DEPARTMENT OF PHYSICAL PLANNING,
SCHOOL OF PLANNING AND ARCHITECTURE: NEW DELHI

UNDERGRADUATE PLANNING SYLLABUS: 2022

Note

Current syllabus was first approved by the Executive Council in June 2015.

In 2016, Credit system was introduced at the School level. This led to conversion of marks to credit system. In 2016, approval for first two years was given by the EC. In March 2018, the approval for conversion of credit system for third and fourth year along with syllabus for electives was given by the Senate and Board of Governors.

Further modifications in consultation with the Advisory Committee of the Department were carried out in January 2019 and the approval for the same was given by the Senate in April 2019. The modifications were carried out in the syllabus of the following subjects:

BPC 3.3 Transportation Planning I
BPS 3.6 Geo Informatics for Planning II
BPC 4.3 Demography & Urbanisation

Further modifications in consultation with the Advisory Committee of the Department were carried out in 2022 and the approval for the same was given by the Senate in 2022. The modifications were carried out in the syllabus of the following subjects:

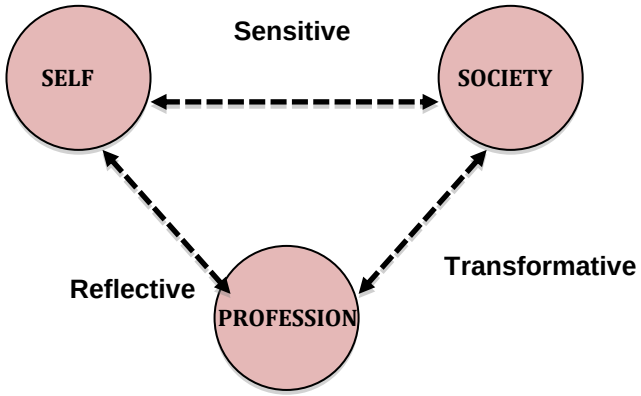
BPC 5.5 Planning Practice I
BPS 7.4 Dissertation & Training

SYLLABUS REVISION FOR B.PLANNING PROGRAMME

In 1989, the undergraduate programme was established to fulfill a need for a generalist planner. In the larger context of 73rd and 74th Constitutional Amendment it was felt that there would be a requirement for a generalist planner who would be able to fill that role. In the last two decades fast paced changes in the technology and its consequent changes in the institutional structures have affected urban and regional development significantly. While changes have been incorporated in the undergraduate curriculum over a period of time subject wise, a significant exercise in syllabus revision was undertaken in 1996. Reflection over the experience accumulated over the years highlighted certain gaps. There is a need to link theory subjects and studio subjects, relevance of some subjects and outdated syllabus for certain subjects. Changes in the larger context led to introduction of some new subjects as well as methods of assessments.

Philosophy

School is a place not just for transference of domain knowledge but also a place that shapes the next generation. It can either function as an instrument of conformity or a 'practice in freedom'. For the education to become a 'practice in freedom', and to develop individuals into creative, thinking human beings, professional education thus needs to focus at all the levels; self, profession and society. It would be the endeavor of the department to guide the students on a journey of self-awareness and professional competence in a manner that they develop the ability in solving the problems of the society. The two instruments available for this are the instrument of knowledge for mastery over technical skills, and intelligence born of observation and self-knowing. This revision along with development of pedagogy and methods of assessment would focus to train the mind towards reflective and sensitive individual who can utilise her/his technical knowledge and skills to bring about change in the society.



The following are identified as what we consider as good, what are our core focus areas and what are the requirements of the society.

- The core concern of the planning programme is land and its allocation. In this context, the programme will focus on the transformation of places and related structures due to larger technological, economic and political changes in the society. In particular graduates of this course will be able to reflect on and engage in problems confronting regions, cities and villages due to changing relations in society, for example due to privatization and globalization.

- The proposed Planning course endeavors to educate graduates in developing a core set of creative, problem-solving and practical skills. It will be based on a 'learning by doing' model in which students will reflect on theoretical concepts through practical experience. They will be encouraged to engage in the theory and practice of strategic planning activities, carrying out critical and action-research, and begin to be able to develop policies, implement programs and evaluate outcomes related to land and built environment.

- The undergraduate planning students would be able to undertake policy analysis and formulation as well as preparation of layout plans. Their core strength would lie in interpretation and implications of policies for implementation, programme formulation and preparation of area level plans.

- While currently M. Planning programmes undertake students from various professional backgrounds with an objective to bring to the team their skills and knowledge of undergraduate degree along with a planning perspective. Undergraduate planning students trained for four years in planning related subjects bring to the planning team a planning perspective as well as sensitivity towards other disciplines for more effective collaboration and team work.

- The programme will prepare students to shape as well as adapt to changing global context with ability for a centered position, long term vision and to understand significance of policy decisions on land allocation.

- It will enable them to contribute in planning and development of infrastructure in the context of rising environmental concerns and prevailing financial climate.

- The programme will have a conscious focus to prepare them as professionals willing to contribute to society and make efforts to provide access to their professional knowledge to groups who may not be able to access them otherwise.

Objectives

Objectives of the programme are

- To create an awareness of the context in which planning operates.
- To impart knowledge towards creating safe and just society with specific focus on policies related to land, its allocation, implementation mechanisms and related aspects.
- To develop understanding of long term implications of planning decisions.
- To develop competence to apply knowledge at different levels in a wide range of situations with an objective to achieve planned development.
- To develop sensitivity towards diversity and conflicting interests in planning.

Learning Outcomes

Before moving on to the detailed curriculum, expected learning outcomes at the end of each year of study have been identified. These learning outcomes would govern the studio exercises and theory courses taught in a particular year of study. The attached flowchart shows knowledge-based learning and skill based learning outcomes for each year of study. All studio and theory courses will be restructured to enable a smooth and enriching learning experience.

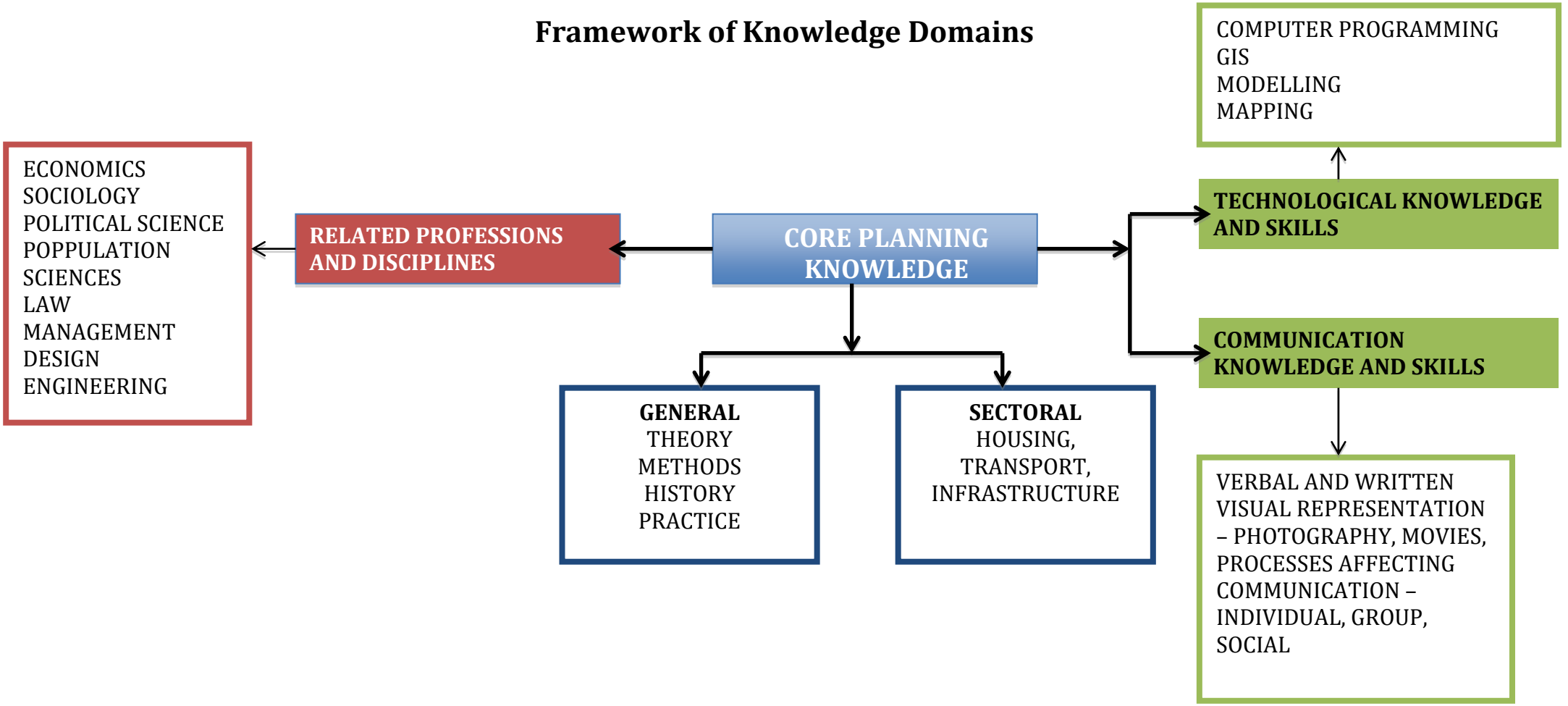
Main Changes

Some of the main changes that have been made are
a) Theory inputs for the studio are given in the previous or the concurrent semester.
b) Introduction of electives as part of the streams.
c) Introduction of new subjects e.g. planning communication, seminar, dissertation.
d) Emphasis has increased on planning theory, planning legislation, information system, planning practice
e) Some of the subjects with low relevance for planning have either been deleted or revised with increased relevance e.g. site development, which combines two or three separate subjects like specifications, surveying, site level infrastructure etc.

LEARNING OUTCOMES

	KNOWLEDGE	SKILLS
YEAR I	• Meaning of planning and its basic purpose • Understanding spaces from perspectives of different disciplines and professions • Comprehend spaces upto the level of neighbourhood • Appreciate history of planning in India and abroad • Awareness of basic concepts from other disciplines relevant for planning. • Basic vocabulary in planning and techniques of planning • Neighbourhood Planning	• Basic computing and analytical skills • Verbal and visual communication skills • Creative and critical thinking skills • Observational skills • Drawing and mapping skills • Sensitivity towards self
YEAR II	• Ability to provide planning solutions at a small scale and comprehend spaces upto the level of sector/ward/planning zone • Ecology and environment • Understand urban patterns and processes • Planning framework- ability to see inter sectoral relationships - for example housing, transport, workplaces and understand the patterns of land use and development controls • Site Planning	• Advanced computing including GIS mapping and analysis • Critical reasoning skills • Analytical and problem solving skills • Interpersonal and group skills • Written, verbal and visual communication skills • Application of conceptual learning through projects
YEAR III	• Ability to comprehend challenges in areas upto the level of cities • Understanding of land use conflicts, public interest and structures of power and principles of land allocation and application of techniques of planning • Financing and governance frameworks • Understanding social and economic structures and processes affecting planning • Processes of marginalization and planning decisions • Sub City and City Planning	• Application of conceptual learning through projects • Problem solving skills • Collaboration, working in teams and leadership skills • Report writing skills • Detailed project reports • Interpretation and synthesizing skills
YEAR IV	• Understand and identify issues related to areas up to the level of regions. • Legal framework - develop understanding of planning law and practice in India • Demonstrate understanding of frameworks, interrelations and levels of planning • Demonstrate ability to understand consequences of planning decisions • Professional ethics • Regional Planning and Project Planning	• Undertake individual and original research • Working in a professional environment • Independent thinking and professional judgment • Conflict resolution skills and problem solving skills

Framework of Knowledge Domains



Detailed Syllabus

YEAR 1 SEMESTER 1

1.1 FUNDAMENTALS OF URBAN AND REGIONAL PLANNING

Unit 1: Definitions and Rationales of Planning
Various definitions of town and country planning; Goals and objectives of planning; Components of planning; Benefits of planning; Arguments for and against planning

Unit 2: Foundations of Planning
Orthodoxies of planning including the Lamps of Planning; Sustainability and rationality in planning; Components of sustainable urban and regional development; Defining what counts as planning knowledge: various sources of planning knowledge, various forms of planning knowledge; Reasoning and its various forms in planning; Space, place and location

Unit 3: Development Plans and Development Regulations
Definition of development plan; Types of development plans; Planning Advisory Group report and national level planning and design guidelines; sector plans and spatial plans; Defining development and development control regulations, types of development control; Conforming and Nonconforming land uses; Compatible and non-compatible land uses, Locally Unwanted Land Use(LULU) and Not in my Backyard (NIMBY).

Unit 4: Governance of Planning
Local government in India; District Planning Committees and Metropolitan Planning Committees; Introduction to Internationalization and globalization of planning: meanings and forms of globalization; Characteristics of a global city; Principles for planning for a global city;

Unit 5: Theories of Urbanization
Theories of urbanization including Concentric Zone Theory; Sector Theory; Multiple Nuclei Theory and other latest theories; Land Use and Land Value Theory of William Alonso; City as an organism: a physical entity, social entity and political entity

1.2 PLANNING TECHNIQUES- I

Unit 1: Types of Data and Sources of Data for Planning
This unit will begin with understanding the difference between data, information and knowledge. Distinction between facts and opinions. Data requirements for urban and regional planning, sources of primary and secondary data. Overview of data availability from different sources for e.g. Census, NSSO etc.

Unit 2: Data Collection Methods - Physical and Socio-Economic Surveys
Quantitative data collection – collection of data, record, file, questionnaire design, design of sample surveys, types of sampling, measurement scales, data coding and data verification.
Qualitative data collection – focus group surveys, individual interviews, observations, ethnographic methods
Physical Surveys – Preparation of Base maps at different scales, contents of base maps, techniques for conducting surveys for land use, building use, density and other surveys to be used in planning. Using information, communication and technology (ICT) – based data collection methods.

Unit 3: Data Analysis, reasoning and relationships

Data tabulation, statistical methods, frequency distribution, classification, mean, median, mode, correlation, content analysis, Land Use classification system, planning standards, population and economic analysis, Land Suitability analysis, housing analysis, development of indicators.

Unit 4: Data Presentation
Preparation of tables and charts, interpreting statistical, qualitative and spatial data to identify trends, patterns and processes, communication of data through presentations, reports etc. (Linked with Planning Communication)

1.3 CULTURE AND CITIES

Unit 1: Fundamentals of Culture and Aesthetics
Definition and symbols of culture; Concepts of beauty and ugliness; Classical theories of aesthetics; Relationship of aesthetics with other cultural values; Concepts of scale, space, form and structure.

Concept of time as dimension of the built form; concept of space and scale as followed through different cultures; the elements of the town, the house, the street, the chowk; social and cultural criteria of location of towns and activities within it.

Unit 2: Role of Culture and Technology in Planning
Transmission of culture; Cultural traits of ethnic groups and their expression in built form; Aesthetics of mixed culture and global culture; Cultural pollution; Role of technology in changing arts, culture, aesthetics, built form and structure of human habitat

Unit 3: Aesthetics, Culture and Technology in India
Aesthetics, culture and advancement of technology in ancient India and their impact on planning of settlements; Planning principles of the Manasara Treatise and Indus Valley Civilization. Aesthetics, culture and advancement of technology during the Mughal and British periods and their impact on planning of human settlements; Traditional Indian City Typologies; Aesthetics, culture and advancement of technology in independent India and their impact on planning of human settlements

Unit 4: Globalization, Culture and Identity
Relationship between culture and built form and city structure through cases of settlements across the world. Impact of globalization on local identities and built form. Technology as a factor in shaping modern cities- examples from different countries.

1.4 COMPUTER APPLICATIONS – I

Unit 1: Introduction
Introduction to Computer Application in Planning; Various Software packages, Utility, of computers in planning assignments, Current trends in Planning Profession with respect to usage of computer application.

Unit 2: Advanced Features of MS-Word
Usage of MS Word in report preparation, Adding and Updating Table of Content, Spell Check, Thesaurus, Working with Columns, Tabs & Indents, Creation & Working with Tables, Margins & Space management in Document, Adding References and Graphics, Importing and exporting to and from various formats, Creating questionnaires using macros

Unit 3: Advanced Features of MS-Excel
Defining Data and Database Management, Working with Census Data, Data analysis using various functions and tools, creating formulas, using formulas, cell references, replication, sorting, filtering, functions, Preparation of charts and graphs, Creating trend lines, Simple Macros

Unit 4: Introduction to AutoCAD
Concept of Mapping and Drafting techniques; Introduction to AutoCAD; Understand the fundamental concepts and the terminologies used in CAD; Tools for digitization; Modifying tools; Layer creation and management; Creating Blocks; Annotation; Scaling; Plotting and Printing and hand-on exercises.

1.5 PLANNING COMMUNICATION I

Unit 1: Verbal and Written Communication
Body language, eye contact, speech, spoken expression
Preparing a summary/abstract, writing an assignment – references, structure
Communication: Language and communication, differences between speech and writing, distinct features of speech, distinct features of writing, Reading Skills to find out particular information and get the gist through notes, letters, articles, reports

Unit 2: Visual Communication – drawings
Basic drawing skills, line, shape, form, texture, color, composition, scale, and its application and examples in buildings, streets etc., sketching
Composition of drawings, proportion of lettering for varying emphasis, drawing pens and their use for different purposes, standard drawing format, standard symbols and notations in drawings.
Techniques of preparation of base map at local level, Choice of appropriate scale for different level of plan, graphical scale, linear scale, areal scale, contents of base maps at different levels

Unit 3: Visual communication - model making, photography and videography
Why photographs, photography as a tool for visual information, Images and history, Developing basic understanding of photography, use of camera and its functions, elements of good photographs
Understanding of different materials for models, built form models to understand the concepts learnt in the studio, study of basic land and built forms through models,

Unit 4: Intrapersonal Communication, Listening Skills, Self Awareness
Ego states, defense mechanisms and identification of individual blocks in communication, emotional intelligence

1.6 QUANTITATIVE METHODS FOR PLANNERS

Unit 1: Correlation and Regression Analysis
Degree of correlation, Scatter Diagram, correlation analysis, correlation co-efficient, co–efficient of rank correlation, partial correlation analysis and multiple correlation, simple Linear and nonlinear regression, lines of regression, coefficient of regression; Multiple Regression Analysis; Use of SPSS and Applications in planning

Unit 2: Statistical Inference
Types of estimation; point, interval, testing of hypothesis, statistical hypothesis, simple and composite tests of significance, null hypothesis, alternative hypothesis, types of errors, level of significance, critical region; two tailed and one tailed tests, large and small sample tests for mean and proportion; Applications in planning.

Unit 3:Chi-Square Test and Analysis of Variance (ANOVA)
Chi-square distribution: applications of chi-square distribution; test of goodness of fit; ANOVA distribution; Use of SPSS and Applications in planning

Unit 4:Mathematical Programming Techniques
Mathematical Programming models, linear programming problems, transportation problems, assignment problems, applications in planning

Unit - 5 Decision Theory
Decision making under conditions of certainty, uncertainty, and conditions of risk decision trees, pay off matrix, applications in planning

1.7 PLANNING STUDIO - I

Understanding the various building blocks of a city. Developing of understanding about city planning elements using movies, lectures and city tours.

Distance and Area Perception- Developing an eye for distance and area and translating the same to scale on drawings.

Space Perception- Study of areas with varying characters to appreciate the concepts of built form, activities and people. Appreciate the various elements of built form such as plot sizes, FAR, densities, building heights and open space. (Individual work) Understanding how built form supports the various activities happening in the areas.

Introduction to neighbourhood: mapping of a neighbourhood and appreciating the basic characteristics of a neighbourhood. Creation of base map, recording and presenting information on the map-manually and digitally

Use of mapping and presentation skills learnt in planning communication studio.

YEAR 1 SEMESTER 2

2.1 CITIES IN HISTORY

Unit 1: Introduction
The significance of the study of historical processes, interpreting history for planning purposes. Concept of time as a dimension of built form, human settlements as a material expression of civilization;

Unit 2: Settlements in History.
Planned cities in India from Medieval to Colonial Era. Medieval planning in India, the common elements of the Indian Medieval towns. Colonial History, built form and town planning, Development of colonialism and the city; modernism and post-modernism, Elements of medieval, colonial, modern and post-modern towns

Unit 3: Urban Processes
Criteria of location and development of towns in history, Political, economic, technological, social and cultural factors which have shaped settlements through history, Indian city typologies and study of urban growth, decline, renewal in different cities based on function, location etc. ,

Unit 4 History of cities in South Asia
Evolution of cities in South Asia, Urban Patterns and trends, Similarities and differences from Indian cities; challenges faced and innovative planning solutions. Examples and Case Studies from south asia.

2.2 INTRODUCTION TO SOCIAL SCIENCES

Unit 1: Sociology
Society and its characteristics, Idea of community and its elements, social system, social institutions and its function, social groups, segregation, urban and rural society,

Unit 2: Political Science
Politics and political theory, basic understanding of the concepts of freedom, liberalism and neo-liberalism, equity and equality, social justice, rights and citizenship,

Unit 3: Philosophy
Core concepts of philosophy- basic understanding of terms like epistemology, aesthetics, philosophy of action, social philosophy, dialectic materialism, ethics, aesthetics, lifeworld. Indian philosophers and their big ideas; types of knowledge; philosophy as a method for enquiry.

Unit 4: Geography
Populations, population density and distribution; human activities- primary secondary, tertiary and quaternary; resources and development; basic land forms, territory, space and place, geographies of scale;

2.3 ECONOMICS FOR PLANNERS

Unit 1: Definition and Scope of Economics
Central problems of economics; micro and macro-economic decisions, use of economics in planning.

Unit 2: Theory of Demand and Supply
Law of demand and supply, elasticity of demand and supply, its use in planning.

Unit 3: Theory of Firm Production

Perfect and imperfect market types, market demand and supply; pricing under different market conditions, theory of production; factors of production, costs, scale of production, and economies of scale.

Unit 4: Concept of Income, Employment and Money
Classical and modern approaches, growth and development indicators; measures of national income, defining development and under development.

Unit 5: Introduction to Urban and Regional Economics
Use of economic concepts in urban planning, housing, transport, taxes, land use, location, etc.; use of economic concepts in regional planning; location, disparities in development, input-output techniques, sectoral development etc. Economic Analysis. Economic Planning in India- National and Urban level

2.4 SITE AND LAND DEVELOPMENT

Unit 1: Fundamentals of Surveying
Principles of surveying, types of surveying, classification of surveys & maps, Plan Vs Map, Accuracy Vs Precision, sources and kinds of error; Least Squares adjustments and applications.
Key principles of Land Surveying, Basics of Chain Surveying, Basics of Levelling.
Modern methods and Instruments, accessories, operation, EDM without reflecting prisms; Total Station – types, instrument description, field techniques, Traversing, motorized total stations; field procedures for total stations in topographic surveys.

Unit 2:Topographical Surveying: Concepts and Techniques and GPS
Definition, Procedure in topographic surveying , uses of topographical maps, Relief, methods of representing relief, contour and contour interval, characteristics of a contour, methods of locating contours, Interpolation of contours, Dam Surveys. Introduction - Maps – Types of Maps – Various Satellites used by GPS – Differential GPS - Fundamentals of GPS – Application of GPS – GPS Receivers – Hand held GPS Receiver – Function – Field procedure

Unit 3: Geology,
Geological Structure, Land Forms, Weathering, Landslides and Mass Wasting. Instability of hill slopes.Land and terrain suitability for various types of development. Earthquakes, seismic zoning, disaster prevention and other planning considerations.

Unit 4: Hydrology
Ground Water- Concept and role in town planning of different types of terrain, hydrologic cycle, Groundwater bearing properties of different lithological formations, surface water, reservoirs and springs; artificial recharge and ground water mound, hydrological features in relation of seepage, fluctuation of water table and hydrographs, geological structure and underground passages for water supply. Planning considerations for the same. Implications on site selection and development.

2.5 GEO-INFORMATICS FOR PLANNING I

Unit 1: Remote Sensing and Photo Interpretation
Remote Sensing -Definition, Aerial and Satellite Remote Sensing; 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 2: Photogrammetry

Limitations of Traditional Surveys for Planning; Photogrammetry as an Alternative Tool for Surveying; Aerial Photographs, Classification; Principles of Stereoscopic Vision; Basic instruments -Stereopair, Pocket and Mirror Stereoscopes, Parallax Bars; Principles of Photogrammetry, Measurement of Heights and Depths; Introduction to Digital Photogrammetry;

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, New Sources of data such as big data and real data

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
Introduction to Spatial Data Infrastructure, NNRMS, NUIS, National Urban Observatory, Municipal Information Systems, Land Information Systems, Cadastre Systems; Applications and Limitations; Tools for Spatial Data Handling, Introduction to GIS; BHUVAN; Agencies responsible for generating spatial data.

2.6 PLANNING COMMUNICATION II

Unit 1: Verbal and Written Communication
Elements of a good presentation, essay writing, developing an argument, how to undertake a literature study, developing your own interpretations

Unit 2: Creativity
Perception, Intuition, Design as problem solving activity, understanding creativity,
Characteristics of creative individuals, Exercises in creative thinking skills

Unit 3: Visual Communication – drawings and presentations
Visual studies of use of line, shape, form, texture, color, composition, scale, in cities and buildings, streets, cities, with special emphasis on rhythm, balance, harmony and proportion etc., sketching as a tool for communication.

Techniques of preparation of base map at city and regional level, presentation of planning information through maps, thematic maps

Preparing power point presentations

Data visualization and development of infographics.

Unit 4: Visual communication - model making and photography
Reading visual images, context of a photograph, photographs as evidence of reality, photography and cities, advance photography techniques

Built form models to understand the concepts learnt in the studio, study of complex land forms and built forms through models, presentation models

Unit 5: Intrapersonal Communication, Listening Skills, Self-Awareness
Listening as an active skill; Types of Listeners; Listening for general content; Listening to fill up information; Intensive Listening; Listening for specific information,

Listening effectively, barriers to listening, giving and receiving feedback

2.7 PLANNING STUDIO II

This studio will focus on developing an understanding up to neighborhood level and basic concepts of land use and development controls.
City Patterns Study- Short trip to a city/town to appreciate how a settlements grows and the driving forces behind the growth . Through guided study acquaint students with old parts of the city as well as recently planned developments. Appreciate what makes the city unique and understand how social and economic forces (such as port, tourism, industries etc) shape the city.

Land Use Study- Through case studies, develop understanding of basic principles of land use planning such as categorization, hierarchy, permissibility, compatibility etc. Supporting infrastructure required for various types of land uses.

Area Appreciation- Develop understanding of the typology of residential development with respect to built form, legality, evolution, ownership etc. Understand what facilities and infrastructure are required in residential areas. Use of surveys to understand differences in socio economic conditions, infrastructure availability and satisfaction among various residential pockets. Comparing existing situation vis-à-vis statutory plans.

YEAR 2 SEMESTER 3

3.1 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

3.2 PLANNING TECHNIQUES II

Unit 1: Plan Preparation
Types and levels of plans, hierarchy of plans, planning process
Forecasting techniques, extrapolation techniques, cohort component techniques, economic analysis techniques, goal formulation, developing planning standards, urban growth models and its use in forecasting.

Unit 2: Methods of Monitoring and Evaluation and Problem Identification
Indicators for plan monitoring, cost benefit analysis, planning balance sheet, logical framework approach, plan evaluation techniques

Unit 3: Public Participation Techniques
Purpose of participation, resources, listening, types and methods of participation, challenges and issues in use of participatory methods.

Unit 4: Decision Making Models
Purpose of Models, types of decision models, linear programming models, threshold analysis and other decision models

3.3 TRANSPORTATION PLANNING I

Unit 1: Introduction
Transport planning, engineering and management; Principles of sustainable mobility; Transport modes, PT/IPT, NMT and their importance; Traffic, travel and their measures and characteristics; transport networks and urban form

Unit 2: Transport Surveys
Uses/applications, methods of conducting and analysis & presentation of transport surveys: traffic volume survey, speed studies, pedestrian and walkability studies, PT & IPT studies, parking studies, origin-destination survey

Unit 3: Traffic Engineering
Urban and rural road hierarchy, understanding of networks analysis, cross-sectional elements; junctions; street furniture and landscaping; cycling and pedestrian infrastructure, norms, standards and guidelines; pedestrian-friendly design/planning principles; PT/IPT stops, locations and planning principles

Unit 4: Transport Externalities
Transport related air pollution, noise: measures, units, sources, impacts; accidents, types, accident black spots, social costs

Unit 5: Transport Systems Management
Traffic management methods, applications, advantages & disadvantages; concept and importance of travel demand management; methods of demand management

3.4 INFRASTRUCTURE PLANNING I

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 manual, code and standards.

Unit 2: Storm Water System
Definition of Hydrology, classification, hydrological cycle, urban water cycle; Types precipitation and measurement, rain fall analysis, Surface water runoff, measurements of runoff, hydrograph, discharge for small and big rivers, watershed; Flood Frequencies, and flood protection measures in urban areas, layout and design of storm water system, Rain Water Harvesting system in site level.

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 variations; Water treatment system, location and space requirements; Components of water distribution systems, Planning for Various uses, Storage and supply network; organizations- jurisdictions and financing; PPP arrangements; Legal and government policy for urban and rural water supply. Case study discussion on innovative methods

Unit 4: Sanitation and Sewer Systems
Methods of sanitations; Off-site and on-site sanitation and technology; Low cost appropriate technologies; standards for Indian cities; Sanitary sewer system network and layout planning, Sewage disposal methods, location criteria and capacity; Case study of innovative approaches; financing and cost recovery for sewer system.

Unit 5: Solid Waste Management

Solid waste management for Indian cities, quantity of solid waste and its character; Methods of solid waste management, collection, transportation and disposal; Land filling and composting, and other methods of pre and post treatment, location and cost aspects of different methods of solid waste disposal systems; Community participation and involvement of NGOs in efficient solid waste management. Best Practices examples.

Unit 6: Other Services
Telecommunication Services- Locational criteria for mobile phone towers. Gas and oil pipelines. Electric substations requirements, capacity, location and space requirement,

3.5 ECOLOGY AND RESOURCE PLANNING

Unit 1: Introduction
Meaning and scope of ecology; evolution of ecology; man, environment and ecosystem; components of nature and basic concepts and processes of ecology; flow of material water energy, invasion, succession, predation, regulatory forces, adaption, trophic levels, food chain, food web, ecological pyramids.

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 energy resources; development and management.

Unit 2: 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. Ecological footprint and carrying capacity. (Ref: http://gulliverasso.org/IMG/pdf/article_footprint.pdf)

Unit 3: Ecology sensitive areas
What are Ecologically Sensitive Areas? ESA as a resource for development- use and over use. Impact of development on coastal, forest, hill and river ecology. Legislations and policies for management of ecologically sensitive regions. Case studies for management of ecologically sensitive areas- India and abroad.

Unit 4: Climate change
Cities and climate change. Impact of built environment and transportation on Green House Gas emissions, Role of planning in Climate Change mitigation and adaptation. Management tools, sustainable buildings and retrofitting infrastructure.
Critical review of policies and regulations in India and abroad regarding Climate Change. Local Examples of climate change plans where mitigation and adaptation strategies are translated into concrete actions, Emerging technologies, National Policy Framework on Climate Change, carbon Credits and trade, carbon footprint

Unit 5: Resource Planning Development and Management
Endowments; types of resources, exhaustive and renewable resources development; utilization and conservation of national, technological and human resources; resource management, recycling of resources and resource equilibrium; water resource management, waste land management; rural industrialization and use of non-conventional energy in rural development; major resource development programmes in India; case studies of resource development projects in agriculture, forestry, minerals, water, manpower, etc.

3.6 GEO-INFORMATICS FOR PLANNING II

Unit 1: Introduction to Geographic Information Systems (GIS)

Introduction to Geoinformatics, concept and definitions of GIS; Components and Functions of GIS; understanding maps and layers; understanding Vector and Raster datasets, map elements, data types and requirements, sources of data and data handling techniques, significance of GIS and its key application areas, current development and practices.

Unit 2: Introduction to GIS Software

Introduction to GIS software, exploring Graphical User Interface (GUI); supported files and formats, Identifying the toolbar and available tools and techniques for performing spatial analysis; introduction to the concept of georeferencing, relevance of adding Spatial Information to scanned image/toposheets/satellite image; learning georeferencing through class exercise; understanding of spatial and attribute data types, class exercises will be introduced on creating a project in GIS software, creating or adding layers; digitization methods, organization of layers, importing and exporting data.

Unit 3: Data Analysis Techniques

Understating of data analysis tools and techniques, Learning tools and techniques available in the GIS software for spatial and attribute data analysis; class exercises on adding database in attribute table; adding information from other sources; creating charts and graphs; statistics summary, calculating geometry, query builder, buffering or proximity analysis, overlay analysis; Using relevant extensions for spatial analysis, 3D analysis etc.

Unit 4: Displaying Data

Understating of map elements, adding and changing symbology; labeling and annotation; creating map layout; Inserting map scale; legend map; title; north symbol; creating grids and saving a Layout; printing and exporting map as image.

3.7 PLANNING STUDIO- LAND USE AND TRANSPORT ASPECTS

This course focuses on the interrelationship between transportation and land use, and related economic, social and environmental issues. The key learning objectives would be to:

- Appreciate the difference between travel demand and transport supply.
- As part of travel demand learn techniques for assessment, mitigation and management of traffic impact of current and proposed development
- Understand key techniques for management and enhancement of transport supply.

Area Mobility Plan with an objective to promote and make way for sustainable mobility patterns, improve accessibility and promote livability.

Study of Travel Patterns- study the mobility profile of residents and workers within the area. Modes used, trip lengths, trip purpose etc. Origin destination survey. Compare travel patterns with socio economic condition, housing typology and private vehicle ownership. Include public opinion on traffic, noise, accessibility and local environment as part of the study.

Assessment of Travel Demand –basic techniques for assessment of traffic impact of existing uses; surveys and analysis related to traffic generation rates and patterns, parking demand, non-motorized traffic, traffic conditions on surrounding roads and intersections. Basic principles of travel demand modeling could be used to simulate scenarios to test how change in the intensity of use of land could impact traffic in the area.

Transport Supply- diagnose key transportation issues in the area by undertaking studies for analyzing traffic volume, journey speed, parking, pedestrian movement and access to public transport. Study the adequacy of transport infrastructure vis a vis travel demand studies undertaken earlier.

Impact of transport on local environment – noise, emissions, safety and quality of life. Developing indicators Consideration of needs of excluded groups such as children, elderly and women. Development of strategies consisting of planning, design and management measures.

YEAR 2 SEMESTER 4

4.1 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

4.2 PLANNING INDIAN CITIES

Unit 1: Evolution of Town and Regional Planning in India
Planning thought in Independent India, overview of evolution from piecemeal projects, town planning schemes, comprehensive development plans, new towns to regional planning,

Unit 2: Planning of Indian Cities in the post-Independence period
Planning interventions in Indian cities post-Independence era. Technological advances and their effect on the town; utopian thinking and movements about urban improvement and planning; the concept of neighbourhood planning;
planning concept and city structure, plan and concept of new towns in India, The concept of ring towns and satellite towns; Delhi Master Plan and the concept of NCR; disorientation of contemporary towns from its

cultural context; the concept of conservation; the role of planner as a central figure to understand the present day problems through the medium of the study of history.

Unit 3: Planning of Indian Cities at the end of twentieth century and early twenty first century
Planning in post liberalisation area, Nature of planning reforms, JnNURM, SEZ, URIF, CCF, DMIC, changes in legal and institutional framework for planning, privatization of planning, corridor planning and its implications.

4.3 DEMOGRAPHY & URBANISATION

Objective: To familiarize students to with the field of demography and urbanization and to acquaint them with current population and urbanization trends and policies.

Unit 1: Study of Population
Evolution of population study, development in the field of Demography as a separate discipline, contributions of John Graunt's, Thomas R. Malthus, G. Trewartha's and many others. Concepts of demographic approaches, key demographic principles i.e. Study of population size and determinants of population size; Study of population structure and composition- population pyramid, age sex composition, sex ratio, dependency ratio, measures of age, workers, marital status, caste, religion, literacy level, etc.; Spatial distribution and density, measures of population distribution and concentration, factors affecting population distribution and density, World population distribution and patterns of density in the world, distribution and density of population in India; and Changes in size, structure and Spatial distribution and factors of change.
Need of demographic data, levels and types of demographic data, methods of collecting demographic data, and sources of demographic data. Introduction to census and registration data, census methodology across various countries example from developed and developing nations, accessing and using census information, information available at various levels and census definitions, recent development in the census enumerations.
Understanding of vitals events such as fertility, mortality, migration, demographic balancing equation, defining mortality, measures of mortality, mortality trends in developed and developing countries; defining fertility, measures of fertility, fertility trends in developed and developing countries; Defining migration, theories of migration and population movement, types of migration, causes and consequences of population movement; effect of migration of composition of population, migration trends in developed and developing countries.
Population growth and decline, techniques of population projections and forecast, measures of population growth, methods of population projections i.e. arithmetic, geometric, exponential, logistic. Advantages and limitation in the methods, uses of various techniques, key assumptions. Concept of life table, techniques of preparing life table, its uses and limitations, computation of survival rates, life expectancy, concepts of cohorts and generation of cohort table and its uses.

Unit 2: Urbanization Trends and Patterns
Introduction to urbanization, defining urbanization, History and patterns of urbanization in the world and in India, Mughal and British influences on India cities; post-independence urbanizations, process of urbanizations as influenced by socio-cultural, political, economic and administrative factors, problems of urbanizations, determinants of urbanizations, factors influencing urbanizations, impact of urbanization on cities and its surrounding areas, methods of measuring urbanization; Census definitions of urban places, formal and functional classification of urban places; theories and models of settlement system i.e. primate city, rank-size rule, Concepts of Rural Urban Dichotomy and Continuum, Rural Urban Fringe,

Unit 3: Urbanization Policies and Strategies
Need for Urbanization policies, urbanization policies across the world, key features and components or urbanization policies, basic issues in urbanization policy; Role of government and key stakeholder to manage rapid urbanization in India, the role of national and state level policies; five year plans, latest

development in formulating urbanization policy in India, current programmes and schemes, key challenges for urban planners.

Unit 4: Population Policies and Strategies
Introduction to population policies, relevance of population policies and its impact on the demographic situation of the nations, key element and components of population policies, population policies of developed and developing nations and its impact on development of the nations, recent developments and key changes in the population policies of various nations.

4.4 LANDSCAPE PLANNING AND DESIGN

Unit 1: Introduction to Landscape
Landscape as an outcome of natural processes; Humans' evolving relationship with Nature and its expression in the designed landscape; a comparative study of the major traditions of landscape design in the East and West with regards to principles and techniques of design with landform, water and vegetation. Utopias: a new vision based on equitable distribution of open spaces.

Unit 2: Place Making
Evolution of Public places: their typology, size, nature, distribution in the urban realm; Relevance of Heritage districts and precincts in the modern city; Design of Urban streetscape; Transformation of nature of community recreation and its impact on form of cities.

Unit 3: Landscape Planning (Regional level, Urban and Zonal scale)
Classification of green spaces at each of planning level; distinguishing the components of landscape at each of these levels. *Assessment: exercise related to the current studio problem to better address the landscape component.*

Unit 4: Site Planning
Principles of analysis and assessment of existing landscape; Design proposals to respond to constraints and opportunities offered by the site; study about open space structure as a basic component of the site plan, process of arriving at a landscape concept.

Landscape Engineering (levels and grading including principles of cut and fill alignment, drainage); Plants and design (environmental benefits of planting, functional requirements, aesthetic considerations; typical situations and criteria for design with plants and selection of species).

4.5 URBAN DESIGN AND CONSERVATION

Unit 1: Introduction to Urban Design Theory

Relationship between architecture, urban design and planning; city as a three dimensional entity; study of volumes and open spaces at all 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: Basic Principles of Conservation
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.

Unit 5: Aspects of Urban Conservation
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.

4.6 PLANNING COMMUNICATION III

Unit 1: Critical Reasoning skills
Developing an argument, studying sources, review of literature and developing your own opinion, argument structure and identification, validity and strength of arguments, common fallacies of reasoning, use and abuse of language in reasoning, principles of fair play in argumentation, respecting opposing positions, understanding different modes of persuasion; emotional, moral and rational.

Unit 2: Verbal and Written Skills
Developing skills to find out what one needs to know in order to have a responsible position on an issue. Understanding difference between propaganda and evidence based arguments,

Technical Writing: Scientific and technical subjects; formal and informal writings; formal writings/reports, handbooks, manuals, letters, memorandum, notices, agenda, minutes; common errors to be avoided, undertaking a literature study (can be linked to another theory subject assignment) writing a term paper – preparation, planning, drafting, finalizing, getting feedback, coherence and cohesion in writing

Unit 3: Visual Communication
Advance drawing and presentation skills, movie making, making a project presentation combining visual and verbal skills

Unit 4: Interpersonal and Group Communication
Process and barriers to communication, Interpersonal communication, Group dynamics, , group processes, Group formation, definition, stages of group formation, group functions, group norms, group conflicts, building effective teams, consensus building,

4.7 PLANNING STUDIO- SITE PLANNING

This studio introduces students to spatial organisation of housing units for a site to be planned in the larger context.

Site context, sector/ward/sub zonal contexts in which the site is planned,
Group Housing Design, 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.

Site Layout, Site analysis, development standards, and preparation of the design brief,

Various considerations for site layout, conceptual approach to site planning preparation of preliminary layout and area analysis,

Final layout showing the circulation and basic infrastructure. Planning of utility networks including rainwater harvesting system. (Use of AutoCAD and GIS for final drawings), Rough costing of the scheme.

Following the closure of the 4th semester academic session, each student would be required to undertake a six week professional training, during summer vacations, in an organization duly approved by the training coordinator of the Department of Physical Planning. The work undertaken during this training shall be presented by the students in the training seminar organized as part of the 'Planning Practice I' course in the 5th semester.

YEAR 3 SEMESTER 5

5.1 HOUSING

Unit 1: Introduction
Housing - definition, housing as a verb and noun; Housing in relation to planning component; Concepts of housing stock, need demand, shortage, An overview of housing situation; Urban and Rural housing scenario in India.

Unit 2: Area Level, Housing Studies
Housing, project formulation: feasibility studies, determinants of housing form: physical, social, economic, technical and aesthetic and housing in tropical climate. Development options and housing, costs, standards. Housing for special groups: slums, inner city housing, and disaster-affected areas. Concept of residential density, ground coverage, FAR and other related development control, Evaluation of housing areas.

Unit 3: City Level Housing Studies
Components of housing, housing subsystems, Administrative, legal and financial framework for housing development, Process of housing development Analysis of housing stress, Concept of affordability and target identification. Housing Market and Real Estate Development

Unit 4: Policy and Legislative Framework
Components of housing policy at national and state level; Financial plans and housing legislation.

5.2 TRANSPORTATION PLANNING II

Unit 1: Transport Policy
Current Transport Policy in India, Evolution of transport policy in India, European, American and Asian Perspective on Transport Policy, Interactions between transport and other policy areas, Land-use transport policy- Translation of National Policy to City and local level plans. Problems of car use and policies to reduce usage. Policy, Strategy and Measures.

Unit 2: Urban Transport System
Urban form and Transport Systems, Impact of land use on transport and vice versa, Transport and Quality of Life
Planning for transport in cities and towns, data requirements and planning techniques, travel behavior and its determinants, choice modelling, influencing travel behavior, land use-transport models for cities, provision of new mass transit in cities and its upkeep, specific challenges of small towns and big cities, roles and responsibilities of various agencies, Provisions for freight transport

Unit 3: Regional Transport System
Planning for regional transport systems, data requirements and planning techniques, Importance of accessibility in regional transport planning, indicators of accessibility to basic services, planning parameters for road, rail, air and water transport systems, locational parameters for regional transport nodes, roles and responsibilities of various agencies

Unit 4: Transport Economics
Pricing and funding of transport service and systems, socio-economic appraisal of transport projects; techniques for estimating direct and indirect road user costs benefits, Monetization of costs and benefits, Investment criteria and PPP in Transport

5.3 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, lifecycle 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 leveling 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.

5.4 SETTLEMENT SOCIOLOGY

Unit1: Foundation of Social Thought
Positivism, functionalism; conflict and interactionism; alternate development thought- feminism, environmentalism etc

Unit2: Society, Culture and Social Change
Processes of Social Change: industrialisation, modernisation, globalisation etc. social stratification-concepts and basis; caste, class, power and gender. social mobility. Social Problems in India

Unit 3: Social Exclusion and Planning
Concept of social exclusion and its relevance for planning. Agents of social exclusion in Indian cities and rural areas; spatial segregation. Sociology of displacement, migration and resettlement. Gender and Development.

Unit 4: Urban Sociology

Culture of cities, social environment of urban areas, social and urban fragmentation and gated communities, neighbourhood as a sociological concept, process of urbanisation, industrialisation, globalisation and their social implication on Indian cities.

Unit 5: Rural Sociology
Social environment of rural areas, processes of rural change -westernization, sanskritization and modernization. Sociological barriers to rural change. rural problems: poverty, unemployment, bonded labour and migrant labourers

5.5 PLANNING PRACTICE I

Unit 1: Training Seminar
Each student shall 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 of planning offices.

Unit 2: Nature of Planning Practice
Planning as a profession and Role of a Planner, Definition of profession, planning as a profession, role of planner in the society, different roles of planner in practice;
Nature of planning practice in general and in Indian context, global context and planning practice.
legal framework for planning in India, planning and development organisations, current planning practices, study of selected projects.

Unit 3: Understanding Reflective Practice
The espoused-theory and theory-in-use, the reflection in and on action, approach and methods of reflective practice, concept of reframing, reflective practice in the Indian context

Unit 4: Planning Practice Cases
This unit would focus on developing a critical reasoning and communication skills through study planning cases including planning permissions, court cases, attending public meetings etc., application of concepts of previous unit through study of planning practice, documentation of cases.

Note: Training is a mandatory requirement towards the partial fulfillment of the Bachelor of Planning Degree Course

5.6 DEPARTMENT ELECTIVE

1. INFRASTRUCTURE PLANNING- II

Unit 1: Infrastructure Development Policy
Meaning, components, contents, constitutional provisions, national policy and legal framework, Five year plan related with infrastructure and current policies.

Unit 2: Infrastructure Pricing, Financing
Mechanisms for financing infrastructure, Mechanisms for pricing different kinds of infrastructure, case studies related to infrastructure finance

Unit 3: Planning for Physical Infrastructure

Understanding of different infrastructure systems, design considerations, Sources, distribution, networks, storage, disposal. Physical infrastructure at city and regional level.

Unit 4: Planning for Social Infrastructure
Various types and levels of social infrastructure- education, health, safety, security and other public services. Policy context- existing norms and standards for various Indian cities and by various international agencies. Different indicators of quality of life. Social infrastructure at city and regional level.

2. REAL ESTATE DEVELOPMENT AND MANAGEMENT

Unit 1: Developments of Land and Real Property
Process of land development, market mechanism and land use pattern cost of development, source of finance, and financial calculation for real estate developer

Unit 2: 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 3: 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 4: 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.

5.7 PLANNING STUDIO- SUB CITY PLAN

This studio provides a link between the site level and city level plans. This level is details out the land allocations and planning proposals at the city level. Purpose of this studio is to understand the relationship between different hierarchies of plan. Studio exercises should be so developed to enable students to apply the concepts learnt in theory so far. It should help students to see the interrelations amongst different sectors at the city level and how these need to be translated through detail plans so as to achieve master plan objectives.

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

The approach to developing the lower hierarchy plan, eg. zonal plan/ward/town planning scheme in the framework of a given master plan and the relevant town planning or development act; The study and development of the relevant planning standards for different land uses; Detailing of specific sites in the proposed zonal plans, covering different land uses; preparation of detailed project reports.

YEAR 3 SEMESTER 6

6.1 URBAN GOVERNANCE AND MANAGEMENT

Unit 1: Introduction to Concepts of Management and Urban Management
Definition of management, Decision Making: definition, features, factors, theories of decision making, essentials and hindrances in sound decision-making; decision makers and decision making bodies related to urban and regional planning at national, state and local level, Coordination, Importance of communications; elements, types, features and essentials of effective communications; Difference between public administration and urban management.

Unit 2: Institutional framework
Existing institutional and organizational framework for urban management in India; distribution of responsibilities and activities among different levels as government and their special purpose bodies in the urban field;

Unit 3: Decentralization and local government
74^{th} CAA; concept of political, administrative and fiscal devolution; types of local governments in India, organization (deliberative and executive wings), powers and functions, resources, state supervision control and conditions of their working. Improvement trusts, city and metropolitan development authorities: organization, scope of their powers and functions, and operational arrangements. Roles and responsibilities of other parastatal bodies (water and sewerage boards, slum authorities, public transport corporations, etc.)

Unit 4: Urban Governance
Shift from urban management to urban governance; concepts and definitions; principles of good urban governance – participation, equity, efficiency, transparency and accountability, responsiveness, security, etc.; Indicators of good urban governance; good governance and planning. First and Second Generation Reforms

Innovation in Urban Management, Good Governance Index, Citizens' Charter, Service Level Benchmarking, Report Card System, Social Audit, Corporatization of Municipal Services etc.

Unit 5: Land Assembly and Administration
Models of land assembly- national and international cases, bulk acquisition, land reconstitution, land administration, methods of land records in rural and urban areas, organisations responsible for land records and land assembly. Examples from different parts of the country.

6.2 PLANNING FOR INFORMAL SECTOR AND URBAN POOR

Unit 1: Urban Poverty
Dimensions of urban poverty, measurement of poverty, magnitude of problem, MDGs and SDGs, defining the poverty line, urban vs. rural poverty, causes and consequences of urban poverty, slums, urban poverty alleviation programmes

Unit 2: Approaches for Alleviation of urban poverty

Community planning approach, low cost alternatives and institutional reforms approach, critical review of five year plans and current policy framework

Unit 3: Concept, causes and consequences of Informal Sector
Concept of informal sector, informal sector and informality, Types of informal sector, Role of Informal Sector in Cities, Spatial Focus on Informal Sector, Characteristics of migrants and their association with growth of informal sector; socio-economic deprivation and informal sector; poverty and informality in historic areas; Informal sector – basic concepts; Policies and practices in dealing with the informal sector in India and abroad (e.g. National Policy on Urban Street Vendors, NCEUS, others), relationship between informal economy and housing, home-based economic activities

Unit 4: Planning for Informal sector
Policy framework for addressing the challenges of informal economy, planning provisions and norms, policy for household industry, street vending etc. and its implications for norms and standards at city level.

6.3 ENVIRONMENTAL PLANNING

Unit 1: Sustainable development
origin of the term 'sustainable development' - its diverse meanings/interpretations; the role of different actors - bottom-up (environmental movements) and top-down (greening of the State), 'weak' versus 'strong' sustainability, the participatory challenge (green democracy versus participatory managerialism), mainstreaming of sustainable development and its integration within sectors. Sustainable development agenda and different models of planning: Features and implications of three key models of planning from the perspective of their relation to sustainability – planning models which emphasise delivery against sustainability targets (linear rational model); those which emphasise collaboration (integration of different forms of knowledge and expertise); and those which see planning as arena for debate and emphasise learning for sustainability.

Unit 2: Environmental land use planning and management
the relationship between land-use, infrastructure and the natural environment; land use and environmental protection; community-based environmental protection; ecosystem management; integrated water resource management; hazard mitigation; ecological restoration; land conservation.

Unit 3: Community-based environmental planning
A bottom-up approach; responsive and context-sensitive plans; incorporate local knowledge; enhance local ownership; how to define the 'community'; inequality within the community; capacity of the community; relationships with other scales of environmental planning.

Unit 4: Environmental justice and land use planning
origins of environmental justice movement in USA – location of polluting industry in ethnic minority neighbourhoods; distribution of environmental ills and benefits; using GIS mapping; issue of scale; recognition of diversity of actors; procedural justice and participation; economic, social and political processes of urban development; urban poor in developing countries and environmental justice issues. EIA in India. Introduction to strategic environment assessment.

Unit 5: Global environmental problems and local planning
Debates over climate change, forest and biodiversity depletion, water scarcity and food scarcity; international environmental negotiations and treaties (1987 Montreal Protocol, 1992 Rio Convention on Biological Diversity, 1997 Kyoto Protocol etc); local environmental planning issues (Green building certification, non-motorised transportation infrastructure, rainwater harvesting, greywater recycling, urban agriculture etc.).

6.4 LAND ECONOMICS & LOCATIONAL THEORY

Unit 1: Introduction to Land Economics
Economics 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: Development of Land and Real Property
Process, cost of development, source of finance, financial calculation for private developer.

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.

Unit 5: Economic Analysis
Techniques of cost benefit analysis of urban development programme, social costs and benefits, monetization of various costs and benefits, difference between financial and economic analysis

6.5 URBAN FINANCE

Unit 1: Multiple Finance
Nature and composition of income and expenditure, limitations and need for revenue enhancements; Expenditure control methods and mechanisms; Budgetary allocation from Central and State Governments for urban development; Assistance from foreign donors and Multi National agencies; Market access; Pool finance and prerequisite conditions for accessing nontraditional funds. Multilateral and bilateral funding from international organisations.

an overview of Plan and Non Plan Financing (Planning Commission and Finance Commission); Categorisation of Municipal Sources of Revenue: Internal Vs. External Revenue, Capital Vs. Revenue Receipt; Municipal Finance Assessment Framework; Reforms in Municipal Finance, Rationalisation of User Charges; Ring fencing; Streamlining Municipal Tax Administration • Monetary Exaction, Land Exactions, Debt Financing, PPP, Role of Financial Intermediaries, Municipal Bond, Municipal Budget - Performance Budget, Gender Budget, Fiscal Indicators –RDR, FAR and EDR, Municipal Accounting and Auditing (overview only)

Unit 2: Additional Funding sources
Types of partnership approaches; Privatization of civic services; public private partnership mechanisms; Types of contracts and ownerships; Emerging cost effect technology interventions; User charged projects; Pricing of services.

Unit 3: Resources Based on Achievement of Urban Reforms
Role of state government and urban local bodies; City's challenge fund; Urban reforms; Implications on resources, incentive fund and state level pooled finance development fund.

Unit 4: Institutional Capacity Enhancement

Better finance management, management process; Accounting and budgeting, asset management, receivables management, cost center approach; Computerization as tool for resource enhancement; Role of Management Information Systems.

Unit 5: Plan forms and Indices
Financial operating plan, city corporate plan; Development of urban indicators; Infrastructure pricing and financing – financing mechanisms in addition to tax and grants; private public partnerships like BOT, BOOT, BOLT etc.; Impact fee, subsidies.

6.6 DEVELOPMENT PLANNING

Unit 1: Developed, Developing and Under-Developed Economics
Characteristics, indicators and phases of development; obstacles to development; business cycles; levels of development; series of development and planning relevance of economic development in physical planning.

Unit 2: Classical Theories of Development
Introduction to Adam Smith's theory, specialization and division of labour; Ricardian theory of rent; land value and quasi-rent.

Unit 3: Modern Theories of Development
Keynesian revolution – innovation theory, backwash and spread effect; critical minimum effort and stages of economic growth.

Unit 4: Models of Development
Balanced vs. unbalanced – dualistic approach in development; derived development; Lewis model; Harrod-Domar model; Sen's model, etc.; development models in Indian planning – first to eighth five year plan; effectiveness of the models in Indian planning.

Unit 5: Issues in Growth and Development
Planning in India – goals and objectives; targets and achievements impact, types of planning – regional disparities, population and poverty, unemployment, savings, balance of trade and payments, resource transfers and regional development, sectoral priorities and development; structural reform and its impact on growth; financing five year plans.

6.7 DEPARTMENT ELECTIVE

1. RURAL AND RESOURCE PLANNING

Unit 1: Introduction to Rural Development
Meaning, nature and scope of development; Nature of rural society in India; Hierarchy of settlements; Social, economic and ecological constraints for rural development

Unit 2: Roots of Rural Development in India
Rural reconstruction and Sarvodaya programme before independence; Impact of voluntary effort and Sarvodaya Movement on rural development; Constitutional direction, directive principles; Panchayati Raj - beginning of planning and community development; National extension services.

Unit 3: Post Independence rural Development

Balwant Rai Mehta Committee - three tier system of rural local Government; Need and scope for people's participation and Panchayati Raj; Ashok Mehta Committee - linkage between Panchayati Raj, participation and rural development. Five Year Plans and Rural Development; 73rd Constitution Amendment Act, including - XI schedule, devolution of powers, functions and its implications. Critical appraisal of government initiatives and their implementation**.**

Unit 4: Planning for Rural Areas
Planning process at National, State, Regional and District levels; Planning, development, implementing and monitoring organizations and agencies; Urban and rural interface - integrated approach and local plans; Development initiatives and their convergence; Special component plan and sub-plan for the weaker section; Micro-eco zones; Data base for local planning; decentralized planning; Sustainable rural development.

2. CLIMATE CHANGE, DISASTER RISK, AND RESILIENCE

Unit 1: Basics of Climate Change and Resilience

Concepts of global warming and climate change, factor of climate changes, challenges and issues of climate change, concepts of resilience community and settlements

Unit 2: Planning, Management, Resilience and Climate Change

Global policies on climate change, national and state policies on climate change, action plan and resilience plan for state, region and urban area. Integration of climate change policy and action plan in various levels of development plans.

Energy efficient development, Compact city form, Transit oriented development. Mechanisms and measures for mitigating and adapting to climate change at various levels Geospatial techniques for analyzing city form, energy efficient development, solar potential utilization studies, wind flow analysis studies

Unit 3: Basics of Disaster and Disaster Management Plan

Definition of calamities, disaster, disaster preparedness and mitigation, concepts of risk and vulnerability, Development and Disaster Management- Interface

Contents and details of various disaster management plans for national, state and settlement level, integration of disaster management plan with other development plan

Unit 4: Geospatial Technologies for Disaster Mitigation and Management

Remote sensing and GIS for natural disasters, flood hazard zoning, landslide hazard zonation, Earthquake hazard risk and assessment, Seismic micro-zonation, Seismic codes, Land subsidence studies, Early warning systems, Geomorphology for urban areas, Thermal images for assessment of urban heat island, Urban Hazard Risk and Analysis

3. OFFERED ELECTIVE

Any other elective course may be offered by any faculty member of the Institute, apart from the above two electives. Detailed subject contents will be separately developed.

6.8 PLANNING STUDIO- DEVELOPMENT PLAN

The study for this studio exercise shall be limited to the preparation of a comprehensive development plan of a small town; The programme may carry a predetermined focus such as planning for tourism, energy conservation, heritage conservation etc. The studio programme is designed to expose the student to:

Study and establish appropriate planning standards, techniques of population projection, Identification of the data to be collected and the sources thereof, organising surveys and collecting socio-economic, traffic and other data,

Projecting the future with different scenarios and identification of 'action areas' (i.e., specific problems related with housing, services, circulation, etc.),

Preparation and presentation of all relevant drawings and reports of complete comprehensive development plan proposal.

NOTE

Following the closure of the 6th semester academic session, each student would be required to undertake a six week professional training, during summer vacations, in an organization duly approved by the training coordinator of the Department of Physical Planning. The work undertaken during this training shall be presented by the students in the training seminar organized as part of the 'Dissertation and Training seminar'

YEAR 4 SEMESTER 7

7.1 PLANNING FOR REGIONS

Unit 1: Regions
Types of regions, delineation of regions, city region, structure of city region, area of influence and dominance, shadow regions, Trickle down effects, rural – urban fringe, its structure and growth.

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; Regional interaction: Rank Size Rule, Settlement patterns and analysis; Loschian theory; Regional networks.; Gravity model, classification of settlements. Delineation of Regions, institutional scalogram

Unit 3: Regional Developments
Regional development; Balanced and unbalanced development; Underdevelopment; Regional multiplier, input-output model; Cumulative causation theory; Core-periphery model; Growth poles and centers.

Unit 4: Planning Processes
Regional planning processes: Identification of plan objectives; collection, classification and analysis of data; Norms and standards for regional planning; Formulation of alternative plan proposals with respect to population distribution, location of new regional economic activities, infrastructure, plan implementation, etc. Selected case studies in regional development:

Unit 5: Rural Planning
Village as an organic entity; physical, social, and economic structure of village; village problems. Trans-humane, accessibility of village, inter-village communication, delivery of social services, rural reconstruction and related programmes, improvement of rural sanitation, hygiene and drainage; panchayati raj institutions; district, block and village administration, Rural Planning in Relation to National and Regional Policies

7.2 PLANNING LEGISLATION I

Unit1: 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 urban planning; benefits of statutory backing for planning schemes;

Unit2: Indian Constitution
Concepts and contents of Indian Constitution; Rights and their implication on planning; Fundamental 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: Statutory Framework for Planning and Development Law
Evolution of town planning legislation, town planning laws, town planning as a state subject, 73rd and 74th amendment and its implications for planning law, current amendments in planning and development laws.

Unit 4: Statutory Framework for Land Acquisition and Assembly

Laws related to land assembly by public and private parties. Land acquisition legislations, eminent domain, police powers and concept of public purpose. Case studies highlighting nature of contention, parties in dispute and the decisions in specific planning disputes.

7.3 PLANNING COMMUNICATION IV

Unit 1: Written Communication – Report Writing
Writing Skills; Selection of topic, thesis statement, developing the thesis; introductory, developmental, transitional and concluding paragraphs, linguistic unity, coherence and cohesion, descriptive, narrative, expository and argumentative writing. Report writing, Type; Types of reports, difference between technical, scientific, legal and other types of communication; specific characteristics of writing technical reports. Format of Reports Preface, acknowledgements, contents, indexing, key word indexing, introduction, body terminal section, appendices, references

Unit 2: Written communication - Other writing requirements
articles and manuals; Planning and preparation of technical articles for publications; Popular articles; Formal letters and specifications: Business and official letters, styles and formats; Requests for specifications and other types of business enquiries; Replies to bidding for tenders and conduct of meetings;
Agendas and minutes of official records and meetings

Unit 3: Leadership
Meaning, Nature and Functions, Leadership styles in organization, Decision Making Decision-making; definition, features, factors, essentials and hindrances in sound decision-making; structure of decisions and types of decisions; approaches to study leadership; trait-approach , behavioural approach and situational approach; Leadership in Teams, Meaning and Nature, Types of power, Relevance in organization and Society. This unit could be covered in workshop format.

Unit 4: Mediation and Conflict Resolution
Nature of conflict, conflict management and resolution techniques,

7.4 DISSERTATION AND TRAINING SEMINAR

Purpose of Dissertation is to introduce to the students to research methods and to develop competencies to critically examine a topic of their interest and present it. This will be a preparatory stage for the terminal /thesis Project. The purpose is to take students from a point at which they have general ideas about their topic for terminal/thesis project and develop research questions, structure, research strategy and present critical analysis of existing literature review on the topic.

Training
Each student shall undertake Training in a planning (or related) office during summer vacation between the Sixth and Seventh 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 in planning offices. Detail guidelines for the training seminar presentation will be provided by the Training coordinator.

Note: Training is a mandatory requirement towards the partial fulfillment of the Bachelor of Planning Degree Course

7.5 DEPARTMENT ELECTIVES*

1. URBAN RENEWAL

Unit 1: Understanding Urban Renewal
Overview and introduction of the basic concepts of urban renewal; parameters for identification of urban renewal areas; conservation, rehabilitation and redevelopment, Urban renewal policies and programmes in India

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: Legal and Administrative Aspects
National and international experience in implementing urban renewal programs; Legal and administrative framework for urban renewal and redevelopment

Unit 4: Urban Renewal and Redevelopment Projects
Critical appraisal of urban renewal and redevelopment projects, process of gentrification, social aspects of urban renewal projects

2. IMPACT ASSESSMENT TECHNIQUES

Unit 1: Introduction
What are impact assessments, Role of Environmental and Social Impact Assessment in the planning and decision making process; Definition and need, evolution and objectives, tasks and scope.

Unit 2: Methods
Methods of Environmental Impact Assessment; Advantages and limitations; Case studies from India and abroad on projects of various types covering different levels of planning

Unit 3: Assessing Environment Impacts
Impacts on Land Uses and Resources, Assessment of impacts on land use, Urban and regional; Assessment of social and health impacts, Assessment of impacts on resources (including air, water, flora and fauna); Case studies from India and abroad on projects of various types covering different levels of planning.

Unit 4: Social Impact Assessment
What is Social Impact Assessment (SIA), Need for SIA, Techniques for SIA and practical case studies undertaking social impact assessment.

7.6 POLITICS, PLANNING AND DEVELOPMENT (Institutional Elective)

Unit 1: Political Systems, Social Systems and Planning
Democracy and planning, socialism and planning, fascism and planning; tribal society, peasant society, industrial society, spatial segregation in India

Unit 2: Governance Arrangements
Politics and governance arrangements that enable and constrain effective urban planning action, governance structures (centralized versus decentralized states, local versus regional versus national authorities, participatory budgeting, etc.) and political conditions (democracy versus authoritarianism, neoliberal versus corporatist versus leftist party politics, social movements), implications of governance arrangements in different political contexts to achieve social justice and equity.

Unit 3: Politics of Policies and Projects
Politics of policy formulation, examples from transportation, housing, informal vending, and mega-project development, drawn from Latin America, South Asia, and East Asia.

Unit 4: Conflicts and contestations
Nature and mode of resolution of conflicts; public participation in planning as an aid to better understanding planning and implementation; political nature of planning and implementation problems in India; examples from the other parts of the world highlighting situations where such problems have been minimized.

7.7 PLANNING STUDIO- REGIONAL PLAN

Understanding the role and relevance of regional planning; state of art, role of planning at district and sub district level, critical appraisal of district/ sub district plans.

Formulation of goals, objectives, methodology, identification of data sources, analysis of data available, survey and preparation of schedules. Field work: visit to the field study area; conducting surveys, collection of data from secondary sources, sectorally and block wise.
Detailed data analysis, identification of potential thrust areas and development issues, both sectorally and block wise. Appropriate alternate strategy planning, settlement development strategy and programmes.
Formulation of sectoral prioritization and financial allocation (block wise); final recommendations for a district/sub district development plan.

YEAR 4 SEMESTER 8

8.1 PLANNING PRACTICE AND PLANNING LEGISLATION II

Unit 1: Ethical Planning Practice and Planning Engagement
Human values and moral reasoning, Planning practice and ethical dilemmas, resolution of ethical dilemmas, code of professional conduct,
Concept of reflective and deliberative practice, Study of decision making, role of different interest groups, deliberation and negotiation large planning project or policy modification requiring approvals,.

Unit 2: Professional Engagement and Office Administration
Tenders, Contracts, Formulation of Project Proposals., Professional fees for different types of planning practice, setting up of planning firms, official correspondence, office management practices

Unit 3: Statutory Plans and Organisations for Planning and Development
Town planning laws. Statutory nature of comprehensive plan and its implications, legal process of plan modifications, Case laws on matters related to plan preparation, modification, implementation and enforcement.
Organisations for plan preparation, implementation and enforcement such as urban/metropolitan development authorities, improvement trusts, water and sewerage boards, housing boards and any other organisations relevant.

Unit 4: Planning Law and its interface with other laws affecting development
Current laws related to environment, heritage, housing, real estate, property law and their interaction with planning law. Any other Acts relevant at a particular time for eg. special investment region acts, model community participation law.

8.2 INVITED ELECTIVES

Electives in this semester may cover any of these; Public Policy and Analysis/Real Estate Fundamentals for Planning/Cities and Technology depending on the interests of the students. Other electives can also be offered by the faculty with approval of the Board of Studies. Detailed subject contents will be separately developed periodically.

8.3 TERMINAL PROJECT/ THESIS

Each student of Bachelor of Planning is required to prepare terminal project on a subject concerning urban, rural or regional development on an approved topic finalized through discussion within the department. The terminal project will provide an opportunity to the student to synthesize the knowledge and skills acquired through the learning of various theories and practices during the course. The students will be required to present their work orally, graphically and through written report. The student will also be required to present her thesis before the external jury appointed by the concerned University / Institute / School.

SCHEME OF EXAMINATION

FIRST SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 1.1	Fundamentals of Urban and Regional Planning	3	3			3	50	100	150	Written-Exam	3h
	BPC 1.2	Planning Techniques - I	3	3			3	50	100	150	Written-Exam	3h
	BPC 1.3	Culture and Cities	3	3			3	50	100	150	Written-Exam	3h
	BPC 1.4	Computer Applications - I	3	2	1		3	100	0	100	*	**
	BPC 1.6	Quantitative Methods for Planning	3	2	1		3	50	50	100	Written-Exam	2h
Studio	BPS 1.5	Planning Communication I	4			4	4	100	0	100	*	**
	BPS 1.7	Planning Studio I	11			11	11	300	150	450	*	**
Total			**30**				**30**	**700**	**500**	**1200**		

SECOND SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 2.1	Cities in History	3	3			3	50	100	150	Written-Exam	3h
	BPC 2.2	Introduction to Social science	3	3			3	50	100	150	written-Exam	3h
	BPC 2.3	Economics for Planners	3	3			3	50	50	100	written-Exam	2h
	BPC 2.4	Site and Land Development	3	3			3	50	100	150	written-Exam	3h
	BPC 2.5	Geo Informatics for Planning I	3	2	1		3	50	50	100	written-Exam	2h
Studio	BPS 2.6	Planning Communication II	4			4	4	100	0	100	*	**
	BPS 2.7	Planning Studio II	11			11	11	300	200	500	*	**
Total			**30**				**30**	**650**	**600**	**1250**		

THIRD SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week				Credits	Marks Allocated			External Exam Type	Duration of Exam
				L	T	S		Internal	External	Total		
Department Core	BPC 3.1	Planning Theory I	3	3			3	50	100	150	Written-Exam	3h
	BPC 3.2	Planning Techniques II	4	3	1		4	50	100	150	Written-Exam	3h
	BPC 3.3	Transportation Planning I	3	2	1		3	50	100	150	Written-Exam	3h
	BPC 3.4	Infrastructure Planning I	3	3			3	50	100	150	Written-Exam	3h
	BPC 3.5	Ecology and Resource Planning	3	3			3	50	100	150	Written-Exam	3h
Studio	BPS 3.6	Geo Informatics for Planning II	3			3	3	100	0	100	*	**
	BPS 3.7	Planning Studio III - Land Use and Transport	11			11	11	250	200	450	*	**
Total			**30**				**30**	**600**	**700**	**1300**		

FOURTH SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 4.1	Planning Theory II	3	3			3	50	100	150	Written-Exam	3h
	BPC 4.2	Planning Indian Cities	3	3			3	50	50	100	Written-Exam	2h
	BPC 4.3	Demography & Urbanisation	3	3			3	50	100	150	Written-Exam	3h
	BPC 4.4	Landscape planning & Design	3	3			3	50	100	150	Written-Exam	3h
	BPC 4.5	Urban Design and Conservation	4	3			4	50	100	150	Written-Exam	3h
Studio	BPS 4.6	Planning Communication III	3	1		2	3	100	0	100	*	**
	BPS 4.7	Planning Studio IV - Site Planning	11			11	11	250	200	450	*	**
Total			**30**				**30**	**600**	**650**	**1250**		

FIFTH SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 5.1	Housing	3	3			3	50	100	150	Written-Exam	3h
	BPC 5.2	Transportation Planning II	3	2	1		3	50	100	150	Written-Exam	2h
	BPC 5.3	Project Formulation, Appraisal and Management	3	3			3	50	100	150	Written-Exam	3h
	BPC 5.4	Settlement Sociology	3	3			3	50	50	100	Written-Exam	2h
	BPC 5.5	Planning Practice I (50% Weightage of internal marks for training seminar)	3	3			3	150 (50 Marks for Training)	0	150	Internal Only	2h
Studio	BPS 5.7	Planning Studio V- Sub City / Zonal Plan	11			11	11	250	200	450	*	**
Department Elective	BPE 5.6	1. Infrastructure Planning II 2.Real Estate Development and Management	2	2			2	50	50	100	Written-Exam	2h
Total			**28**				**28**	**600**	**650**	**1250**		

SIXTH SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 6.1	Urban Governance and Management	2	2			2	50	50	100	Written-Exam	2h
	BPC 6.2	Planning for Informal sector and Urban Poor	2	2			2	50	50	100	written-Exam	2h
	BPC 6.3	Environmental Planning	3	3			3	50	100	150	written-Exam	3h
	BPC 6.4	Land Economics and Locational Theory	3	3			3	50	100	150	written-Exam	3h
	BPC 6.5	Urban Finance	2	2			2	50	50	100	written-Exam	2h
	BPC 6.6	Development Planning	3	3			3	50	100	150	written-Exam	3h
Studio	BPS 6.8	Planning Studio VI - Site Development Plan	11			11	11	250	200	450	*	**
Department Elective	BPE 6.7	1. Rural and Resource Planning 2. Climate Change, Disaster Risk and Resilience 3. One Elective Flexible to be offered by any faculty	2	2			2	50	50	100	written-Exam	2h
Total			**28**				**28**	**600**	**700**	**1300**		

SEVENTH SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 7.1	Planning for Regions	3	3			3	50	100	150	written-Exam	3h
	BPC 7.2	Planning Legislation I	3	3			3	50	100	150	Written-Exam	3h
Studio	BPS 7.3	Planning Communication IV	2	1		3	2	100	0	100	*	**
	BPS 7.4	Dissertation & Training Seminar	2			2	2	150 (50 Marks for Training)	0	150	*	**
	BPS 7.7	Planning Studio - Regional Plan	11			11	11	250	250	500	*	**
Department Elective	BPE 7.5	1. Urban Renewal 2. Impact Assessment Techniques 3. One Elective Flexible to be offered by any faculty	2	2			2	50	50	100	Written-Exam	2h
Institutional Elective	BPE 7.6	Politics, Planning and Development	2	2			2	100	0	100	*	**
Total			**28**				**25**	**25**	**750**	**500**	**1250**	

EIGHTH SEMESTER

Classification of Course	Course Code	Subject Offered	Hours/ Week	L	T	S	Credits	Marks Allocated			External Exam Type	Duration of Exam
								Internal	External	Total		
Department Core	BPC 8.1	Planning Practice and Legislation	4	4			4	100	100	200	written-Exam	3h
Studio	BPS 8.3	Terminal Project/ Thesis	16			16	16	400	500	900	*	**
Department Elective	BPE 8.2	Invited Electives to be offered by faculty	2	2			2	50	50	100	written-Exam	2h
Total			**22**				**22**	**550**	**650**	**1200**		
Grand Total			**223**				**223**	**5150**	**4850**	**10000**		

* Studio/ dissertation/Lab/Workshop/Lecture's :- external & internal exam is in one or combination of different examination mode like viva-voice/written test/ assignment/project/ model building/ jury/ seminar/presentation(electronic or paper based)

** Duration of exam of individual or whole class is decided by examiner concerned or jury members or studio coordinator or subject coordinator or HOD or dean (Academic)

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Dr. Poonam Prakash
Ms.Taru Jain