

## **DUAL CERTIFICATION PROGRAMME Scheme of Examination and Syllabus**

### **1.0 ABOUT INSTITUTE OF TOWN PLANNERS, INDIA (ITPI)**

The Institute of Town Planners, India, owes its origin to a small group of town planners, who in 1947 decided to set up a professional Town Planning Institute on the lines similar to the Royal Town Planning Institute, London. The number of planners, which then did not exceed six, was too small for a registered society to be set up and therefore, the small group formed itself into an Indian Board of Town Planners and started working towards establishing a professional Institute. After years of continuous hard work, the Institute of Town Planners, India was finally established in July 1951. It was inaugurated by Shri N.V. Gadgil, the then Union Minister for Works and Housing. Today, the Institute has a membership of over 4,000 apart from a large number of student members.

The main objectives of the Institute among others are:

- To advance the study of town planning, civic design and kindred subjects and of the sciences and arts as applied to those subjects;
- To promote planned, economic, scientific and artistic development of town, cities and rural areas;
- To promote the general interests of those engaged in the practice in Town and Country Planning;
- To foster the teaching of subjects related to Town and Country Planning and assist in providing such teaching by making grants to technical schools, colleges or institutions, or by paying or assisting to pay the fees and expenses of students of any such subjects or by providing and giving scholarships, prizes and other rewards to such students, or by any or all such methods;
- To devise and impose the means for testing the qualifications of candidates for admission to membership of the Institute by examination in theory and in practice or by any other tests or arrange with any technical school, college or institution for the imposition of such tests;
- To consider all questions affecting the practice of Town and Country Planning and to initiate and watch over measures affecting, or likely to affect Town Planning; and to procure changes of and amendments in the law relating to or affecting Town and Country Planning;
- To ascertain and notify the law and practice relating to Town and Country Planning.

The management of the Institute vest with the Council, elected annually assisted by an Executive Committee for discharging its day to day functioning. Town Planning Examination Board (TPEB) is responsible for conducting examinations and to deal with matters relating to Town Planning Education including devising schemes for education, examination, etc. There is also a modest library containing more than 5,000 books relating to areas of urban development and management, town and country planning and related subjects. The Institute also subscribes to over 20 journals both from India and abroad connected with planning, development and management of human settlements. Students may borrow books from the library for study purposes. The Institute also has hostel accommodation for students and

members. The Editorial Board of Institute publishes four quarterly Journals (Referred) along with four Newsletters giving the articles of Eminent Professionals / Educationists / Researchers besides information on National and International events related with town and country planning and information on the placements for the students.

To coordinate and promote professional activities at regional and state level the Institute has setup 21 Regional Chapters mostly in State capitals and 3 Centers. Some of the Regional Chapters has Library and Hostel Facilities as well. The ITPI conducts Zonal conferences spread over in a year in different parts of the Country and National Town and Country Planners Congress (Annually) on the theme of topical interest.

The Institute has the four categories of membership: (1) Corporate members: Associate and Fellows; (2) Honorary Fellow; (3) Retired Associates/Fellows; and (4) Student Members, for further details visit [www.itpi.org.in](http://www.itpi.org.in).

Recently, on 26<sup>th</sup> December, 2011, Institute of Town Planners, India signed the Memorandum of Understanding with Karnataka State Open University for Dual Certification Programme and accordingly on the successful completion of the Associateship Examination of ITPI; Masters Degree in Planning (M. Plan) would be awarded by Karnataka State Open University.

## **2.0 ABOUT KARNATAKA STATE OPEN UNIVERSITY (KSOU)**

Karnataka State Open University (KSOU) was established on 1<sup>st</sup> June, 1996 with the assent of His Excellency Honorable Governor of Karnataka as a full fledged University in the academic year 1996 vide Government notification No. ED1 UOV 95 dated 12<sup>th</sup> February, 1996 (KSOU Act – 1992). The act was promulgated with the object to incorporate an Open University at the State level for the introduction and promotion of Open University and Distance Education systems in the education pattern of the State for the Co-ordination and determination of standard of such systems. Distance Education Council (DEC), New Delhi, has accorded recognition to Karnataka State Open University, Mysore for offering Programmes and Courses approved by the Statutory bodies of the University. Karnataka State Open University is a recognized University of Distance Education Council under the aegis of Ministry of Human Resource Development (MHRD) (Revised notification Fine. DEC/OU/Recog./2008).

Karnataka State Open University is a regular member of the Association of Indian Universities (AIU), New Delhi since 1999 (No. EV/11(80)/99/203935-4172); KSOU is a permanent member of (i) Association of Commonwealth Universities (ACU), London, United Kingdom since 1999. Its member code is: ZKASOPENUINI; and (ii) a permanent member of Asian Association of Open Universities (AAOU), Beijing, China since 1999. KSOU has association with Commonwealth of Learning (COL), Vancouver, Canada since 2003. COL is an intergovernmental organization created by Commonwealth heads of Government to encourage the development and sharing of open learning / distance education knowledge, resources and technologies.

Karnataka State Open University is situated at the North-Western end of the Manasagangotri Campus, Mysore. The Campus, which is about 5 kms, from the city centre, has a serene atmosphere ideally suited for academic pursuits. The University

houses at present the Administrative Office, Academic Block, Lecture Halls, a well-equipped Library, Guest House Cottages, a Moderate Canteen, Girls Hostel and a few cottages providing limited accommodation to students coming to Mysore for attending the Contact Programmes or Term-end examinations.

With the virtue of KSOU Act of 1992, Karnataka State Open University is empowered to establish, maintain or recognize colleges, Regional Centres and Study Centres at such places in Karnataka and may also open outside Karnataka at such places as it deems fit.

### **3.0 SCHEME OF DUAL CERTIFICATION EXAMINATION FOR STUDENT MEMBERS**

The Institute of Town Planners, India invites applications for grant of students membership who can then appear for the Associateship Examination of the Institute. After successfully qualifying in the Associateship Examination, the KSOU would award Master of Planning (M. Plan) Degree and after completing one year practical experience in the field of Town Planning, students are eligible to become Associate Member of the Institute.

The examination is conducted by the Town Planning Examination Board (TPEB) of Institute of Town Planners, India according to the syllabus prescribed by ITPI in consultation with KSOU.

The scheme of examination contained in this brochure will be effective starting from the Associateship Examination to be held in 2012 and would continue to operate until modified by the TPEB, in consultation with KSOU time to time.

#### **3.1 Entry Requirements:**

Every candidate desirous of appearing for the Associateship Examination shall have to first enroll himself as a student member of the Institute. The candidate shall fulfill the following requirements for becoming a student member of the Institute.

**3.2 Age:** Candidate must be at least 21 years on the last date for submitting completed applications.

**3.3 Qualifications:** Candidates must possess (a) Bachelor's Degree in Civil Engineering or Architecture or Planning from any University / Institution in India or abroad or its equivalent recognized by the Government of India, or (b) Master's Degree in Geography or Sociology or Economics from any University / Institution in India or abroad recognized by Government of India.

Candidates must have obtained minimum 55% marks in the qualifying examination relaxable to 50.00% for the candidates belonging to Schedule Caste and Schedule Tribe.

The candidate shall have adequate facilities for conducting studies in Town Planning under the guidance of qualified Town Planner. He shall be required to produce a certificate to this effect along with his application. Fellows/Associates of ITPI,

signatory to the certificate shall be under professional obligation to provide necessary guidance to the candidate. All applications must be routed through proper channel.

### **3.4 Assignments**

Students formally enrolled have to clear the Assignments for each paper in which they desire to appear in the examination. No student shall be eligible to sit in the examination unless he has cleared the assignment in that subject. In case it is subsequently found that a student has taken up the examination, without clearing the assignment, the result in that subject shall be cancelled.

Students are generally given 6 to 8 weeks for preparing their assignments. 20% marks in each subject are earmarked for assignments. These marks shall form part of the final score in each subject. Assignments are to be prepared on the basis of guidelines which will be communicated by the TPEB. On clearing the assignments, student members are eligible to appear in the examination which is held at the end of each Semester. The option for elective subjects in each Semester should be indicated in the Examination Form.

### **3.5 Examination in Written Papers**

The entire system of examination is divided into four Semesters each comprising of 5 subjects (4 core subjects and 1 elective from a group) and Planning Portfolio except in Semester 4, in which there will be 1 core subject, and the Thesis, as detailed in the syllabus.

After clearing the assignments students are eligible to take up subjects of Semester-I. They can take up the subjects of Semester-II only after they have cleared all except one subject of Semester-I besides the assignments of the subjects of Semester-II. However in case a student fails to clear that subject of Semester-I his result of Semester-II shall not be declared until he clears that subject of Semester-I. Students intending to appear in Semester-III shall have to clear all the subjects of Semester-I and Semester-II and likewise for other Semesters. Students can take up the Thesis in Semester-IV only after clearing all the subjects of the Semesters – I, II, and III.

### **3.6 Thesis**

Students will be required to suggest three alternative topics for thesis for consideration of the TPEB, which will approve one as a topic on which the student shall prepare his Thesis. Students are required to do this in the form of brief synopsis of each topic in duplicate. After approval of one of the brief synopsis, students are required to submit a detailed synopsis in duplicate as per the Thesis manual prescribed by the TPEB time to time. After submission of the Thesis the TPEB will arrange for a viva-voce examination. Students will be required to appear in this at their own expenses. The place, date and time of the viva-voce shall be intimated to the candidate in advance.

A person may be a student for not more than four years but the TPEB, upon his application, may permit him to be a student for not more than one additional year if

he satisfies the TPEB that he is taking steps to qualify for Associateship Examination. Thus the students would be required to complete the course of study including Thesis within this time frame. Failure to do so would lead to cancellation of student membership and the student would be required to undergo the entire process of examination de novo.

### **3.7 Qualifying Marks**

Minimum qualifying marks in each subject and assignment individually is 50% and also for thesis.

Students shall be declared to have passed the examination with distinction if they score an aggregate of 75% marks. This will apply only to students who qualify in each paper including assignments and thesis in their first attempt.

### **3.8 Certificate of Successful Completion**

After the student has successfully passed in the theory subjects, Planning Portfolio and the thesis he will be awarded a certificate of having passed the Associateship Examination of ITPI on the basis of which KSOU would award Masters Degree in Planning (M. Plan) and after completion of one year's experience in Town Planning, the student will be eligible to seek election as an Associate Member of the Institute of Town Planners, India.

### **3.9 Orientation Classes**

In order to facilitate the basic understanding of subjects of study the Institute would organize Orientation Classes in each Semester. Students are required to intimate the subjects in which they are interested in attending the Orientation Classes. However, they will have to pay fees as may be prescribed from time to time.

### **3.10 Fees: (As prescribed by ITPI in consultation with KSOU time to time.)**

Present Fees Structure

- |   |   |                              |
|---|---|------------------------------|
| 1. Registration Fee (KSOU)  | - | Rs. 500.00 (one time)        |
| 2. Course Fee for Dual Certification  | - | Rs.10,000.00 (Each Semester) |
| 3. Examination Fee<br>(to be paid at the time of Examination)                 | - | Rs.1,500.00 (Each Semester)  |
| 4. Assignment Fee<br>(to be paid at the time of submission of Assignments)    | - | Rs.1,500.00 (Each Semester)  |
| 5. Orientation Classes Fee<br>(to be paid at the time of Orientation Classes) | - | Rs.1,500.00 (Each Semester)  |

Candidates are required to pay the necessary fees along with their application form.

### **3.11 Centers for Examination**

Normally the examination centre will be at ITPI HQ, New Delhi, however, the TPEB in consultation with KSOU may conduct the examination at any Regional Chapter of the Institute in addition to New Delhi.

#### 4.0 IMPORTANT INSTRUCTIONS FOR STUDENTS

Candidates are advised to carefully examine the pre-requisites regarding qualifications, experience, etc., given in this brochure before filling in and completing the application form. Completed applications may be sent to the Secretary (Examination), Institute of Town Planners, India, 4-A, Ring Road, I.P. Estate, New Delhi – 110002, with all the attested copies of necessary documents, certificates and fees by the last date prescribed.

The submission of application by a candidate shall be taken to signify his acceptance of the rules and regulation of the examination currently in force and such rules and regulations which the TPEB, ITPI and KSOU may notify from time to time.

Candidates formally enrolled as student members are required to submit four stamp size photos in colour for student Identity Card to be issued by ITPI and KSOU.

Students are required to submit the Examination form duly completed along with necessary fee before appearing in the examination at each Semester. Candidates are also required to submit attested copies of certificates of their qualifications along with the application form. Before they are permitted to appear in the examination, candidates will be required to produce before the Secretary (Examinations) original certificates for the purpose of verification.

When a student is in arrears of fees, he shall not be allowed to appear in the examination and ceases to have student membership but may obtain reinstatement of his student membership upon payment of all arrears and such fees as he would have been liable to pay had he continued his membership without interruption.

#### 5.0 SYLLABUS FOR ASSOCIATESHIP EXAMINATIONS

Semesters	Core, Elective Subjects, Planning Portfolios and Thesis	Credits	Marks
<b>Semester I</b>	<b>Core Subjects</b>		
	<b>C.1.1.</b> Planning Theory	02	100
	<b>C.1.2.</b> Planning Techniques	02	100
	<b>C.1.3.</b> Housing and Habitat Planning	02	100
	<b>C.1.4.</b> Urban Sociology & Economics of Planning	02	100
	<b>Elective Subjects</b> (Select any one)		
	<b>E.1.1.</b> History of Human Settlements	02	100
	<b>E.1.2.</b> Village Planning and Rural Development		
	<b>E.1.3.</b> Land and Real Estate Management		
	<b>E.1.4.</b> Ecology and Environment Planning		
	<b>C.1.5. Planning Portfolio – I:</b> Local Level or Sub-City Level Planning	10	500
<b>Sub - Total</b>	<b>20</b>	<b>1,000</b>	

<b>SEMESTER II</b>	<b>Core Subjects</b>		
	<b>C.2.1.</b> Design of Human Settlements	02	100
	<b>C.2.2.</b> Regional Planning and Development	02	100
	<b>C.2.3.</b> Transport Planning	02	100
	<b>C.2.4.</b> Statistics and Population Studies	02	100
	<b>Elective Subjects (Select any one)</b>		
	<b>E.2.1.</b> Urban Conservation and Heritage Management	02	100
	<b>E.2.2.</b> Development Management		
	<b>E.2.3.</b> Public Participation in Planning		
	<b>E.2.4.</b> Governance and Management in Planning		
	<b>C.2.5. Planning Portfolio – II:</b> City Level Planning	10	500
<b>Sub - Total</b>	<b>20</b>	<b>1,000</b>	
<b>SEMESTER III</b>	<b>Core Subjects</b>		
	<b>C.3.1.</b> City and Metropolitan Planning	02	100
	<b>C.3.2.</b> Planning for Infrastructure	02	100
	<b>C.3.3.</b> Land Economics	02	100
	<b>C.3.4.</b> Project Formulation, Financing and Appraisal	02	100
	<b>Elective Subjects (Select any one)</b>		
	<b>E.3.1.</b> Politics and Spatial Planning	02	100
	<b>E.3.2.</b> Planning for Disaster Risk Mitigation and Management		
	<b>E.3.3.</b> Planning for Informal Sector		
	<b>E.3.4.</b> Public Policies in Planning		
	<b>C.3.5. Planning Portfolio – III:</b> District or Region Level Planning	10	500
<b>Sub - Total</b>	<b>20</b>	<b>1,000</b>	
<b>SEMESTER IV</b>	<b>Core Subjects</b>		
	<b>C.4.1.</b> Planning Legislation and Professional Practice	02	100
	<b>C.4.2. Thesis – Report (600 marks) and Viva Voce Examination (300 marks)</b>	18	900
	<b>Sub - Total</b>	<b>20</b>	<b>1,000</b>
<b>Grand Total</b>		<b>80</b>	<b>4,000</b>

- Note: 1. The Credits of the Core Subjects are mandatory based on the Course selected, however, a candidate needs to complete total of 20 Credits in each Semester.  
2. 20% of marks in each subject are earmarked for assignments.

### **FIRST YEAR, SEMESTER – I**

#### **C.1.1. Planning Theory**

#### **Module I:** Definitions, Rationales and Foundations of Planning

Various definitions of town and country planning; Goals and objectives of planning; Components of planning; Benefits of planning; Arguments for and against planning;

Lamps of Planning; Defining what counts as planning knowledge: various sources of planning knowledge, various forms of planning knowledge; Reasoning and its various forms in planning.

**Module II:** Theories of Urbanization and Theories of City Development

Theories of urbanization including Concentric Zone Theory; Sector Theory; and the Multiple Nuclei Theory; Land Use and Land Value Theory of William Alonso.

Compact city approach: concept, advantages and limitations; Forms of cities in developing world, Forms of cities in the developed world; Forms of cities in the former and present socialist countries

**Module III:** Scientific Rationalism, Advocacy Planning, and Equity Planning Theory

Defining instrumental rationality; Systems view of planning with a focus on contributions of J.B. McLoughlin and others; Chief characteristics of Comprehensive Rational Planning Model and implications for planning practice; Historical background and purposes of Advocacy Planning Model; Main features of Advocacy Planning Model; Relevance for planning practice; Equity and its various definitions; Major components of the Equity Planning Model; Implications on the role of planners in planning practice

**Module IV:** Political Economy Theory, and Collaborative Planning Theory

Defining the term political economy; Role of the state in planning; Contributions of David Harvey and Manuel Castells; Richard Foglesong and the property contradiction; Spatial Fix. Various components of Collaborative Planning Model with focus on the contributions of Patsy Healey and JudithInnes; Deliberative policy analysis; Role of trust in planning;

### **C.1.2. Planning Techniques**

**Module I:** Basics of Planning Techniques

Planning practice in India, an overview. Methods of identifying urban and regional problems, setting of goals, objectives and priorities. Performance standards, spatial standards and standards for utilities.

**Module II:** Classification Techniques

Classification of regions, regionalization and delineation techniques for various types of regions. Cluster and factor analysis methods.

**Module III:** Analysis Techniques

Analysis for understanding structure of urban areas; land value and density patterns, locational dimensions of population groups. Forces of concentration and dispersal. Social Area Analysis, Strategic choice approach and technique of interconnected decision area analysis. Introduction to (i) Techniques of system simulation; Grain Lowry model (ii) Linear programming (iii) Threshold analysis. Preparation of urban and regional development plans-various approaches; comprehensive planning, System approach to planning, Case studies identifying use of techniques.

**Module IV:** Advanced Techniques

Aerial photography - Basic principles and techniques of photogrammetry, photo interpretation and remote sensing. Collection of data by photo-interpretation and



remote sensing techniques, analysis, interpretation of this data and compilation of interpreted data for thematic maps. Specific applications in urban and regional planning, traffic and transportation planning, housing, urban design, and landscape analysis.

### **C.1.3. Housing and Habitat Planning**

#### **Module I:** Basic Concepts and Definitions

Definition of terms related to housing, housing as a basic need, Housing as an integral component of comprehensive urban and regional development, Housing form as shaped by physical, technological, socioeconomic, demographic and political factors, Housing situation in India in quantitative and qualitative terms, Housing statistics.

#### **Module II:** Socio-Economic Perspectives in Housing

Role of housing in social and economic development. Housing as an index of social welfare. Housing in relation to stages of development particularly as related to developing economies, Micro and Macroeconomic views of the housing sector, supply-demand issues, Obstacles to provision of housing in India and emerging issues and priorities in urban and rural housing, cultural and heritage dimensions, Housing and family life, Principles of community Organization, residential satisfaction, Community participation.

#### **Module III:** Urban and Rural Housing Policies and Programmes

Basic considerations for the formulation of viable housing policy and programmes in consonance with availability of resources and feasibilities of implementation and management, Housing policy optional in developing countries, Housing programmes in Five Year Plans of India, Social housing programmes, recent policy and programme initiatives of the Government of India viz. JNNURM and RAY, various state government housing programmes. Urban poverty, Problems of slums and squatting, illegal land subdivisions, approaches to tackle the problems of unorganized housing, housing programmes for slum improvement / upgradation / redevelopment, site and services approach, shelter associated problems of footpath dwellers, environmental issues.

#### **Module IV:** Housing Supply and Habitat Planning

Public housing agencies in India at National, state and local level, their organization and functions, Role of private sector and PPP, Cooperative housing, Housing for central and state government employees, institutional housing providers, The concept of housing standards, issues involved in formulation of standards, various formal and informal systems of financing housing supply in India, emerging issues of habitat planning.

### **C.1.4. Urban Sociology and Economics of Planning**

#### **Module I:** Man and Environment Relationship

Man and Environment relationship. Traditional patterns and trends of change in Indian society, concept of social structure, culture and social institutions. Relation between social structure and spatial structure. Social aspects of housing. Social problems of slums.

**Module II: Economic Resource**

Economic resource, Typology of goods, production economics, process, laws, product and costs. Economies of scale, external economies, valuation, typology of markets, land and real estate market, macro-economic concepts.

**Module III: Economic Analysis**

Basic economic analysis, economic principles and land use, economic rent, land use pattern and land values.

**Module IV:**

Development of land and real property, financial balance sheet of land development. Land and real property markets: private ownership and social control over land.

**E.1.1. History of Human Settlements****Module I: Ancient Civilizations**

Mesopotamian Civilization; Egyptian Civilization; Indus valley Civilization; Greek Civilization; Roman Civilization; Chinese Civilization; Contemporary Developments in India; Samrat Ashok, Gupta Period, Maurya Period, Chanakya Arthshastra, Mansara Vastushastra; American Civilization.

**Module II: Medieval Period: 500-1500 A.D.**

Medieval Towns, Squares and Plazas, Neo Classic Period, Renaissance Period, Baroque Cities, Renaissance Period in India, City Planning in India, Jaipur, Fatehpur Sikri, and other examples of town planning.

**Module III: Industrial Revolution: 18<sup>th</sup> Century onwards**

Industrialization in west, Technology development, Characteristics of Industrial Towns, Great Britain in 18<sup>th</sup> and 19<sup>th</sup> century, Growth of America, City Beautiful Movement.

**Module IV: New Towns Concepts in 20<sup>th</sup> Century**

New Town Concepts - Linear Cities, Industrial City, The Radiant City, Radburn - Town of Motor Age, Broad Acres, CIAM, ASCORAL, Neighborhood Concept, Garden City Concept, Patrick Geddes, Lewis Mumford, Le Corbusier, Town Planning in 19<sup>th</sup> and 20<sup>th</sup> Century in India, Land use, Zoning Regulations, Building Bye Laws, Town Planning in Post Independence period, New Towns in India.

**E.1.2. Village Planning and Rural Development****Module I: Rural and Urban development and relation**

Relevance of rural area for urban development, mutual dependence between urban and rural areas, between industry and agriculture. Characteristics of symbiotic development and the pattern of urban development in India in this context, Ecological and environmental considerations in rural development and village planning, Rural energy issues, renewable and alternative sources of energy

**Module II:** Levels of living of rural people

Levels of living of rural people-trends of development differentials in level of development between various regions within India and different socio economic group National planning and rural development. Concepts of planning for rural settlement. Regional development and urban rural partnership, related inputs and infrastructure development.

**Module III:** Agriculture and rural development

Agricultural development, allied activities and patterns of rural linkages, communication and marketing facilities, community development, institutions and delivery of social services.

**Module IV:** Classification of rural settlement

Rural settlements, typology, structure, spatial significance in metro-regions and interior areas. Planning principles of villages and community norms. Rural reconstruction. Basic needs and rural sanitation, water supply, hygiene and drainage, technology transfer and options. Area, district and block level development planning and implementation, public participation in rural development process, role of voluntary Organization.

**E.1.3. Land and Real Estate Management****Module – I:**

Introduction to real estate, definition, types of real estate, principles of real estate, value concepts, methods of valuation, introduction to real property ownership, leasing, property succession. The status of land and property ownership in the Constitution of India, types of land, ownership and various tenure options of land, peculiar nature of property markets. Factors affecting supply and demand for property.

**Module – II:**

Methods of sale/ purchase, title search, real estate investment analysis and portfolio management, foreign direct investment (FDI), role of NRIs and PIOs in the property investment market, marketing and brokerage, introduction to various laws related to real estate.

**Module – III:**

Techniques of land assembly, development and disposal, financing of land and property development, land pooling/land readjustment, TP Schemes, Public Private Partnerships (PPP), role of the government, para-statal agencies and private sector in land and real estate management.

**Module – IV:**

Various policies and regulations for land, township policies of different state governments, international and domestic case studies, institutional, political and socio-economic concerns. Real estate project formulation, real estate development process, asset management, property insurance, taxation and fiscal incentives, industry organization, public-private partnerships and JV'S for corporate real estate development, rating, risk assessment.

#### **E.1.4. Ecology and Environment Planning**

**Module I:** Evolution of Ecology

Evolution of Ecology, Man and ecosphere, Components of nature and some basic concepts, process of ecology, flow of material, water, energy, invasion, succession, predation, regulatory forces, adoption, trophic levels, food chains, food web, ecological pyramids.

**Module II:** Ecosystem and Urban Ecosystem

Eco-system and their relevance to environment, resources and human settlements. Modifications in natural environment, causes and consequences.

Impact of advanced agriculture-methods, urbanization and industrialization on nature. Pollution, types, sources, remedies. Urban ecosystem approach, evolution and significance.

**Module III:** Quantitative Ecology

Introduction to quantitative ecology, Identification of ecological parameters for planning at different levels, Site planning, Settlement planning, Regional planning. Data needs, formats for data collection Types of analysis required to evolve ecological parameters. Environmental impact assessment. Methods and their appraisal. Ecological awareness in India, traditional indigenous methods, contemporary trends. Endowments and resources, definition and classification according to different criteria, endues, renewable, non-renewable etc. Space bound and flow resources, preparation and analysis of resource inventories and resource matrices.

**Module IV:** Resource Planning and Management:

Finiteness of resources, examples of transfer from one resource to another in history in different parts of world. Development, utilization and conservation of resources, resource planning, integrated resource planning approach. Resource regions, their problems and potentials. Resource management, traditional and contemporary approaches. Resource development in India, some selected areas (energy, water, manpower, etc.)

#### **C.1.5. Planning Portfolio – I: Local Level or Sub-City Level Planning**

Planning Portfolio – I will focus on planning of an area based on site analysis, application of development controls, and preparation of a site plan. For the preparation of a site plan, existing site will be examined based on a stipulated set of factors before a preliminary layout is prepared after the application of development controls. The final submission should include a concept plan, land use plan, subdivision plan, circulation plan, basic infrastructure plan, and a written report including all drawings. Submission of drawings, presentation sheets (A-1) and written report (A-3) is required to be submitted for examination.

## **FIRST YEAR, SEMESTER - II**

### **C.2.1. Design of Human Settlements**

#### **Module I:** Introduction

Nature of urban design, Role of urban design in the planning process. Social choices and values in design options. Ecological determinants in urban settlement design. Principles of structuring urban spaces, locational criteria of activities and urban uses.

#### **Module II:** Settlement Design

Imageability of the city, Determinants of urban patterns and forms, density and networks, impact of technology on infrastructure, standards and implications of regulatory control on urban form and design, in relation to renewal and re-development of central areas.

#### **Module III:** Town Design

Issues related to changing practices of planning human settlements as applied to spatial design. Urban design projects, identification, scope and relationship with development plan-case studies. Planning and design parameters for new towns, selected case studies.

#### **Module IV:** Future of Urban design

Issues in urban design, Efficient environments, Segregation and integration of activities and people, Creativity in city planning

### **C.2.2. Regional Planning and Development**

#### **Module I:** Basics and concepts

Spatial planning in the regional context. Concepts and theories of marginality, growth and development. Issues in regional development, dualism and dependency, efficiency, equity and environmental goals, theories of Spatial Organization, polarised growth, spread and backwash, centre and periphery.

#### **Module II:** Regional Planning framework

National planning framework and general approach in India. Philosophy and status of regional planning in the planning process, sectoral, multi-level and integrated approach to planning, national policies on income distribution and provision of minimum basic needs.

#### **Module III:** Regional Analysis

Regional analysis techniques to understand regional spatial structure, regional economy, planning styles in developing countries and contemporary approaches to regional development, structural and functional aspects, agropolis and its applicability to India.

#### **Module IV:** Strategies of regional development

Development strategies in the regional context in regional to urban/rural area, people prosperity, growth pole and growth centre strategies, small and medium towns, industrial region, special area strategies for metropolitan region, Techniques of target fixation in regional development inter-sectoral co-ordination. Formulation phasing and

implementation of integrated area development plans and development plan for regions.

### **C.2.3. Transportation Planning**

#### **Module – I:**

Urban form, network and transport patterns: Types of urban forms and structure; Land use – transport interaction, Impact of urban structure on travel patterns; urban road network classification, hierarchy and cross sectional elements; concept of accessibility.

Transport systems: Types and attributes of Urban and Regional transport systems, Mass transit systems, Non- Motorized Transport systems; regional transport systems planning.

#### **Module – II:**

Transport surveys and studies: study area definitions, zoning, surveys and their types, survey techniques, sampling methods, analysis and interpretation of traffic studies; urban traffic and travel characteristics.

Analytical techniques: Techniques for urban structure analysis; four stage urban transport planning process; land use- transport models; application of graph theory in rural road network planning.

#### **Module – III:**

Transport and environment: Traffic noise, air pollution, Transport Dependent Greenhouse Gas (GHG) Emissions; air and noise pollution abatement measures.

Traffic safety and Mobility: accident reporting and recording systems, factors affecting road safety; Mobility requirements for transport disadvantaged groups- children, aged, women, poor and physically challenged.

#### **Module – IV:**

Economic evaluation: Pricing of transport service and systems, economic appraisal of transport projects, Techniques for estimating road user costs and benefits, value of travel time.

Management of transport systems: Traffic management and Transport System management (TSM) measures; Existing organizational and legal framework for management of Transport systems; Transport sector budgets and outlays; Transport Policy.

### **C.2.4. Statistics and Population Studies**

#### **Module I:** Sampling methods

Theory of probability, random variables and distribution of sample statistics. Some important sampling distributions,

#### **Module II:** Projection

Statistical inference: Estimation of population parameters, testing of hypotheses.

Elementary association models: Chi-square test; simple linear regression and correlation. Time-series Analysis. Index Numbers. Statistics available for spatial analysis: An appraisal.

**Module III:** Basics of Population Studies

Introduction, Scope, method, subject matter and relevance for spatial planning, sources of demographic data. Interrelations: Population change, socioeconomic dimension of development and pattern of human settlements.

**Module IV:** Population and spatial distribution

Population, composition and spatial distribution; population structure and composition, spatial distribution causes and implications of spatial differentiation. Analysis of labour force, mortality and fertility, Life table technique, relevance for spatial planning. Theory models and measurement of internal migration, Internal migration and urban growth. Population estimation and projection techniques relevant for regions and settlements. Indian population census data an appraise.

**E.2.1. Urban Conservation and Heritage Management**

**Module – I:** Planning for heritage areas – conceptual & legal framework

Evolution of concept of integrated conservation and development, planning for areas of heritage significance; Value based approach to heritage management and urban conservation; International obligations and National Policy and Legislation for heritage conservation and management.

**Module – II:** Heritage areas in India – resource significance & potential

Types of heritage areas in India and their significance and potential today; Responsibilities of the urban local bodies and relevance of the 74<sup>th</sup> Amendment 12<sup>th</sup> schedule for heritage conservation, interface with district planning & metropolitan area planning; participatory heritage management; financing of heritage conservation heritage values; economic imperatives an implications for heritage management, heritage tourism.

**Module – III:** Integrated urban conservation & heritage management process

Identification, delineation and designation of heritage areas; Listing, documentation and heritage resource database development; Conservation and development guidelines for heritage areas; Integration of heritage conservation zones into master plans; Preparation of City Development Plans and DPR's in the heritage management and conservation sector under the JNNURM programme, Heritage Toolkit; Disaster preparedness for urban heritage areas; Methods for 'Heritage Impact Assessment' and 'Archaeological Impact Assessment'.

**Module - IV:** Comprehensive conservation plans & heritage management plans

Holistic approach to conservation and management of urban and rural heritage, cultural landscapes and cultural regions; Goals and objectives of comprehensive conservation plans and heritage management plans; Plan implementation and capacity building for heritage management.

**E.2.2. Development Management**

**Module I:** Development and Management Aspects

National goals and political-economic system effecting it. Development management and development process. System of local government in India. Development administration at National, State, District and Local level and the process of decision making, development and management.

**Module II:** Local Government

Functions, powers, structure and resources of local governments and their performance. Identifications of other non-government developmental organisations and their relationship with local governments. Possibilities of qualitative improvement in plan administration. Public relation and citizen participation.

**Module III:** Manpower Management

Personal management, Manpower planning, performance, appraisal, motivation, and morale, Organizational behaviour-organization theory, authority and confect, administration communication, leadership in administration, organizational changes, organizational structure and plan implementing agencies. Local financial system in India-local taxation and fees, state and local fiscal relations, financing local services, local services, local expenditure, capital budgeting and performance budgeting. Financial resource mobilization. Policies and programmes of related financial institutions, administrative aspects of investment.

**Module IV:** Land Management

Land Management practices and policies. Classical persuasive and no-persuasive strategies and techniques, New techniques of management by objective (MBO), integrated reporting system, flow diagrams, bar charts, mile stones, networks (CPM & PERT), line of balance (LOB), Techniques of monitoring of development works, standard oriented costs control, turn keys system, vertical production method, inventory cost control technique, unified status index technique.

**E.2.3. Public Participation in Planning**

**Module – I:** Understanding Participation

Defining participation, and related concepts, political and social context of participation, objectives of participation, types of participation, conditions affecting participation.

**Module – II:** Public Participation in Planning

Arenas of participation in planning, mandated participation in planning, other legal and organizational mechanisms for participation, Current trends in participatory planning in India, case examples of public participation in planning

**Module – III:** Methods and Techniques of Participation

Understanding reasons and nature of public involvement at different stages in planning, skills required for undertaking participatory planning,, methods and techniques of organizing participation.

**Module – IV:** Participation and Empowerment

Understanding concept of power and process of empowerment, case examples of empowering and exclusionary participatory processes in planning.



## **E.2.4. Governance and Management in Planning**

### **Module – I:**

Public governance in India, concepts and principles, emergence of the good governance paradigm, overview of urban governance structure in India, governance for town planning, national goals and political system affecting development management, emerging concepts of decentralization and privatization, role of government, elected representatives, executive and judiciary, industry, citizens, communities and non-governmental organizations, democracy and participatory processes in plan making, Constitutional provisions and amendments.

### **Module – II:**

Definition and concepts in organization, factors affecting organizational structure administrative context of town planning organizations in India, organizational theories and their effectiveness, planning organizations in India at national, state and local level, powers, functions and role of ULBs, improvement trusts, town planning departments, development authorities and para-statal organizations.

### **Module – III:**

Basic elements of management, planning, organization, staffing, coordination and monitoring and its relevance of town planning sector, importance of leadership development, communication and motivation for good management, need for modernization of management processes in town planning, e-governance mechanisms, citizen's charter, etc., emerging contours of the reform agenda, concept of 'new public management'.

### **Module – IV:**

Role of private sector, public – private partnerships, joint ventures, organizational reforms and privatization, outsourcing and contracts, role of financing agencies and linkages with other agencies (domestic and international).

## **C.2.5. Planning Portfolio – II: City Level Planning**

Primary objective of Planning Portfolio – II is to obtain comprehensive understanding of planning of an urban settlement. A master plan of a selected city will be examined with a specific focus on two land uses. An evaluation will be carried out based on the following considerations:

- Identify and explain the objectives of the plan as contained in the master plan pointing out contradictors among objectives, if any.
- Enumerate surveys required for the preparation of the plan and identify major conclusions of each survey. Give your comments on the reliability of these surveys.
- Identify the direction of growth (physical) and growth potentials (socioeconomic) pointed out in the plan.
- (d) Take any two land uses and evaluate policies, planning considerations, implementation procedures and development controls regarding these land uses.
- Submission of drawings, presentation sheets (A-1) and written report (A-3) is required to be submitted for examination.

## **SECOND YEAR, SEMESTER - III**

### **C.3.1. City and Metropolitan Planning and Development**

**Module I:** Trends in the dynamics of growth of urban centres in India  
Urbanization, metropolitanization, urban primacy, pattern and process; impacts and responses; urban development in Five Year Plans; environmental problems associated with large cities and metropolises.

**Module II:** Physical structure of large cities and metropolitan complexes  
Master Plan / Development Plan – an instrument of town planning – population, land use, traffic and transportation, urban form and structure, city-form-transport relationship; urban housing, its structure, role, stock; urban basic services; present deficiencies and efforts to fill the gaps.

**Module III:** The economic maladies and the social contours of the Indian metropolis  
The industrial, commercial and tax bases; spatial polarization of employment, unemployment and urban poverty; growth of the informal sector; measures to increase employment and to strengthened the economic base; changes in the family size and structure, culture, occupation, income and life-style; urban-rural dichotomy and social pathology of the large city.

**Module IV:** The management of the metropolis  
Metropolitan government and finances; proliferation of local authorities, overlapping jurisdiction; metropolitan planning and development agency, its powers and functions, need for unified urban administration.

### **C.3.2. Planning for Infrastructure**

**Module I:** Theories and components of major Infrastructure  
Concepts and theories of design and operation of urban services and network systems-water supply, sewage disposal, drainage, refuse collection, recycling and disposal, electricity network and telephone network, health care and education, police protection and fire fighting, general welfare,

**Module II:** Planning for emergency infrastructure  
Operational planning for emergency evacuation in urban areas, basic needs, formulation of objectives, norms and standards both for space allocation and quality control.

**Module III:** Services and appropriate technologies  
The network and service systems: components, interrelationship, requirements and needs of appropriate technology. Effects of density, land use and urban structure on design of network and service systems.

**Module IV:** Cost of infrastructure provision  
Cost recovery, economics of urban service system and networks.

### **C.3.3. Land Economics**

**Module I:** Economic concepts of land

Definition of urban land, other relevant terms and definition of such terms, allocation of resources, Economic concept of land, objectives, scope of land economics, relevance for spatial planning,

**Module II:** Economic principles of land uses

Economic principles of land uses, inefficiency of the market use, accessibility and demand of land, urban land use pattern, factors of specific uses like residential, industrial, commercial and institutional, urban rent, land values and densities, spatial structure,

**Module III:** Development of land

Development of land, real property and process of land development, Cost of development, source of finance, Real property market, Heterogeneity and imperfections, principles and practices.

**Module IV:** Economic aspects of land policies

Economic aspects of land policies at various levels of decision making, taxation of real property, urban redevelopment

### **C.3.4. Project Formulation, Financing and Appraisal**

**Module I:** Introduction to project formulation

Introduction to the life cycle of a project, project identification, formulation, appraisal, monitoring and evaluation. The role of project formulation and appraisal in the planning process.

**Module II:** Methodology of project identification

Stages of preparation of projects and its appraisal, methodology for project identification and formulation of opportunity studies, feasibility reports and detailed project reports, Policy parameters for appraisal of project reports, Planning Commission guidelines, requirements of principle financing agencies in the field of urban and regional planning, Review of project appraisal techniques adopted by financing agencies. Cost effectiveness analysis and cost-benefit analysis.

**Module III:** Cost-benefit analysis

Financial cost-benefit analysis, Cash flow analysis, time value of money, discounted cash flow analysis. Measures of project profitability based on market prices-Net present value, internal rate of return, benefit cost ratio, etc. Exercises and case studies.

Economic cost-benefit analysis, Distinction between market prices and accounting prices, objective functions in economic cost benefit analysis, derivation and application of shadow wage rates. Measures of project profitability based on efficiency prices, Case Studies.

Social cost-benefit analysis, Trade-offs between efficiency and equity goals in project appraisal, measurement of direct and indirect costs and benefits in different sectors of urban and rural development, Adjustments for project impact on saving and

investment, income distribution, consumption of merit and demerit goods, Case Studies.

**Module IV:** Risk and uncertainty analysis

Techniques for identifying and assessing conditions of risk and uncertainty in the project environment, Sensitivity and probability analysis in the Indian context, Emerging trends in the decision making process with respect to project appraisal and resource allocation at various levels of government.

**E.3.1. Politics and Spatial Planning**

**Module I:** Understanding Politics

Classical notions of politics; Current definitions and content of politics, political and police by Jacques Rancière.

**Module II:** Planning and Politics

Relationship between politics and planning; Politics of planning and politics in planning; Disempowering work of planning; and Urbanization as creeping apartheid.

**Module III:** Production of Space and Spatial Planning

Meaning of space; Types of space by Henri Lefebvre – absolute space, relative space and relational space; Meaning and essence of spatial planning; and Religion and caste based case examples.

**Module IV:** Spatial Injustices

Meaning of spatial injustice, Spatiality of injustice: Spatial dialectics of injustice, the Right to the city, and the Right to difference; and Squatter settlements based case examples of spatial injustices.

**E.3.2. Planning for Disaster Risk Mitigation and Management**

**Module I:** Basic Concepts of Disaster Management

Disaster – definition and concepts, types of disasters, disaster management cycle, historical perspective of disaster management, Hyoto framework of action; disaster management act, policy and programmes,

**Module II:** Natural hazards/disasters

Physical process, phenomenon causes and consequences, mitigation and management practices of natural hazards/disasters like cyclones, floods, earthquakes, landslides, etc.

**Module III:** Disaster Risk Mitigation – Non-structural Measures

Tools and techniques for risk assessment, development of risk sensitive land use planning, forecasting and early warning systems, community based disaster preparedness (CBDP), disaster education and awareness, hospital's and school's preparedness for disaster safety

**Module IV:** Disaster Risk Mitigation - Structural Measures

Disaster safe construction practices, building codes and guidelines, retrofitting for earthquake safety, post-disaster management, linkages between disaster and development

### **E.3.3. Planning for Informal Sector**

#### **Module I:** Concept and Definitions

Definitions and concept of informal sector; its relation to housing and income generation; Home workers, Home based Enterprises and home based economic activities; street vendors, informal commercial activities in context of plan preparation,

#### **Module II:** Policy Framework for Informal Sector

Policies of the government on the informal sector, growth and characteristics of the informal sector. Formal - informal sector linkages and their effect on urban development.

#### **Module III:** Concept of Urban Poverty Alleviation

Urban poverty: dimensions, determinants, manifestation, Non-economic criteria in identification of poor, replicability of urban anti-poverty programmes.

#### **Module IV:** Policy Framework for Poverty Alleviation

Government policies and programme for urban poverty alleviation, Linkages with various other programmes, Inclusive planning with reference to poverty alleviation.

### **E.3.4. Public Policies in Planning**

#### **Module I:** Basics of Public Policies

Meaning of public policy; Forms and components of public policies; Cycle of public policy formulation; and Theories of public policies and policy analysis.

#### **Module II:** Planning and Public Policies

Meaning of planning policy; Forms and components of planning policies; Sources and content of public planning policies; Joined-up government; and Policy implementation and evaluation.

#### **Module III:** Context of Planning Policies

Reasons for linking urban and regional planning policies to public policies; Integration and coherence of planning policies; Context and integration of planning policies with relevant other public policies; and Significance of the study of public planning policies.

#### **Module IV:** Nature of Planning Policies

Welfarist planning policies; Managerialism and urban entrepreneurialism; Neoliberal urbanism; Gentrification; and some case examples of current and classical Indian planning policies.

### **C.3.5. Planning Portfolio – III: District or Region Level Planning**

Regional plans are prepared for different kind of regions in various parts of the country since 1950s onwards. After the 73rd and 74th amendments to the

Constitution of India in 1992, district development plans have obtained new urgency. Many states are in the process of creating institutions for the preparation of district development plans. The students are required to select a published regional plan or district plan and critically examine its contents by keeping in mind the following:

- Identity and explain the objectives of the plan as contained in the regional plan and district plan pointing out contradictors among objectives, if any.
- Enumerate surveys required for the preparation of the plan and identify major conclusions of each survey.
- Identify the direction of growth (physical) and growth potentials (socioeconomic) pointed out in the plan.
- Discuss the proposed land utilization plan in detail with a focus on integration of various land uses such as forestry, agriculture, tourisms, etc.
- Submission of drawings, presentation sheets (A-1) and written report (A-3) is required to be submitted for examination.

## **SECOND YEAR, SEMESTER - IV**

### **C.4.1. Planning Legislation and Professional Practice**

#### **Module1:** Fundamentals of Law and its relevance with planning

Concepts of law, Sources of law, legislation and precedent, meaning of terms of law, legislation, ordinance, bill, act, regulations and byelaws, Significance of law and its relationship to urban planning, Benefits of statutory backing for schemes- eminent domain and police powers

#### **Module II:** Planning polices and acts

- A. Indian Constitution, Concept and contents, Provisions regarding property rights, Legislative competence of State and Central Governments to enact town planning legislation, National Environmental Policy; Environmental Protection Act, Land Acquisition Act, 1894 and Amendments – Basic concept, procedure for compulsory acquisition of property and determination of compensation. Evolution of planning legislation.
- B. Model Town Planning Legislation, Regional Planning Legislation including National Capital Region Planning Board Act, 1985, Town and Country Planning Act, Urban Planning and Development Authorities Act, objectives, contents, procedures for preparation and implementation of regional plans, master plans and town planning schemes and 73<sup>rd</sup>, 74<sup>th</sup> Constitutional Amendment Act, 1992, Panchayati Raj and Local Self Government Legislation.  
Introduction to law relating to slum clearance, housing, landscape and traffic, Legislation relating to urban conservation and restoration, historical monuments, archaeological sites.

#### **Module III:** Legal tools for planning and development

An overview of legal tools connected with urban planning and development. Concept of arbitration, betterment levy, development charges and public participation in statutory planning process, English Law, Concept of structure plan, local plan and action plan.

Significance of land Development Control objectives and legal tools, critical, evaluation of zoning, sub-division regulations, building regulations, and byelaws. Development code, zoning law and law relating to periphery control.

**Module IV: Planning Professional Practices**

Aims and objectives of professional institutes sister bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct and scale of professional charge. Formulation of project proposal and outlines. Consultancy agreements and contracts, managerial aspects. Role in inter-disciplinary groups. Appreciation of the decision making process, and the process in relation to varied consultancy assignments of planning.

**C.4.2. THESIS**

The main objective of the Thesis is to provide an opportunity to the students to conduct an original study and develop a subject of their choice, which adds significantly to the knowledge of urban and regional planning. This attempt would also give a chance to the students to demonstrate their abilities to use and apply planning theories and techniques they have learnt in theory subjects and to arrive at independent conclusions. Depending upon the theme of the Thesis, investigations may involve original field work (collection of primary data), compilation and analysis of data already available and critical analysis before its synthesis in the form of conclusions and policy recommendations.

The ITPI will organize an orientation course on research methods, presentation techniques, and report writing and each student is compulsorily required to attend these courses.

Stage for the preparing a thesis are given below:

- (a) Selection of topic – preliminary synopsis
- (b) Appointment of thesis guide (s)
- (c) Submission and approval of detailed synopsis
- (d) Draft or pre-final report
- (e) Review and presentation of the draft
- (f) Submission of the final thesis
- (g) Final presentation before the Jury