



Two-Year Postgraduate Programme

Post Graduate Programme

Faculty of Architecture and Planning

Parul University

Vadodara, Gujarat, India

Faculty of Architecture and Planning
Master's in planning (Urban and Regional Planning)

1. Vision of the Department

To become a Centre of Excellence that fosters Contextual Interventions for Efficient Built-environment Practices.

2. Mission of the Department

To develop creative professionals who are sensitive to the environment, socially responsive and possess the highest levels of technical competence.

3. Program Outcomes

Program Learning outcomes are statements conveying the intent of a program of study.

PO 1	Develop a deep understanding of planning in a variety of contexts, with a special focus on the Indian context.
PO 2	Identify the role of planner in practice.
PO 3	Develop an ability to deal with different types of developmental issues caused due to socio- cultural, economic, political, locational factors, haphazard planning, etc.
PO 4	Apply his/her analytical and logical ability to resolve those issues.
PO 5	Write on the subject in the form of reports, papers, articles, etc.

4. Credit Framework

Semester wise Credit distribution of the programme	
Semester-1	24
Semester-2	24
Semester-3	24
Semester-4	24
Total Credits:	96

Category wise Credit distribution of the programme	
Category	Credit
Major Core	24
Minor Stream	31
Ability Enhancement Course	6
Skill Enhancement Courses	8
Value added Courses	9
Research Thesis/Dissertation	18
Total Credits:	96

5. Program Curriculum / Teaching Scheme

Semester 1						
Sr. No.	Subject Code	Subject Name	Credit	Lect	Studio	Field Work
1.	01201101	Planning Studio	6.00	1	4	1
2.	01201102	Planning Techniques	3.00	2	-	1
3.	01201103	Infrastructure and Transport Planning	3.00	2	-	1
4.	01201104	Basic Planning Techniques	3.00	1	1	1
5.	01201105	Housing Environments and Planning	3.00	2	-	1
6.	01201106	Planning History and Theory	3.00	2	-	1
7.	01201107	Socio-economics Basis for Planning	3.00	2	-	1
		Total	24.00	12	5	7
Semester 2						
Sr. No.	Subject Code	Subject Name	Credit	Lect	Studio	Field Work
8.	01201151	Urban and Regional Planning Studio-I	9.00	2	6	1
9.	01201152	Advanced Planning Techniques	3.00	2	-	1
10.	01201153	Infrastructure Planning and Management	3.00	2	-	1
11.	01201154	Metropolitan City and Regional Planning	3.00	2	-	1
12.		Elective-I (Compulsory Subjects :1)	3.00	2	1	-
13.		Elective-II (Compulsory Subjects :1)	3.00	2	-	1
		Total	24.00	12	7	5
Elective-I						
i.	01201180	Inclusive Urban Planning	3.00	2	1	-
ii.	01201181	Planning for Tourism	3.00	2	1	-
Elective-II						
i.	01201191	Urban Heritage Conservation and Management	3.00	2	-	1
ii.	01201192	District Planning and Rural Development	3.00	2	-	1
iii.	01201193	Land Markets and Management	3.00	2	-	1
Semester 3						
Sr. No.	Subject Code	Subject Name	Credit	Lect	Studio	Field Work
14.	01201201	Urban and Regional Planning Studio-II	9.00	2	6	1
15.	01201202	Urban & Regional Development and Management	3.00	2	-	1
16.	01201203	Project Planning and Management	3.00	2	-	1
17.	01201204	Urban Governance	3.00	2	-	1
18.	01201205	Politics and Public Planning Policy	3.00	2	-	1
19.	01201206	Summer Training / Internship Review	-	-	-	-
20.		Elective-III (Compulsory Subjects :1)	3.00	2	1	-

		Total	24.00	12	7	5
Elective-III						
i.	01201230	Environment, Development and Disaster Management	3.00	2	1	-
ii.	01201231	Energy, Climate Change and Urban Development	3.00	2	1	-
Semester 4						
Sr. No.	Subject Code	Subject Name	Credit	Lect	Studio	Field Work
21.	01201251	Thesis	18.00	-	8	10
22.	01201252	Legal Issues and Professional Practice	3.00	2	-	1
23.	01201253	Development Finance	3.00	2	-	1
		Total	24.00	4	8	12

6. Syllabus & Course outcome of the subjects

Syllabus & Course Outcome

Semester I

- a. **Course Name:** Planning Studio
b. **Course Code:** 01201101
c. **Course Learning Outcomes:**

CO 1	Review and analyses the Master Plan / Zonal / Area plan in relation to the selected areas in terms of legal / illegal / authorized / unauthorized, Slums, Urban Aesthetics.
CO 2	Categorize people based on the type of population living, people's perception about area and its planning problems.
CO 3	Estimate Land use including Agriculture land and land use conflicts, extent (%) of broad land use such as commercial, industrial, residential, institutional and recreational.
CO 4	Discriminate the study area in the zone, city and regional context with respect to location, environmental issues, infrastructural designs and transportation.

- d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
1	4	1	6	-	-	20	60	20	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

- e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Film Appreciation (Individual Assignment) Films related to city development and socio-economic issues will be screened for students. The purpose of these films is to educate the students' understanding of various development issues and to absorb them in the planning practice. At the end of the film, a discourse around the film will also be held. After viewing the films, each student is expected to write about its main focus, city / region context, its applicability to Indian environment by answering the given questions in not more than half a page.		
2	Literature Review (Individual Assignment) Each student is expected to read the article given from a journal / book and write a summary of not more than a page (250 words only) highlighting the problem, approach, methodology, analysis, how the author arrived at the conclusion and its relevance to Indian context. There will be a negative marking for writing the same text as in the original (that is copying from the original text given to them).		
3	Area Appreciation (Individual Assignment) The aim of the area appreciation exercise is to enable the students to understand and contextualize the location of the area in relation to the city, zone and area in which the particular place is situated. This is done in relation to the socio-economic, spatial and cultural characteristics of that city, zone, location, etc. The main purpose is to make the students appreciate the locational attributes of land parcels for future development in a city. Due to the size of the area, this exercise is done in groups of students being		

	assigned to a particular area. The following planning issues at area level should be identified: • Review of the Master Plan / Zonal / Area plan in relation to the selected areas. Appreciation / Analysis of ward level data. • Perception of areas in terms of legal / illegal / authorized / unauthorized, Slums, Urban Aesthetics. • Social Categorizations of people - Type of population living, people's perception about area and its planning problems. • Land use including Agriculture land and land use conflicts, extent (%) of broad land use such as commercial, industrial, residential, institutional and recreational. • Extent of formal / informal activities present in the area including their location and conflicts. • General land tenure of the area and land value for different uses. • Major types of transport, type of roads, hierarchy of roads, type of transport modes used. • Amenities: Location of Social and Physical infrastructure and their problems as perceived by local population. Look for specific infrastructure such as Water supply, drainage (water logging areas), waste collection and disposal system, sanitation, etc. • Environmental Issues: Open Spaces – Availability and extent of open space to built-up area, garbage disposal, encroachment (through photographic evidences and sketches). • Locating the study area in the zone, city and regional context with respect to all the above aspects.		
4	Site Planning (Individual Assignment) Site planning is a process whereby the optimum utilization of potential of site is considered recognizing the constraints the site has. It uses 3-dimensional space of the site and the associated locational advantages, human activities and the regulations that are assigned to a particular site. The site is developed using a set of standards / norms in a given context which varies from location to location. A student is expected to understand the intricacies and interface between various variables such as soil conditions, topography, environmental dimensions, location, spatial standards applicable to the site, etc.		
5	City Development Plan (Group Assignment) A City is a multi-dimensional, dynamic and a futuristic space. Understanding city involves appreciating this multi direction, and include them in the city making process. A job of physical planner does not merely understand the current conflict in development but to emerge out of this and to come out with a vision for the city. To arrive at this vision, a planner needs to understand the dynamics of various components of the city and how and what level interventions can be made to achieve that vision. A group of students are expected to study a city in terms its present problems and issues and project a futuristic vision in terms of scenario building.		

f. Text Book and Reference Book:

1. 'Site Planning', by Kevin Lynch, The MIT Press
2. 'Residential Landscape Sustainability – A Checklist Tool', by Carl Smith, Nigel Dunnett and Andy Clayden, Wiley-Blackwell
3. 'Revised Tool Kit for Preparation of CDP', by Ministry of Urban Development, Government of India

- a. **Course Name:** Planning Techniques
b. **Course Code:** 01201102
c. **Course Learning Outcomes:**

CO 1	State various planning techniques as an analytical tool to analyse the region.
CO 2	Use various analytical techniques such as survey techniques and mapping, analytical methods, demographic methods, planning standards.
CO 3	Justify planning standards based on UDPFI guidelines, zoning regulations and development control rules and regulations.

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Survey Techniques and Mapping Data base for physical surveys including land use, building use, density, building age, etc., and socio-economic surveys; Survey techniques; Land use classification or coding and expected outputs; Techniques of preparing base maps including understanding the concepts of scales, components and detailing for various levels of plans like regional plan, city plan, zoning plan, and local area plan.		
2	Analytical Methods Classification of regions, delineation techniques of various types of regions, analysis of structure of nodes, hierarchy, nesting and rank size; Scalogram, sociogram, etc.; Planning balance sheet; Threshold analysis; Input output analysis, SWOT analysis		
3	Demographic Methods Methods of population forecasts and projections; Lorenz Curve, Ginni Ratio, Theil's index, ratios: urban – rural, urban concentration, metropolitan concentration; Location dimensions of population groups – social area and strategic choice approach – inter connected decision area analysis.		
4	Planning Standards Spatial standards, performance standards and benchmarks, and variable standards; UDPFI guidelines, zoning regulations and development control rules and regulations.		

f. **Text Book and Reference Book:**

1. An introduction to Town planning Techniques', by Margaret Robert, Hutchinson Educational, Hutchinson
2. 'Principles and Practice of Town and Country Planning', by Lewis B. Keeble, Estates Gazette Ltd.
3. 'Urban Planning Methods', by Ian Braken, Routledge
4. 'Urban Planning Analysis: Methods and Models', by Donald A. Kruekeberg and Arthur L. Silvers, John Wiley & Sons Inc.

- a. **Course Name: Infrastructure and Transportation Planning**
 b. **Course Code: 01201103**
 c. **Course Learning Outcomes:**

CO 1	Discuss the elements of infrastructure and role of transport in urban and regional planning.
CO 2	Justify the role of Infrastructure in Development-Elements of Infrastructure with reference of physical, social, utilities and services areas.
CO 3	Explain Planning and Management of Water, Sanitation , Storm Water, Waste and Transportation in written and oral format under given situation.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit,, CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Role of Infrastructure in Development Elements of Infrastructure (physical, social, utilities and services); Basic definitions, concepts, significance and importance; Data required for provision and planning of urban networks and services; Resource analysis, provision of infrastructure, and land requirements; Principles of resource distribution in space; Types, hierarchical distribution of facilities, Access to facilities, provision and location criteria, Norms and standards, etc.		
2	Planning and Management of Water, Sanitation and Storm Water Water – sources of water, treatment and storage, transportation and distribution, quality, networks, distribution losses, water harvesting, recycling and reuse, norms and standards of provision, institutional arrangements, planning provisions and management issues; Sanitation – points of generation, collection, treatment, disposal, norms and standards, grey water disposal, DEWATS, institutional arrangements, planning provisions and management issues. Storm water – rainfall data interpretation, points of water stagnation, system of natural drains, surface topography and soil characteristics, ground water replenishment, storm water collection and disposal, norms and standards, institutional arrangements, planning provisions and management issues;		
3	Planning and Management of Municipal Wastes, Power and Fire Municipal and other wastes – generation, typology, quantity, collection, storage, transportation, treatment, disposal, recycling and reuse, wealth from waste, norms and standards, institutional arrangements, planning provisions and management issues. Power – Sources of power procurement, distribution networks, demand assessment, norms and standards, planning provisions and management issues. Fire – History of fire hazards, vulnerable locations, methods of fire fighting, norms and standards, planning provisions and		

	management issues.		
4	Transport Infrastructure Planning, Management and Design Role of transport, types of transport systems, evolution of transport modes, transport problems and mobility issues; Urban form and Transport patterns, land use – transport cycle, concept of accessibility; Hierarchy, capacity and geometric design elements of roads and intersections; Basic principles of Transport infrastructure design; Traffic and transportation surveys and studies, traffic and travel characteristics; Urban transport planning process – stages, study area, zoning, data base, concept of trip generation Transport, environment and safety issues; principles and approaches of traffic management, transport system management.		

f. Text Book and Reference Book:

1. Crisis in Road Transport', by Mohinder Singh and L.R Kadiyali, Konark Publishers Pvt. Ltd
2. 'Traffic engineering and Transport planning', by L.R Kadiyali, Khanna
3. 'Environmental scenario in India: Successes and Predicaments', by S. Mukherjee and D. Chakraborty (Editors), Routledge
4. 'Infrastructure and Governance', by S. Kochhar, D. B Phatak, H. Krishnamurthy and G. Dhanjal (Editors), Academic Foundation

- a. **Course Name:** Basic Planning Techniques
b. **Course Code:** 01201104
c. **Course Learning Outcomes:**

CO 1	Indicate the sources of demographic data and applications for GIS and remote sensing for Urban and Regional Planning.
CO 2	Explain Population structure and composition based on demographic data in India towards various size class settlements.
CO 3	Solve statistical problems by using statistical interference, population and samples variables, Sampling, simple statistical models, Measures of central Tendency, Measures of Dispersion, Measures of shape of distribution, Correlation and regression.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
1	1	1	3	-	-	25	50	25	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	GIS Applications Coordinate system and geo-coding, vector data structure and algorithms, rasterdata structure and algorithms, data bases for GIS – concepts, error modeling anddata uncertainty, decision making through GIS, constructing spatial datainfrastructure and spatial information system; National Urban Information system.		
2	Remote Sensing Why remote sensing, aerial and satellite remote sensing, principles of aerial remotesensing, Aerial photo-interpretation, photogrammetry, stereovision, measurementof heights / depths by relief displacement and parallax displacement. Principles ofsatellite remote sensing, spatial, spectral, temporal resolutions. Applications inplanning, population estimation, identification of squatter / unauthorized areas,sources of pollution, etc., spatial resolution related to level of Planning		
3	Demography Sources of demographic data in India, Settlement type, growth pattern andstructure: urban settlement analysis, Concentration: spatial, vertical and size, periurbansprawl, economic base; Rural Settlements – Size, occurrence and character;transformation, Policies towards various size class settlements. Population structure and composition – Age, sex, gender, marital status, caste,religion, literacy level, etc.; Age - sex ratio, structure, pyramid; dependency ratio;occupational structure; Fertility; mortality, migration analysis, natural growth ofpopulation, migration and its implications in spatial planning;		
4	Statistical Applications General concepts - statistical interference, population and samples variables,Sampling, simple statistical models, Measures of central Tendency, Measures ofDispersion, Measures of shape of distribution, Correlation and regression		

f. **Text Book and Reference Book:**

- Geographic Information Systems and Science', by P. Longley, M. Goodchild, D. Maguire and D. Rhind, John Wiley & Sons
- 'Fundamentals of Remote Sensing', by S.C Bhatia, Atlantic

3. 'Elements of Demography', by V.C Sinha and E. Zacharia, Allied Publishers Pvt. Ltd.
4. 'Introduction to Statistical Analysis', by F.J Dixon, Wilfrid J. and Massey, McGraw Hill Book Company

- a. **Course Name:** Housing Environments and Planning
b. **Course Code:** 01201105
c. **Course Learning Outcomes:**

CO 1	Interpret socio-economic dimensions relevant to Housing.
CO 2	Categorize various types of Slums and squatters, night shelters, public health issues related to housing based on theories of housing.
CO 3	Outline concept of green housing, green rating of housing projects and basic services for housing neighbourhoods.

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Concepts and Definitions Shelter as a basic requirement, determinants of housing form, Census of India definitions, Introduction to policies, housing need, demand and supply, dilapidation, structural conditions, materials of constructions, housing age, occupancy rate, crowding, housing shortage, income and affordability, poverty and slums, houseless population. Various housing typologies viz. traditional houses, plotted development, group housing, multi-storied housing, villas, chawls, etc.		
2	Social and Economic Dimensions Housing as social security, role of housing in development of family and community well being, status and prestige related to housing, safety, crime and insecurity, deprivation and social vulnerability, ghettoism, gender issues, housing for the elderly. Contribution of housing to micro and macro economy, contribution to national wealth and GDP, housing taxation, national budgets, fiscal concessions, forward and backward linkages		
3	Housing and the City Understanding housing as an important land use component of city plan / masterplan, considerations for carrying out city level housing studies, projections, land use provisions; Suitability of land for housing, housing stress identification, projecting housing requirements, calculating housing shortages, housing allocation.		
4	Housing Environments Slums and squatters, night shelters, public health issues related to housing, various theories of housing, concept of green housing, green rating of housing projects; basic services for housing neighbourhoods. Approaches to neighbourhood living in traditional and contemporary societies, elements of neighbourhood structure Planning and design criteria for modern neighbourhoods, norms and criteria for area distribution, housing and area planning standards, net residential density and gross residential density,		

	development controls and building byelaws, UDPFI guidelines, NBC 2005 provisions and Case studies of neighbourhood planning.		
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f. Text Book and Reference Book:

1. 'People and Housing in Third World Cities', by D. J Dwyer, Longman
2. 'Housing: a factual analysis', by Glenn Beyer, Macmilan Company
3. 'Man's Struggle for Shelter in Urbanizing World', by Charles Abrams, The MIT Press
4. 'Urban Housing in the Third World', by Geoffrey Payne, RoutledgeKegan and Paul
5. 'Inside the Civano Project (Green source Books): A Case Study of Large-Scale Sustainable Neighborhood Development (McGraw-Hill's Green Source)', by C. Alan Nicholas and Jason A. Laros, McGraw-Hill Education
6. 'Sustainable Urbanism: Urban Design with Nature', by Douglas Farr, John Wiley & Sons
7. 'Shelter in India-sustainable Development Series', by AromarRevi, Stosius Inc./ Advent Books Division
8. 'Eco Housing Assessment Criteria-New Construction', by International Institute for Energy Conservation (IIEC), USAID

- a. **Course Name:** Planning History and Theory
b. **Course Code:** 01201106
c. **Course Learning Outcomes:**

CO 1	Correlate the history and relevance of urban, regional planning and evolution of settlements.
CO 2	Defend Human settlements as an expression of civilizations based on elements of the city and Town planning in ancient India.
CO 3	Illustrate the concept of City as a living spatial entity, political statement and an organism.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit,, CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Evolution of City Building Relevance of the study of evolution of settlements; Hunter, gatherer, farmer and formation of organized society; Cosmological and other influences, origins and growth of cities, effects of cultural influence on physical form; Human settlements as an expression of civilizations; Basic elements of the city; Concepts of space, time, scale of cities.		
2	Planning History Town planning in ancient India; Medieval, renaissance, industrial and post industrial cities; City as a living spatial entity; Concepts of landmark, axis, orientation; City form as a living space; City as a political statement: New Delhi, Chandigarh, Washington D.C. Brasilia etc; Contribution of individuals to city planning: Lewis Mumford, Patrick Geddes, Peter Hall, etc; Dynamics of the growing city, impact of industrialization and urbanization, metropolis and megalopolis.		
3	Definitions and Objectives of Planning Definitions of town and country planning; Orthodoxies of planning; Goal formulation, objective, scope, limitations; Sustainability and rationality in planning; Components of sustainable urban and regional development		
4	Theories of City Development and Planning Theories Theories of city development including Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory and other latest theories; Land use and land value theory of William Alonso; Ebenezer Howard's Garden City Concept; and Green Belt Concept; City as an organism: a physical, social, economic and political entity; Emerging Concepts: global city, inclusive city, safe city, etc.; City of the future and future of the city; Shadow cities, divided cities; Models of planning: Advocacy and Pluralism in Planning; Systems approach to planning: rationalistic and incremental approaches, mixed scanning and middle range planning; Equity planning; Political Economy Model; Types of development plans, plan making process.		

f. Text Book and Reference Book:

1. "Cities of tomorrow: An intellectual history of urban planning and design since 1880", by P. Hall, Wiley-Blackwell
2. 'One Hundred Years of City Planning's Enduring and Evolving Connections (Journal of American Planning Association)', by E.L Birch and C. Silver, Routledge
3. 'Making the Invisible Visible: A Multi-cultural Planning History', by L. Sandercock, University of California Press
4. 'Four Critical Junctures in the History of the Urban Planning Profession - An exercise in hindsight (Journal of American Planning Association)', by M. P Brooks, Routledge
5. 'Urban and Regional Planning: A Systems Approach', by J.B McLoughlin, Faber and Faber
6. 'A Reader in Planning Theory', by A. Faludi, Peragamon Press
7. 'Collaborative Planning: Shaping Places in Fragmented Societies (Planning, Environment, Cities)', by Prof. P. Healey, Palgrave McMilan
8. 'Urban and Regional Planning', by P. Hall and M. Tewdwr-Zones, Routledge

- a. **Course Name:** Socio Economics Basis for Planning
b. **Course Code:** 01201107
c. **Course Learning Outcomes:**

CO 1	Establish relevance to Socio-economic Issues and Socio-cultural profile of Indian society and urban transformation in Urban and Regional Planning.
CO 2	Discuss Tradition and modernity in the context of urban and rural settlements with reference to Displacement, resettlement and rehabilitation due to compulsory land acquisition.
CO 3	Estimate demand, supply and economic-social cost-based production and factor market.
CO 4	Compare and Contrast different market structures and price determination based on determinants of national income, consumption, investment, inflation, unemployment, capital budgeting, risk and uncertainty, and long-term investment planning

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Nature and Scope of Sociology Sociological concepts and methods, man and environment relationships; Socio-cultural profile of Indian society and urban transformation; Tradition and modernity in the context of urban and rural settlements; Issues related to caste, age, sex, gender, health safety, and marginalized groups; Displacement, resettlement and rehabilitation due to compulsory land acquisition.		
2	Community and Settlements Social problems of slums and squatters communities, urban and rural social transformation and their impact on social life, safety, security; Crimes in urban areas and their spatial planning implications, social structure and spatial planning; Role of socio-cultural aspects on growth patterns of city and neighbourhood communities; Social planning and policy, and community participation; Marginalization and concepts of inclusive planning, and gender concerns in planning. Settlement Policy: National Commission on Urbanization, Rural Habitat Policy and experiences from developing countries regarding settlement structure, growth and spatial distribution.		
3	Elements of Micro and Macro Economics Concepts of demand, supply, elasticity and consumer markets; concept of revenue costs; Economies of scale, economic and social costs, production and factor market; Different market structures and price determination; market failures, cost-benefit analysis, public sector pricing; Determinants of national income, consumption, investment, inflation, unemployment, capital budgeting, risk and uncertainty, and long-term investment planning.		
4	Development Economics and Lessons from Indian Experiences		

	Economic growth and development, quality of life; Human development index, poverty and income distribution, employment and livelihood; Economic principles in land use planning; Policies and strategies in economic planning, balanced versus unbalanced growth, public sector dominance; changing economic policies, implications on land.		
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f. Text Book and Reference Book:

1. 'Urban Sociology', by N. Jayapalan, Atlantic Publishers and Distributors
2. 'Urban Sociology-Images and Structure', by William G. Flanagan, Rowman and Littlefield Publishers
3. 'Sustainability and Human Settlements: Fundamental Issues, Modeling and Simulation', by Mani Monto, L.S. Ganesh and K. Verghese, SAGE Publications Pvt. Ltd.
4. 'Principles of Economics', by D. N Dwivedi, Vikas Publishing House Pvt. Ltd.
5. 'Principles of Economics', by Karl E. Case, Pearson Education
6. 'The Economics of Development and Planning', by M. L Jhingan, Vrinda Publications Pvt. Ltd.

Semester II

- a. **Course Name:** Urban and Regional Planning Studio-I
 b. **Course Code:** 01201151
 c. **Course Learning Outcomes:**

CO 1	To understand the Characteristics of the City and Preparation of Sustainable Development Plan and to understand the concept of Village and Block Level or Taluka Planning. The laboratory training will be conducted in accordance with the studio exercise.
CO 2	Introduction to Geo-informatics, introduction to Remote Sensing – Aerial and Satellite; introduction to GIS, Spatial data and Attribute data; Satellite images as input to GIS; Collection and presentation of baseline information. Initial study involves understanding of the exercise through theories, study of similar case studies, awareness of relevant norms and standards through extensive literature search.
CO 3	Students are required to prepare a comprehensive list of required data and identify probable sources before making a field visit to the case study town/city.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	6	1	9	-	-	20	60	20	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Geo-Informatics Laboratory Training The laboratory training will be conducted in accordance with the studio exercise. Introduction to Geo-informatics, introduction to Remote Sensing – Aerial and Satellite; introduction to GIS, Spatial data and Attribute data; Satellite images as input to GIS; Collection and presentation of baseline information.		
2	Development Plan The studio exercise focuses on the planning, development and design aspect (in line with the other core and elective courses offered in the semester). The exercise pertains to large cities and emerging metropolitan cities and ranges from preparation of sustainable development plans to sector specific themes pertaining to tourism, SEZs, etc. The studio exercise enables students to develop an approach/ framework for the task; it is field based as a database is generated that is analyzed and the plan and strategies are formulated.		
3	Block or Taluka Planning Block or Taluka Planning has been practiced in India since		

	Independence. After the 73 rd and 74 th CAA, the emphasis has been placed on district planning which in turn has given scope to do Block or Taluka planning so as to achieve inclusive development. The students are required to prepare a detailed Block or Taluka Plan for a selected block(s) in a district and come out with a detailed analysis, proposals for development and written report.		
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f. Text Book and Reference Book:

1. 'Validity and the Review of Literature, Review in the Schools' by A. Dellinger
2. 'Doing a Literature Review, Releasing the Social Science Research Imagination' by C.Hart, Sage and Open University
3. 'A Student's Writing Guide: How to Plan and Write Successful Essays' by G. Taylor, Cambridge University Press
4. 'The Complete Guide to Referencing and Avoiding Plagiarism (Open up Study Skills)' by Neville Colin, Open University Press
5. 'An introduction to Social Research: Quantitative and Qualitative Approaches', Keith Punch, SAGE Publications
6. 'Working with Maps', K. K Gupta and V. C Tyagi, 105, Printing group, Survey of India, Dept. of Science and Technology, Government of India
7. 'Manual of Integrated District Planning', Planning Commission, Planning Commission

- a. **Course Name:** Advanced Planning Techniques
b. **Course Code:** 01201152
c. **Course Learning Outcomes:**

CO 1	To study Advanced Planning Techniques such as surveying techniques, GIS Mapping, Analytical techniques, Report writing and Presentation.
CO 2	Data Base for Physical surveys (including land use / building use / density / building age, etc.) and Socio-economic surveys; Questionnaire formulation, Sampling and survey techniques, etc. Land use classification / coding.
CO 3	Approaches in research, developing a method for research; Questionnaire Design, Types of data, sampling methods; developing aims, objectives, scope, limitations; and literature research – using library, accessing the Internet. Data tabulation; Interpretation of information; Graphical presentation of data; Spatial representation of data.
CO 4	Types of reports with specific focus on technical report writing; Organizing the report, structure chapter organization, Writing the report (analytical findings); Referencing in text, use of software in referencing.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; **T-** Tutorial; **P-** Practical; **C-** Credit; **CE-** Continuous Evaluation, **ESE-** End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Survey Techniques Data Base for Physical surveys (including land use / building use / density / building age, etc.) and Socio-economic surveys; Questionnaire formulation, Sampling and survey techniques, etc. Land use classification / coding		
2	GIS Mapping Coordinate system, Geo-referencing and geo-coding; GIS data processing (Digitization, topology building and metadata creation), Data structures and modeling, GIS analysis (Buffer, proximity and overlay), Decision making through GIS, Information systems (Land Information system, Urban Information system for various activity sectors)		
3	Research Design and implementation Approaches in research, developing a method for research; Questionnaire Design, Types of data, sampling methods; developing aims, objectives, scope, limitations; and literature research – using library, accessing the Internet		
4	Analytical Techniques, Presentation and Report Writing		

	Data tabulation; Interpretation of information; Graphical presentation of data; Spatial representation of data; Types of reports with specific focus on technical report writing; Organizing the report, structure chapter organization, Writing thereport (analytical findings); Referencing in text, use of software in referencing.		
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f. Text Book and Reference Book:

1. 'Survey Methodology' by R.M. Groves, F.J. Fowler, M.P. Couper, J.M. Lepkowski, E. Singer, R. Tourangeau, John Wiley and Sons
2. 'Urban Planning and Development, Application of GIS' by S. Easa, Y. Chan (Editor), American Society of Civil Engineers.
3. 'Research Design' by John W. Creswel, Sage Publications 'Writing the Winning Thesis' by A. Glatthorn and R. L. Joyner, Corwin Press

- a. **Course Name:** Infrastructure Planning and Management
b. **Course Code:** 01201153
c. **Course Learning Outcomes:**

CO 1	To study the Significance of Infrastructure in Urban and Regional Planning and Development. Equity, Access, level and Efficiency, Quality of Service, Paying Capacity, Pricing of Infrastructure Services; Ownership and Control: Public, Private, SPV, and PPP Models in infrastructure provision, Multi-service providers and their operation at various levels.
CO 2	Infrastructure Policy: Regulatory and Facilitative, Investment Requirement at various levels and actual investments in Infrastructure; Role of Infrastructure in regional development, Critical Infrastructure in regional development, and Indicators of infrastructure development in defining regional development, standards and bench marks for infrastructure provision and delivery at various levels; Role of Spatial Information Technology (SDI) in the planning, provision, and monitoring infrastructure.
CO 3	Quantity and quality, source of supply, transmission and distribution, treatment methods, design guidelines. Basic principles, generation, characteristics, collection, disposal, management.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Infrastructure Planning and importance of Regional Infrastructure Equity, Access, level and Efficiency, Quality of Service, Paying Capacity, Pricing of Infrastructure Services; Ownership and Control: Public, Private, SPV, and PPP Models in infrastructure provision, multi-service providers and their operation at various levels. Infrastructure Policy: Regulatory and Facilitative, Investment Requirement at various levels and actual investments in Infrastructure; Role of Infrastructure in regional development, Critical Infrastructure in regional development, and Indicators of infrastructure development in defining regional development, standards and bench marks for infrastructure provision and delivery at various levels; Role of Spatial Information Technology (SDI) in the planning provision, and monitoring infrastructure.		
2	Water Supply and Sanitation Quantity and quality, source of supply, transmission and distribution, treatment methods, design guidelines. Introduction: Sources of water, current scenario: Conflicts and Co-operation – Transboundary water conflicts: inter-		

	state, international water treaties, National Water Policy, Water Rights: Excess and under utilization of water. Access standards, demand and supply analysis, pricing parameters, conservation issues, technology: extraction, cleansing, recycling and reuse. Pollutions associated with water. Institutions in Water provision: PPP, SPV in water; Role of Community in water provision. Conflicting use of water: Agriculture vs. Water harvesting; Water for Irrigation: Source, Access, Trans-boundary conflicts and co-operation, pricing, demand and supply conditions. Regulatory and Facilitative policies, Investments in Irrigation: Minor, Major irrigation and issues related to these. Technology in irrigation (systems); equity, efficiency and pricing issues in irrigation; Drinking /Potable Water: Source, provision at various levels (Village, City and District) equity, efficiency, leakages and unaccounted water and its minimization; Privatization of Water and its implications. Pricing and access; Spatial variations in standards and provisions.		
3	Solid Waste Disposal and Management Basic principles, generation, characteristics, collection, disposal, management Waste in Rural Areas: types of waste, problems and re-use; community involvement in collection, treatment and re-use. Waste in Urban Areas: collection and disposal, technological innovations, formal and informal institutions in waste collection. Role of ULBs, NGOs, informal networks, rag-pickers, solid waste as an economy issue, cost recovery in solid waste.		
4	Fire and Electrification, and Social Infrastructure Planning for fire protection, services and space standards, location criteria; Planning for Education, health, civic, cultural infrastructure		
5	Traffic and Transportation Planning for infrastructure and facilities for transport		
6	Regional Roads and Energy Hierarchy of Roads: <i>National, State, District, Other District Roads, and Village Roads</i>: Standards, provision and institutions involved. Investment, pricing and maintenance; Access, Coverage and conditions; National, State and District Policies towards Roads; National Highway Project: Golden Quadrilateral, North-South and East-West Corridors and its impact on regional space, PMGSY and its impact on village connectivity. BRDO: border roads and backward regions; Forward and Backward regions in terms of road provision; Conventional and Alternative Energy Sources and Policies and programmes towards energy at various levels. Demand and Supply projections, investment and pricing; Trans-boundary issues in production, sharing; privatization issues. Nuclear Energy: issues involved and probable spatial impact.		

f. **Text Book and Reference Book:**

1. 'Managing Urban Water Supply' by E. Gathe Donald, Billings, R. Bruce, Buras, Nathan, Dordrecht, Kulwer Academic Press
2. 'Water of India' by G.K. Ghosh, A.P.H. Publishing Corporation
3. 'Water Problems and its Management' by SatishYadav, Hope India Publications
4. 'Urban Water Supply Handbook' by W'Mays Larry, McGraw Hill Handbook
5. 'Urban Drainage' by David Butter, David Butter & John W. David Spon Press
6. 'Basic Environmental Technology: Water Supply, Waste Disposal & Pollution Control' by J.A. Nathanson, P.E. John Wiley and Sons, N.R. Brisbane, Prentice Hall
7. 'Municipal Solid Waste Management' by N.N. Bandela, D.G. Tare, B.R. Publishing
8. 'Manual on Municipal Solid Waste Management, The Expert Committee Gol, MoUD, CPNEEO 2000 Managing Solid Waste in Developing Countries' by J.R. Holmes, John Pub, John Wiley & Sons
9. 'CPHEEO Manuals on Water Supply, Sewerage, Drainage and Solid Waste Management', by CPHEEO, CPHEEO
10. 'Improving Municipal Solid Waste Management in India', by Da Zhu, P.U Asnani and Chris Zurbrugg; World Bank Publications
11. 'Unleashing the Potential of Renewable Energy in India', by Gevorg Sargsyan, Mikul Bhatia, Sudeshna Ghosh Banerjee, Krishnan Raghunath and Ruchi Soni; World Bank Publications
12. 'Report of Working Group on Road Transport', by Working Group on Road Transport for 12th Plan, Planning Commission

- a. **Course Name:** Land Markets and Management
b. **Course Code:** 012001193
c. **Course Learning Outcomes:**

CO 1	To study Land Markets and Land Management Techniques. Economic Principles of Land use, Concept of Rent and its application. Demand forecasting for land, factors affecting land supply and demand;
CO 2	Market Conditions –formal and informal, legal and illegal; Instruments of land policy and impact on markets:
CO 3	Planning instruments, market development instruments, financial development instruments, fiscal instruments, and other supportive instruments

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	-	50	-	-	50	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Land Economics, Land Policy and Land Markets Economic Principles of Land use, Concept of Rent and its application. Demand forecasting for land, factors affecting land supply and demand; Market Conditions –formal and informal, legal and illegal; Instruments of land policy and impact on markets: Planning instruments, market development instruments, financial development instruments, fiscal instruments, and other supportive instruments: Demand Side Management Income elasticity of land, business cycles and its impact on demand for land, externalities and internalities in land development and induced demand, economic growth and demand for land; Changes in tastes and preferences and its effect on type of land; Poor and their demand; Physical, fiscal, financial and legal incentives for inducing or restricting the demand for land; Mega investments and its effect on land.		
2	Supply Side Management Property Rights: ownership, user and exchange rights: Its implication on land supply, Land Development: Type, cost, methods of disposal. Corruption and land markets: Corruption, black money and land markets; Relation between land, share and gold markets.		
3	Market by Government and Government by Markets: Regulation, monopoly power and its use, private development, rent-seeking and its impact on land supply, access to land by various segments of population, and PPP in land.		

4	Regulation in Land Markets: Social justice and land distribution: public domain, social-democratic regulation and corporatist regulation, collective action of the state and regulation of its supply of land – overall impact of regulation on land prices: Master Plan, Zoning and other planning regulations and their impact on supply. Land Management Techniques: Private land assembly, co-operatives in land development, FDI in land development, land pooling and plot reconstitution, Transfer of development rights, land sharing and land lease.		
5	Land Pricing and Real Estate Markets Land valuation techniques, land pricing, subsidies, auctions; type of development: plotted, flat system, and their effect on land pricing. Hedonistic pricing, land price behaviour in urban centres; constructing the land price index; Market Conditions – real estate cycles, market efficiency, market forecasting, Cartels, collusion, and rent seekers in real estate market, agents in real estate markets, risks; Real estate regulatory bill and its likely impact. Land Information System (LIS): Land records in rural areas (examples from Karnataka, Andhra, etc), transparency in land transaction, methods of publicizing land prices and land price monitoring.		

f. **Text Book and Reference Book:**

4. 'Urban Land Economics' by Jack Harvey and Jowsey Ernie, Macmillan Publications
5. 'Sustainable Land Management Sourcebook' by World Bank, World Bank Publications.
6. 'Urban Land Economics' by Jack Harvey and Jowsey Ernie, Macmillan Publications
7. 'Sustainable Land Management Sourcebook' by World Bank, World Bank Publications.

- a. **Course Name:** District Planning and Rural Development
b. **Course Code:** 01201192
c. **Course Learning Outcomes:**

CO 1	To study District Planning with Integration of Rural and Urban Development Initiatives, Policies and Programmes. Introduction: Meaning and Scope and overview of rural development: Historical perspective – Rural Development Programmes in India. Problem / perception and identification;
CO 2	Rural Area Planning – Programmes / Policies / Schemes for rural development, their coverage and outcomes;
CO 3	Rural Infrastructure Development: Bharat Nirman – A business plan for rural infrastructure, Rural Building Centres, PMGSY, IAY, Rajiv Gandhi Technology Mission, Central Rural Sanitation Programme, PURA

d. **Teaching & Examination Scheme:**

g. Teaching & Examination Scheme:

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	-	50	-	-	50	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Introduction Decentralized Planning in India – Historical perspective: Current Scenario – Recent Development in decentralized district level planning. 73rd and 74th Constitution Amendment Acts, Participative District Planning; Role of Planning Commission and Finance Commissions, and ICT in District Planning.		
2	District Planning Data Management and District Level Visioning, Institutional and other support for District Planning Committee, Bridging gap through district planning, resource mapping and determination of funding sources, consolidation of urban and rural plans; Multi-Sector and multi-level integrated approach to planning (vertical and horizontal spatial integration); Rural-Urban spatial relationship; District Development Plans – Guidelines for District Planning: Content and context and methodologies, Village Development Plans – an Integrated approach, rural norms and standards (spatial). Capacity Building for Decentralized Planning; Democratizing Information: using media for district development.		
3	Rural Development - I Introduction: Meaning and Scope and overview of rural development: Historical perspective – Rural Development Programmes in India. Problem / perception and identification; Rural Area Planning – Programmes / Policies / Schemes for rural development, their coverage and		

	outcomes; Rural Infrastructure Development: Bharat Nirman – A business plan for rural infrastructure, Rural Building Centers, PMGSY, IAY, Rajiv Gandhi Technology Mission, Central Rural Sanitation Programme, PURA. Rural Employment Schemes: Mahatma Gandhi National Rural Employment Guarantee Act, 2005, Sampoorna Grameen Yojana, National Food for work programme, Swarna Jayanti Gram Swarozgar Yojana, National Social Assistance Programme. Programmes: Command Area Programme, Drought Prone Area Programme, Backward Area Development Programme, North Eastern Development Programme. Technology Missions: Water, Sanitation, etc.		
4	Rural Development - II Changing Profile of the Rural areas of India: Consumption pattern changes, land utilization changes, cropping pattern changes, holding size change, living standard changes, changes in asset ownership – its implication in the planning process; Rural Settlement Analysis: Types, activity, environment and economic interface in rural habitat, technology in rural settlement; Land Utilization: Types of land utilization and its relevance to planning; Land conversions and its regulation / facilitation in peri-urban areas; Land utilization analysis; Common property and its use, tenancy and ownership, holding size and its relevance, irrigated and non-irrigated and land values; Sources of information for land information; Technology in Rural Development: ICT in rural development, Rural Information system, Weather forecasting, disaster minimization, market information, etc. E-Panchayats, energy-efficient technologies and alternative technologies; Inclusive Development: Special Component Plan - Tribal Sub Plan and Weaker Sector Plan allocation, implementation, monitoring and evaluation; North Eastern Plan.		

f. Text Book and Reference Book:

1. 'Panchayati Raj, From Legislation to Movement' by George Mathew, Concept Publishing Co.
2. 'Constitution (73rd Amendment) Act 1992' by GOI, GOI
3. 'Constitution (74th Amendment) Act 1992' by GOI, GOI
4. 'Manual of Integrated District Planning' by Planning Commission, Planning Commission
5. 'Various Five Year Plans (1st to 12th)', by GOI, Planning Commission
6. 'Kollam Perspective Plan' Government of Kerala, Department of Town & Country Planning, Thiruvananthapuram
7. 'Rural Development in India: A Public Policy Approach' by S. Maheshwari, SAGE
8. 'People's Knowledge, Participation and Patronage' by B. Cokke (Editor) and U. Kothari (Editor), ZED Books

- a. **Course Name: Urban Heritage Conservation and Management**
b. **Course Code: 01201191**
c. **Course Learning Outcomes:**

CO 1	Indicate the sources of demographic data and applications for GIS and remote sensing for Urban and Regional Planning.
CO 2	Explain Population structure and composition based on demographic data in India towards various size class settlements.
CO 3	Solve statistical problems by using statistical interference, population and samples variables, Sampling, simple statistical models, Measures of central Tendency, Measures of Dispersion, Measures of shape of distribution, Correlation and regression.

d. **Teaching & Examination Scheme:**

Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	1	-	3	-	50	-	-	50	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	GIS Applications Coordinate system and geo-coding, vector data structure and algorithms, raster data structure and algorithms, data bases for GIS – concepts, error modeling and data uncertainty, decision making through GIS, constructing spatial data infrastructure and spatial information system; National Urban Information system.		
2	Remote Sensing Why remote sensing, aerial and satellite remote sensing, principles of aerial remote sensing, Aerial photo-interpretation, photogrammetry, stereovision, measurement of heights / depths by relief displacement and parallax displacement. Principles of satellite remote sensing, spatial, spectral, temporal resolutions. Applications in planning, population estimation, identification of squatter / unauthorized areas, sources of pollution, etc., spatial resolution related to level of Planning		
3	Demography Sources of demographic data in India, Settlement type, growth pattern and structure: urban settlement analysis, Concentration: spatial, vertical and size, periurban sprawl, economic base; Rural Settlements – Size, occurrence and character, transformation, Policies towards various size class settlements. Population structure and composition – Age, sex, gender, marital status, caste, religion, literacy level, etc.; Age - sex ratio, structure, pyramid; dependency ratio; occupational structure; Fertility; mortality, migration analysis, natural growth		

	of population, migration and its implications in spatial planning;		
4	Statistical Applications General concepts - statistical interference, population and samples variables, Sampling, simple statistical models, Measures of central Tendency, Measures of Dispersion, Measures of shape of distribution, Correlation and regression		

f. Text Book and Reference Book:

1. 'Geographic Information Systems and Science', by P. Longley, M. Goodchild, D. Maguire and D. Rhind, John Wiley & Sons
2. 'Fundamentals of Remote Sensing', by S.C Bhatia, Atlantic
3. 'Elements of Demography', by V.C Sinha and E. Zacharia, Allied Publishers Pvt. Ltd.
4. 'Introduction to Statistical Analysis', by F.J Dixon, Wilfrid J. and Massey, McGraw Hill Book Company

- a. **Course Name: Planning for Tourism**
b. **Course Code: 01201181**
c. **Course Learning Outcomes:**

CO 1	To study the Role of Tourism in Urban and Regional Planning. It also explores Relationship between Tourism and Urban Development,
CO 2	Tourism multiplier and forecasting methods: capacity building and carrying capacity planning for tourism projects. Nature and scope of a tourism plan- key issues and stages, data requirements, surveys, role of key players / stake holders in tourism policy and planning, sustainable tourism development planning; community planning and tourism; implementation and management, role of travel and tourism promoting agencies, monitoring the tourism development;
CO 3	Tourism marketing - concept, techniques and strategies.

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	1	-	3	-	50	-	-	50	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Introduction to Tourism Definitions, scope, nature, classification and dimension, tourism as an industry, tourism in developed and developing world		
2	Tourism Sector – impacts Relationship between Tourism and Urban Development, Tourism multiplier and forecasting methods: capacity building and carrying capacity planning for tourism projects, tourism and cultural and social change: Socio-cultural problems, environmental degradation.		
3	Planning for Tourism Nature and scope of a tourism plan- key issues and stages, data requirements, surveys, role of key players / stake holders in tourism policy and planning, sustainable tourism development planning; community planning and tourism; implementation and management, role of travel and tourism promoting agencies, monitoring the tourism development; Tourism marketing - concept, techniques and strategies.		
4	Policies and Programmes Tourism policies at various levels		

f. **Text Book and Reference Book:**

9. "Tourism: Principles, Practices, Philosophies" by R. Charles, J. Goeldner and R. Brent Ritchie, John Wiley & Sons.
10. 'Tourism Development in India' by A. Satishbabu, APH Publishing Corporation

- a. **Course Name: Inclusive Urban Planning**
 b. **Course Code: 01201180**
 c. **Course Learning Outcomes:**

CO 1	To study the various Forms, Arenas and Uses of Inclusion in the Processes of Urban and Regional Planning. 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. Participatory Planning Process and Policies, Programmes and Legislation
CO 2	Methods, role of stakeholders (including civil society organizations), etc.; Related Acts, Five-year plans, policies and programmes at various levels
CO 3	Planning interventions- Inclusive zoning, development and building regulations, Slum Improvement.

- d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	1	-	3	-	50	-	-	50	100

L- Lectures; **T-** Tutorial; **P-** Practical; **C-** Credit; **CE-** Continuous Evaluation, **ESE-** End Semester Examination

- e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Understanding Inclusive Planning Definitions and components		
2	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		
3	Participatory Planning Process and Policies, Programmes and Legislation Methods, role of stakeholders (including civil society organizations), etc.; Related Acts, Five year plans, policies and programmes at various levels		
4	Planning interventions Inclusive zoning, development and building regulations, Slum Improvement		

- f. **Text Book and Reference Book:**

9. 'The Illegal City: Space, Law and Gender in a Delhi Squatter Settlement' by A. Datta, Ashgate
 10. 'Worlding Cities: Asian Experiments and the Art of Being Global' by A. Roy (Editor) and A. Ong (Editor), Wiley Blackwell
 11. 'Unequal Networks: Spatial Segregation, Relationships and Inequality in the City' by G.V. Ejik, IOS Press
- 'Antinomies of Empowerment: Observations on Civil Society, Politics and Urban Governance in India, Economic

Semester III

- a. **Course Name:** Urban and Planning Studio-II
b. **Course Code:** 01201201
c. **Course Learning Outcomes:**

CO 1	Develop management plans and projects related to various sectors pertaining to infrastructure, disaster risk, riverfront development etc for metropolitan cities and mega cities
CO 2	Identify and formulate projects, work out the appraisals and do the feasibility, viability and implementation mechanisms of the projects.
CO 3	Devise Project identification, formulation, and appraisal, financing mechanisms and institutional framework.

d. **Teaching & Examination Scheme:**

U. Teaching & Examination Scheme.

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	6	1	9	-	-	20	60	20	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Geo-Informatics Laboratory Training The laboratory training will be conducted in accordance with the studio exercise. Introduction to Geo-informatics, introduction to Remote Sensing – Aerial and Satellite; introduction to GIS, Spatial data and Attribute data; Satellite images as input to GIS; Collection and presentation of baseline information		
2	Management and Governance Plans The focus of the studio is on management and governance aspects (in line with the other core and elective courses offered in the semester). The exercise pertains to metropolitan cities and mega cities and ranges from preparing management plans and projects related to various sectors pertaining to infrastructure, disaster risk, riverfront development etc. Students are also required to identify and formulate projects, work out the appraisals and do the feasibility, viability and implementation mechanisms of the projects. Students work on a case study town/city and have to visit the field for collection of data and interaction with city officials and stakeholders. Although planning continues to be an important aspect of the exercise, students are also exposed to project identification, formulation, and appraisal, financing mechanisms and institutional framework. Students draw from the theoretical knowledge provided in the core and elective subjects related to management, finance and governance offered in the semester and translate		

	them in their studio exercise. The culmination of the exercise is in the form of group presentations and studio report.		
3	SPATIAL DATA INFRASTRUCTURE Concepts and Hierarchy Spatial Data Infrastructure: Concepts, Contents, Nature and SDI hierarchy; Global, National, Regional and Local SDI initiatives. Building a SDI and using it in planning and decision making process. Open Geospatial Consortium – ISO standards (TC211). Data streaming and mining in spatial data infrastructure.		
4	From Global to Local SDI applications National SDI Initiatives: NRDMs: Multi-level spatial data infrastructure, NSDI: Assimilation and Dissemination and Data warehouse; State SDI: NCT Delhi SDI, Karnataka and Kerala Portals; Case studies from various levels. Karnataka's Land Management Programme: Bhoomi, geo portal assisting local to state level planning process; Gujarat's Tax programme, etc.; Application to coastal area planning –TamilNadu coast		
5	SDI application in Planning and Decision Support SDI – Location based technology development, Interoperability arrangement for geospatial data and ontology mapping; Application in Population Data Sets, Natural Resource Repository, Integrated Water Resource Management, Krishi –application in agriculture and rural development, geospatial application in transportation, disaster management and conservation. Spatio-temporal data modelling and analysis; 3 - D mapping of land and its use in city and regional planning; Geo visualization of landscapes: rural and urban		
	Technology in SDI and decision support system Real time technologies and their application: landslides monitoring in Himalayan region, web based spatio-temporal prediction of landslides, decentralization planning in Uttarakhand- web based model. Satellite based and other real time technologies and their use in identifying physical transformation. Its application in urban and rural areas: slum formation, illegal colonies, flash flood warning system in river and coastal belt, etc.		
	DISTRICT PLANNING / REGIONAL PLANNING The objective of this studio exercise is to expose the students in the practical ways of planning for a region (district / mega / metro Region). The students will be given a live case study to understand the complexities of planning the region, inter-sector, scalar interface, integration, etc. The focus will be to understand the scale of the problem and how to tackle them. It is expected that the approach will be mostly in terms of governance, which the students have acquired through theory subjects in second semester. It is also expected that the students after preparing the plan will present it to the stakeholders to get their viewpoint.		

f. **Text Book and Reference Book:**

- 'Project Planning and Management: an integrated approach' by L.T. Goodman, Love, N. Ralph, Pergamon Press
- 'Project Appraisal and Planning for Development Countries' by Little, IMD, Mirrlees, J.A., Heinemann Educational Books
- 'Project Evaluation and Development' by Alexander Rougvie, Mitchell Publishing
- 'Project Management' by S. Choudhary, Tata McGraw-Hill
- 'The Complete Guide to Referencing and Avoiding Plagiarism' by C. Neville, McGraw-Hill International
- 'A Student's Writing Guide: How to Plan and Write Successful Essays' by Gordon Taylor, Cambridge University Press
- 'Social Research: Issues, Methods, and Processes' by Tim May, Open University Press
- 'Manual of Integrated District Planning' by Planning Commission, Planning Commission
- 'Kollam Perspective Plan' by Government of Kerala, Department of Town and Country Planning, Thiruvananthapuram.

- a. **Course Name:** Urban and Regional Development and Management
b. **Course Code:** 01201202
c. **Course Learning Outcomes:**

CO 1	Interpret Economic concepts of land, Land Pricing / valuation
CO 2	Understand Economic principles of land use; demand forecasting for land use: factors affecting land supply and demand; Land development methods, Supply Management, Demand side Management; Real estate markets, type of property development and its impact on supply and demand, method of development, environmental considerations.
CO 3	Analyse Spatial and Non - spatial information systems; Urban reforms and acts and policies.

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Introduction to Development Management Concept, approaches, components, interfaces with national goals and political economic system.		
2	Urban Development Management Strategies, Tools and Techniques; organizations involved		
3	Land and Real Estate Development Economic concepts of land, Land Pricing / valuation; Economic principles of land use; demand forecasting for land use: factors affecting land supply and demand; Land development methods, Supply Management, Demand side Management; Real estate markets, type of property development and its impact on supply and demand, method of development, environmental considerations.		
4	Information System and Urban Reforms Spatial and Non - spatial information systems; Urban reforms and acts and policies		

f. **Text Book and Reference Book:**

- 'Urban Livelihoods: A people – Centred Approach to Reducing Poverty' by C. Rakodi and T. L. Jones, Earthscan
- 'The Illegal City: Space, Law and Gender in a Delhi Squatter Settlement' by A. Datta, Ashgate
- 'Worlding Cities: Asian Experiments and the Art of Being Global' by A. Roy (Editor) and A. Ong (Editors), Wiley Blackwell

- a. **Course Name:** Project Planning and Management
b. **Course Code:** 01201203
c. **Course Learning Outcomes:**

CO 1	Correlate projects and planning issues including sectoral policy at: Local, State and National levels Project appraisal: Market analysis – Macro environment survey, survey methods, market characterization, demand forecasting.
CO 2	Explore Technical Analysis terms like Magnitude, processes, materials, equipment, factors of production availability, implementation schedule; suitability of the plans, layout and design, location of the project; location analysis; supporting infrastructure requirements- Capital Budgeting – Estimation of costing of components; developing over project cost; Social cost benefit analysis – UNIDO, Merles, ZOPP/GOPP, etc.

d. **Teaching & Examination Scheme:**

Teaching & Examination Scheme:									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Project planning Introduction to Projects; Nature of planning projects; Project Life Cycle; Identification of projects		
2	Project Formulation and Appraisal Relationship between projects and planning issues including sectoral policy at: Local, State and National levels Project appraisal: Market analysis – Macro environment survey, survey methods, market characterization, demand forecasting; Technical Analysis – Magnitude, processes, materials, equipment, factors of production availability, implementation schedule; suitability of the plans, layout and design, location of the project; location analysis; supporting infrastructure requirements- Capital Budgeting – Estimation of costing of components; developing over project cost; Social cost benefit analysis – UNIDO, Merles, ZOPP/GOPP, etc.		
3	Project Management and Implementation, and Project Evaluation and Monitoring Project characteristics - pitfalls in management of a project; Techniques of management; Planning milestones - responsibility charts and principle responsibility, principles of activity planning; Project Implementation – methods, hurdles, facilitative factors; Project culture: line management, steering committee, role of project manager; Project Control: cost and time, quality - ISI standards and its application to Indian context; Introduction to Project Management Software (Ms Projects) and its usage. Types of evaluation - concurrent, ex-ante and ex-post. Methods of evaluation, techniques of evaluation, end results, Presentation of evaluation findings, Techniques of Monitoring of Development Works.		

4	Regulatory Frameworks Governing Projects National Rehabilitation and Resettlement Policy (2007) - Social Impact mitigation; National Environmental Policy (2006) - Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP)		
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f. Text Book and Reference Book:

- 'Projects' by Prasarna Chandra, McGraw Hill
- 'Brilliant Project Management' by Barker, Stephen, and Cole, Rob, Person Education Limited
- 'International Development Projects: Appraisal, Execution planning and Monitoring' by Joseph Martial Riberio, Presses International Polytechnique

- a. **Course Name:** Urban Governance
b. **Course Code:** 01201204
c. **Course Learning Outcomes:**

CO 1	Explain the Role of Government, Private Sector and the Third Sector for Governance of Cities and Regions.
CO 2	Identify the differences between institutions and organizations
CO 3	Identify the approaches to understanding organizations; types, structure and functions, their interface and conflicts, reach, and their effectiveness; Methods, process and evaluation; Present organizations and involved in urban governance.

d. **Teaching & Examination Scheme:**

Teaching & Examination Scheme:									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Overview of Urban Governance Definition, concepts, components, government and governance, hierarchy and structure, forms of governance, process of inclusion and exclusion,		
2	Legislations pertaining to Urban Governance Institutional frame and mechanism for urban governance as envisaged in the 73rd and 74th Constitution Amendment Acts.		
3	Institutions and Organizations Differences between institutions and organizations; approaches to understanding organizations; types, structure and functions, their interface and conflicts, reach, and their effectiveness; Methods, process and evaluation; Present organizations and involved in urban governance.		
4	Urban Local Governance and Participatory Processes System, structure, functions, powers, process and resource, performance, interface with NGO's, other agencies. Stakeholders' participation, roles and responsibilities, access to government by various stakeholders.		

f. **Text Book and Reference Book:**

- 'Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability' by R.A.W. Rhodes, Open University Press
- 'Local Governance in India: Decentralization and Beyond' by N.G. Jayal, A. Prakash and P.K. Sharma, Oxford University Press
- 'New Forms of Urban Governance in India: Shifts, Models, networks and Contestations' by I.S.A. Baud and J.D. Wit, SAGE

- a. **Course Name:** Politics and Public Planning Policy
b. **Course Code:** 01201205
c. **Course Learning Outcomes:**

CO 1	Identify Public Policies pertaining to City and Region.
CO 2	Understand the Two-Way Relationship between Politics and Planning.
CO 3	Analyse Policy Process Models, Policy Initiation: Multi-Stream Approaches, policy implementation analysis, life-course approach to policy analysis
CO 4	Differentiate between strategic planning and management in the public and private sectors, Mission statements and goal-setting techniques;
CO 5	Devise Strategic decisions and evaluation, strategic leadership; Co-ordination and networks

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; **T-** Tutorial; **P-** Practical; **C-** Credit, **CE-** Continuous Evaluation, **ESE-** End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Nature and Making of Public Policy The Nature of public problems, planning as a public issue – policy analysis and process: Six Steps in Policy Analysis: how are policies made, who influences the policy agenda and what issues affect policy's 'success' and 'failure'?, what can we learn from how different countries approach similar policy problems? Theoretical frameworks, the role of institutions in the policy process, and the motivation of policy actors; Classical Rational Problem Solving Model; Limitations in Public Sector and the Private Sector; Establishing Analysis.		
2	Public Policy Analysis and Strategic Policy Planning Overview of Policy Process Models, Policy Initiation: Multi-Stream Approaches, policy implementation analysis, life-course approach to policy analysis, Case studies in Policy Process Analysis, Policy Integration: possible areas of integration in Planning; Differences between strategic planning and management in the public and private sectors, Mission statements and goal-setting techniques; Strategic decisions and evaluation, strategic leadership; Co-ordination and networks; Crisis Management; Transformational strategic Management		
3	Public Policy Management and Delivery How are new information and communication technologies shaping public service delivery		

	E-Governance, E-Panchayats, E-Market, etc.; Transparency, Accountability, Accessibility, and participatory mechanisms; Trends and Pressures that affect public service organizations, Market based arrangements, Multi-serviceprovider arrangements in public sector setting, and benchmarks in policy management; Land, Environment, Health, Water and other policies – Integration and disintegration of policies – Frequency and commitments to change; Global Commitments: MDG, Environment, etc, and its commitment at the National, State and Local Level. Land Policy: Interest Groups, Acts / agents and policy making process		
4	Interface between Politics and Planning Social and economic context; State in India – political culture of the Indian State –Centre – State – Local political economy: 74th Constitution Amendment Act, State Finance Commissions; Emergence of the State in the federal set up.		
	City and the State State as a manager of resources – property rights, norms and standards –Government market and market by Government – Regulatory State, Reforming State, and Rent Seeking State – their spatial implications; Development planning and the Indian state – Centralization, powerlessness and decentralization; spatial politics and competition; Politics of the State and bureaucracy; New State spaces, invited and contested spaces – changing role of the state.		
	Politics related to Planning and Development Politics related to land, shelter, urban infrastructure, resources; Regeneration and redevelopment politics; politics of provision, financing and pricing; decision-making and decision taking.		
	Politics and Civil Society Politics and emergence of civil society – NGO, CBO and their role in planning, development and management, collective bargaining and collective action		

f. **Text Book and Reference Book:**

- 'Financing Urban Development in India' by KSRN Sarma, IIPA
- 'City Politics' by A.H. Maarten, Aldershot
- 'Government and Politics of India' by P. Sharan, Metropolitan Book
- 'Participation of Sustainable Development: Theory and Practice in Government and NGOs' by Vettivel, K. Surendra, Vetri Publishers
- 'The Argumentative Turn in Policy Analysis and Planning' by F. Fischer and J. Forester, Duke University Press and UCL press
- 'Theories of Urban Planning' by D. Judge, G. Stoker and H. Wolman, SAGE
- 'Holding Their Ground: Secure Land Tenure for the Urban Poor in Developing' by A. Lasserre Durand and L. Royston, Earthscan
- 'Public Policy' by Parsons, Edward Elgar
- 'Frame Reflection: Toward the Resolution of Intractable Policy Controversies' by D.A. Schon and M. Rein, Basic Books
- 'An Introduction to the Policy Process: Theories, Concepts and Models of the Public Policy Making' by T.A. Birkland, M.E. Sharpe

- a. **Course Name:** Environment, Development and Disaster Management
b. **Course Code:** 01201230
c. **Course Learning Outcomes:**

CO 1	Analyse Disaster Management Practices and Mitigation Measures and their Impact on Environment and Development.
CO 2	Devise Environmental Impact Assessment, thresholds, indicators, audits, environmental certification, lifecycle analysis, environment and poverty links, environmental policy, Acts and regulations.
CO 3	Explore Environmental education, participatory approaches, emerging concepts. Disaster classification, concepts, hazards, vulnerability, risks, human response to disaster.

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Environment, Development and Disaster Management – Interface Resource use, exploitation and conservation; Impact of human activities on environment; Environment and economy interaction, introduction to environmental accounting		
2	Environmental Management Environmental Impact Assessment, thresholds, indicators, audits, environmental certification, lifecycle analysis, environment and poverty links, environmental policy, Acts and regulations; Environmental education, participatory approaches, emerging concepts. Disaster classification, concepts, hazards, vulnerability, risks, human response to disaster, impacts.		
3	Disaster Mitigation and Management Relevance of disaster management in development and environment, disaster preparedness, prevention, displacement and development, Role and responsibilities of government and non-government organizations, Disaster Education – awareness of individuals, communities and participation at various levels; Integrating disaster mitigation in the spatial planning process, provision of infrastructure for disaster mitigation.		
4	Policies and Legislation Pertaining to Environment and Disaster Management Policies and Legislation at various levels		

f. **Text Book and Reference Book:**

- 'Community, Environment and Disaster Risk Management' by Rajib Shaw, Emerald Group Publishing Limited
- 'Urban Risk Reduction: An Asian Perspective' by Rajib Shaw HariSrinivas, Anshu Sharma, Emerald Group Publishing Limited
- 'Introduction to Disaster Management' by P.C. Sinha, Anmol Publications
- 'Disaster Mitigation: Experiences and Reflections' by PardeepSahni, AlkaDhameja, Uma Medury, PHI Learning Pvt. Limited
- 'Disaster Mitigation & Management Post Tsunami Perspectives' by Jegadish Gandhi P, Deep & Deep Publications Pvt Ltd.
- 'Disaster Management Guidelines' by NDMA, NDMA
- 'Model Amendment in Town and Country Planning Legislations, Regulation for Land Use Zoning and Building Byelaws for Structural Safety' by Ministry of Home Affairs, MHA
- 'National Policy on Disaster Management (NDPM)' by Ministry of Home Affairs, MH

- a. **Course Name:** Energy, Climate Change and Urban Development
b. **Course Code:** 01201231
c. **Course Learning Outcomes:**

CO 1	Understand Interface between Energy, Climate Change and Urban Development. Energy efficient development, Compact city form, Transit oriented development.
CO 2	Analyse mechanisms and measures for mitigating and adapting to climate change at various levels.
CO 3	Identify Energy Supply and Demand, Energy Consumption in cities, determinants of energy demand, phenomenon of climate change, factors influencing climate change, impacts of climate change.

d. **Teaching & Examination Scheme:**

c. Teaching & Examination Scheme.									
Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	10	25	15	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Introduction Energy, Climate change and Urban Development – Interface		
2	Energy Generation and Consumption Energy Supply and Demand, Energy Consumption in cities, determinants of energy demand, phenomenon of climate change, factors influencing climate change, impacts of climate change		
3	Energy Planning and Management, and Mitigation and Adaptation to Climate Change Energy efficient development, Compact city form, Transit oriented development. Mechanisms and measures for mitigating and adapting to climate change at various levels		
4	Plans, Policies and Strategies Related to energy planning, conservation, climate change mitigation and adaptation		

f. **Text Book and Reference Book:**

- 'Climate change: an Indian perspective, New Delhi' by S.K Dash, Cambridge University Press
- 'Compact Cities: Sustainable urban forms for Developing countries' by Jenks, Mike; Burgess, Rod, Spon Press London.
- 'Adapting cities to climate change: understanding and addressing the development change by Bicknell, Jane, Earthscan, London
- 'The smart Growth Manual' By Andres Duany, Jeff Speck and Mike Lydon, McGraw-hill.
- 'Green metropolis: Why living smaller, living closer, and driving less are the keys to sustainability' by David Owen.

Semester IV

a. **Course Name:** Thesis

b. **Course Code:** 01201251

c. **Course Learning Outcomes:**

CO 1	Undertake independent study in the field of Urban and Regional Planning.
CO 2	Carry out independent research and prepare a thesis on a topic on urban and regional planning

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
-	8	10	18	-	50	10	20	20	100

L- Lectures; **T-** Tutorial; **P-** Practical; **C-** Credit; **CE-** Continuous Evaluation, **ESE-** End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	The students are required to carry out independent research and prepare a thesis on a topic on urban and regional planning selected by them and approved by the faculty under the supervision of a research guide allocated by the department/institute.		

f. **Text Book and Reference Book:**

1. 'Thesis and Dissertations: A Guide to Planning, Research and Writing' by Brubaker, D. L. and Thomas, R.M.
2. 'How to write a Thesis (3rd Edition)' by Rowena Murray, Open University Press.
3. 'Thesis Writing' by F. Abdul Rahim, New Age International (P) Limited Publishers, New Delhi.
4. 'How to write your Thesis' by Kastens, K. P firman, S., Stute, M., Abbott, D. and Scholz, C., Colombian University.
5. 'Urban Planning Methods, Research and Policy Analysis' by Bracken, I., Routledge.
6. 'Research Methods in Urban & Regional Planning' by Wang, X., Von Hofpe, R., Springer
7. 'Tools for Academic Research in Urban Design and Planning' by Youtube, Youtube Video.

- a. **Course Name:** Legal Issues and Professional Practice
b. **Course Code:** 01201252
c. **Course Learning Outcomes:**

CO 1	Understand Legislations related to Urban Planning and Development and their role and responsibilities as professional planner.
CO 2	Equip themselves with the knowledge, procedures, and legal tools required for Professional Practice in Urban Planning.
CO 3	Co relate aims and objectives of professional Institutes, sister bodies.
CO 4	Understand Professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charges.
CO 5	Formulate project proposal and outlines, consultancy agreements and contracts, managerial aspects.
CO 6	Manage and learn their Role in inter disciplinary groups: Appreciation of the decision-making processes and the process in relation to varied consultancy assignments of planning.

- d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	25	-	25	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

- e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Introduction Interface between policy and legislation pertaining to urban development.		
2	Understanding of Law Concepts, sources, terminologies, significance of law and its relationship to Urban Planning benefits of statutory backing for schemes - eminent domain and police powers; Indian Constitution: concept and contents; 73rd and 74th Constitution Amendment Act, provision regarding property rights.		
3	Planning Legislation and Policy Formulation and Appraisal Evolution; An over view of legal tools connected with Urban Planning and Development, Town and Country Planning Act, Improvement Trust Act, Urban Planning and Development Authorities Act – objectives, contents, procedures for preparation and implementation of Regional Plans, Master Plans and Town Planning Schemes. Various Acts related to urban governance, planning and development organizations, land resources, environment protection, and public participation in statutory planning process; Approaches of formulation of policies, appraisal of policies.		

4	Professional Practice Aims and objectives of professional Institutes, sister bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charges; Formulation of project proposal and outlines, consultancy agreements and contracts, managerial aspects; Role in inter disciplinary groups: Appreciation of the decision-making processes and the process in relation to varied consultancy assignments of planning.		
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f. Text Book and Reference Book:

1. 'Planning Legislation and Professional Practice' by ITPI, ITPI, New Delhi.
2. 'Law and Urban Land' by Bijlani, H.U. and Balachandran, IIPA, New Delhi.
3. 'UDPFI Guidelines Vol. 2A' by Gol, ITPI, New Delhi.
4. 'Indian Contract Act 1872; The Arbitration and Conciliation Act 1996. Constitution of India; Constitution (73rd& 74th Amendment) Acts 1992; Model rent control Legislation; Slum (improvement And Clearance) Act 1956; Land Acquisition Act 1894 and amendments thereof; NCR Planning Board Act, Environment (Protection) act 1986; Model Town Planning and Regional Planning Development Law; and Other acts' by Gol, ITPI, New Delhi.
5. 'Maharashtra Regional and Town Planning Act 1966' by Government of Maharashtra.
6. 'State Act Related Town Planning, Slum Clearance, Municipalities, Development Authorities, etc' by Government of various States.
7. 'Urban and Regional Planning in India: HandBook for Professional Practice' by Kulshrestha, S.K., Saga Publications, New Delhi.
8. 'Conditions of Engagement of Professional Services and Scale of Professional Fee and Charges' by ITPI, ITPI, New Delhi.
9. 'CPWD manual 2012' by CPWD, CPWD, New Delhi.

- a. **Course Name:** Development Finance
b. **Course Code:** 01201253
c. **Course Learning Outcomes:**

CO 1	Provide an Overview of Development Finance.
CO 2	Establish Urban fiscal reforms, municipal finance and urban inclusion, Sources of revenues and application of money.
CO 3	Corelate terms like Equities; Loans; Debt financing; Municipal Bonds, land and non-land-based sources; Structure of finances, fiscal problems and issues of financial management
CO 4	Understand the Implications of 74th Constitution Amendment Act for municipal finance, expenditure pattern, Bilateral and multi-lateral lending institutions mobilizing resources for a project - financial resources, land resources, project resources, and other resources.

d. **Teaching & Examination Scheme:**

Teaching Scheme				Evaluation Scheme					
L	T	P	C	ESE		Internal Evaluation			Total
				T	P	T	C.E.	P	
2	-	1	3	50	-	25	-	25	100

L- Lectures; T- Tutorial; P- Practical; C- Credit; CE- Continuous Evaluation, ESE- End Semester Examination

e. **Course Content:**

Sr. No.	Content	Weightage	Teaching Hours
1	Overview of Development Finance Approaches, concepts, components, process, credit rating		
2	State Finance Inter-governmental fiscal relationship between Central, State and Urban Local Government		
3	Municipal Finance Urban fiscal reforms, municipal finance and urban inclusion, Sources of revenues and application of money; Equities; Loans; Debt financing; Municipal Bonds, land and non-land based sources; Structure of finances, fiscal problems and issues of financial management, implications of 74th Constitution Amendment Act formunicipal finance, expenditure pattern, Bilateral and multi lateral lending institutions mobilizing resources for a project - financial resources, land resources, project resources, and other resources.		
4	Investment Planning and Financing Mechanism Link with spatial plans, process, components, investment needs and budgeting for infrastructure and services; Financing of urban development, infrastructure andservices –mechanisms and instruments, subsidy reduction, cost recovery, public private partnerships; Financial appraisal, investment appraisal; Financial Risk –Sources, Measures and perspectives on risk, Sensitivity analysis and pricing and cost recovery mechanism.		

f. Text Book and Reference Book:

1. 'State Finance Commissions and Urban Fiscal Decentralization in India' by O.P. Mathur and George Peterson, NIPFP
2. 'Report of 13th Finance Commission' by Ministry of Finance, Government of India
3. '73rd and 74th Constitution Amendment, Acts' by Government of India, Government of India
4. 'Stimulating Revenue Base of ULBs in India' K.K. Pandey, IIPA
5. 'Municipal Infrastructure Financing – Innovative Practices From Developing Countries' by Alam Munavvar, Commonwealth Secretariat
6. 'Report of 13th Finance Commission' by Ministry of Finance, Government of India
'Revisioning Indian Cities' by K. C. Sivramkrishnan