DEPARTMENT OF REGIONAL PLANNING

Syllabus

Master’s in Planning (with specialization in Regional Planning)

(approved in 61st Academic Council Meeting held on 17 May 2016 and 99 Executive Council meeting held on 5 August 2016)

SCHOOL OF PLANNING AND ARCHITECTURE
NEW DELHI – 110 002
**1. Mission Statement**

Globalisation and liberalization and inter-connectivity of economies have brought in a new paradigm shift in defining ‘the region’. Accepting the regional variations in the development process as inevitable and a necessity for over all development of the country, the role of the regional planner – the end product of our department of regional planning, has forced us to adapt to the changing knowledge environment. At the same time, we look upon this as a challenge and an opportunity.

The 73rd and 74th Constitutional Amendment Act (CAA) in India has given a new impetus to the development planning with inputs from village, block/taluka and district that requires a set of new tools for understanding the issues, new tools for analysis and decision making process. Being in the business of skill development and knowledge transfer, SPA’s Regional Planning Department is trying to equip and transfer the kind of skills and knowledge that the market and society demands through its students.

Regional Planning Department believes in a seamless interface between typology and levels of regions so as to achieve integrated and conflict reducing plans. The Department aims to impart knowledge in developing sustainable development of a region through an inter play of various variables that are directly and indirectly affecting the region’s development.

To impart this high quality knowledge to our students, we use new approaches, techniques and subjects in our pedagogy such as Spatial Data Infrastructure, and subjects such as Public Policy Analysis, Climate Change, Poverty and Development, Emerging Regions, etc. Recent international conferences and seminars organized around these subjects and our intense interaction with the national and international community through free online courses for the students and active participation of faculty members of the department in these seminars/conferences helps our department to impart the specialized knowledge that is emerging in this field.

Open discussions with the students, special lectures by foreign professors who are visiting the department, invited special lectures by eminent subject specialists have been the strength of our department. Students are also exposed to present their ideas in international seminars/conferences being organized by the Department in various emerging fields so that they develop their skills/quality at international level.

Through the programme offered by the Department in the field of Regional Planning, we equip the students in the skills of regional analysis at various levels, preparation of action oriented policies, plan, strategies and management plan for human settlements. To expose our students with latest skill sets in this field, the department has networked with Universities across the world, with which our students interact on regular basis. Needless to say - we lead the knowledge in the field of Regional Planning in India, as a specialized knowledge transfer institution.
2. **Alignment with Research Interests:**

Regional Planning Department’s faculty members (both permanent and visiting) are constantly engaged in research and publication and have been a source of knowledge generation. This is evident from the list of international publications that the faculty members have brought out and the international level research they have taken up, on poverty mapping (with University of Amsterdam), spatial data infrastructure ITC, The Netherlands), climate change (University of Queen’s, Belfast), peri-urban development (with French Research Institutions), and mega region governance (University of Cologne), etc. In addition, the department has informal links with NGOs working in rural areas of Rajasthan and Haryana where the students were exposed to Village level planning through participatory initiatives.

3. **Desired Student Profiles:**

In a competitive world, we need to have the best quality student, which is demanded by the country. Hence, our selection process is based on: entrance test, group discussion and interview. As Regional Planning involves a multi-disciplinary approach, we take students from the field of Architecture, Engineering, Economics, Geography, Planning and Sociology. However, we feel this needs to be further broad based and open to other related disciplines in the long run.

4. **Learning Outcomes:**

Through the knowledge imparted in the Regional Planning Department, we expect that our students will come out as professionals with a specialized knowledge in the field of Regional Planning/Development. He/She should be able to plan, manage and deliver the end quality product required by the country in the field of Planning, at various levels and in various organizations.

5. **Assessment:**

The objective of the course is not only to develop individual student’s ability in academics but also to bring the best out of that student. Hence, we believe in both interactive assessment as well as individual assessment by a group of faculty. These assessments in the case of individual theory subjects are being carried out on the basis of assignments, class presentations, and tests, while in the studio exercises individual’s ability to work in a multi-disciplinary environment, group dynamics and leadership qualities are assessed by a group of faculty members.

6. **Pedagogy:**

The Department of Regional Planning carries out its task of knowledge transfer through the following methods:

a) Lectures, b) Special Lectures, c) Studio exercise, d) Tutorial, e) Seminar/Presentations, f) Independent Reading including library hours, and g) presentation/participation in conferences organized by the department.
7. Content:

Semester-wise content, starting from the Second Semester to Fourth Semester is given below. First semester-wise table along with credits are given, and content details such as objective, prerequisites, pedagogy followed etc is given in the following write up.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
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<tbody>
<tr>
<td>I</td>
<td>24</td>
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<tr>
<td>II</td>
<td>22 (20+2)</td>
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<tr>
<td>III</td>
<td>22 (18+2+2)</td>
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<tr>
<td>IV</td>
<td>16 (14+2)</td>
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<tr>
<td>Total</td>
<td>84 (76+4+4)</td>
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Core Course
Department Elective
Institute Elective (IE)

8. Total Teaching Hours (II, III and IV Semester):

Theory: 24 Hours
Studio: 37 Hours
CA 1: PLANNING HISTORY AND THEORY

Teaching Inputs:
- Total Lecture: 16
- Time Duration: 2 hours/lecture
- Total Hours/semester: 32 hours
- Credits: 2

<table>
<thead>
<tr>
<th>Module 1: Planning History</th>
<th>16 hours</th>
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<tbody>
<tr>
<td>• Relevance of the study of Evolution;</td>
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<tr>
<td>• Hunter gatherer/farmer and formation of organized society;</td>
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<tr>
<td>• Cosmological and other influences origin &amp; growth of cities, effects of cultural influence on physical form;</td>
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<td>• Human settlements as an expression of civilization.</td>
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<td>• Basic elements of the city, Concepts of space, time, scale of cities;</td>
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<td>• Town planning in ancient India medieval, renaissance, industrial and post industrial cities;</td>
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<tr>
<td>• City as a living &amp; spatial entity; Concepts of landmark, axis, orientation. City form as a living space.</td>
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<td>• City as a political statement. New Delhi, Chandigarh, Washington D.C., Brazilia etc.;</td>
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<tr>
<td>• Contribution of individuals to city planning. Lewis Mumford, Patric Geddes, Peter Hall etc.;</td>
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<tr>
<td>• The dynamics of the growing city. Impact of industrialization and urbanization. Metropolis and Megalopolis; Generic and paracentric cities,</td>
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<table>
<thead>
<tr>
<th>Module 2: Planning Theory</th>
<th>16 hours</th>
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<tbody>
<tr>
<td><strong>Definitions and Rationales of Planning Theory</strong></td>
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<tr>
<td>• Definitions of town and country planning, Orthodoxies of planning, sustainability and rationality in planning, Components of sustainable urban and regional development</td>
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<tr>
<td>• Theories of urbanization including Concentric Zone Theory, Sector Theory, Multiple Nuclei Theory and other latest theories, Land use and land value theory of William Alonso; Ebenezer Howard’s Garden City Concept; Green Belt Concept</td>
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<tr>
<td>• City as an organism: a physical, social, economic and political entity</td>
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<tr>
<td>• Emerging Concepts: Global City, inclusive city, Safe city, etc. City of the future, 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, advocacy planning and action planning, equity planning;</td>
<td></td>
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<tr>
<td>• Types of Development Plans</td>
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<tr>
<td>• Goal formulation, objective, scope, limitations; Plan making process, planning methodology and case studies.</td>
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</table>
# CA 2: SOCIO - ECONOMIC BASE FOR PLANNING

<table>
<thead>
<tr>
<th>Teaching Inputs:</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Total Lecture</td>
<td>16</td>
</tr>
<tr>
<td>Time Duration</td>
<td>2 hours/ lecture</td>
</tr>
<tr>
<td>Total Hours/ semester</td>
<td>32 hours</td>
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</tbody>
</table>

### Module 1: Nature and Scope of Sociology (8 hours)

- Sociological concepts and methods, man and environment relationships;
- socio-cultural profile of Indian society and urban transformation;
- traditions and modernity in the context of urban and rural settlements
- Issues related to caste, age, sex, gender, health safety, marginalized group, un/underemployed, disabled population.

### Module 2: Community and Settlements (8 hours)

- Social problems of slums and squatters communities, urban and rural social transformation and its effects on social life, safety, security and crime in urban areas and its spatial planning implications, social structure and spatial planning;
- Role of socio-cultural aspects in the growth patterns of city and neighbourhood communities;
- Social planning and policy; community participation; Marginalization and concepts of inclusive planning, Gender concerns. Settlement Policy: National Commission on Urbanisation, Rural Habitat Policy – Experiences in developing countries regarding Settlement structure, growth and its spatial distribution.

### Module 3: Elements of Micro and Macro Economics (8 hours)

- Concepts of demand, supply, elasticity and consumer market; concept of revenue cost;
- Economies of scale, economic and social cost, production and factor market;
- Different market structure and price determination; market failure, cost-benefit analysis, public sector pricing;
- Determinants of national income, consumption, investment, inflation, unemployment, capital budgeting, risk and uncertainty, long-term investment planning.

### Module 4: Development Economics and Lessons from Indian Experiences (8 hours)

- Economic growth and development, quality of life; Human development index, poverty and income distribution, employment and livelihood;
- Economic principles of land use planning;
- Policies and strategies of economic planning, balanced vs. unbalanced growth, public sector dominance; changing economic policies, implications on land and case studies.
## Module 1: Survey Techniques and Mapping

- Data Base for Physical surveys (incl. land use / building use / density / building age, etc.) and Socio-economic surveys; Survey techniques, etc.; Land use classification/coding; expected outputs.
- Techniques of preparing base maps – concepts of scales, components and detailing for various levels of plans (regional, city, zone, local area plans).

## Module 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.
- Methods of population forecasts and projections.
- Lorenz Curve, Ginni Ratio, Theil’s index, rations: urban – rural, urban concentration, metropolitan concentration;
- Location dimensions of population groups – Social area and strategic choice approach – interconnected decision area analysis.

## Module 3: Planning Standards

- Spatial standards, performance standards and benchmarks, and variable standards. UDPFI guidelines, zoning regulations and development controls.
# CB1: INFRASTRUCTURE AND TRANSPORT PLANNING

**Teaching Inputs:**
- **Total Lecture:** 16
- **Time Duration:** 2 hours/lecture
- **Total Hours/semester:** 32 hours
- **Credits:** 2

## INFRASTRUCTURE

<table>
<thead>
<tr>
<th>Module 1: Role of Infrastructure in Development</th>
<th>4 hours</th>
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<tbody>
<tr>
<td>• 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. Land requirements. Principles of resource distribution in space.</td>
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<thead>
<tr>
<th>Module 2: Physical Infrastructure</th>
<th>10 hours</th>
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<tbody>
<tr>
<td>• 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.</td>
<td>3 hours</td>
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<tr>
<td>• Sanitation – points of generation, collection, treatment, disposal, norms and standards, grey water disposal, DEWATS, institutional arrangements, planning provisions and management issues.</td>
<td>3 hours</td>
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<tr>
<td>• 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.</td>
<td>1 hour</td>
</tr>
<tr>
<td>• 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.</td>
<td>2 hours</td>
</tr>
<tr>
<td>• 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.</td>
<td>1 hour</td>
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<thead>
<tr>
<th>Module 3: Social infrastructure</th>
<th>2 hours</th>
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<tbody>
<tr>
<td>• Social Infrastructure – Education, Health, Civic Types, hierarchical distribution of facilities, Access to facilities, provision and location criteria, Norms and standards etc.</td>
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## TRANSPORT PLANNING

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
<th>Duration</th>
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</table>
| Module 1: City Development and Transport | • 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 | 4 hours |
| Module 2: Transport Infrastructure Planning and Design Principles | • Hierarchy, capacity and geometric design elements of roads and intersections  
• Basic principles of Transport infrastructure design | 4 hours |
| Module 3: Urban Transport Planning Process and Studies | • Traffic and transportation surveys and studies, traffic and travel characteristics  
• Urban transport planning process – stages, study area, zoning, data base, concept of trip generation | 4 hours |
| Module 4: Transport Management | • Transport, environment and safety issues  
• Principles and approaches of Traffic Management, Transport System Management. | 4 hours |
## CB2. HOUSING AND ENVIRONMENTAL PLANNING

Teaching Inputs:
- Total Lecture: 16
- Time Duration: 2 hours/lecture
- Total Hours/semester: 32 hours
- Credits: 2

### HOUSING

<table>
<thead>
<tr>
<th>Module 1: Concepts and Definitions</th>
<th>4 hours</th>
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</thead>
<tbody>
<tr>
<td><strong>a)</strong> 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.</td>
<td>2 hours</td>
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<tr>
<td><strong>b)</strong> Various housing typologies viz. traditional houses, plotted development, group housing, multi-storied housing, villas, chawls, etc., slums and squatters, night shelters, public health issues related to housing, various theories of housing, concept of green housing, green rating of housing projects.</td>
<td>2 hours</td>
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<table>
<thead>
<tr>
<th>Module 2: Social And Economy Dimensions</th>
<th>4 hours</th>
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<tbody>
<tr>
<td><strong>a)</strong> 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 and the elderly.</td>
<td>2 hours</td>
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<tr>
<td><strong>b)</strong> Contribution of housing to micro and macro economy, contribution to national wealth and GDP, housing taxation, national budgets, fiscal concessions, forward and backward linkages.</td>
<td>2 hours</td>
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<thead>
<tr>
<th>Module 3: Housing and the City</th>
<th>4 hours</th>
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<tbody>
<tr>
<td><strong>a)</strong> Understanding housing as an important land use component of city plan / master plan, considerations for carrying out city level housing studies, projections, land use provisions,</td>
<td>2 hours</td>
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<tr>
<td><strong>b)</strong> Suitability of land for housing, housing stress identification, projecting housing requirements, calculating housing shortages, housing allocation.</td>
<td>2 hours</td>
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<tr>
<th>Module 4 Planning for Neighbourhoods</th>
<th>4 hours</th>
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<tbody>
<tr>
<td><strong>a)</strong> 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.</td>
<td>2 hours</td>
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<tr>
<td><strong>b)</strong> Case studies of neighbourhood planning</td>
<td>2 hours</td>
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## ENVIRONMENTAL PLANNING

<table>
<thead>
<tr>
<th>Module 1: Global Environmental Concerns and Planning of Settlements</th>
<th>4 hours</th>
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<tbody>
<tr>
<td>• UN/ International Conferences/ Conventions (Global /National issues)</td>
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<td>• Environmental Concerns of human settlements</td>
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<td>• Components, structure and meaning of the urban and regional environment</td>
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<table>
<thead>
<tr>
<th>Module 2: Environment planning techniques</th>
<th>4 hours</th>
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<tbody>
<tr>
<td>• Environmental surveys- Methods of data collection, interview techniques, analysis.</td>
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<td>• Database for incorporation of environmental concerns in planning analysis</td>
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<td>• Techniques of resource protection and conservation (land suitability analysis, carrying capacity, vulnerability analysis.</td>
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<tr>
<th>Module 3: Environment Resource and assessment</th>
<th>6 hours</th>
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<tbody>
<tr>
<td>• Resources type, scale, inventory</td>
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<td>• Resource Assessment –</td>
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<tr>
<td>Land – topographic analysis,</td>
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<td>Water – quality standards,</td>
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<td>Air and Noise – quality standards,</td>
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<td>Biodiversity – basics of flora and fauna diversity assessment</td>
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<tr>
<th>Module 4: Environment Quality</th>
<th>2 hours</th>
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<tr>
<td>• Methods of addressing environmental quality</td>
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<td>• Environmental Impact Assessment – an introduction</td>
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<td>• EIA notification as related to human settlement planning</td>
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### STUDIO COURSE

<table>
<thead>
<tr>
<th>Teaching Inputs:</th>
<th>Total Lecture</th>
<th>16</th>
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<tr>
<td></td>
<td>Time Duration</td>
<td>2 hours/lecture</td>
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<td>Total Hours/ semester</td>
<td>32 hours</td>
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<td></td>
<td>Credits</td>
<td>2</td>
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#### 1. GIS Applications

<table>
<thead>
<tr>
<th>Module 1: GIS Applications</th>
<th>8 hours</th>
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<tbody>
<tr>
<td>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.</td>
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<thead>
<tr>
<th>Module 2: Remote Sensing</th>
<th>8 hours</th>
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<tbody>
<tr>
<td>Why remote sensing, aerial &amp; 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.</td>
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#### 2. Demography and Statistical Applications

<table>
<thead>
<tr>
<th>Module 1: Demography</th>
<th>8 hours</th>
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<tbody>
<tr>
<td>Sources of demographic data in India, Settlement type, growth pattern and structure: urban settlement analysis, Concentration: spatial, vertical and size, peri-urban 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;</td>
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<table>
<thead>
<tr>
<th>Module 2: Statistical Applications</th>
<th>8 hours</th>
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<tbody>
<tr>
<td>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.</td>
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#### 3. Computer Applications (non-audit course)

<table>
<thead>
<tr>
<th>Module 1: Word Processing</th>
<th>8 hours</th>
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<tbody>
<tr>
<td>Application of Word, Excel, PowerPoint, Adobe reader etc.</td>
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<table>
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<tr>
<th>Module 2: Drawing Software</th>
<th>8 hours</th>
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<tbody>
<tr>
<td>Application of Autocad, Photoshop, Sketch up etc.</td>
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STUDIO ASSIGNMENTS

Time Duration 12 hours/week  
Total Hours/Semester 192 hours  
Credit 12

Assignment 1

Film Appreciation (individual assignment)-1 week  
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 question is not more than half a page.

Assignment 2

Literature Review (individual assignment) – 1 week  
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).
Assignment 3

Area Appreciation (individual assignment)-2 weeks

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 area 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.
Assignment 4

Site Planning (individual assignment) - 3 weeks

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 spaces 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.

Assignment 5

City Development Plan (Group assignment) - 11 weeks

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.
Second Semester Courses

The main objective of the second semester course (four main and one elective course) is to equip the students with the knowledge of regions: in terms of typology, functions and to prepare planning for the regions through the understanding of land, infrastructure, climate, etc and also enables them to think about what will be the future scenario of emerging regions in the country propelled by technological, economic and social advancements. The main subjects will enable the students to understand the core issues of regional planning, while the electives makes them understand the issues within these core issues such as poverty and climate change issues in a regional perspective.

Name of Department: Department of Regional Planning

1. Subject Code: RP 1

   Course Title: Planning for Regions

2. Contact Hours: Lecture (L) & Tutorial (T) 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination).

4. Credits: 2

5. Semester: Winter

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external).

7. Objective: To provide students with knowledge on typology of regions, its inter and intra linkages with other levels, paradigm shift in the definition and scale of regions, regional analysis, and case studies.

8. Details of Course:

   **Module 1: Concepts and Typology of Regions**
   Basic Concepts in Regions, Defining a region: fluidity and purposiveness, Typology of Regions: Resource Regions, Mega, Macro, Meso, and Micro Regions. Delineation of Regions (Regionalisation)

   Rural Settlement Analysis: Types, activity, environment and economic interface in rural habitat, technology in rural settlement

   **Module 2: Regional Dynamics**
   Growth of Mega and Metro Regions: Scale, Complexity and its impact on national and international scenario, convergence and divergence. Regional Economy, competitiveness among regions, backward and leading regions in development. Special Regions: SEZ, Agro Regions, Ecological regions, etc.; Regional Disparity Analysis (through factor analysis); Regional Interdependence Analysis (through Input-Output model)
Module 3: Regions in India and its planning
Resource Regions; Corridors as regions; National, Sub-National and State as a region; Macro, Meso and Micro regions in India.

Case Studies from India: NCR and Delhi Mega Region, Mumbai Mega Region, Kolkata Metro Region, Chennai Metro Region, and other Metro Regions in India. Western & Eastern Ghats, North Eastern Region, Coastal Regions, and River Valley

Regions. Corridors: Golden Quadrilateral, Delhi-Mumbai, Chennai-Bangalore Industrial Corridor, North-South and East-West Corridor Regions; Core, Fringe and Periphery in a Region and its planning.

Tools and techniques available for planning regions in India.

Role of 73 and 74 CAA in regional plan preparation and implementation.

Module 4: Future Regions

Seminar 1: Introduction to Futures perspectives and methods
Seminar 2: Technological advancement and emerging future regions
Seminar 3: Rapid Economic changes and future engines of growth
Seminar 4: Regional Demographics including regional migration pattern
Seminar 5: Concept of Ecological Footprint, Introduction to Ecological Economies, Sustainability Concepts and Practices, Climate Change
Seminar 6: Globalisation and emergence of seamless regions
Seminar 7: Policy Changes and its impact on future regions

Expected Learning Outcome: Students are expected to have obtained the skills in understanding a region, its dynamics, and planning complexities, once they undergo this course.
Name of Department: Department of Regional Planning

1. Subject Code: RP 2

2. Course Title: **Regional Infrastructure**

   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination).

4. Credits: 2

5. Semester: Winter

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: During the first semester, during the course on infrastructure, students were imparted knowledge in the field of planning and provision of infrastructure. In this semester, skills are imparted in the field of regional infrastructure, which are essential in a neo-liberal privatizing world. They will be taught equity, efficiency and other issues of management in various infrastructures at various levels: from village to regional level. This course will equip them in understanding and managing the multi-service-provider environment emerging in various infrastructure.

8. Details of Course

**Module 1: Infrastructure Management: Planning Issues**
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; Infrastructure Index.

**Module 2: Role and functions of Infrastructure in a Region**
Role of Infrastructure in regional development; Critical Infrastructure in regional development, and Indicators of infrastructure development in defining regional development, standards and benchmarks for infrastructure provision and delivery at various levels; Role of Spatial Information Technology in the planning, provision, and monitoring infrastructure.

**Module 3: Regional Resource Analysis**
Regional Resource Mapping across forest resource, mineral resource, agricultural resource, water resource etc.
Module 4: Physical Infrastructure

1) Water

   b) 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.

   c) Drinking/Potable Water: Source and provision at various levels (Village, City and District); equity and efficiency; leakages and unaccounted water and its minimization; Privatisation of Water and its implications; Pricing and access; Spatial variations in standards and provisions.

2) Sanitation

   b) Access to Sanitation: Cost and Coverage; Role of Institutions: Public, Private and community; Sanitation and environment; Sanitation and health.

3) Solid Waste Management
   a) Wastes in Rural Areas including agriculture: types of waste, Problems and reuse; community involvement in collection, disposal, treatment and reuse

   b) Wastes 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

   c) Urban Waste Disposal in Rural Areas: specialized waste management from urban areas (hazardous, e-waste, medical, wholesale market, mandi and any other waste)
4) Regional Connectivity

a) Roads
   • Hierarchy of Roads: National, State, District, Other District Roads, and Village Roads: 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 and International Roads: border roads, international roads and backward regions; Forward and Backward regions in terms of road provision.

b) Railways: Goods and passengers train, dry ports, container depot etc., high-speed connectivity and Metro

5) Energy
   Conventional and Non-Conventional Energy Sources and Policies and programmes towards energy at various levels; Demand and Supply projections; investment and pricing; Trans-boundary issues in production and sharing; privatization issues; Nuclear Energy: issues involved and probable spatial impact.

Module 5: Social Infrastructure

a) Health
   Provisions, availability, access and future requirement; government policies

b) Education
   Provisions, availability, access and future requirement; government policies

c) Socio-Cultural and Recreational
   Provisions, availability, access and future requirement; government policies

Module 6: Economic Infrastructure
Agriculture Extension Centres, Agriculture Marketing/ storage, Banking and Insurance, Tourism Infrastructure, Ports, Airports, Inland Waterways, Special Economic Zones (SEZ)

Module 6: Line Infrastructure

a) Communication: Provisions and Management of Information Communication and Technology (ICT)

b) Gas, Liquid Gas and other network connectivities

Expected Learning Outcome: Students are expected to have obtained the skills in understanding the infrastructure provision at various levels, conflicts in provision and maintenance, and concepts of infrastructure management at various levels once they under go this course.
Name of Department: Department of Regional Planning

1. Subject Code: RP 3

2. Course Title: District Planning and Rural Development

3. Contact Hours: L & T 2

4. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination).

5. Credits: 2

6. Semester: Winter

7. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

8. Objective of the Course: District Planning has gained a new momentum after the introduction of 73 and 74 CAA. Within District planning, rural development has acquired a new meaning through participatory development process from village to district level. It is our endeavor to impart this essential skill in regional planning through this course.

9. Details of Course

Module 1: Introduction

Module 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 Decentralised Planning; Democratising Information: using media for district development.

Module 3: Rural Planning and Development
a) Introduction: Meaning, Scope and overview of rural development; Historical perspective - Rural Development Programmes in India, Problem/perception and identification;

b) Rural Area Planning - Programmes/ Policies/ Schemes for rural development, their coverage and outcomes;
c) **Rural Infrastructure Development Schemes**

d) **Rural Employment Schemes**

e) **Programmes:** Command Area Programme, Draught Prone Area Programme, Backward Area Development Programme, North Eastern Development Programme etc.

f) **Technology Missions:** Water, Sanitation, etc.

**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

**Inclusive Development:** Special Component Plan- Tribal Sub Plan and Weaker Sector Plan allocation, Direct Cash Transfer, Affirmative Action etc., implementation, monitoring and evaluation. North Eastern Plan

**Participatory Planning Process:** Introduction, purpose, origin, salient features; Principles and Methods of participatory planning; preconditions for participatory planning; steps in participatory planning in local governance: case studies from different parts of India, Participatory Learning and Action (PLA) tools, challenges faced in participatory planning.

**Expected Learning Outcome:** Students are expected to have obtained the skills in understanding the District Planning, integrated district planning, participatory district planning, rural development in all its dimensions, once they under go this course.
Name of Department: Department of Regional Planning

1. Subject Code: RP 4

2. Course Title: **Land Markets and Management**

3. Contact Hours: L: 2

4. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

5. Credits: 2

6. Semester: Winter

7. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role-play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

8. Objective of the Course: This course will provide an understanding of the functioning of the land markets, land policy, supply and demand analysis, equity and efficiency in land markets, regulation in land markets, land management techniques and land price issues. These aspects were taught for urban, fringe and peri-urban areas of India and case studies were provided from developing and developed countries.

9. Details of Course

**Module 1: Introduction to Land Economics**
Economic Principles of Land use, Concept of Rent and its application, Demand forecasting for land, factors affecting land supply and demand; interpretation of Revenue Maps (Cadastral maps)

**Module 2: Land Policy and Land Markets**
a) Market Conditions: formal and informal, legal and illegal
b) Instruments of land policy and impact on markets: Planning instruments, market development instruments, financial development instruments, fiscal instruments, and other supportive instruments: Market by Government and Government by Markets: Regulation, monopoly power and its use, private development
c) Rent-seeking and its impact on land supply, access to land by various segments of population, and PPP in land; Introduction to Resettlement & Rehabilitation (R&R).

**Module 3: 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.

**Regulation in Land Markets:** Social justice and land distribution: public domain, social-democratic regulation, 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 Utilisation:** 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.

**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.

**Module 4: 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.

**Module 5: Land Pricing**
Land valuation techniques, land pricing, subsidies, auctions; type of development: plotted, flatted system, and their effect on land pricing; Hedonistic pricing; land price behaviour in urban centers; Constructing the land price index.

**Module 6: Land Information System (LIS)**
Land records in Rural areas (examples from Karnataka, Andhra, etc), transparency in land transaction, methods of publicising land prices and land price monitoring.

**Expected Learning Outcome:** Students are expected to have obtained the skills in understanding the functioning of land markets by undergoing this course.
Electives: Students are given the option of taking any of the electives from the ones offered by the Regional Planning Department or from the electives offered by other planning departments.

Name of Department: Department of Regional Planning

1. Subject Code: RPE 1

2. Course Title: Poverty and Development

   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

4. Credits: 2

5. Semester: Winter

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: This course will provide an understanding of the poverty situation across continents with a specific focus on India. It will help in inclusive planning with a pro-poor development agenda.

8. Details of Course

   Module 1: Understanding Poverty
   Definition, concept of poverty, new definitions of poverty and its likely impact: relative poverty, absolute poverty, over all poverty, extreme poverty, physical poverty, income poverty, rural and urban poverty; poverty data base in India, data sources used for estimating poverty in India (household surveys and household consumption surveys). Globalisation of poverty.

   Module 2: Measures of poverty

   Module 3: Indicators of poverty
   Methodology: Poverty Lines, Rural and urban poverty lines, national poverty lines, poverty ratio, sub-national indicators: MDG indicators, income and non-income indicators (Education and health, etc), Quality of life indicators, empowerment indicators, gender indicators, and human development indicators; Multiple Poverty Index, Small Area Estimation of Poverty.
Module 4: Rural Poverty
Overview: incidence and dynamics of rural poverty: causes of rural poverty: dimensions of rural poverty, estimates of rural poverty in India, issues related to rural poverty; reviews of development strategies of past decade.

Module 5: Urban Poverty
Multi-dimensional aspects of poverty, urban poverty matrix, vulnerability and asset ownership, Informal sector and poverty, role of National Commission for Enterprises in the organized sector (NCEUS), Programmes to address the poverty issues: policy based (tenure regularization), sector based (slum upgradation, access to housing), finance based (Micro finance, compulsory municipal fund allocation)

Module 6: Policies and Programmes
Monitoring and Evaluation of anti-poverty programmes; National and International Best Practices in poverty alleviation; Percentage allocation for poor in the budget; Skill Development and Capacity Building

Module 7: Poverty and Climate Change
Climate Vulnerability and its Impact on Poverty, ways to overcome the risk and reducing their vulnerability to climate change - double effect of poverty and vulnerability to risks; Spatial targeting of poverty; Government programmes

Expected Learning Outcome: Students are expected to have obtained the skills in understanding the various dimensions of poverty and how to address them in the planning process by undergoing this course.
Name of Department: Department of Regional Planning

1. Subject Code: RPE 2

2. Course Title: **Climate Change and its impact**
   
   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

4. Credits: 2

5. Semester: Winter

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role-play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: This course will help to understand the phenomenon of climate change, its impact on region and international discourses/ debates. It will appraise the students about government policies both macro and micro to deal with the impact of climate change.

8. Details of Course:

   **Module 1: Global Climatic Change**
   Environment, economics science and policy; The scale of potential change, vulnerability of particular societies, sectors and ecosystems – environment – economic development conflicts – Momentum of the economic system producing greenhouse gases; industrial concentration and regional concentration of heat sinks and its impact on the region.

   **Module 2 Economics of Climate change**
   **a) Climate Change and its impact on agriculture**
   Introduction on economics of climate change: theoretical concepts and framework of analysis; Food security and regional development; Water availability; drought and flash floods; productivity changes and its impact.

   **b) Climate Policy Analysis under uncertainty**
   Modelling, prediction, sensitivity studies and uncertainty; Environment decisions under uncertainty; Climate Policy choice under uncertainty; unresolved problems in climate analysis; International agreements and its repercussions on India.

   **Module 3: Urban Micro Climates**
   Urbanisation and its impact on micro climates; urban heat islands – causes and effects; research on heat islands globally and in India; Use of remote sensing and GIS in detecting urban heat islands.
Module 4: Climate change In India
Changing agricultural pattern, productivity and security, industrial concentration, weather and micro climatic changes, funding climate change prevention: market and non-market based approaches, role of institutional actors: Government, NGOs, Multilateral agencies and citizen groups.

Module 5: Government’s Policy and Action on Climate Change
Climate change response strategies: Climate Change adaptability and livelihood, climate change and the challenge to achieve MDGs, Climate Action Plan (CAP), 4x4 Report on Climate Change and its strategies; International Covenants on Climate Change.

Expected Learning Outcome: Students are expected to have obtained the skills in understanding the various dimensions of climate change and how to address them in the regional planning process by undergoing this course.
Name of Department: Department of Regional Planning

1. Subject Code: RPS 1

2. Course Title: Village Planning, Block Planning, Urban and Peri-Urban Area Planning

   Contact Hours: Studio: 12

3. Relative Weightage: CWS: 50 (Consisting of regular weekly Presentation and reviews, and internal Jury), ETE: 50 (based on external examination by experts).

4. Credits: 12

5. Semester: Winter

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis, role-play and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: The objective of this studio is to expose the students in the practical ways of planning for a village, block, tehsil, peri-urban and urban area. The students will be trained in applied GIS based on the case study selected. The students will be given a live case study to understand the complexities of planning at various levels i.e. village, block, tehsil, peri-urban and urban levels. This will enable them to identify data sources, carry out primary surveys, understand sampling methods, stakeholder analysis, techniques of analysis and come out with policy level proposals.

8. Duration of Study:

   a) Village Study: 6 week

   b) Block Study including presentation of village study: 10 week

9. Expected Learning Outcome: Students are expected to have obtained the skills in understanding the various levels of planning, planning institutions, sources of information for village, block, tehsil, peri-urban and urban planning, and also develop public interaction by undergoing this course.
Third Semester Courses

The objective of the third semester theory and the studio subjects are to provide the students with higher levels of specialized knowledge in the field of planning that will make them more hands on planners. The subjects selected are such that they deal with environment, policy making and analysis, governance, and rehabilitation and resettlement issues.

Name of Department: Department of Regional Planning

1. Subject Code: RP 5

2. Course Title: Environment and Development

   Contact Hours: L 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

4. Credits: 2

5. Semester: Autumn

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: During the first semester, during the course on Housing and Environment, students were imparted knowledge in the field of environmental issues, especially basic concepts and its simple applicability to planning. In this semester, skills are imparted at the higher levels of knowledge. They will be taught in the interface between environment and development at various levels: from village to regional level. This course will equip them in understanding and managing the environment, help them in minimizing the disaster.

8. Details of Course

   Module 1: Environment and Development
   Environment and Development interface: Resource Use; exploitation and conservation: Land, water, air and green spaces including forest cover; Impact of various human activities on environment including recreation, tourism; urban waste and its impact on environment.

   Module 2: Emerging Concepts
   Emerging Concepts: smart growth, clustered cities, ecological footprints, green development, sustainable cities and inclusive cities for sustainable livelihood; Environment and poverty links; Environment and Economy interaction: Kuznet curve, Green GDP, Carbon Trading, carbon sequencing, environmental accounting, and Green Budgeting.
Module 3: Environmental Risks and Impact
Environmental Risks in rural and urban areas, health and environmental links, sustainable growth, carrying capacity, optimum city, Environmental Impact Assessment: project specific, universal

Module 4: Role of Institutions in Environment Management
Role of various levels of governments in environmental management, NGOs and other agencies in environmental management; Case studies from developing and developed countries; Political commitment and environmental policy; Local Agenda 21, MDGs, environmental standards; Civil Society around Environment Management

Module 5: Disaster Preparedness, Prevention and Mitigation
Concepts, processes and perceptions of Disasters – natural and man made – causes and consequences. Disaster and natural environment: flooding and drainage, land slides, soil erosion, earth quakes, tremor, tsunami, cloud bursts, etc. Damage to people and property due to disaster. Case studies from across the world. Disaster Recovery.

Disaster Mitigation Planning and resource management: Disaster preparedness, prevention, displacement and development; Government structure and disaster mitigation, disaster mitigation measures at individual, group and community level; Human response to disaster – short term and long term effects; Integrating disaster mitigation in spatial planning process: micro zoning, building bye-laws, norms and standards, density variations, provisions of infrastructure for disaster mitigation; vulnerability index and mapping; Disaster insurance at various levels: village, district, and town/city level.

Module 6: Disaster Education
Community awareness and participation at various levels; Role of NGOs/CBOs and communities in disaster education; Relevance of disaster management with relevant to development and environment; Use of technology and media for spreading disaster awareness.

Expected Learning Outcome: Students are expected to have obtained the skills in understanding various concepts of environment and disaster and how to use them in the planning process. It will also provide them with the knowledge of various environmental regulations in the country.
Name of Department: Department of Regional Planning

1. Subject Code: RP 6

2. Course Title: Project Planning

   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

4. Credits: 2

5. Semester: Autumn

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and participatory knowledge building through case study analysis and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: This course is to equip the students to understand the whole Project Planning Cycle. It will look into aspects such as to how prepare a project, how to do the various appraisals, how to implement, monitor and evaluate the projects. These aspects will be taught for urban, fringe and peri-urban areas of India and case studies will be provided from developing and developed countries.

8. Details of Course

   **Module 1: Introduction**
   
   Introduction to Project, nature of planning projects – Project Life Cycle: Identification, issues involved in identification including source of projects, Formulation: links between projects and local, district, state and national level planning including sectoral policies; pre-feasibility studies; feasibility studies; Concept of Appraisal: Definition, need and aspects; Appraisal Methods: UNIDO, Little-Mirrlees, ZOPP, GOPP, etc.

   **Module 2: Appraisal**

   a) **Technical Appraisal:** Magnitude of the project, processes, materials, equipment, reliability of the system to be used, suitability of the plan, layout and design, location of the project, necessary infrastructure, factors of production, methods of implementation, procurement, phasing and implementation schedule.

   b) **Financial Appraisal:** Project profitability at market price; techniques of financial appraisal (methods not based on time value of money and use of time value of money in appraisal); financial effects on the intended beneficiaries, financial risk and sensitivity to price changes, adequacy, autonomy and financial standards and over all financial viability of project through Internal Rate of Return (IRR) and sensitivity analysis.

   c) **Economic Appraisal:** Efficiency pricing: a) Market distortions- shadow pricing: labour, foreign exchange, land and capital b) Income distribution effect c) consumption, savings and investment adjustments d) adjustments for poverty e) adjustment for merit and demerit goods, calculation of Economic Rate of Return (ERR)
d) **Social Appraisal**: Socio-cultural context of a project, Five entry points to social analysis of a project and how to do that, Use of social assessment methods: PRA, SARAR, etc, Social-Cost-Benefit Analysis and Returns (SRR)

e) **Commercial Aspects of Appraisal**: Country Specific and Project Specific Procurement: compulsory contract tendering, e- tendering and transparency; Marketing of the project Output.

f) **Environmental Appraisal**: Resource Pricing: Methods of identifying environmental costs and benefits of a project- travel cost, replacement cost, bequest pricing, hedonic pricing, contingent valuation, land values, preventive/mitigation expenses, benefit transfers, productivity changes. Preparation of EIA/EIS in terms of costs and benefits.

g) **Institutional Appraisal**: Institutional Commitment towards a project, Capacity Enhancement Need Assessment (CENA); Five aspects of institutional appraisal: prior experience in the sector, interface between participating institutions, power, responsibility and cost and benefit sharing, institutional covenants, and relevant regional, state and local level actors/agents in a project. Policy level issues: National, Sectoral, State, and local: Fiscal, legal and other policies that affect the projects; Technology usage in a project and its impact.

h) **Risk and Uncertainty**: Types of Risk: Systematic and unsystematic, integrating risks in project NPV criterion; Methods: Conservative estimates, project classification, shorter pay back period, certainty equivalent approach, Risk adjusted return, Capital Asset Pricing Model (CAPM), Monte Carlo Simulation, Decision Tree Analysis, Cost and Time over runs in project.

**Module 3: Methods of Financing**
Fiscal Transfers under 73 and 74 Constitution Amendment Act (CAA), Central and State Finance Commissions; Own Source funding, Equities, debt financing, sell out, refinancing, co-financing, and venture capital; Issues in Project financing; Credit Rating of Bonds, Special Purpose Vehicle, Conditionalities for PPP

**Module 4: Monitoring and Evaluation of projects and Practical Problem Solving**
a) Monitoring a project: Techniques and software for project monitoring.
b) Evaluation: Types of evaluation and its effectiveness.
c) Problem Solving: Cost effective, cost-benefit analysis, discounted cashflow techniques, calculation of Internal Rate of Return (IRR) and Economic Rate of Return (ERR)
d) Project Management: PERT, CPM, Project Manager and other tools

**Expected Learning Outcome**: Students are expected to have obtained the skills in understanding the various dimensions of project planning and how to incorporate them in the regional planning process by undergoing this course.
Name of Department: Department of Regional Planning

1. Subject Code: RP 7

2. Course Title: **Institutional Analysis and Governance**
   
   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

4. Credits: 2

5. Semester: Autumn

6. Pedagogic Method: Teaching, Role Play, Presentations, Assignments and participatory knowledge building through case study analysis, and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: This course is to make the students understand the nuances of institutions and their role in the planning and decision making process.

8. Details of Course

**Module 1: Institutions in Planning**

Type of institutions, their role and relevance (legal, political, social, cultural and economic institutions); formal and informal institutions and spaces – their interface, conflicts, reach and their effectiveness in planning; Analysing the institutions: Methods, process and evaluation; Role of the State in Planning: Market facilitative, regulatory and monopoly power; Hierarchies, Scales and Levels of Planning Institutions

**Module 2: Comparative Institutions**

Formal and informal institutions such as constitutions, electoral rules, property rights, and civil rights; How and why people in different groups, countries, and cultural context of institutions to facilitate collective action; Whether different groups construct distinctly different institutions to deal with similar problems and why similar institutions seem to work differently in differently in distinct societies.

**Module 3: Institutions and Organisations**

Different between organizations and institutions, government and governance; Organisations: types, concepts, theories, structure and functions; approaches to understanding organizations; Institutional building: factors and processes, institution Process and networks – how the network operates.

**Module 4: Planning Organisations**

Present Organisations dealing with urban and regional planning; Post 73 and 74 CAA environment and the modified role and functions of local bodies, local authorities, district authorities and state level agencies; Case studies.
Module 5: Decentralisation of Powers
Development Planning and Indian state-centralisation, powerlessness, decentralization; institutional frame and mechanism for urban governance as envisaged in 73rd and 74th CAA; transfer of power from Centre to State and State to Local government; role of the existing planning and development agencies in various states in the light of CAA; Role of various institutions in the governance process and access to government by various stakeholders; Digital Governance, E-Democracy, E-Governance and Grievances Redressal system; case study related to digital and e-governance.

Module 6: Participatory Governance
Benefits of participation in community planning; process and principles of community planning, bottom up planning process, community building process, community planning, partnership; community rights and physical planning norms/standards, public distribution system, community based evaluation of planned projects. Community Participation Laws

Module 7: Network Governance
Role of the state in relation to other Stakeholders (NGOs, Private Sector, Scientific Network and international institutions), New State Spaces: Invited and contested spaces: changing role of the state- emergence of middle class and its socio-political space, collective bargaining and collective action; role of donor agencies. Advanced Locality Management, Resident Welfare Associations and other agencies in the governance system. Role of People’s participation in planning process: Process of inclusion and exclusion in governance.

Expected Learning Outcome: Students are expected to have obtained the skills in understanding various institutions, their interface in the planning process. It will also provide them with the knowledge of various changes that the 73 and 74 CAA has brought in the country in terms of empowerment at various levels.
Name of Department: Department of Regional Planning

1. Subject Code: RP 8

2. Course Title: Legal Issues in Planning and Professional Practice

   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

4. Credits: 2

5. Semester: Autumn

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and test and external exam. Special lectures by eminent experts from outside the School (policy makers and implementers) in this field will be invited to deliver lectures.

7. Objective of the Course: The objective of this course is to enable the students to understand the legal implications of the plans that they will be making and also the professional practice guidelines.

8. Details of Course

Module 1: Introduction, Concept and Significance of Law
Sources of law: custom, legislation and precedent; Meaning and terms of law: legislation, ordinance, bill, act, regulation, and bye-laws; Significance of law and its relationship to urban and regional planning, benefit of statutory backing, eminent domain powers and police powers.

Module 2: Indian Constitution and Evolution of Planning Legislation
a) Indian Constitution
Concepts and contents related to planning provision regarding property rights, Concept of Arbitration, betterment levy development charges and public participation in statutory planning process, concept of structure plan, local plan and action plan under the Law; legislative competence of Local, State and Central government to deal with various matters concerning Town and Country Planning.

b) Evolution of Planning Legislation
An overview of legal tools connected with urban and regional planning and development. Town and Country Planning Act, Improvement Trust Act, Development Authorities Act: objectives, content, procedures for provision an implementation of regional plans, master plans and town planning schemes.

Module 3: Policy, Acts and Laws
Inventory of Planning legislations pertaining to Regional Planning
a) Policy
National Environmental Policy Act; Environmental Protection Act; Land Acquisition Act: Concepts, procedure for compulsory acquisition of property and determination of compensation.

b) Acts
Acts pertaining to SEZ, disaster management, and legal aspects of innovative techniques such as Transfer of Development Rights, Air Rights, etc.; Consultancy document contract Agreement and Contract Management.

c) Law
Laws relating to Slum Clearance, environment, housing, landscape and traffic; Laws relating to conservation and restoration, historical monuments, archaeological sites and remnants of national importance; contract management and execution of projects.

Module 4: Significance of Land Development Control
Objectives of legal tools, critical evaluation of zoning, sub-division regulations, building regulations and bye-laws, development code zoning, periphery control, land conversion in the peri-urban areas.

Module 5: Professional Practice in Public, Private and Joint Sector

a) Professional Practice
Aims and objectives of professional institute, sister bodies, professional role and responsibility of planning consultants, professional ethics and code of conduct and scale of professional charges; Professional Practice under International Agreements (GATT & WTO) and its impact in India; Formulation of Consultancy project proposal and outlines; Expression of Interest (EoI), Request for Proposal (RFP), etc.; Scale of Professional Charges, Management of office and personnel, Collaborative projects.

b) Role of Inter-Disciplinary groups: appreciation of decision-making process and the process in relation to varied consultancy assignments in planning

Expected Learning Outcome: Students are expected to gain knowledge in the legal issues in planning and how to design a contract as a professional practitioner.
**Electives:** Development at various scales (rural, regional, and urban) induces displacement and it has become an important political and socio-economic issue. Regional Planning department would like to equip its student to know about various aspects of development induced displacement as well as displacement due to natural factors, how the affected people are rehabilitated, and what kind of problems emerge during rehabilitation. To impart this knowledge, the department introduced the subject ‘Resettlement and Rehabilitation’. Similarly, technology has become an important infrastructure in the decision making process. Spatial Decision making process increasingly depends on the Spatial Data Infrastructure (SDI) abroad and in India too it is catching up. Regional Planning Department understands this growing importance of SDI and hence, incorporated this as an elective subject.

Name of Department: Department of Regional Planning

1. Subject Code: RPE 3
2. Course Title: **Resettlement and Rehabilitation (R & R)**
3. Contact Hours: L & T 2
4. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)
5. Credits: 2
6. Semester: Autumn
7. Pedagogic Method: Teaching, Interaction, Presentations, Assignments, Test and external exam. Eminent experts from outside the School (policy makers and implementers) will be invited to deliver Special lectures.
8. Objective of the Course:

9. Details of Course

**Module 1: Land Development and Resultant Resettlement**

**Module 2: Impact of Resettlement and Rehabilitation Plan**
implications of resettlement and rehabilitation. Resettlement options and strategies, Self-relocation and project facilitated relocation.

**Module 3: Case Studies**
Case studies in Resettlement and Rehabilitation in Development Sectors: Mining, Highways, Power, industrial and township development; Flood affected areas and other infrastructure projects such as Mumbai Transport Project, SEZ, Ports etc.

**Module 4: Rehabilitation**
Policies, Assessing the livelihood losses, livelihood impact assessment and skill mapping surveys, income restoration strategies, training strategy for skill upgradation and meeting demands for shifting economic profiles in the development area.

**Module 5: Participation as an important tool for R & R**
Use of Participatory tools for Resettlement Planning; Institutional arrangements for R & R - Role of NGOs/CBOs and other Local, State, National and International Organisations in resettlement and rehabilitation; Monitoring and Evaluation of R & R interventions.

**Expected Learning Outcome:** Students are expected to have obtained the skills in understanding various issues related to Resettlement and Rehabilitation due to Development induced displacement and natural displacement and how to minimize the problems associated with it through proper planning as well as participatory approaches.
Name of Department: Department of Regional Planning

1. Subject Code: RPE 4

2. Course Title: Spatial Data Infrastructure (SDI)

3. Contact Hours: L & T 2

4. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination)

5. Credits: 2

6. Semester: Autumn

7. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and test and external exam. Special lectures by eminent experts from outside the School (policy makers and implementers) in this field will be invited to deliver lectures.

8. Objective of the Course:

9. Details of Course

Module 1: 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.

Module 2: 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 - Tamil Nadu coast.

Module 3: SDI application in Planning and Decision Support
SDI – Location based technology development, Interoperability arrangement for geospatial data and ontology mapping; Application in Bhuvan and its spatial applications, Population Data Sets, Natural Resource Repository, Integrated Water Resource Management, mKrishi – application in agriculture and rural development, geospatial application in transportation, disaster management and conservation; Spatio-temporal data modeling and analysis; 3-D mapping of land and its use in city and regional planning, Geo visualization of landscapes: rural and urban; spatial inequalities.

PGIS: Definition, concept and need; PGIS and PPGIS; Geo-referencing and visualizing indigenous spatial knowledge; Ethical issues in PGIS; PGIS for regional level technology based information system; case studies and application of PGIS in India.
Module 4: 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.

Expected Learning Outcome: Students are expected to gain knowledge in the spatial data infrastructure and its effective use in planning and decision support system.
Name of Department: Department of Regional Planning

1. Subject Code: RPS 2

2. Course Title: a) Resource Regional Planning, b) Mega and Metro Region Planning, c) District Planning, d) Special Regions

   Contact Hours: Studio 10

3. Relative Weightage: CWS: 50 (Consisting of regular weekly Presentation and reviews, and internal Jury), ETE: 50 (based on external examination by experts).

4. Credits: 10

5. Semester: Autumn

6. Pedagogic Method: Teaching, Interaction, Presentations, Assignments and test and external exam. Special lectures by eminent experts from outside the School (policy makers and implementers) in this field will be invited to deliver lectures.

7. Objective of the Course: The objective of this studio 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.

8. Expected Learning Outcome: Students are expected to have obtained the skills in understanding the various levels of planning, planning institutions, sources of information for regional planning, and also develop public interaction by undergoing this course.
Fourth Semester Courses

The courses that are offered during the fourth semester enables the students to acquire knowledge associated with implementation of the plans that they prepared during the second and third semester. This semester offers only one theory subject i.e. Institution Elective (IE) Politics and Public Policy. Along with this subject, a student is expected to select a topic for his/her thesis work, which he/she prepares during this semester.

Name of Department: Department of Regional Planning

1. Subject Code: RPIE 1

2. Course Title: **Politics and Public Policy**

   Contact Hours: L & T 2

3. Relative Weightage: CWS: 50 (Consisting of Assignment, Presentation and a class test), ETE: 50 (based on written examination).

4. Credits: 2

5. Semester: Winter

6. Pedagogic Method: Teaching, Role Play, Assignment, Presentations, Assignments and participatory knowledge building through case study analysis, and exam (both internal and external). Special lectures by eminent experts (policy makers and implementers) in this field from outside the School will be invited to deliver lectures.

7. Objective of the Course: This course is to make the students understand the role of politics in the planning and decision making process, how the public policies, especially planning policies are made in India and how to evaluate them in the context of planning.

8. Details of Course

   **Module 1: Introduction**

   Political culture of Indian State: Center, State and Local political economy, emergence of state in the federal set up; politics of the state and bureaucracy; politics and emergence of civil society; regeneration and redevelopment politics.

   **Module 2: State as a manager of resources**

   Property rights, norms and standards, government market and market by government; regulatory state, reforming state, rent-seeking state and their spatial implications.

   **Module 3: Politics of Provision**

   Land use Politics; politics of provision of housing in urban and rural areas; infrastructure; Decision Making; Decision-Taking process; Financing and Pricing.
Module 4: Case Studies
Case studies from India and abroad on planning and political decisions in their impact on rural and urban development; Examples from: South Korea: conversion of rural land to urban land; FSI changes and resultant changes in land use and form: China, USA and other countries.

Module 5: Public Policy
a) 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.

b) Public Policy Analysis
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.

c) Public Policy and Management in the Information Age
How are new information and communication technologies shaping public service delivery?: E-Governance, E-Panchayats, E-Market, etc.; transparency, accountability, accessibility and participatory mechanisms.

d) Public policy Management and Delivery
Trends and Pressures that affect public service organizations; Market based arrangements; Multi-service provider arrangements in public sector setting and benchmarks in policy management.

Model 6: Strategic Policy 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.

Module 7: Sectoral Policy Analysis
Land, Environment; Health, Water and other policies – Integration and disintegration of policies – Frequency and commitments to change; Global Commitments: Millennium Development Goals (MDGs), Sustainable Development Goals (SDGs), Environment, etc. and its commitment at the National, State and Local Level; Land Policy: Interest Groups, Acts/agents and policy making process.

Expected Learning Outcome: Students are expected to have obtained the skills in understanding various institutions, their interface in the planning process. It will also provide them with the knowledge of various changes that the 73rd and 74th CAA has brought in the country in terms of empowerment at various levels.
Name of Department: Department of Regional Planning

1. Subject Code: RPS 3

2. Course Title: Thesis

   Contact Hours: 14

3. Relative Weightage: CWS: 50 (Consisting of regular fortnightly reviews, and internal jury), ETE: 50 (based on external examination by experts).

4. Credits: 14

5. Semester: Winter

6. Objective and Details of the Course: Students are expected to write a thesis on the topic selected by them with the constant guidance from faculty members.
## Scheme of Examination 2016

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Offered</th>
<th>No. of Hours/Week</th>
<th>No. of Credits</th>
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**Electives**

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**Total (Theory and Studio)** 22 22 352 550 550 1100

### FOURTH SEMESTER

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**Total (Theory and Thesi)** 16 256 16 400 400 800

* The two elective courses i.e. Resettlement and Rehabilitation and Spatial Data Infrastructure are offered as Institute elective for other Departments of SPA.

** The subject Politics and Public Policy (RPIE 1) is offered as Instituted elective for other Departments of SPA.