

Bachelor of Planning

Syllabus - First Semester

STATISTICAL AND QUANTITATIVE METHODS IN PLANNING – I

Course Code: PLN2104

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Data Collection

Statistical data and methods; collection of data, record, file, sources of data; questionnaire design, design of sample surveys; simple random sampling, stratified sampling, systematic samples, etc.; data coding, data verification.

Module-II: Basic Data Presentation

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.

Module-III: Statistical Methods

Raw data, frequency distribution, selecting number of classes, class limits, curves, cumulative frequency distribution and ogives, 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. Statistical Programme for Social Sciences (SPSS) genstat and statisticia and its application for statistical methods.

Module-IV: Time Series Analysis

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

Module-V: Probability Theory and Probability Distribution

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

TECHNICAL REPORT WRITING AND RESEARCH METHODOLOGY

Course Code: PLN2105

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: 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.

Module-II: Format and Elements of Reports

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

Module-III: Special Type of Writing

Special type of writing: 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.

Module-IV: Research Methodology

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

PLANNING AND DESIGN LAB - I (GRAPHICS & PRESENTATION TECHNIQUES)

Course Code: PLN2107

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: Drawing Equipments and Mediums

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

Module-II: Shapes and Forms

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;

Module-III: Concepts of Scales and Proportions

Sketching of human figures, activities, natural and man-made elements; Concept of scales and proportions; Graphic scales; Free hand lettering; *Jali* patterns;

Module-IV: Perspective Projections

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

Module-V: Appreciation and Presentation

Appreciation and design of Logo and Insignia of geometric merits and format of presentation drawings

Syllabus – Second Semester

SURVEYING AND PHOTOGRAMMETRY

Course Code: PLN2202

Credit Units: 03

Lecture Hours per Week	1
Practical Hours per Week	2
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: 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.

Module-II: 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.

Module-III: 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.

Module-IV: 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.

Module-V: Photogrammetry

Photogrammetry as an Alternative Tool for Surveying; Introduction to Aerial Remote Sensing and 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; Introduction to GPS; Introduction to Total Stations; Applications in urban and regional planning; Laboratory Exercises.

SPECIFICATIONS, ESTIMATION AND VALUATION

Course Code: PLN2203

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Introduction

Why the knowledge of quantity surveying and specifications is necessary for planners? Significance and methods of writing specifications, classifications of specifications, sources of specifications; Types and methods of cost estimation for different types of projects, rates and sources of rates for different components of planning projects; Cost Index.

Module-II: General Specifications

General specifications for common building materials and building trades, earthwork, structure (framing), flooring, stonework, plasters, waterproofing of basements and terraces, roofing, doors and windows, elevators.

Module-III: Detailed Specifications

Site development and earth works; Water supply net work and distribution systems; Sewer systems; Electrical and telephone networks; Landscaping, roads, pathways, boundary wall, pools, lighting.

Module-IV: Estimation

Cost estimation and determination of rates for different types of housing; Cost estimation and determination of rates of works involved in the infrastructure services (roads, water supply, sewer systems, etc.); Costing procedure for different land use categories, development works, interest on investment, and phasing; Preparation of detailed Development Costs of a Planning Schemes for an approximate population of 5,000 as per Norms and standards.

Module-V: Valuation

Value and purpose of valuation; Definition and importance of valuation of land and buildings; Factors affecting property and land value at a city and clarity level; Legal, fiscal and administrative measures of land value; Betterment; Scrap value, salvage value, outgoings; Capitalized value of buildings; appreciation, methods of calculating depreciation.

STATISTICAL AND QUANTITATIVE METHODS IN PLANNING – II

Course Code: PLN2204

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: 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; Applications in planning.

Module-II: 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.

Module-III: Chi-Square Test and Analysis of Variance (ANOVA)

Chi-square distribution: applications of chi-square distribution; test of goodness of fit; ANOVA distribution; Applications in planning.

Module-IV: Mathematical Programming Techniques

Mathematical Programming models, linear programming problems, transportation problems, assignment problems, applications in planning.

Module-V: Decision Theory

Decision making under conditions of certainty, uncertainty, and conditions of risk, decision trees, pay off matrix, applications in planning.

TECHNIQUES OF PLANNING – I

Course Code: PLN2206

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: 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.

Module-II: 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, mailed questionnaires and observer participation.

Module-III: 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.

Module-IV: Techniques of Graphic Presentation of Statistical Data

Tabulation of data, graphical presentation of data; pie diagrams, histograms, bar charts, normal, semi-log and double log graphs and their uses; colour, black and white presentation techniques; basis disciplines of illustration and tables.

Module-V: Techniques of 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.

PLANNING AND DESIGN LAB - II (GRAPHICS AND PRESENTATION TECHNIQUES)

Course Code: PLN2208

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: Graphic Presentation

Graphic presentation of statistical data

Module-II: Base Maps and Key Maps

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

Module-III: Composition of Drawings and Photographs

Composition of Drawings, Proportions of Lettering and Line thickness, Standard symbols, Linestyles, Colour-coding; Legend, Drawing Formats; Appreciation of Thematic Maps of various levels of Planning; Introduction to Photography, Basic Principles, Composition for Architectural Building Photographs and Planning / Site Photographs;

Module-IV: Communication Skills

Graphic presentation and communication skills; Use of Power Point and Multi-Media Projections;

Module-V: Appreciation Studies

Appreciation studies of Residential, Commercial, Institutional areas in small urban and / or rural Settlements

Syllabus – Third Semester

TECHNIQUES OF PLANNING – II

Course Code: PLN2303

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Methods of Analysis

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

Module-II: Spatial Standards

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

Module-III: Regional Surveys

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

Module-IV: Plan Preparation Techniques

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

Module-V: Introduction to Advanced Techniques

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

COMPUTER AIDED DESIGN (CAD) IN PLANNING

Course Code: PLN2304

Credit Units: 03

Lecture Hours per Week	1
Practical Hours per Week	2
End Semester Examination	00
Internal Assessment	50
External Jury	50
Total Marks	100

Module-I: Drafting in CAD

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

Module-II: 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.

Module-III: Case Studies of Lay-out Plans

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

Module-IV: Case Study of a Regional Plan

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

Module-V: Limitations

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

PLANNING AND DESIGN LAB - III (NEIGHBORHOOD & SITE PLANNING)

Course Code: PLN2307

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: Designing, Preparation and Presentation of Drawings

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;

Module-II: Planning Working Drawings

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

Module-III: Site Analysis and Conceptual Approach to Site Planning

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

Module-IV: Layouts and Area Analysis

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

Module-V: Costing and Preparation of Model

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

Syllabus – Fourth Semester

PLANNING PRACTICE-I

Course Code: PLN2402

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Framing Planning Policies

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

Module-II: Development Authorities

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

Module-III: 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.

Module-IV: Coordination in Planning Practice

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

Module-V: Privatization of Planning Practice

History of privatization of planning; Special Economic Zones; Retail sector developments; Infrastructure development by the private sector such as Metro, etc.

Note: This course will be delivered by practitioners having considerable experience in planning practice.

TRAFFIC AND TRANSPORTATION PLANNING – II

Course Code: PLN2403

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Urban Structure and Transport System

Types of Urban Form and Structure, Impact of urban form and structure on transport system development, urban structure and mobility levels, concept of accessibility, land use – Transport Cycle, Transit Oriented Development (TOD), Case Studies.

Module-II: Comprehensive Transport Planning

Study area definitions, surveys and studies, survey techniques; and transport planning process – trip generation, trip distribution, modal split, trip assignment; land use transport models, Scenario development, Comprehensive Mobility Plan (CMP) Components, Case studies.

Module-III: Economic Evaluation

Economic appraisal of transport projects, techniques for estimating direct and indirect road user costs and benefits, value of travel time

Module-IV: Transport and Environment

Traffic noise - factors affecting noise, noise abatement measures, standards; air pollution – factors affecting air pollution levels, abatement measures, standards; Traffic Safety- accident reporting and recording systems, factors affecting road safety; Transport Planning for Target groups - Children, adults, handicapped and women; Norms and Guidelines for highway landscape; Street lighting type - standards and design considerations.

Module-V: Transport Policy and Management

Review of national, state and local level transport policies and their relevance in spatial and economic planning; pricing and funding of transport systems; energy and environment implications in transport; existing organizational and legal framework, transport co-ordination; Transport System Management (TSM) Plans

PLANNING AND DESIGN LAB - IV (TRANSPORTATION PLANNING)

Course Code: PLN2407

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: Classification of Roads

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

Module-II: Types of Transport Surveys

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

Module-III: Road Geometrics and Surveys

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

Module-IV: Road Layouts

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

Module-V: Area Circulation Plan

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

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

Syllabus – Fifth Semester

REAL ESTATE PLANNING AND MANAGEMENT

Course Code: PLN2501

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Land

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

Module-II: Developments of Land and Real Property

Process, cost of development, source of finance, and financial calculation for real estate developer.

Module-III: 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.

Module-IV: 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.

Module-V: 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.

PLANNING LEGISLATION

Course Code: PLN2503

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Concept of Law

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

Module-II: Indian Constitution

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

Module-III: Laws and Acts for Planning and Development

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

Module-IV: 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.

Module-V: Organizations for Plan Implementation

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

GEO-INFORMATICS FOR PLANNING

Course Code: PLN2505

Credit Units: 03

Lecture Hours per Week	1
Practical Hours per Week	2
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Remote Sensing

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

Module-II: Photo Interpretation

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

Module-III: 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;

Module-IV: 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.

Module-V: Planning Information Systems in India

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

PLANNING AND DESIGN LAB - V (AREA PLANNING)

Course Code: PLN2507

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: 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.

Module-II: Relationship among Plans

Relationship of higher order plans with lower order plans.

Module-III: Framework for Zonal Plans

The approach to developing the area/ zonal plan within the framework of Master Plan

Module-IV: Planning Standards

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

Module-V: Zonal Plans / Area Plans

Detailing of specific sites in the proposed Zonal Plans / Area Plans, covering different land uses.

TRAINING SEMINAR – I

Course Code: PLN2508

Credit Units: 02

Lecture Hours per Week	0
Practical Hours per Week	0
End Semester Examination	00
Internal Assessment	100
External Jury	00
Total Marks	100

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 Co-ordinator-in-charge of training.

The objective of Training is to expose the students to live planning projects and working environment at planning offices. The students are required to submit a ‘Satisfactory’ certificate from the relevant Planning Office after completion of Training.

The student will also submit a report, highlighting the Profile of the Planning Office, its organization, key work areas, etc; Introduction to the project(s) worked upon during training; planning brief; methods employed; and planning - design solutions / proposals.

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

Syllabus – Sixth Semester

PROJECT FORMULATION, APPRAISAL AND MANAGEMENT

Course Code: PLN2603

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Introduction to Project Formulation, Appraisal and Management

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

Module-II: 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.

Module-III: 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.

Module-IV: 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.

Module-V: 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.

GEOGRAPHIC INFORMATION SYSTEMS FOR PLANNING

Course Code: PLN2606

Credit Units: 03

Lecture Hours per Week	1
Practical Hours per Week	2
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Need for GISs

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

Module-II: Introductions to GISs

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

Module-III: GIS Modelling

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

Module-IV: Specific Packages

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

Module-V: Advanced Concepts in GISs

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

PLANNING AND DESIGN LAB - VI (URBAN DEVELOPMENT PLAN)

Course Code: PLN2607

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: Studying Development Plans

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

Module-II: Secondary Source Information for a Selected City or Town

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

Module-III: 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.

Module-IV: Analysis and Synthesis

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

Module-V: Plan, Policies and Proposals

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

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

Syllabus – Seventh Semester

DISASTER RISK MITIGATION AND MANAGEMENT

Course Code: PLN2704

Credit Units: 03

Lecture Hours per Week	1
Practical Hours per Week	2
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: Basic Concepts of Disaster Management

Disaster – definitions, concept and perceptions; different types of disasters; recent 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

Module-II: 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).

Module-III: 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.

Module-IV: 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.

Module-V: 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.

PLANNING AND DESIGN LAB - VII (REGIONAL PLANNING)

Course Code: PLN2706

Credit Units: 11

Lecture Hours per Week	0
Practical Hours per Week	11
End Semester Examination	00
Internal Assessment	200
External Jury	200
Total Marks	400

Module-I: Context of Regional Plans

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

Module-II: Constitutional Provisions

District planning in the context of 73rd and 74th Constitution Amendment Acts; District Planning Committees (DPCs); Metropolitan Planning Committees (MPCs) and Ward Committees.

Module-III: 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.

Module-IV: 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.

Module-V: Plan, Policies and Proposals

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

TRAINING SEMINAR – II

Course Code: PLN2707

Credits: 02

Lecture Hours per Week	0
Practical Hours per Week	0
End Semester Examination	00
Internal Assessment	100
External Jury	00
Total Marks	100

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 Co-ordinator-in-charge of training.

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

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

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

Syllabus – Eighth Semester

PLANNING PRACTICE-II

Course Code: PLN2802

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

Module-I: 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.

Module-II: Organization, Scope and Scale of Charges

Aims and objectives of professional institutes, sister bodies; professional roles and responsibilities of planning consultants; professional ethics; 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, group housing schemes, commercial centers, industrial estates, etc; Consultancy agreements and safeguards; Fees and scales of professional charges, competitions and copyrights.

Module-III: 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.

Module-IV: Methods of Real Property Valuation

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

Module-V: 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.

Note: This course will be delivered by practitioners having experience in planning practice.

HUMAN VALUES IN PLANNING

Course Code: PLN2803

Credit Units: 03

Lecture Hours per Week	3
Practical Hours per Week	0
End Semester Examination	50
Internal Assessment	50
External Jury	00
Total Marks	100

The objective of the course is an exploration of human values, which go into making a 'good' human being, a 'good' professional, a 'good' society and a 'good life'. The context is the work life and the personal life of modern Indian professionals.

Module-I: Nature of Values

The value-crisis in the contemporary Indian Society; The nature of values: the value spectrum for a good life; The Indian system of values.

Module-II: Values and Science and Technology

Material development and its values; the challenge of science and technology; Values in planning profession, research and education.

Module-III: Types of Values

Psychological values — integrated personality; mental health; Societal values — the modern search for a good society; justice, democracy, rule of law, values in the Indian constitution; Aesthetic values — perception and enjoyment of beauty; Moral and ethical values; nature of moral judgment; Spiritual values; different concepts; secular spirituality; Relative and absolute values; Human values — humanism and human values; human rights; human values as freedom, creativity, love and wisdom.

Module-IV: Ethics

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

Module-V: Values and Managements

Management by values — professional excellence; inter-personal relationships at work place; leadership and team building; conflict resolution and stress management, management of power

PLANNING THESIS

Course Code: PLN2804

Credit Units: 21

Lecture Hours per Week	0
Practical Hours per Week	18
End Semester Examination	00
Internal Assessment	400
External Jury	200
Total Marks	600

Each student of Bachelor of Planning is required to prepare a thesis on the subject of his / her choice, concerning urban, regional or rural planning. The topic shall be approved by the concerned department. Thesis will provide an opportunity to the student to conduct independent research by using the skills of analysis and synthesis learnt through various theory and practical courses. Thesis will be completed under the guidance of an approved research supervisor allotted by the Department. Thesis will be prepared by the student as per Thesis Manual prepared by the Department. The students will be required to present thesis 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.

Module-I: Need for the Study and Formulation of Goals and Objectives

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.

Module-II: 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 (proper acknowledgements by authors).

Module-III: Field Surveys

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

Module-IV: 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.

Module-V: 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 practice.