air and solid waste pollution; norms, standards, laws, organizations and policies in urban air quality control and solid waste management; examples of best practices.

BPLN-0508: Training Seminar - I

Each student will be required to undertake training in a planning (or related) office during summer vacation between the Fourth and Fifth semester. The period of training will be six weeks. The exact period and place of training will be decided in consultation with the Coordinator-in-charge of training.

The objective of training is to expose the students to live planning projects and working environment at planning offices.

The students are expected to submit a 'Satisfactory' certificate from the relevant Planning Office after completion of training. The student will also submit a report, highlighting the Profile of the Planning Office, its organization, key work areas, etc., Introduction to the project(s) worked upon during training, planning brief, methods employed, and planning - design solutions/ proposals.

The students will also be required to present their work through drawings/ visuals, power point presentations in the form of a Seminar to the faculty and students of the Department over the fifth semester, as per directions of the Coordinator-in-charge of training.

THIRD YEAR: SIXTH SEMESTER

BPLN-0601: Planning Studio, VI (Urban Development Plan)

Unit 1: Studying Development Plans

The study shall involve understanding of contents of various types of development plans and explore their foci

Unit 2: Selecting the Case City or Town

Identification and preparation of secondary source information of the towns or cities selected for the study

Unit 3: Organization of Field Surveys

Visit to the case study area, collection of primary and secondary data and information on various aspects such as demography, social, economic, housing, transportation, etc.; conduct of primary and secondary surveys

Unit 4: Analysis and Synthesis

Analysis and synthesis of data and information collected on various aspects; projections of population and workforce; trends and issues identification

Unit 5: Plan, Policies and Proposals

Preparation of policies and proposals with different scenarios and identification of priorities and action areas; phasing and monitoring; governance structures for implementation; land use plan and the plan document

Note: Each student will be required to undertake training and planning (or related) during summer vacation. The exact period and place of training will be decided in consultation with the coordinator in charge of training

BPLN-0602: Urban Management-I

Unit 1: Role of Management in Urban Development

Definition, objectives and scope of management; Role of management in developing economy; Meaning and theory of organization; Urban development as a decision making process and corporate activity; Application of management techniques in urban planning and development

Unit 2: Urban Developments in India

Urban development in India: problems and issues, policies, programmes and provisions in the national five year plans; processes of decision making for urban development at national, regional, state, district and local levels.

Unit 3: Organizations for Urban Development

Various national, state, regional, district and local level organizations involved in urban development in India, their background, functions, powers, organization structure and resources; Case studies.

Unit 4: Urban Developments and Public / Private Sector

Urban development bodies; urban development authorities: background, functions, powers, organization structure and resources, Case studies; Role of NGOs and private organizations in urban development, relationships with local and state governments.

Unit 5: Financing Urban Development

Financing urban development projects; Sources of funding: cost recovery, cost subsidization, medium and long term financing; Private investments in urban development projects: prospects and limitations; Municipal financing: sources of revenue and items of expenditure; Financial resource mobilization for urban development particularly for municipal/ local bodies.

BPLN-0603: Urban Renewal and Conservation

Unit 1: Introduction

Overview and introduction of the basic concepts of conservation; values, attitudes and principles for judging the conservation importance of sites, areas and related typology; scope and basic technique of urban conservation; Urban renewal as apart of metropolitan plan; identification of urban renewal areas; conservation, rehabilitation and redevelopment urban renewal policies and strategies

Unit 2: Economic, Financial and Management Aspects

Economic and spatial implications of urban renewal programs mobilization of resources; incentive zoning - management of urban renewal areas

Unit 3: Conservation and Development

Economic and social aspects of conservation, traffic and management issues; Conservation policies - case studies

Unit 4: Slums

Clearance and improvement schemes, planning aspects, land management, social economic issues, public participation, government schemes and their critical evaluation

Unit 5: Legal and Administrative Aspects

National and international experience in implementing urban renewal programs; Legal and administrative aspects, archaeological acts/ charters pertaining to conservation, development and conservation; Case studies of proposals for urban conservation of sites/ areas in India and abroad

BPLN-0604: Project Formulation Appraisal and Management

Unit 1: Introduction to Project Formulation, Appraisal and Management

The concept of projects, Importance of project formulation, appraisal and management; reasons for shortfall in its performance; scientific management, life cycle of project; detailed project report, and feasibility studies; techniques of financial appraisal, payback period, IRR, DCF, NPV, CBR.

Unit 2: Project Formulations

Project formulation: definition, objectives; Stages of project formulation and their significance; Methodology for project identification and formulation; Feasibility studies, input analysis, financial cost-benefit analysis, social-cost benefit analysis; Project appraisal and report.

Unit 3: Project Appraisals

Project formulation: definition, objectives; Need for project appraisal; Project formulation: definition, objectives; Stages of project form Network analysis; CPM, PERT, resource levelling and allocation, time-cost trade off aspects; Bar charts, Milestones, Standard oriented cost control techniques; Techno-economic analysis of projects.

Unit 4: Project Implementation and Monitoring

Project implementation, stages of implementation, Teamwork, actors in project implementation; Project monitoring: meaning objectives and significance; Monitoring techniques: integrated reporting, Milestones, time and cost overrun and under runs, unit index techniques.

Unit 5: Project Evaluations

Project evaluation: meaning, objectives, scope, stages, approach and steps, Life of a project; Techniques of project evaluation: input analysis, financial cost-benefit analysis, social-cost benefit analysis; case studies in urban and regional development projects.

BPLN-0605: Introduction to Urban Design

Unit: 1 Introduction to Urban Design Theory

Urban design as interface between architecture and planning; city as a three dimensional entity; Study of volumes and open spaces at all spatial levels; A brief historic review of the development of the urban design discipline and principles

Unit: 2 Elements of Urban Design

Urban form as determined by inter - play of masses, voids, building typology; scale, harmony, symmetry, colour, texture, light and shade; dominance, height, urban signage and graphics; organization of spaces and their articulation in the form of squares, streets, vistas and focal points; image of the city and its components such as edges, paths, landmarks, street features, sky - line, etc.; urban transportation.

Unit: 3 Physical and Non - Physical Determinants of Urban Forms

Activity and the morphology of places; form, size and structure of cities and the related geometry co - related with their determinants; case studies of urban design characteristics of cities in India and abroad; related issues for public intervention.

Unit: 4 Control of Urban Design

Urban design and its control; Control of visual pollution; Agencies responsible for ensuring better urban design, their roles, powers and limitations.

Unit: 5 Contemporary Practices

Townscape policies, building byelaws and regulations for existing and emerging areas of development; Special rules for heritage and hill areas

BPLN-0606: Planning and Management of Informal Sector

Unit 1: Urban Poverty

Dimensions of urban poverty, magnitude of problem, urban poverty alleviation programmes, impact of macro-economic structural adjustment policies on poor urban households.

Unit 2: Basic Needs

Development of the concept of basic needs; identification of basic needs and their provision for various target groups and informal sectors; standards for basic needs, NGO's and voluntary organizations associated with provision of basic needs.

Unit3: Alternative Approaches for Delivery of Basic Services to the Urban Poor

Community planning approach, low cost alternatives and institutional reforms approach.

Unit 4: Migratory Impulses and Impact on Informal Sector

Characteristics of migrants and their association with growth of informal sector; socio-economic deprivation and informal sector; development of informal sector concept; Role of informal sector in housing stock, economy, commercial activities, etc.; Implications in physical planning.

Unit 5: Consequences of Spontaneous Growth

Study of major aspects; spontaneous living and working, their characteristics and functions in urban context, actions for improvement; appraisal of the role of government, private and voluntary organizations; existing management; their organizational set-up and limitations; planning and development of urban settlements in respect of the spontaneous growth; case studies from India and other developing countries.

BPLN-0607: Geographic Information Systems for Planning

Unit 1: Need for GISs

Maps and Spatial Information, Limitations of Typical DBMS Packages and CAD Packages; Need for GISs.

Unit 2: Introductions to GISs

Geographic Information Systems, Introduction, Components, Benefits; Computerized GISs, Input and Output Devices; Spatial Data Entry into GIS, Spatial Information Security and Sharing; Data Structure for GIS, Vector and Raster Data Structures, Comparative Advantages and Disadvantages; Maps, Base Maps and Thematic Maps, Mapping and Spatial Analysis Software, Linking of Attribute Data, Spatial Data Aggregation; Spatial Data Generalization; Limitations of GISs

Unit 3: GIS Modelling

Overlay functions in GIS; using attribute over spatial data in Modelling; case study based land suitability analysis; Modelling service area for social infrastructures; impact analysis

Unit 4: Specific Packages

Introduction and laboratory exercises on selected GIS Packages (e.g., ArcInfo, ArcView, Geo-Concept, Geo-Media, ILWIS, MapInfo, etc.); Comparative advantages and disadvantages; Planning applications

Unit 5: Advanced Concepts in GISs

Introduction to Dynamic GISs; Integration of GIS and Digital Image Processing; Integration of GIS and GPS

FOURTH YEAR: SEVENTH SEMESTER

BPLN-0701 Planning Studio - VII (Regional Planning)

Unit 1: Context of Regional Plans

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

Unit 2: Constitutional Provisions

District planning in the context of constitution 73rd and 74th amendment acts; district planning committees; metropolitan planning committees

Unit 3: Organization of Field Surveys

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

Unit 4: Analysis and Synthesis

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

Unit 5: Plan, Policies and Proposals

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