

DETAILED SYLLABUS FOR PLANNING
FIRST YEAR BACHELOR OF PLANNING SEMESTER – I
FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I
PLC 101 PLANNING STUDIO - I

CREDITS = 08

(L= 0, S= 12, W=0)

CONTACT HRS/WK = 12

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50 UNIVERSITY EXAMINATION (JURY) = 50

Focus : Focus : Graphics and Presentation Techniques

Contents:

Unit 1: Drawing equipment's and Mediums

Introduction to drawing equipments and mediums, Importance of graphics and visual presentations.

Unit 2: Use of Shapes

Use of points, lines, polygons; Horizontal, vertical, diagonal, curved lines; Line thicknesses and intensities; Texture, color and tone in materials and graphics; Shapes and forms.

Unit 3: Concepts of Scales and Proportions

Sketching of human figures, activities, natural and man-made elements; Concept of scales and proportions; Graphic scales; Lettering

Unit 4: Geometric Projections

Orthographic, isometric and perspective projections of one, two and three dimensional objects.

Unit 5: Measured Drawings

Architectural Building Drawings - Plans, Elevations, and Sections. Measured drawings for simple buildings.

Unit 6: Graphic Presentation

Graphic presentation of statistical data.

Unit 7: Base Maps and Key Maps

Scales of preparation of Base Maps at the levels of Site, Area, Zone, City, Region, etc; Preparation of Key Maps.

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I**

PLC 102 TECHNICAL REPORT WRITING

CREDITS =02

(L=02, S=0, W=03)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Writing report along with a proposal

Contents:

Unit 1: Types and Classification of Reports

Types of reports; Difference between technical, scientific, legal and other types of communications; specific characteristics of writing technical reports. English comprehension and oral communication; Presentation techniques in digital and oral format for group discussion in seminars and meetings.

Unit 2: Format and Elements of Reports

Preface, acknowledgements, contents, indexing, key word indexing, introduction, body terminal section, appendices, References and bibliography; Use of Word Processing software; Literature surveys: Use of libraries, knowledge of indexing and available reference materials.

Unit 3: Site Appraisal and Visit Reports Communication

Special type of writing: articles and manuals; Planning and preparation of technical articles for publications; Popular articles; Site visit reports

Unit 4: Research Structure and Methods

Intuition and research; Scientific research, need for scientific approach to research; Research methods; Hypotheses, testing of hypotheses; Reporting of research; Research in planning

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I
PLC 103 FUNDAMENTALS OF PLANNING**

CREDITS =03

(L=02, S=0 , W=02)

CONTACT HRS/WK = 04

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Basics of Planning, its Objectives ; Process and Methods

Contents:

Unit 1:Introduction to Planning Discipline

Defining planning as a discipline, multidisciplinary nature, role of a planner, fields of planning- Urban, regional, environmental, transport and infrastructure.

Unit 2:Definitions and Bases 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. Bases of physical planning. Planning Process and Levels of Planning in India.

Unit 3: Types of Plans

Types of plans: Definition of development plan; Types of development plans: Master plan, City development plan, Structure plan, District plan, Action area plan, Subject plan, Comprehensive planning, Zonal plans etc.

Hierarchy of plans: Regional plan, Sub-regional plan; Sector plans and Spatial plans; Town planning schemes.

Unit 4: Development Plans and Regulations

Definition of development plan; Types of development plans: master plan, city development plan, structure plan, district plan, action area plan, subject plan, town planning scheme, regional plan, sub-regional plan; Planning Advisory Group report and the UDPFI Guidelines; Sector plans and spatial plans; Defining development and development control regulations, types of development control; Implications of violations of development control regulations; Conforming and Nonconforming land uses; Compatible and non-compatible land uses, LULU and NIMBY

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I**

PLC 104 ELEMENTARY ARCHITECTURAL DESIGN AND BUILDING CONSTRUCTION

CREDITS =03

(L=01, S=0, W=04)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Principles of Architectural Design and Building Construction

Contents:

Unit 1: Principles and Elements of Design

Understanding of principles of design. Appreciation of principles of 2-D and 3-D composition. Project presentation modes through physical models, oral, digital and manual sketches.

Unit 2: Anthropometries and Layouts of Rooms

Anthropometries, Human Activity and Space Use; Furniture Layout of a room; Building circulation/ flow diagrams; Concepts of Space, Form and Function.

Unit 3: Architectural Space Standards

Introduction to Architectural Space Standards; Preparation of Design Briefs; Appreciation of different building types.

Unit 4: Building Design, Factors and Concepts

Factors and concepts related to building design - Climate, Site Characteristics, Land Form, Visual Elements, Behavioral Factors, Space Utilization.

Unit 5: Introduction to Building Elements and Materials

Introduction to building elements such as Foundations, walls, roofs, floors etc.
Building Materials-brick, timber, stone, R.C.C., Steel etc.

Unit 6: Fundamentals of Building Structures

Understanding of structural system of column-beam, load bearing wall and framed structure, roof, arching and vaults, post and lintel system etc.

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I
PLC 105 TECHNIQUES OF PLANNING**

CREDITS = 02

(L=02, S=0 , W=02)

CONTACT HRS/WK = 04

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Understanding Methods and mechanisms of Planning

Contents:

Unit 1: Techniques of Preparing Base Maps

Choice of appropriate scale for region and settlement level plans; town development plans, zonal development plans, layout plans; Graphical, linear and areal scales; Contents of base maps at various scales, notations - basic disciplines of maps; Measurement of Areas

Unit 2: Data Base for Planning and Socio - Economic Surveys

Data requirements for urban and regional planning; sources of primary and secondary data; questionnaire design, measurement scale and their application, sampling techniques, types of socio-economic surveys; self surveys, interviews, questionnaires and observer participation.

Unit 3: Physical Surveys

Techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of building, land utilization and physical features of land; Data requirement for various types of regional plans; Techniques for conducting regional surveys.

Unit 4: Graphic Presentation of Statistical Data

Application of Statistical Data analyses and presentation in the context of planning- Tabulation of data, graphical presentation of data; pie diagrams, histograms, bar charts, normal, semi-log and double-log graphs and their uses; color presentation techniques; basic disciplines of illustration and tables.

Unit 5: Graphic Presentation of Spatial Data

Land use classification, coding and analysis; residential and non-residential density patterns and analysis; colour, black and white presentation techniques; basis disciplines of illustration; Presentation of spatial data, analysis and proposals

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I
PLC 106 ELEMENTS OF SOCIOLOGY**

CREDITS = 02

(L=2, S=0, W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Developing an awareness of how social dimensions play an important role in shaping Built Environment.

Contents:

Unit 1: Understanding Sociology

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

Unit 2: Sociological Perspective and Organizing Social Life

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

Unit 3: Social Institutions

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

Unit 4: Society and Urbanization

Characteristics of Urban Social life; Process of Urbanization in India, Urbanization & Industrialization; Social issues of Urban life. Sociology and its relation to planning, Patrick Geddes's contribution in planning.

Unit 5: Community Development

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

Unit 6: Gender and Development

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

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I
PLC 107 ENVIRONMENT AND ECOLOGY**

CREDITS = 02

(L=2, S=0, W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Understanding Fundamentals of Ecology and impact of development on Environment

Contents:

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, adaptation, trophic levels, food chain, food web, ecological pyramids; Environmental zones.

Unit 2: Ecosystem and its Relevance to Environment

Resources and human settlements impact of advanced agricultural methods, urbanization and industrialization on nature; Urban ecosystem approach evolution and significance; Soil, water, land, vegetation and solar, biomass, wind, hydro energy resources; Settlement planning and energy conservation; Development and management.

Unit 3: Environmental Policies

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

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – I
PLC 108 ELECTIVE**

CREDITS = 02

(L= 0, S=0 , W= 05)

CONTACT HRS/WK =05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field.

Contents: A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester.

Courses that may be offered from time to time :

List of Elective:

- a. Photography
- b. Sketching
- c. Tourism Planning
- d. Heritage Conservation & Preservation
- e. Traffic & Transportation
- f. Planning for Informal Sectors
- g. Development of water bodies & natural resources
- h. Waste water management
- i. Urban Infrastructure
- j. Campus Planning
- k. Affordable and Cost Effective Housing
- l. Census Information Analysis

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – II
PLC 201 PLANNING STUDIO - II**

CREDITS = 10

(L= 0, S=14 , W= 0)

CONTACT HRS/WK =14

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Site and Neighborhood Planning

Contents:

Unit 1: Site Analysis

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

Unit 2: Layouts

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

Unit 3: Planning Working Drawings

Introduction to the working drawings; Preparation of plans, sections, elevations and important details of residential unit types.

Unit 4: Designing and Planning

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

Unit 5: Costing

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

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – II
PLC 202COMPUTER APPLICATION I**

CREDITS = 02

(L= 0, S=0 , W=03)

CONTACT HRS/WK =03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus:

Contents:

Unit 1: Drafting in CAD

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

Unit 2: Editing and Controlling Display in CAD

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

Unit 3: Data Conversions

Paper maps, digital layout maps, on screen digitization; Base map evaluation, scanning the maps, digitization, scale conversion, symbolization, layer control, plotting and related commands. Exercises with case studies of small layouts and large scale regional level plans may be taken up.

Unit 4: Advanced Techniques

Advanced features- x-ref, dynamic blocks, 2D and 3D conversion, perspective view, rendering, use of material finishes and lighting.

Unit 5: Application of Other relevant software

Use of Power Point and Multi-Media Projections, Data processing, word processing, presentation software like Photoshop, Google Sketchup, etc., spread sheets and data bases such as MS Office applications (Word, Excel, Access, PowerPoint).

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – II**

PLC 203 PLANNING THEORY -I

CREDITS = 02

(L= 02, S=0 , W=01)

CONTACT HRS/WK =03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Various theories of Planning

Contents:

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; Paradigms of Planning Practice by John Muller, Kuhn and others; Various issues in planning theory and practice.

Unit 2: Theories of Urban Structure

Theories of urban structure including Concentric Zone Theory; Sector Theory; Multiple Nuclei Theory and other latest theories; Land Use and Land Value. Theory of William Alonso on location and Land use; City as an organism: a physical entity, social entity and political entity.

Unit 3: Sustainability, Rationality and Globalization

Sustainability and rationality in planning; Components of sustainable urban and regional development; Globalization, internationalization, modernism and postmodernism debate; Impact of Information Technology on urban economics and politics; 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 4: 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 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.

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – II**

PLC 204 HOUSING AND COMMUNITY PLANNING

CREDITS =02

(L=02 , S= 0, W=01)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Planning for community housing and its amenities

Contents:

Unit 1: Introduction

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

Unit 2: Assessing Housing

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

Unit 3: Housing Development Process

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

Unit 4: Housing Standards and Design

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

Unit 5: Housing Policy Analyses

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

PLC 205 SURVEYING AND PHOTOGRAMMETRY

CREDITS =02

(L=01 , S=0 , W= 02)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Principles and theory of Surveying and learning photogrammetry as an alternative to surveying

Contents:

Unit 1: Fundamentals of Surveying

Definitions, classifications, use, objectives and basic principles of surveying; Classifications of measurements and units, concepts of scales, maps and plan and use of conventional symbols; Stages in surveying works - field works, office works, care and adjustment of the instruments; Errors in surveying - sources and kinds.

Unit 2: Chain Surveying and Compass Surveying

Definition, application, advantages and disadvantages, principles; Instruments used, steps in chain survey; Definition of framework of survey, survey lines, survey stations, base line, tie line, check line; Ranging and chaining a survey line, off-sets - use and types; Errors and obstacles in chaining; Plotting chain survey to prepare a plan with practical examples. Definition of compass surveying, traversing, types of traversing, applications, advantages and disadvantages, principles and instruments used in compass surveying; Concept of bearings, meridian and angles, designation of bearing, fore bearing and back bearing, local attraction; Plotting of compass survey data to prepare a plan of a small area.

Unit 3: Plain Table Surveying and Computations of Areas

Definition, application, advantages and disadvantages of plane table survey; Instruments used, working operation, methods of plane table survey; Preparation of map of a small area with plane table survey. General methods of determining area; Instrument used and their principles for computing area; Determination of area from the plotted map with different methods and comparing them; Use of Digital Planimeter.

Unit 4: Levelling and Contouring

Definition, principle, methods and application of levelling; Instruments used and the principles of their work; Concepts of level surface, level line, horizontal plane, horizontal line, vertical line, datum, bench marks; Theory of direct levelling, differential levelling and reduction of levels, classification of levelling and errors in levelling. Definition and application of contouring; Characteristics and interpretation of contour lines; Methods of locating contours.

Unit 5: Photogrammetry

Photogrammetry as an Alternative Tool for Surveying; Introduction to Aerial Remote Sensing and Aerial Photographs, Classification; Principles of Stereoscopic Vision; Basic instruments Stereo-pair, Pocket and Mirror Stereoscopes, Parallax Bars; Principles of Photogrammetry, Measurement of Heights and Depths; Introduction to Digital Photogrammetry; Introduction to GPS; Introduction to Total Stations; Applications in urban and regional planning; Laboratory Exercises

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER – II**

PLC 206 CENSUS, DEMOGRAPHY AND URBANIZATION

CREDITS = 02

(L=2 , S=0 , W=01)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION = 50

Focus : Understanding significance of Census and interpretation of data contained therein for planning

Contents:

Unit 1: Study of Population

Demographic variables: fertility, mortality, migration; Evolution of population study, contribution of Malthus; Mortality-trends, biological and social factors and mortality-gender, race, social structure, life style, social status, occupation etc; Measures of mortality-crude and age-specific death rates; infant mortality, adjusted or standardized death rates; Neonatal mortality rate; fertility-fertility trends, fertility and social and biological behavior; Differential fertility, ethnic groups, socio-economical group mobility, location etc.; Measures of fertility, crude birth rate; Age specific fertility rate; Total fertility rate, net reproduction rate; migration-causes and consequences of population movement; reasons and types of migration trends; Methods of measuring volumes of migration; Direct and indirect measures; Effect of migration of composition of population.

Unit 2: Study of Demography and Census

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

Unit 3: Urbanization in India

A brief history of urbanization in India; Mughal and British influences of India cities; Post-independence urbanization; Urbanization process as influenced by socio-cultural, political, economic and administrative factors; Definition of urban centers, concepts of rural-urban continuum and dichotomy;

Census definition of urban places town, cities, town groups, urban agglomeration, standard urban area metropolis, megalopolis etc. functional classification of urban places.

Unit 4: Urban Area as Settlement

Settlement system, Census classification of settlements, primate city, rank-size rule, urbanization, industrialization and urban development; push and pull factors; Migration trends and impacts on urban and rural development.

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

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

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER-II**

PLC 207 ENVIRONMENTAL STUDIES

CREDITS =02

(L=02 , S=0 , W=01)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION = 50

Focus :Study of Impact of Climate on built environment

Contents:

Unit 1 :Elements and constituents of Climate;

Climate and human shelter-factors shaping climate, climate and human comfort, Thermal body balance and heat exchange, comfort zone.

Unit 2:Building and its Climate:

Thermal balance of building, mechanical and structural climatic controls

Unit 3 Climatic factors

Air flow, Wind profile, Wind Speed, wind direction, local airflow and its impact on building, radiation and sunshine, temperature, humidities

Unit 4: Urban Planning and microclimate and urban heat island

Unit 5 :Urban Geometry

Building Regulations, urban climate , urban geometry

**FIRST YEAR BACHELOR OF PLANNING
SEMESTER-II**

PLC 208 ELECTIVE

CREDITS =03

(L=0, S=0 ,W=05)

CONTACT HRS/WK =05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field.

Contents: A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester.

Courses that may be offered from time to time :

List of Electives

- a. Photography
- b. Sketching
- c. Tourism Planning
- d. Heritage Conservation & Preservation
- e. Traffic & Transportation
- f. Planning for Informal Sectors
- g. Development of water bodies & natural resources
- h. Waste water management
- i. Urban Infrastructure
- j. Campus Planning
- k. Affordable and Cost Effective Housing
- l. Census Information Analysis

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 301 PLANNING STUDIO - III

CREDITS = 10

(L=02 , S=14 , W=0)

CONTACT HRS/WK = 16

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Comparative Study of Unplanned versus Planned Area

Unit 1: Studying Development Plans

The study shall involve comparative study of planned and unplanned areas along with understanding of contents of various types of development plans.

Unit 2: Organization of Field Surveys

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

Unit 4: Analysis and Synthesis

Analysis and synthesis of comparative data and information collected on various aspects;

Unit 5: Plan, Policies and Proposals

Preparation of policies and proposals; Governance structures for implementation;

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 302 COMPUTER APPLICATIONS-II

CREDITS = 03

(L=02 , S=0 , W=03)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : 3D/REVIT/3DS MAX/ ARCHICAD

Contents:

Unit 1: Drafting in CAD

Recap and revision of 2D commands.

Unit 2: Drafting

Creation of 3D model from Plan, Convert 2D from 3D Model, Visualization, Perspective View, Walkthrough

Unit 3 Advanced

Working with schedule and quantities, Site creation.

Unit 4: Data Conversions

Paper maps, digital layout maps, on screen digitization; Base map evaluation, scanning the maps, digitization, scale conversion, symbolization, layer control, plotting and related commands. Exercises with case studies of small layouts and large scale regional level plans may be taken up.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 303 PLANNING THEORY - II

CREDITS =03

(L=03 , S=0 , W=02)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Various theories in Planning

Contents:

Unit 1: Scientific Rationalism and Planning

Defining instrumental rationality; Systems view of planning with a focus on contributions of J.B. McLaughlin and others; Main 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 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.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 304 LAND ECONOMICS

CREDITS =02

(L= 02, S=0 , W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Understanding basics of Economics and its relevance to physical planning
Introducing basic items, concepts and theories drawn from economics as commonly applied in
'planning'

Contents:

Unit 1: Definition and Scope of Economics

Central problems of economics; Micro and Macroeconomic decisions; Use of economics in planning.

Unit 2: Theory of Demand and Supply

Law of demand and supply, elasticity's 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, Sectorial Development, etc.

Unit 6: Land Economics

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 305 QUANTITATIVE RESEARCH METHODS

CREDITS =02

(L= 02, S=0 , W=02)

CONTACT HRS/WK = 04

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Research Methods dealing with statistics and its interpretation

Contents:

Unit: 1 Introduction

Statistical data and methods; Collection of data, record, file, sources of data; questionnaire design.

Unit: 2 Sampling AND Data Presentation

Introduction to Sampling; Simple random sampling, stratified sampling, etc.; Data coding, data verification; Design of sample surveys. Statistical tables; Types of tables, comparisons, methods of presentation, graphic presentation; Types of charts; plotting a curve, rules for drawing curves; Bar charts, pictography, pie charts, histograms/ use of presentation software.

Unit: 3 Statistical Methods

Raw data, frequency distribution, selecting number of classes, class limits, curves, cumulative frequency distribution, measures of central tendency; arithmetic mean, median, mode, geometric mean and harmonic mean. Measures of absolute dispersion, range, quartile deviation, average deviation, standard deviation, skewness and kurtosis.

Unit 4: Probability and Sample distribution

Introduction, addition rule, conditional probability, multiplication rule, random variables and probability distribution, mathematical expectation; Binomial distribution and normal distribution.

Unit: 5 Correlation

Degree of correlation, correlation co-efficient, methods of concurrent deviation, co-efficient of rank correlation, partial correlation analysis and multiple correlation.

Unit 6: Linear Regression Analysis

Linear and non-linear regression, lines of regression, coefficient of regression; Applications in planning.

Unit 7: Time Series Analysis

Variation in time series, trend analysis, cyclical variation, seasonal variation, irregular variation, time series analysis forecasting; Applications in planning.

Unit 8: Index Number

Defining an index number, types and use of index numbers; Construction of index number; Simple aggregate method etc. Cost of living index number and its construction; Applications in planning.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 306 ENVIRONMENTAL STUDIES

CREDITS = 02

(L=02 , S= 0, W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Geology and Hydrology

Contents:

Unit 1: Introductory Earth Science and Meteorology

Earth as a planet, the solar system, movement of the earth, atmosphere and its composition, composition of the earth; The earth processes, geological cycles, igneous activities, volcanoes, minerals and their properties; Rock types and their character; Bedding, outcrop and strikes; Rock cycle; Geological and time scale; Indian stratigraphy.

Unit 2: Geological Structure, Land Forms, Weathering, Landslides and Mass Wasting

Description and classification of folds, faults, joints, unconformities, fault planes, geometrical destruction, etc. land form types; Erosional, depositional fluvial, glacial, deolian and marine; Rock weathering and climate; Mechanical and chemical processes, soil formation, landslides, sources and causes of crystal displacements, soil formation, landslides, sources and causes of crystal displacements, types, characters and effects, instability of hill slopes, prevention.

Unit 3: Earthquakes

Historical account, tectonic behavior and seismic belts; Causes, intensity and magnitude of earthquakes, seismic zoning in India, earthquake waves and their character, particle motion and behavior in various geological formations; Seismography, accelerograms and their interpretation, prediction and prevention; Earthquake resistant structures.

Unit 4: Selection of Site and Foundations

General considerations, sources of preliminary geological data particularly related to Indian stratigraphic sequences and the types of foundations, nature and preparation of foundation for road, bridge, building and other geo-technical structures; Geophysical explorations.

Unit 5: Ground Water

Concept and role in town planning of different types of terrain, hydrologic cycle, vertical distribution of groundwater, interstices; Groundwater bearing properties of different litho logical formations, porosity, permeability, specific yield, specific retention, transmissivity and storage coefficient; Ground water in igneous, sedimentary and metamorphic rocks; Aquifers; Types and classification (geological), aquiclude, aquitard; Aquifer, water table and piezometric surface; 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.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-III**

PLC 307 ELECTIVE III

CREDITS = 03

(L=0, S=0, W=5)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field .

Contents: A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester.

Courses that may be offered from time to time :

List of Electives

1. Tourism Planning
2. Heritage Conservation & Preservation
3. Traffic & Transportation
4. Planning for Informal Sectors
5. Development of water bodies & natural resources
6. Waste water management
7. Urban Infrastructure
8. Campus Planning
9. Affordable and Cost Effective Housing
10. Census Information Analysis

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV**

PLC 401 PLANNING STUDIO - IV

CREDITS =12

(L=04 , S=14, W=0)

CONTACT HRS/WK = 18

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Comprehending Plan making process by making an area Plan

Contents:

Unit 1: Approaches to Plan Making

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

Unit 2: Hierarchy in Plans and Relationship among Plans

Relationship of higher order plans with lower order plans.

Unit 3: Framework for Zonal Plans

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

Unit 4: Planning Standards

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

Unit 5: Zonal Plans/Area Plans

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

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV**

PLC 402 GEOGRAPHIC INFORMATION SYSTEMS

CREDITS =03

(L=02, S=0, W=02)

CONTACT HRS/WK = 04

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Use of geographic information systems as a tool for planning

Contents:

Unit 1: Need for GIS

Maps and spatial information, limitations of typical DBMS packages and CAD packages; Need for GISs.

Unit 2: Introductions to GIS

Geographic information systems, introduction, components, benefits; Computerized GISs, input and output devices; Spatial Data Entry into GIS, spatial information security and sharing; Data structure for GIS, Vector and raster data structures, comparative advantages and disadvantages; Maps, base maps and thematic maps, mapping and spatial analysis software, linking of attribute data, spatial data aggregation; Spatial data generalization; Limitations of GISs. analysis; Modelling service area for social infrastructures; Impact analysis.

Unit 1: Remote Sensing

Limitations of traditional surveys for planning; Remote sensing - definition, aerial and satellite remote sensing, aerial remote sensing

Unit 2: Photo Interpretation

Aerial photo-interpretation, qualitative and quantitative elements of photo interpretation; Satellite remote sensing, geostationary and sun-synchronous satellites, principles of electro-magnetic radiations, resolutions; Introduction to digital image processing; Salient features of popular remote sensing satellites; Applications in planning; Laboratory exercises.

Unit 3: Planning Information Systems

Systems approach to planning as basis for planning information systems; Systems, hierarchy, types; Data and information, value of information, information flows, loops; Information security and sharing; Information systems, types, limitations.

Unit 4: Specific Packages

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

Unit 5: Advanced Concepts in GIS

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

Unit 6: 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 7: Planning Information Systems in India

Planning information systems -NNRMS, NUIS, national urban observatory, municipal information systems, land information systems, cadaster systems; Applications and Limitations; Tools for spatial data handling, introduction to GISs.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV**

PLC 403 Planning Practices and Urban Governance

CREDITS = 03

(L=02, S=0, W=02)

CONTACT HRS/WK = 04

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Comprehending Plan making process by making an area Plan

Contents:

Unit 1: Planning Policy and Framework

Role of Town and country planning organization at central level and town and country planning department at state level. Actors framing public planning policies; Influences of various stakeholders on policy formulation; Implementation of public policies. Legal basis of planning; Types of Plans Perspective plan, Master Plan, Structure Plan, Action Area Plan; Planning approaches- Strategic Planning, Advocacy Planning, Mixed Scanning approach, Sectoral approach, Systems approach, Trans active planning, Instrumentalism, Communicative planning; Review of Comprehensive Development Plans in India.

Unit 2: Development Authorities

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

Unit 3: Development and Development Regulations

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

Unit 4: Coordination in Planning Practice

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

Unit 5: Privatization of Planning Practice

History of privatization of planning; Special Economic Zones; Retail sector developments; Infrastructure development by the private sector. Note: It is preferable that this course is delivered by practitioners having considerable experience in planning practice.

Unit 6: Urban Governance

Government, governing and governance; Determinants and indicators of good governance; Citizens charter and other instruments; Decision making processes; Processes of urbanization, developmental conflicts, resource constraints, systems deficiencies; Urban poverty and exclusion from development process; Sustainable development; Impact of globalization and economic reforms; Social diversities; Defects in planning approaches, multiplicity of organizations and authorities.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV**

PLC 404 PRINCIPLES OF VALUATION

CREDITS = 02

(L=02, S=0 , W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION(JURY) = 50

Focus : Fundamentals and Methods of Valuation

Contents:

Unit 1: Fundamentals of Valuation

Fundamentals of valuation, ownership of land, compound interest theory, calculating of present value, concepts of economic rents and social rents, property taxes, sinking fund, annuity, depreciation, valuation tables; Legislative framework-rent control, land acquisition, easements and their effects on properties.

Unit 2: Methods of Real Property Valuation

Income capitalization methods, land and building method and other methods of valuation; Purpose of valuation; Valuation for wealth tax, income tax, capital gains tax, property tax, gift tax, etc.

Unit 3: Contract Documents and Project Formulation

Tenders, contracts, arbitration, schedule of rates for construction; Materials, labor and equipment for land development, unit and mode of measurements, rate analysis; Formulations of project proposals and outline; Preparation of and response to Notice Inviting Tenders, Expression of Interest, Terms of Reference, Penalty clauses, etc.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV
PLC 405 PLANNING FOR RURAL DEVELOPMENT**

CREDITS = 02

(L=1 , S=0 , W=3)

CONTACT HRS/WK = 04

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Development of Rural areas and development schemes

Contents:

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.

Unit2: Roots of Rural Development in India

Rural reconstruction and Sarvodayaprogramme 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

BalwantRai 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; 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;

Need for decentralized planning; Sustainable rural development.

Unit 4: Post 73rd Amendment Scenario

73rd Constitution (Amendment) Act - XI schedule, devolution of powers, functions and finance; Panchayati Raj institutions - organizational linkages; Recent changes in rural local planning; Gram Sabha- revitalized Panchayati Raj; Institutionalization; resource mapping, resource mobilization including social mobilization; Information Technology and rural planning; Need for further amendments.

Unit 5: Government Schemes

Overview of contemporary government schemes for rural development. Rural development schemes plans and policies for sectors of development as agriculture and allied industries, Transport, employment, child and women development, Rural electrification, etc.

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV**

PLC 406 SUSTAINABLE URBAN DEVELOPMENT

CREDITS = 02

(L=02 , S=0 , W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Impact of development on environment and methods to mitigate its ill –effects.

Contents:

Unit 1: Concept and Issues

Changing perspectives in man-environment relationship with focus on issues of population, urbanization, resource depletion and pollution; Limits to growth vis-a-vis sustainable economy; Growth and environmental imperatives of developing vs. developed countries; Definitions, concepts and parameters in sustainable development with particular reference to Brundtland Commission, Agenda21, Eco-City approach, etc.

Unit 2: Methods and Techniques

Application of ecological principles in sustainability: energy and resource cycles, food webs, ecological pyramids and evolution and succession of natural ecosystems; Carrying Capacity based planning: concept, parameters and indicator measures, models and case studies in urban and regional development; Environmental impact and strategic environmental assessment for urban areas; Ecological footprint analysis of cities; Sustainable lifestyle assessment and behavioral modifications at household levels.

Unit 3: Land, and Energy Resources

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

Unit 4: Role of Water

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

Unit 5: Air Quality & Solid Waste Management

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

**SECOND YEAR BACHELOR OF PLANNING
SEMESTER-IV
PLC 407 ELECTIVE**

CREDITS = 03

(L=0, S=0, W=5)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field.

Contents: A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester.

Courses that may be offered from time to time :

List of Electives

- Tourism Planning
- Heritage Conservation & Preservation
- Traffic & Transportation
- Planning for Informal Sectors
- Development of water bodies & natural resources
- Waste water management
- Urban Infrastructure
- Campus Planning
- Affordable and Cost Effective Housing
- Census Information Analysis

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-V**

PLC 501 PLANNING STUDIO - V

CREDITS = 12

(L=03 , S=18, W=0)

CONTACT HRS/WK = 21

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Understanding the process of making an Urban Development Plan

Contents:

Unit 1: Studying Development Plans

The study shall involve understanding of contents of various types of development plans and explore the focus of each.

Unit 2: Selecting the Case City or Town

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

Unit 3: Organization of Field Surveys

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

Unit 4: Analysis and Synthesis

Analysis and synthesis of data and information collected on various aspects; Projections of population and workforce; Trends and issues identification.

Unit 5: Plan, Policies and Proposals

Preparation of policies and proposals with different scenarios and identification of priorities and action areas; Phasing and monitoring; Governance structures for implementation; Land use plan and the plan document.

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-V
PLC 502 PROJECT FORMULATION AND APPRAISAL**

CREDITS = 02

(L=01 , S=0 , W=02)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus :

Contents: Hands of experience of evolving a project proposal.

Unit 1: Introduction

The concept of projects, Project formulation: definition, objectives; Importance of project formulation, appraisal and management; Stages of project formulation and their significance; Methodology for project identification and formulation;

Unit 2: Project Appraisals

Project formulation: definition, objectives; Need for project appraisal; Project formulation: definition, objectives; Stages of project form Network analysis; CPM, PERT, resource levelling and allocation, time-cost trade off aspects; Bar charts, milestones, standard oriented cost control techniques; Techno-economic analysis of projects. Feasibility studies, input analysis, financial cost-benefit analysis, social-cost benefit analysis; Project appraisal and report.

Unit 3: 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 4: 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. Techniques of financial appraisal, payback period, IRR, DCF, NPV, CBR.

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-V**

PLC 503 PLANNING LAW AND LEGISLATIONS

CREDITS = 02

(L=01, S=0, W=02)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Understanding legislations as tools for planning and development

Contents:

Unit 1: Concept of Law

Sources of law (Legislation, delegated legislation and precedent); Meaning and Significance of Law, Legislation, Ordinance, Bill, Act, Regulations and Bye-laws and relationship of each of the term to planning; Benefits of statutory planning.

Unit 2: Indian Constitution

Brief contents of Indian Constitution with special reference to fundamental rights and duties of citizens, Right to Property; Directive principles of state policy, distribution of legislative powers for enactment of laws; Evolution of Planning Legislation and overview of legal tools connected with Urban Planning and Development, Model Town Planning Laws;

Unit 3: Laws and Acts for Planning and Development

Evolution of Urban and regional planning Legislation in India; 73rd and 74th Constitutional (Amendment) Acts; Model Town and Country Planning Acts & UDPFI Guidelines, Proliferation of Laws (Municipal Acts, Urban Development Authority Acts, Housing Board Acts, Improvement Trust Acts, Slum Improvement Acts etc); Environmental & Pollution Control Acts.

Unit 4: Land Acquisition Act

Introduction to Land Acquisition Act, 1984; Historical background, need, advantages, limitations; Relevance in today's context; Case studies highlighting nature of contention, parties in dispute and the decisions in specific planning dispute. Eminent Domain and police powers; Case laws in respect of land acquisition and compensation.

Unit 5: Organizations for Plan Implementation

Role of different state agencies for plan implementation; Methods of coordination between planning and implementation agencies; Statutory town planning schemes, contemporary Model schemes of some states; Significance of enforcement and single window system.

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-V**

PLC 504 PUBLIC FINANCE

CREDITS =02

(L= 02, S=0 , W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Comprehending Financial applications of projects and mechanism for mobilization of financial resources.

Contents:

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; Non-traditional sources of funding; Market access; Pool finance and prerequisite conditions for accessing non-traditional funds

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 Enhancements

Better finance management, management process; Accounting and budgeting, asset management, receivables Management, cost centre 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.

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-V**

PLC 505 INCLUSIVE PLANNING AND DEVELOPMENT

CREDITS = 02

(L= 01,S= 0,W=02)

CONTACT HRS/WK = 03

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Understanding needs of specially challenged people and planning for it.

Contents:

Unit 1: Understanding Inclusive Planning

Definitions and components

Unit 2: Analysis of Stakeholders

Profile and needs, access to shelter, services and livelihoods: Urban Poor, Informal Sector, Gender, Children, Elderly, Disabled, Displaced people etc.; Slums - dimensions, causative factors, determinants, location characteristics of settlements; Informal sector - growth, characteristics, functions, economic contributions, linkages with formal sector, impact on Urban Development

Unit 3: Participatory Planning Process

Methods, role of stakeholders (incl. civil society organisations), etc

Unit 4: Planning interventions

Inclusive zoning, development and building regulations, slum development

Unit 5: Plans, Policies and Programmes, Legislation

Related Acts, Five year plans, policies and programmes at various levels

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-VI**

PLC 506 URBAN SERVICES

CREDITS = 02

(L=02 ,S= 0,W=0)

CONTACT HRS/WK = 02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: Understanding services as life lines of human settlement and planning for it.

Contents:

Unit 1: Introduction, Basic Concepts and Theories

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

Unit 2: Storm Water System

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

Unit 3: Water Supply Systems

Surface and ground water sources, quality and quantity requirements, collection and conveyance of water, water requirement for various land uses, factors affecting water demand, per capita requirement and its relationship with population sizes, variation of water consumption, treatment methods, treatment plant location, planning of water supply system and their zoning with respect to urban structure, basic design guidelines and layout of water supply distribution system, water distribution systems in buildings and their design, financing water supply systems, case study discussion on innovative methods and successful urban water supply system, significance and methods and advantages of water harvesting system, government initiative for water harvesting system and case study discussion.

Unit 4: Sanitation and Sewer System

Sewage disposal methods and their advantages and disadvantages, quantity of sewage, low cost appropriate technologies for sanitation, standards for Indian cities, characteristics of waste water, Industrial pollutants and their effects, sanitary sewer system network and layout, procedure of planning, sewer appurtenances, case study of innovative approaches of sewage disposal in urban area.

Unit 5: Solid Waste Management

Elements of solid waste management, classification and characteristics of solid wastes, on site collection, storage, transportation and disposal of solid wastes, processing and treatment of solid wastes, incineration, pyrolysis, land filling and cost aspects of different methods of solid waste, solid waste management issues in Indian Cities. Various social aspects of the solid waste management, community participation and involvement of NGOs in efficient solid waste management.

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-VI
PLC 507 ELECTIVE**

CREDITS = 03

(L=0, S=0 , W=5)

CONTACT HRS/WK = 05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field.

Contents: A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester.

Courses that may be offered from time to time :

List of Electives

Tourism Planning

Heritage Conservation & Preservation

- Planning for Informal Sectors
- Development of water bodies & natural resources
- Waste water management
- Urban Infrastructure
- Campus Planning
- Affordable and Cost Effective Housing
- Census Information Analysis
- Traffic & Transportation

**THIRD YEAR BACHELOR OF PLANNING
SEMESTER-VI**

PLC 601 PRACTICAL TRAINING

CREDITS = 18

(L= 0,S= 0,W=0)

CONTACT HRS/WK =

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: To develop an understanding of the process and methods of undertaking live planning projects and participate in multidisciplinary teams undertaking various aspects of spatial planning including exploring specialized fields.

Contents:

The students must complete a minimum of sixteen weeks of training in a Planning firm. They are required to participate in each activity of the organization for a minimum period of twelve week. Maintaining a weekly report file and recording their activities during training period in detail (refer Guidelines for Office Training given).

The student is also expected to do case study of one project that he/she is associated with, during his training period. This study should include a complete documentation and analysis of the planning project right from its formulation, collection of relevant data. Details which are deemed confidential by the firm should not be included in the study report, which must be submitted along with the Weekly Report File. Thrust of the Report would be on specific projects that the student may be part of, describing the background, context, methodology, policy framework and proposals (if any) of the project.

The students would be evaluated on the basis of the report submitted and presented as a seminar at the time of Viva-Voce and the report received from the organization.

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VII**

PLC 701 PLANNING STUDIO - VI

CREDITS =18

(L=06, S= 20, W=0)

CONTACT HRS/WK =26

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Regional Planning

Contents:

Unit 1: Introduction to Region

Concept of Regional Planning: nature, objectives, levels and aims; Concept of a region, types, and regionalization. Role and relevance of Regional Planning at district or block level , critical appraisal of district or block level plans; Understanding the contents of various types of regional plans and their linkages with higher and lower order plans.

Unit 2: Interactions within a Region

Regional interaction: Rank Size Rule, Settlement patterns; Central Place Theory; Loschian theory; Regional networks.

Unit 3: Regional Developments

Regional development; Balanced and unbalanced development; Under-development; Regional multiplier, input-output model; Linear programming applications; Cumulative causation theory;

Core-periphery model; Growth poles and centers. District planning in the context of Constitution 73rd and 74th Amendment Acts; District Planning Committees; Metropolitan Planning Committees.

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. planning process under DPC and MPC. Organization of Field Surveys; Formulation of goals, objectives, methodologies; Identification of data and sources of information; Collection of secondary and primary data for sectoral and spatial planning; Detailed Data Analysis.

Unit 5: Case Studies

Selected case studies in regional development like Rajasthan Canal Area, South-East Resource Region, Western Ghats Region, National Capital Region, Mumbai Metropolitan Region, etc. Analysis and Synthesis; Identification of development issues, potential thrust areas and constraints: Sectoral and spatial; designing of alternative planning strategies, settlement patterns and development strategies; Sectoral and spatial prioritization, phasing, financial plans, institutional mechanisms, legislative framework, management plans.

Unit 6: Plan, Policies and Proposals

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

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VII**

PLC 702 DISSERTATION APPRAISAL

CREDITS =02

(L=02,S=0,W=0 4)

CONTACT HRS/WK =06

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION (JURY) = 50

Focus: To introduce students to basic literature, research process, techniques and colloquial arguments, so as to help them finalize a topic for their Dissertation.

Contents:

Unit 1: Dissertation Programming

Identification of topic of interest having relevance to planning profession, integration and application of the learnt research process to the pre-thesis work.

Planning colloquium: Exposure to the colloquial arguments by the stakeholders, decision makers, urban managers, advocates, technocrats, user groups, etc. Based on the inputs from the colloquial arguments, the topics shall be finalized for Dissertation.

Unit 2: Research Techniques

Data collection and analysis: Sample determination, data tabulation (coding, de-coding, etc.), quantitative and qualitative data analysis. Introduction to advanced statistical techniques such as, decision trees, factor analysis, fuzzy logic, multiple regression, multi variance, cobweb, logit and probit models, etc. Testing of hypothesis: Statistical hypothesis, simple and composite tests of significance, null hypothesis, types of errors, level of significance, critical region, chi-square distribution, goodness of fit, applications in planning.

Unit 3: Research Process

Problem identification, formulation of problem statement, literature review, working hypothesis, research brief, research methodology, sample determination, data collection and analysis, report structuring.

Unit 4: Project Formulation and Proposal

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VII**

PLC 703 DISASTER MANAGEMENT

CREDITS =02

(L=02, S=0 , W= 0)

CONTACT HRS/WK =02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) =50

UNIVERSITY EXAMINATION (JURY) = 50

Focus : Implications of various types of Disasters

Contents:

Unit 1: Basic Concepts of Disaster Management

Disaster - definitions, concept and perceptions; Different types of disasters; Various initiatives at National and State level; Kyoto Framework of disaster mitigation and management; Disaster Management Policy - National and States; Disaster Management Act - National and States.

Unit 2: Disaster Management Mechanisms

Disaster management mechanisms - national, state and district levels; Select global practices; disaster and development; Physical planning and disaster management plans; Various role players in disaster management - NGOs / CBOs and Armed Forces; Community Based Disaster Preparedness (CBDP).

Unit 3: Disaster Risk Mitigation

Natural Disasters - physical phenomenon, causes and consequences mitigation and management practices - cyclones, floods, earthquakes, landslides etc.; Causes and risk mitigation strategies at the master plan for industrial, chemical and biological disasters; Land use planning, building bye laws and disaster safe construction practices for different types of disasters.

Unit 4: Disaster Preparedness

Forecasting and early warning systems for various types of disasters; Communication and information technology in disaster management; Disaster education and awareness; Documentation and case studies on natural disasters. Urbanization, land requirements, social and affordability issues of land use, climate change and its implications in disaster mitigation.

Unit 5: Post Disaster Management and Cross Cutting Issues

Post disaster management; Rehabilitation and reconstruction of disaster affected areas; Urban disaster mitigation; Natural resource management for disaster safe habitation; Relationship between disaster and environment; safe hill area development guidelines and coastal zone regulations for safe habitation; Human settlement planning for consequence mitigation of global warming and climate change through.

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VII**

PLC 704 ELECTIVE

CREDITS =03

(L= 0, S=0 , W= 05)

CONTACT HRS/WK =05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field.

Contents: A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester.

Courses that may be offered from time to time :

List of Electives

1. Tourism Planning
2. Heritage Conservation & Preservation
3. Traffic & Transportation
4. Planning for Informal Sectors
5. Development of water bodies & natural resources
6. Waste water management
7. Urban Infrastructure
8. Campus Planning
9. Affordable and Cost Effective Housing
10. Census Information Analysis

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VIII**

PLC 801 DISSERTATION

CREDITS =20

(L= 06, S=20 , W=04)

CONTACT HRS/WK =30

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50 UNIVERSITY EXAMINATION (JURY/ VIVA) =50

Focus: project should essentially culminate in a spatial planning solution in addition to social, economic and strategic inputs. The students will be required to present the dissertation orally, graphically and through written report

Contents:

Unit 1: Development of Methodology

Clear goals and objectives along with scope of each objective should be outlined before establishing the need for conducting a research study; Substantive limitations of the research work should also be stated.

Unit 2: Literature Search

Previous published work on the subject area has to be critically examined for finding out existing thought processes of other authors and trends.

Unit 3: Primary(Field Surveys)/Secondary Data Collection

Depending on the research topic, field surveys have to be designed and field work has to be done after conducting appropriate sample surveys.

Unit 4: Synthesis of Data and Information and Findings

Field data and information and literature search findings should be synthesized to make final arguments and identification of planning issues.

Unit 5: Proposals and Recommendations

Final specific planning proposals and recommendations should be made at various geographical levels. Proposals should directly emanate from analysis and should not be generalized. Thesis should contain a list of references as per international standards.

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VIII**

PLC 802 PROFESSIONAL PRACTICE

CREDITS=02

(L= 02, S=0 , W=0)

CONTACT HRS/WK =02

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50
UNIVERSITY EXAMINATION (JURY/ VIVA) = 50

Focus : Understanding Professional Role and Responsibilities of a Planner

Contents:

Unit 1: Role of Planner

Planner's input as professional at various levels and organizations, his role in decision making processes, relevant issues:

Generalists vs. specialists, professionals vs. technocrats, planner as decision maker vs. advisor to decision maker, relationship with client, developers, institutions and contractors; Relationship with other experts such as engineers architects, sociologists, economist, lawyers, etc. for specialized studies related to planning.

Unit 2: Organization, Scope and Scale of Charges

Aims and objectives of professional institutes, sister bodies; Professional roles and responsibilities of planning consultants; Responsibilities towards clients, fellow professionals and general public; Scope of services for different projects like master plan for urban area, zonal district plan, sector/neighborhood, layout for group housing schemes, commercial centres, industrial estates, etc.; Consultancy agreements and safeguards; Fees and scales of professional charges.

Unit3: 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 4: Conflicts and Resolutions

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; Case studies: examples from the other parts of the world highlighting situations where such problems have been minimized.

Unit 5: Ethics

Canons of ethics; Ethics of virtue; Ethics of duty; Ethics of responsibility; Work ethics; Professional ethics; Ethics in planning profession, research and education.

**FORTH YEAR BACHELOR OF PLANNING
SEMESTER-VIII**

PLC 803 ELECTIVE

CREDITS=03

(L= 0, S= , W=05)

CONTACT HRS/WK =05

INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100

UNIVERSITY EXAMINATION = NIL

Focus: To help students explore their aptitudes and in developing skills in any related field .

Contents:

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9. Affordable and Cost Effective Housing
10. Census Information Analysis