

DEPARTMENT OF REGIONAL PLANNING

Syllabus

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

**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.

Semester	Credits
I	24
II	22 (20+2)
III	22 (18+2+2)
IV	16 (14+2)
Total	84 (76+4+4)

Core Course

Department Elective

Institute Elective (IE)

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

Theory: 26 Hours

Studio: 34 Hours

FIRST SEMESTER INTEGRATED PROGRAMME FOR MASTER OF PLANNING

CA1 : PLANNING HISTORY AND THEORY

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

Module 1: Planning History	16 hours
<ul style="list-style-type: none"> • Relevance of the study of Evolution; • Hunter gatherer/farmer and formation of organized society; • Cosmological and other influences origin & growth of cities, effects of cultural influence on physical form; • Human settlements as an expression of civilization. • Basic elements of the city, Concepts of space, time, scale of cities; • Town planning in ancient India medieval, renaissance, industrial and post industrial cities; • City as a living & spatial entity; Concepts of landmark, axis, orientation. City form as a living space. • City as a political statement. New Delhi, Chandigarh, Washington D.C., Brazilia etc.; • Contribution of individuals to city planning. Lewis Mumford, Patric Geddes, Peter Hall etc.; • The dynamics of the growing city. Impact of industrialization and urbanization. Metropolis and Megalopolis; Generic and paracentric cities, 	
Module 2: Planning Theory	16 hours
<p>Definitions and Rationales of Planning Theory</p> <ul style="list-style-type: none"> • Definitions of town and country planning, Orthodoxies of planning, sustainability and rationality in planning, Components of sustainable urban and regional development • 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 • City as an organism: a physical, social, economic and political entity • 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; • Types of Development Plans • Goal formulation, objective, scope, limitations; Plan making process, planning methodology and case studies. 	

CA2 : SOCIO - ECONOMIC BASE FOR PLANNING

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

Module 1: Nature and Scope of Sociology	8 hours
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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. 	

CA 3 : PLANNING TECHNIQUES

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

Module 1: Survey Techniques and Mapping	8 hours
<ul style="list-style-type: none"> • 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	18 hours
<ul style="list-style-type: none"> • 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 – inter connected decision area analysis. 	
Module 3: Planning Standards	6 hours
<ul style="list-style-type: none"> • 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

Module 1: Role of Infrastructure in Development	4 hours
<ul style="list-style-type: none"> • 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. 	
Module 2: Physical Infrastructure	10 hours
<ul style="list-style-type: none"> • 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. 	3 hours
<ul style="list-style-type: none"> • Sanitation – points of generation, collection, treatment, disposal, norms and standards, grey water disposal, DEWATS, institutional arrangements, planning provisions and management issues. 	3 hours
<ul style="list-style-type: none"> • 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. 	1 hour
<ul style="list-style-type: none"> • 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. 	2 hours
<ul style="list-style-type: none"> • 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. 	1 hour
Module 3: Social infrastructure	2 hours
<ul style="list-style-type: none"> • Social Infrastructure – Education, Health, Civic Types, hierarchical distribution of facilities, Access to facilities, provision and location criteria, Norms and standards etc. 	

TRANSPORT PLANNING

Module 1: City Development and Transport	4 hours
<ul style="list-style-type: none">• 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	
Module 2: Transport Infrastructure Planning and Design Principles	4 hours
<ul style="list-style-type: none">• Hierarchy, capacity and geometric design elements of roads and intersections• Basic principles of Transport infrastructure design	
Module 3: Urban Transport Planning Process and Studies	4 hours
<ul style="list-style-type: none">• Traffic and transportation surveys and studies, traffic and travel characteristics• Urban transport planning process – stages, study area, zoning, data base, concept of trip generation	
Module 4: Transport Management	4 hours
<ul style="list-style-type: none">• Transport, environment and safety issues• Principles and approaches of Traffic Management, Transport System Management.	

CB2 : HOUSING AND ENVIRONMENTAL PLANNING

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

HOUSING

Module 1: Concepts and Definitions	4 hours
a) 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.	2 hours
b) 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.	2 hours
Module 2: Social And Economy Dimensions	4 hours
a) 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.	2 hours
b) Contribution of housing to micro and macro economy, contribution to national wealth and GDP, housing taxation, national budgets, fiscal concessions, forward and backward linkages.	2 hours
Module 3: Housing and the City	4 hours
a) 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,	2 hours
b) Suitability of land for housing, housing stress identification, projecting housing requirements, calculating housing shortages, housing allocation.	2 hours
Module 4 Planning for Neighbourhoods	4 hours
a) 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.	2 hours
b) Case studies of neighbourhood planning	2 hours

ENVIRONMENTAL PLANNING

Module 1: Global Environmental Concerns and Planning of Settlements	4 hours
<ul style="list-style-type: none"> • UN/ International Conferences/ Conventions (Global /National issues) • Environmental Concerns of human settlements • Components, structure and meaning of the urban and regional environment 	
Module 2: Environment planning techniques	4 hours
<ul style="list-style-type: none"> • Environmental surveys- Methods of data collection, interview techniques, analysis. • Database for incorporation of environmental concerns in planning analysis • Techniques of resource protection and conservation (land suitability analysis, carrying capacity, vulnerability analysis. 	
Module 3: Environment Resource and assessment	6 hours
<ul style="list-style-type: none"> • Resources type, scale, inventory • Resource Assessment – <ul style="list-style-type: none"> Land – topographic analysis, Water – quality standards, Air and Noise – quality standards, Biodiversity – basics of flora and fauna diversity assessment 	
Module 4: Environment Quality	2 hours
<ul style="list-style-type: none"> • Methods of addressing environmental quality • Environmental Impact Assessment – an introduction • EIA notification as related to human settlement planning 	

STUDIO COURSE

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

1. GIS Applications

Module 1: GIS Applications	8 hours
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.	
Module 2: Remote Sensing	8 hours
Why remote sensing, aerial & 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.	

2. Demography and Statistical Applications

Module 1: Demography	8 hours
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;	
Module 2: Statistical Applications	8 hours
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.	

3. Computer Applications (non- audit course)

Module 1: Word Processing	8 hours
Application of Word, Excel, PowerPoint, Adobe reader etc.	
Module 2: Drawing Software	8 hours
Application of Autocad, Photoshop, Sketch up etc.	

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 make 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: RPC 201
2. Course Title: **Planning for Regions**
3. Contact Hours: 2 hours/ week
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).
8. 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.
9. 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

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

Expected Learning Outcome: Students are expected to obtain the skills in understanding a region, its dynamics, and planning complexities.

Reading list:

- Amravati, C., 2016. *Amravati Vision 2020*, s.l.: Creative Circle, Nagpur.
- Bhattacharya S. and Cropper M.L., 2010. *Options for Energy Efficiency in India and barrier to their Adoption*. Resources for the future, Washington DC. Issue 202-328-5000.
- Authority, B. M., 2016. *Bangalore Metropolitan Region Revised Structure Plan 2031*. Bangalore: Bangalore Metropolitan Region Development Authority.
- Authority, M. M. R. D., 2016. *Mumbai Metropolitan Regional Plan 2016-2036*, Mumbai: MMRDA.
- Authority, p. R. a. t. p., 2016. *Greater Mohali Region, Punjab*, Mohali: Greater Mohali area Development authority.
- BMRDA, 2016. *Bangalore Metropolitan Region Revised Structure plan 2031*, Bangalore: BMRDA.
- Board, N. C. *Regional Plan 2021- National Capital Region*. Delhi: National Capital Regional Planning Board.

- Brar, J., Gupta S., Madgavkar A., Maitra.B.C., Rohra S., Sundar M., 2014. *India's economic geography in 2025: States, Clusters and cities*. Insights India, Mckinsey Company.
- Bruce Tonn, D., 2013. Willow pond: A decentralized low-carbon future scenario. *ELSEVIER*.
- Clark, G. and Moonen, T., 2014. *Mumbai: India's Global City*. s.l.:s.n.
- Cohen, M. J., 2013. Collective dissonance and the transition to post-consumerism. *Futures*, Vol. 52, pp 42-51.
- Creel, L., 2003. Ripple Effects: Population and Coastal Regions. *Population Reference Bureau Policy Brief*, Vol. 42, pp. 39-48.
- Eastin, J., Grundmann, R. and Prakash, A., 2011. The two limits debates: “Limits to Growth” and climate change. *Futures*, Vol. 43, no. 1, pp. 16-26. DOI: 10.1016.
- Ehrlich, P. R. and Ehrlich, A. H., 2013. Can a collapse of global civilization be avoided?. *Proceedings of the Royal Society*, 280(1754):20122845. DOI: 10.1098.
- Garcia, E., 2012. Degrowth, the past, the future, and the human nature. *Futures*, Vol. 44, pp. 546-552.
- Glasson, J., 1974. *An Introduction to Regional Planning*, London: Taylor and Francis Ltd.
- Government of Rajasthan NCR Planning and Monitoring Cell, J. R., 2014. *Draft Rajasthan Sub Regional Plan -2031*, Jaipur: DTCP, Government of Rajasthan.
- HMDA, 2013. *Metropolitan Development Plan – 2031 for Hyderabad Metropolitan Development Region*, Hyderabad: Hyderabad Metropolitan development Authority.
- Industry, C. o. I., 2011. *District Development Plan Khammam*, s.l.: ALC India Pvt. Ltd.
- Jaidit Brar, S. G. A. M. C. M. S. R. M. S., 2014. *India's Economic Geography in 2025: States, Clusters and Cities*, Delhi: Mckinsy and Company.
- Jain, S., Panda, J. and Kant, S., 2014. Possible Socio-scientific Issues of Land-use and Land-cover Change Impact and Associated Tools of Study with a Special Reference to Delhi-Mumbai Industrial Corridor Region. *International Journal of earth and Atmospheric Sciences*, Vol. 1, pp. 58-70.
- Jim Smyle, C. L. G. M. A. M. W., 2014. *Watershed Development in India*, Washington DC: The World Bank.
- Josh Eastin, R. G. A. P., 2010. The two limits debates: “Limits to Growth” and climate change. *ELSEVIER*.
- Klapka, P., Halas, M. and Tonev, P., 2013. Functional regions: concept and types. *International Colloquium on Regional Sciences*. Brno: Masaryk University. Vol. 16, pp. 94 - 101. ISBN 978-80- 210-6257-3. DOI 10.5817.
- KMDA, 2000. *Perspective Planning for metropolitan Development*, Kolkata: Kolkata Metropolitan Development Authority.
- Moriarty, P. and Honnery, D., 2012. Preparing for a low-energy future. *Futures*, Vol. 44, pp. 883-892.

- MoUD., 2014. *Regional Planning Approach*, URDPFI vol. I and Vol.2. New Delhi
- NCRPB, 2005. *National Capital region regional plan 2021*, New Delhi: National Capital Regional Planning Board.
- Rengasamy, S., 2009. *Types of Regions and Regionalization of India*, Regional planning part II. UNCRD.
- Patrick Moriarty, D. H., 2012. Preparing for a low-energy future. *ELSEVIER*. Vol. 39, No.3, pp. 31-40.
- Patrik Söderholm, R. H. B. J. K. F. W., 2011. Governing the transition to low-carbon futures: A critical survey of energy scenarios for 2050. *ELSEVIER*. Vol. 28, pp. 43-52.
- Piccioni, L., 2012. *Fourty Years Later. The reception of the growth in italy 1971-1974*, s.l.: Fondazione Luigi Micheletti.
- Raskin, P. D., Electris, C. and Rosen, R. A., 2010. The Century Ahead: Searching for Sustainability. *Sustainability*, Vol. 2, pp.2626-2651.
- Sadorsky, P., 2011. Some future scenarios for renewable energy. *Futures*, Vol. 43, pp. 1091-1104.
- Soderholm, P. et al., 2011. Governing the transition to low-carbon futures: A critical survey of energy scenarios for 2050. *Futures*, Vol. 43, pp. 1105-1116.
- Spangenberg, J. H., 2010. World civilisations at crossroads: Towards an expansionist or a sustainable future—Lessons from history. *Futures*, Vol. 42, pp. 565-573.
- Taylor, N., 1999. Anglo-American town planning theory since 1945: three significant developments but no paradigm shifts. *Planning Perspectives*, Vol. 14, pp. 327-345.
- Tonn, B. and Stiefel, D., 2013. Willow pond: A decentralized low-carbon future scenario. *Futures*, Vol. 33, No. 10, pp. 1772-1787.
- Trust, N. I., 2015. Nagpur Metropolitan Area Development Plan 2012-2032, Nagpur: s.n.
- Wheeler, S., 2009. Regions, Megaregions, and Sustainability. *Regional Studies*, Vol. 43.6, pp. 863-876.
- Nijkamp, P. and Delft, A. V., 1977. *Multi-Criteria Analysis and Regional Decision-Making*. Leiden: Martinus Nijhoff Social Sciences Division.
- Behrens, K. and Thisse, J. F., 2007. Regional economics: A new economic geography perspective. *Regional Science and Urban Economics*, Vol. 37, No. 4, pp. 457-465.
- Enright, M. J., 2016. Regional Clusters and Multinational Enterprises - Independence, Dependence, or Interdependence? *International Studies of Management and Organisation*, Vol. 30, No. 2, pp. 114-138.
- Schaffar, A. and Dimou, M., 2010. Rank-size City Dynamics in China and India, 1981–2004. *Regional Studies*, Vol. 46, No. 6, pp. 707-721.
- Strategia, A., 2015. Tools and Technologies for Planning the Development of Smart Cities. *Journal of Urban Technologies*, Vol. 22, No. 2, pp. 43-62.

- Counsell, D. and Haughton, G., 2006. Sustainable development in regional planning: The search for new tools and renewed legitimacy. *Geoforum*, Vol. 37, No. 6, pp. 921-931.
- Foth, M. and Bajracharya, B., 2009. The Second Life of urban planning? Using NeoGeography tools for community engagement. *Journal of Location Based Services*, Vol. 3, No. 2, pp. 97-117.
- Lo, F. C. and Marcotullio, P. J., 2000. Globalisation and Urban Transformations in the Asia-Pacific Region: A Review. *Urban Studies*, Vol. 37, No. 1, pp. 77-111.
- Choudhary, B. R., 2015. Regionalism in the Era of Globalization: The Case Study of the SAARC in South Asia. *The international Journal of humanities and Social Studies*, Vol. 3, No. 7, pp. 80-88.
- Farhana, I., 2012. The Region and Its Margins: Re-Appropriations of the Border from 'Mahagujarat' to 'Swarnim Gujarat'. *Economic and Political Weekly*, Vol.32, pp.66-72.
- Zhu, J., 2002. Industrial globalisation and its impact on Singapore's industrial landscape. *Habitat International*, Vol. 26, No. 2, pp. 177-190.
- Sobhan, R., 1998. Regional Cooperation in South Asia: a Quest for Identity. *South Asia Survey*, Vol. 5, No. 1, pp. 3-26.
- Cantlon, J. E., 1999. Sustainable Ecological Economies. *Ecological Economics*, Vol. 31, No. 1, pp. 107-121.
- York, R.; Dietz, T. and Rosa, E. A., 2008. The Ecological Footprint Intensity of National Economies. *Journal of Industrial Ecology*, Vol. 8, pp. 139-154.
- Matutinovic, I., 2002. Organizational patterns of economies: an ecological perspective. *Ecological Economics*, Vol. 40, No. 3, pp. 421-440.
- Wolock, David M.; Winter Thomas C. and McMahon, G., 2004. Delineation and Evaluation of Hydrologic-Landscape Regions in the United States Using Geographic Information System Tools and Multivariate Statistical Analyses. *Environmental Management*, Vol. 34, pp. 71-88.
- Rydberg, A. and Borgefors, G., 2001. Integrated method for boundary delineation of agricultural fields in multispectral satellite images. *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 39, No. 11, pp. 2514-2520.
- Harrigan, F. J.; McGilvray J. W. and McNicoll I. H., 1980. Simulating the Structure of a Regional Economy. *Environment and Planning A: Economy and Space*, Vol. 12, No. 8, pp. 927-936.
- Nowark, J., 1997. Neighbourhood Initiative and the Regional Economy. *Economic Development Quarterly*, Vol. 11, No. 1, pp. 3-10.
- Saxenian, A., 2005. From Brain Drain to Brain Circulation: Transnational Communities and Regional Upgrading in India and China. *Studies in Comparative International Development*, Vol. 40, No. 2, pp. 35-61.
- Wanmali, S., 1992. *Rural infrastructure, the settlement system, and development of the regional economy in southern India. Research Report 91*, Washington D.C.: International Food Policy Research Institute.

Name of Department: Department of Regional Planning

1. Subject Code: RPC 202
2. Course Title: **Regional Infrastructure**
3. Contact Hours: 2 hours/ week
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: 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.
9. 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, Special Purpose Vehicle (SPV), and Public Private Partnership (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 bench marks 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

- a) Introduction: Sources of water, current scenario: Conflicts and Co-operation – Trans boundary water conflicts: inter-state, international water treaties, National Water Policy, Water Rights: Excess and under utilization of water. Access standards, demand and supply analysis, pricing parameters, conservation issues, technology: extraction, cleansing, recycling and reuse. Pollutions associated with water. Institutions in Water provision: PPP, SPV in water. Role of Community in water provision. Conflicting use of water: Agriculture vs. Water harvesting.
- 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

- a) Policies and Programmes in the provision of Sanitation at various levels: Rajiv Gandhi Technology Mission on Water supply and Sanitation (Rural), City Sanitation Plan, and State Sanitation Strategies. Sanitation and MDG, Resource Commitment for 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 including agriculture: types of waste, collection, formal and informal institutions in waste collection; in collection, disposal, specialized waste management (hazardous, e-waste, medical, wholesale market, mandi and any other waste), treatment, reuse, technological innovations, Solid waste as an economy issue, cost recovery in solid waste; Role of ULBs, NGOs, informal networks, rag-pickers and community; Problems and reuse

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 7: Line Infrastructure

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

b) Gas, Liquid Gas and other network connectivity

Expected Learning Outcome: Students are expected to obtain 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 undergo this course.

Reading list:

- Barro, R. and Martin, X. S. I., 1995. *Economic Growth: Neoclassical (SOLOW) growth model*. New York: McGraw Hill.
- Boianovsky, M. and Hoover, K. D., 2009. *The Neoclassical Growth Model and 20th Century Economics*. s.l., History of Political Economy Conference.

- Energy, M. o. N. a. R., 2012. *Empowering Rural India the RE way - Inspiring success stories*. New Delhi: Ministry of New and Renewable Energy, Government of India.
- Foster, A. D. and Rosenzweig, M. R., 1995. Learning by doing and Learning from Others: Human Capital and Technical Change in Agriculture. *The Journal of Political Economy*, Vol. 103, No. 6, pp. 1176 - 1209.
- Klenow, P. J. and Clare, A. R., 2005. Externalities and Growth. In: P. Aghion and S. N. Durlauf, eds. *Handbook of Economic Growth*. 1A ed. s.l.: Elsevier B.V., pp. 818 - 859.
- Ministry of Water Resources, 1987. *National Water Policy*. New Delhi: Government of India.
- Ministry of Water Resources, 2002. *National Water Policy*. New Delhi: Government of India.
- Ministry of Water Resources, 2012. *National Water Policy*. New Delhi: Government of India.
- Prescott, E. C., 1988. Robert M. Solow's Neoclassical Growth Model: An Influential Contribution to Economics. *The Scandinavian Journal of Economics*, Vol. 90, No. 1, pp. 7- 12.
- Nijkamp, P.; Graff, H. de and Sigar, E., 1981. A Multidimensional Analysis of Regional Infrastructure and Economic Development. *Paper presentation at the Conference on "Structural Economic Analysis and Planning in Time and Space"*, pp. 1-24.
- Komarova, V. N.; Zjablova, O. V. and Denmukhametov, R. R., 2014. An Infrastructure Factor in Regional Competitiveness. *Mediterranean Journal of Social Sciences*, Vol.5, No.18, pp. 355-360.
- De, P., 2010. *Governance, Institutions, and Regional Infrastructure in Asia*. ADBI Working Paper No. 183. Tokyo: Asian Development Bank Institute.
- Demurger, S., 2001. Infrastructure Development and Economic Growth: An Explanation for Regional Disparities in China?. *Journal of Comparative Economics*, Vol. 29, pp. 95-117.
- Zhai, F., 2010. *The Benefits of Regional Infrastructure Investment in Asia: A Quantitative Exploration*. ADBI Working Paper No. 223. Tokyo: Asian Development Bank Institute.
- Crescenzi, R. and Rodriguez-Pose, A. 2012. Infrastructure and regional growth in the European Union. *Papers in Regional Science*, Vol. 91, pp. 487-513.
- Hefner, F. L. and Burson, T. E., 1992. The Determinants of Regional Infrastructure Spending. *Regional Science Perspectives*, Vol. 22, No. 2, pp. 19-29.
- De, P., 2009. *Regional Cooperation for Regional Infrastructure Development: Challenges and Policy Options for South Asia*. *RIS Discussion Paper No. 160*. New Delhi: Research and Information System for Developing Countries.
- Ghosh, B. and De, P., 1998. Role of Infrastructure in Regional Development: A Study over the Plan Period. *Economic and Political Weekly*, Vol. 33, No. 47/48, pp. 3039–3048.

- Bocco, G.; Mendoza, M. and Velazquez, A., 2001. Remote sensing and GIS-based regional geomorphological mapping—a tool for land use planning in developing countries. *Geomorphology*, Vol. 39, No. 3-4, pp. 211-219.
- McCann, P. and Shefer, D., 2004. Location, agglomeration and infrastructure. *Regional Science*, Vol. 83, pp. 177-196.
- Rajesh, H. M., 2004. Application of remote sensing and GIS in mineral resource mapping— An overview. *Journal of Mineralogical and Petrological Sciences*, Vol. 99, pp. 83-103.
- Dymond, R. J. and Harmsworth, G. R., 1994. Towards automated land resource mapping using digital terrain models. *ITC Journal*. Vol. 2, pp. 129-138.
- Lee, S., Kim, Y. S. and Oh, H. J., 2012. Application of a weights-of-evidence method and GIS to regional groundwater productivity potential mapping. *Journal of Environmental Management*, Vol. 96, No. 1, pp. 91-105.
- Beaucage, P.; Bernier, M.; Lafrance, G. and Choisnard, J., 2008. Regional Mapping of the Offshore Wind Resource: Towards a Significant Contribution from Space-Borne Synthetic Aperture Radars. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Vol. 1, No. 1, pp. 48-56.
- Kalibo, H. W. and Medley, K. E., 2007. Participatory resource mapping for adaptive collaborative management at Mt. Kasigau, Kenya. *Landscape and Urban Planning*, Vol. 82, No. 3, pp. 145-158.
- Bartholome, E. and Belward, A. S., 2007. GLC2000: A new approach to global land cover mapping from Earth observation data. *International Journal of Remote Sensing*, Vol. 26, No. 9, pp. 1959-1977.
- Eberts, R. W., 1990. Public Infrastructure and Regional Economic Development. *Economic Review, Federal Reserve Bank of Cleveland*, Vol. 42, No. 1, pp. 15-27.
- Enright, M. J., 2000. *Survey on the Characterization of Regional Clusters*. Working Paper. Hong Kong: Institute of Economic Policy and Business Strategy-Competitiveness Program, University of Hong Kong.

Name of Department: Department of Regional Planning

1. Subject Code: RPC203
2. Course Title: **District Planning and Rural Development**
3. Contact Hours: 2 hours/week
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.
10. Details of Course

Module 1: Introduction

Decentralised Planning in India – Historical perspective: Current Scenario – Recent Development in decentralized district level planning, 73 and 74 Constitutional Amendment Acts, Participative District Planning, Role of Planning Commission and an Overview of District Planning Manual of Planning Commission of India, Finance Commissions, and ICT in District Planning.

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 obtain the skills in understanding the District Planning, integrated district planning, participatory district planning, rural development in all its dimensions, once they undergo this course.

Reading list:

- Singh, K. and Reddy, K., 2000. *Designing and Managing Rural Development Organisation*, New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
- Singh, K. and Shishodia, A. 2016. *Rural Development: Principles, Policies, and Management*. New Delhi: Sage Publication.
- Singh, K. and Ballabh, V., 1996. *Cooperative Management of Natural Resources*. New Delhi: Sage Publication.
- Bardhan, P., 1989. *The economic theory of Agrarian Institutions*. Oxford: Oxford University Press.
- Chopra, K., G. K. Kadekodi and M. N. Murthy., 1990. *Participatory development: people and common property resources*. New Delhi: Sage Publication.
- Acharya, S. S., 1997. Agricultural price policy and development: some facts and emerging issues. *Indian Journal of Agricultural Economics*, Vol. 52, No. 1, pp. 1-47.

- Coase, R., 1937. The nature of the firm. *Economica*, Vol. 4, pp. 386-405.
- Coase, R., 1960. The problem of social cost. *Journal of Law and Economics*, Vol. 3, pp. 1-33.
- Gandhi, V. P., 1998. Institutional framework for agricultural development. *Indian Journal of Agricultural Development*. Vol. 53, No. 3, pp. 552-564.
- Marothia, D. K., 2002. *Institutionalizing common pool resources*. Delhi: Concept Publication.
- Dhawan, B. D., 1995. *Groundwater depletion, land degradation and irrigated agriculture in India*. New Delhi: Commonwealth Publishers.
- Gupta, A. K., 1999. Making Indian agriculture more knowledge intensive and competitive: the case of intellectual property rights. *Indian Journal of Agricultural Economics*, Vol. 54, No.3, pp. 342-369.
- Jodha, N. S., 2002. *Decline of rural commons: role of population growth and public policies*. In *institutionalizing common pool resources*. D. K. Marothia, New Delhi: Concept Publishing Company.
- Deshpande, R. S. and Thimmaiah, G., 1999. Watershed development approach and experience of national watershed development program in the country. *Journal of Rural Development*, Vol. 18, No.3, pp. 453-469.
- Reddy, R. V., 2000. Sustainable watershed management: institutional perspective. *Economic and Political Weekly*, Vol. 35, No.40, pp. 3435-3444.
- Reese, L.A. and Fasenfest, D., 2003. Planning for development: An assessment of the economic development district planning process. *Economic Development Quarterly*, Vol. 17, No.3, pp.264-279.
- Renting, H., Marsden, T.K. and Banks, J., 2003. Understanding alternative food networks: exploring the role of short food supply chains in rural development. *Environment and planning*, Vol. 35, No. 3, pp.393-411.
- Uphoff, N., 1993. Grassroots organizations and NGOs in rural development: Opportunities with diminishing states and expanding markets. *World Development*, Vol. 21, No.4, pp.607-622.
- Ellis, F. and Biggs, S., 2001. Evolving themes in rural development 1950s-2000s. *Development policy review*, Vol. 19, No.4, pp.437-448.
- Tregear, A., Arfini, F., Belletti, G. and Marescotti, A., 2007. Regional foods and rural development: The role of product qualification. *Journal of Rural studies*, Vol. 23, No.1, pp.12-22.
- Kuse, H., Endo, A. and Iwao, E., 2010. Logistics facility, road network and district planning: Establishing comprehensive planning for city logistics. *Procardia-Social and Behavioural Sciences*, Vol.2, No.3, pp.6251-6263.
- Jin, L., Qian, G. and Yan, W., 2012. Industry-city Integrate Development Oriented High-tech District Development and Planning Strategies: Jinan East High-tech District Case. *Planners*, Vol. 4, pp.58-64.
- Lekorwe, M.H., 1998. *Local government and district planning*. JL Van Schaik.

- Fischer, G.W., 1994. Agro-ecological land resources assessment for agricultural development planning: A case study of Kenya: Making land use choices for district planning, Food and Agriculture Org, Vol. 10, pp. 13-21.
- Planning Commission, 1984. *Report of the Working Group on District Planning*. New Delhi: Government of India.
- Heikinaro-Johansson, P. and Sherrill, C., 1994. Integrating children with special needs in physical education: A school district assessment model from Finland. *Adapted Physical Activity Quarterly*, Vol. 11, No.1, pp.44-56.
- Dawson, E., 1992. District planning with community participation in Peru: the work of the institute of local democracy IPADEL. *Environment and Urbanization*, Vol.4, No.2, pp.90-100.
- Inamdar, N.R. and Kshire, V.K., 1986. *District Planning in India: A Case Study of Maharashtra*. Oxford and IBH Publishing Company.
- Thakur, D. and Singh, S.N., 1991. *District Planning and Panchayati Raj*. Deep and Deep Publications.
- Sanwal, M., 1987. The implementation of decentralization: A case study of district planning in Agra District, Uttar Pradesh, India. *Public Administration and Development*, Vol.7, No.4, pp.383-397.
- Yugandhar, B.N. and Mukherjee, A. eds., 1991. *Readings in Decentralised Planning: With Special Reference to District Planning*, Vol. 1. Concept Publishing Company.
- Hooja, R. and Mathur, P.C. eds., 1991. *District and Decentralized Planning*. Rawat Publications.
- *Manual for Integrated District Planning*. Planning Commission Government of India. Vol. 1 and 2.
- Hooja, R., 1973. The District as a Planning Unit: Style and Locus. *Indian Journal of Public Administration*, Vol. 19, No.3, pp.393-406.
- Yan-ping, D.O.N.G., 2008. On residential district planning and design. *Shanxi Architecture*, Vol.10, pp.33-41.
- Ahuja, K., 1977. *District Planning in Rajasthan*. Jaipur: HCM State Institute of Public Administration.
- Hooja, R., 1995. *Bibliography on Multi-level and District Planning*. Madhya Pradesh Institute of Social Science Research.
- Stiggins, R.J., 2001. *Leadership for Excellence in Assessment: A Powerful New School District Planning Guide*. Portland Oregon, Assessment Training Institute.

Name of Department: Department of Regional Planning

1. Subject Code: RPC 204
2. Course Title: **Land Markets and Management**
3. Contact Hours: 2 hours/week
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 rural, 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; 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 obtain the skills in understanding the functioning of land markets by undergoing this course.

Reading List:

- Acharya, B. P., 1989. *The Indian Urban land Ceiling Act: a critique of the 1976 legislation and Policy and land Acquisition and Development: Analysis of an Indian Experience*. Washington: The World Bank.
- Ballaney, S., 2008. *The town planning mechanism in Gujarat, India*. Washington: The World Bank.
- Banerjee, B., 2002. Security of Tenure in Indian Cities. In: D. Lasserre and A. a. L. Roystan, eds. *Holding their land. s.l.:Earthscan*, pp. 37 - 58.
- Banerjee, B., 2014. *Diversity, informality and opportunities for the poor in villages in Asian megacities: examples from Delhi and Mumbai*. Hanzhou: International Policy Workshop on Rural-Urban Poverty Linkages.
- Department of Land Resources, 2013. *National Land Utilization Policy - framework for land use planning and management*. New Delhi: Ministry of Rural Development, Government of India.

- Deshpande, R. S., 2007. *Emerging Issues in Land Policy*. New Delhi: Asian Development Bank.
- Deshpande, R. S., 2012. *Current land policy issues in India*. s.l.: FAO Corporate Document Repository.
- Dunkerley, H. B., 1983. *Urban Land Policy: Issues and Opportunities*. Washington: Oxford University Press. Vol.1.
- EU Task Force on Land Tenure, 2004. *EU Land Policy Guidelines*. Denmark: European Union.
- Farvacque, C. and McAuslan, P., 1992. *Reforming Urban Land Policies and Institutions in Developing Countries*. Vol. 1. Washington: The World Bank.
- Hong, Y. H. and Needham, B., 2007. *Analysing Land Readjustment*. Chicago: Lincoln Institute of Land Policy. Vol.2
- Lim, G. C., 1987. Land Markets and Public Policy: A Conceptual Framework. *Habitat International*, Vol. 11, No.1, pp. 23 - 27.
- Rasheed, S. and Parambath, S. G., 2014. Urban Land Management and Planning. *International Journal of Scientific and Engineering Research*, Vol. 5, No.7, pp. 58 - 62.
- Roy, A., 2005. Urban Informality: Toward an Epistemology of Planning. *Journal of the American Planning Association*, Vol. 71, No. 2, pp. 147 - 158.
- The World Bank, 2003. *Land Policies and Growth and Poverty Reduction*, Washington: Oxford University Press.
- Town and Country Planning Organization, 2007. *Model Guidelines for Urban Land Policy*. New Delhi: Ministry of Urban Development.
- UN HABITAT, 2007. *How to Develop a Pro - poor Land Policy: Process, Guide and lessons*. Kenya: United Nations Human Settlements Programme (UN-HABITAT).
- UN HABITAT, 2008. *Secure Land Rights for All*. Kenya: United Nations Human Settlements Programme (UN-HABITAT).
- United Nations HABITAT, 2014. *Urban Planning for City Leaders*. Vol.2. Germany: United Nations Human Settlements Programme (UN-Habitat).
- World Bank, 2007. *India Land Policies for Growth and Poverty Reduction*. Washington: Oxford University Press.
- Wu, F., 2001. China's recent urban development in the process of land and housing marketization and economic globalisation. *Habitat International*, Vol. 25, No.1, pp. 273 - 289.
- Yuen, B., 2007. Squatters no more: Singapore Social Housing. *Global Urban Development*, Vol. 3, No. 1, pp. 1 - 22.
- Dunk A., 2011. Defining a typology of peri-urban land-use conflicts. *Landscape and Urban Planning*, Vol.101, pp. 149-156.
- Navastara M. A., Navitas, P., 2012. Impact of residential Land Development Towards land price Dynamics in Surabaya. *Land Price Dynamics*, Vol. 25, pp. 273-289.

- Bastiaan Philip Reydon, L. E. g. S., 2014. Determination and Forecast of Agricultural Land Prices. *Research Gate*, Vol. 24, pp. 389-407.
- Cheshire, P., 2012. Land market regulation: market versus policy failures. *Research Gate*, Vol. 30, pp. 170-188.
- D. hasse, H. N., 2010. Assessing the impacts of Land use change on transforming regions. *Land use science*, Vol. 5, pp. 67-72.
- Deshpande, R. S., 2002. *Current land policy issues in India*. Delhi: Corporate document respiratory.
- Holden S.T., H. G., 2016. Land rental market legal restrictions in Northern Ethiopia. *Elsevier*, Vol. 55, pp. 212-221.
- Holden, S. H. G., 2016. Land Rental Market Legal Restrictions in Northern Ethiopia. *Land use Policy*, Vol. 52, pp. 410-421.
- Holden, S. K. O., 2014. The roles of land tenure reforms and land markets in the context of population growth and land use in Africa. *Elsevier*, Vol. 48, pp. 88-97.
- Holden, S. S. B., 2010. Preferences for land sales Legalization and Land Values in Ethiopia. *Land use Policy*, Vol. 52, pp. 410-421.
- John, F., 2012. A model of mixed land use in Urban Area. *Elsevier*, Vol. 41, pp. 64-69.
- Lim, G. C., 2007. Land markets and public policy: A conceptual framework. *Habitat International*, Vol. 11, pp. 23-27.
- Long, H., 2014. Land use policy in China: Introduction. *Elsevier*, Vol. 40, pp. 81-85.
- Ludwig Einstein, G. S., 2014. Determination and forecast of agricultural land prices. *Research Gate*, Vol. 24, pp. 389-407.
- Narain, V., 2009. Growing city, shrinking hinterland: land acquisition, transition and conflict in peri-urban Gurgaon, India. *Elsevier*, Vol. 21, pp. 501-512.
- Netto, V., 2011. *Urbanization at the heart of economy: the role of cities in economic development*. Sage Publications.
- Paul Cheshire, S. S., 2010. Land markets and land market regulation: progress towards understanding. *Science direct*, Vol. 34, pp. 619-637.
- Peter D. little, W. T. D. N. D., 2015. *Formal or Informal, Legal or Illegal: The Ambiguous Nature of cross-border Livestock Trade*. Borderland studies.
- Pindiga, A. O. K., 2013. Development of a land information system of tumpure residential and commercial layout in Akko local government area of Gombe State. *IOSR journal of environmental science*, Vol. 3, pp. 54-63.
- Prarambath, S. R. and., 2014. Urban land management and planning. *International journal of scientific and engineering research*, Vol. 5, pp. 58-62.
- Sebastian Galiani, E. S., 2011. Land property rights and resource allocation. *Elsevier*, Vol. 54, pp. 329-345.
- Talen, E., 2012. *City Rules: How regulation affect urban form*, Island Press, Washington. Elsevier.

Name of Department: Department of Regional Planning

1. Subject Code: RPC 205
2. Course Title: **Advanced GIS Applications**
3. Contact Hours: 2 hours/week
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, practical knowledge of GIS.
8. Objective of the Course:
The objective is to expose the students in GIS applications at the village, block, tehsil, district and metropolitan region level.
9. Details of the course:

Module 1. Cartographic Concepts (6 hours)

Course Introduction, fundamental of cartographic concepts, GIS spatial concepts, roles of GIS components, Coordinate systems and projections, scale and cartographic generalization, typography, map design, semiotics.

Module 2. Map Design Principles of Spatial Information (6 hours)

GIS modeling overview, GIS analysis: how to design choropleth, proportional symbol, dot, dasymetric, isoline, cartogram, and flow map, Spatial registration, GIS thematic mode.

Module 3. GIS Concepts (6 hours)

Spatial Data Types and Data acquisition , Data Creation, vector data structure and algorithms, raster data structure and algorithms, conversion from raster to vector data and vice versa, Geo-referencing, geo-coding and visualizing indigenous spatial knowledge, Spatial Analysis, Use of GIS in planning and decision making process.

Module 4. Geospatial Database (6 hours)

Fundamental database concepts, benefits of using databases, functions of database management systems; Data modelling, error modelling, data uncertainty and database design: Entity- Relation diagrams, relational model, object-oriented

database design, object-relational database, geo-relational model; Geospatial database creation, query and manipulation. Constructing spatial data infrastructure and spatial information system.

Module 5. GIS and Spatial Analysis (8 hours)

Multiple regression, principal components, clustering methods, time series analysis, computer-intensive methods (e.g., bootstrapping), spatial autocorrelation, spatial interpolation, spatial pattern analysis, and machine learning techniques for spatial data, Spatio-temporal data modelling and analysis; Interoperability arrangement for geospatial data and ontology mapping.

Reading List:

- Ben She, 2011. *Principle and Application of GIS -Principles and Applications of GIS*, ISBN-13: 978-7564611699, ISBN-10: 7564611693, China: China University of Mining and Technology Press.
- Bernhardsen, T., 1992. *Geographic Information Systems*, Randburg: Vitak IT.
- Davis, B.E., 1996. *Geographic Information Systems: a visual approach*, New Delhi: Word Press
- DeMers, M.N., 2000. *Fundamentals of Geographic Information Systems*, 2nd Edition, Hoboken, New Jersey: John Wiley & Sons.
- Heywood, I., Cornelius, S. & Carver, S., 1998. *An introduction to geographical information systems*, Harlow, London: Longman.
- Jones, C., 1997. *Geographic Information Systems and Computer Cartography*, Harlow, London: Longman
- Masser, I., 2005. GIS Worlds-Creating Spatial Data Infrastructures. *URISA Journal*, Vol.17, No.2, pp. 51-53.
- Ministry of Science and Technology, 2011. *National Spatial Data Infrastructure - India ASPIRATION*, New Delhi: Department of Science and Technology, Government of India.
- Paul A Longley and Michael F Goodchild, 2005. *Geographical Information Systems: Principles, Techniques, Management and Applications*, ISBN-13: 978-0471735458, ISBN-10: 9780471735458, 2nd Edition, Hoboken, New Jersey: John Wiley & Sons.
- Qihao Weng, 2009. *Remote Sensing and GIS Integration: Theories, Methods, and Applications: Theory, Methods, and Applications (Electronics)*, 1 edition, New York: McGraw-Hill Education.

Name of Department: Department of Regional Planning

1. Subject Code: RPS 206
2. Course Title: **Village Planning, and Block Planning**
3. Contact Hours: 10 hours/week
4. Relative Weightage: CWS: 50 (Consisting of regular weekly Presentation and reviews, and internal Jury), ETE: 50 (based on external examination by experts).
5. Credits: 10
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: The objective of this studio is to expose the students in the practical ways of planning for a village, and block/ tehsil. The students will be given a live case study to understand the complexities of planning at various levels i.e. village, block/ tehsil 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.
9. Duration of Study:
 - a) Village Study: 6 week
 - b) Block Study including presentation of village study: 10 week
10. Expected Learning Outcome: Students are expected to obtain the skills in understanding the various levels of planning, planning institutions, sources of information for village, block/ tehsil planning, and also develop public interaction.

Reading List:

- Banerjee B., 2015. *Summary Report of 'International Policy Workshop on Rural-Urban Poverty Linkages*. Asian Development Bank, Manila. Workshop during 2 to 4 September, 2014, Hanzhou, Zheijiang, PRC.
- Baruah, Joydeep, 2009. *Planning at the Grassroots: An experiment with Integrated District Planning*. OKD Institute of Social Change and Development, MPRA Paper No. 47529. Germany on 24th November, 2015.
- Cecilia T., 2007. EarthscanReader in Rural-Urban Linkages. Reviewed by Arif, G.M. in *Pakistan Institute of Development Economics*, Islamabad, Vol. 46, No. 1, pp. 42-59.

- Corwin, Anita, Lauren, 1977. The Rural Town: Minimal Urban Center, *Urban Anthropology*, Vol.6, No.1, pp.023-043.
- International Labour Organisation, 2003. *Integrated Rural Accessibility Planning*, Third Expert Group Meeting Report, Regional Office for Asia and the Pacific, Bangkok.
- Jeganathan C, Roy P.S. and Jha, M.N., 2011. Multi-Objective Spatial Decision Model for Land use Planning in a Tourism District of India, *Journal of Environmental Informatics*, Vol. 17, No. 1, pp.15-24.
- Kulshrestha, S.K., 2012. *Urban and Regional Planning in India: A handbook for Professional Practice*, New Delhi: Sage India.
- Majumder R., 2003. *Infrastructural Facilities in India: District Level Availability Index*, Munich Personal RePEc Archive (MPRA), MPRA Paper No. 4779, posted 8th September, 2007.
- Rao M., 1996. Beyond Urban Bias?, *Economic Political Weekly*, Vol.31, No.27, pp. 1743- 1745.
- MSS Research Foundation, 2014. *Rural Employment Strategies in India*.
- National Institute of Disaster Management, 2014. *Training Manual for Mainstreaming Climate Change adaptation and Disaster Risk Reduction: Into District Level Development Plans*, New Delhi: National Institute of Disaster Management.
- National Remote Sensing Center, 2015. *Bhuvan Panchayat – Space Based Information Support for Decentralised Planning (SIS-DP)*.
- Planning Commission of India, 2008. *Manual for Integrated District Planning*, Planning Commission of India, Ministry of Planning and Implementation, Government of India, New Delhi, Vol. 1, No. 4, Vol.2 – No.3, 5, 6 and 7.
- Niharranjan, R., 1978. Indian Tradition and History, Bhandarkar Oriental Research Institute, *Golden Jubilee*. Vol. 58/59, pp. 863-892.
- Sharma, N., 2016. *How Gram Panchayat Development Plan is changing the villages of India*, ET Bureau, July 30, 2016, 02.36 AM IST, Accessed From: <https://economictimes.indiatimes.com/news/politics-and-nation/how-gram-panchayatdevelopment-plan-is-changing-the-villages-of-india/articleshow/53458749.cms>
- Yadav, L.R and Singh, R.S., 2013. *e-MANCHITRA: A step*. <http://geospatialworld.net/Paper/CaseStudies/ArticleView.aspx?aid=30625India> GeoSpatial Digest, 2013, New Delhi.

Department Electives: Students are given the option of taking any of the electives from the ones offered by the Regional Planning Department.

Name of Department: Department of Regional Planning

1. Subject Code: RPE 206
2. Course Title: **Poverty and Development**
3. Contact Hours: 2 hours/week
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 poverty situation across continents with a specific focus on India. It will help in inclusive planning with a pro-poor development agenda.
9. 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

Evolution of poverty line, consumption expenditure data: per capita consumer expenditure, distribution of expenditure; source of Data: National Sample Survey (NSS), National Accounts Statistics, Identification of poor: how identification is done in India, food and land as a substitute, slum centric views, other methods. Approaches: livelihood approach, consumption based approaches, etc.; Head Count ratio, Poverty Gap and Squared Poverty gap.

Module 3: Indicators of Poverty

Methodology: 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: Poverty

Overview: incidence and dynamics of poverty: causes of poverty: dimensions of poverty, estimates of poverty in India, issues related to poverty; Multi-dimensional aspects of poverty, poverty matrix, vulnerability and asset ownership, Informal sector and poverty, reviews of development strategies of past decade, 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 5: 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 6: 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 obtain the skills in understanding the various dimensions of poverty and how to address them in the planning process by undergoing this course.

Reading List:

- Ahluwalia, M. S., 1990. Policies for Poverty Alleviation. *Asian Development Review: Studies of Asian and Pacific Economic Issues*, Vol.8, No.1.
- Anon., 2009. *Summary. In: India Urban Poverty Report.*
- Gibson, J., 1998. Identifying the Poor for Efficient Targeting: Results for Papua New Guinea. *New Zealand Economic Papers*, Vol. 32, No.1, pp. 1-18.
- Government of India, 2002. Poverty Alleviation in Rural India – Strategy and Programmes. *Tenth Five Year Plan 2002-07*. Delhi: Government of India, pp. 293-314.
- Lal, D., Natrajan, I. and Mohan, R., 2002. Economic Reforms and Poverty Alleviation in India - A Tale of Two Surveys. *University of California (Department of Economics) Working Paper Series*, WP no. 822.
- Mallick, S., 2009. Macroeconomic Policy and Poverty Reduction in India. *IGIDR Proceedings/Project Reports Series*, PP no. 062-15, pp. 1-37.
- Mehta, A. K. et al., 2011. *India Chronic Poverty Report: Towards Solutions and New Compacts in a Dynamic Context*. Delhi: Indian Institute of Public Administration.
- Morduch, J., 1999. Reforming Poverty Alleviation Policies. Conference on Economic Policy Reform: What We Know and What We Need to Know, *Stanford University*, pp. 1-36.

- OXFAM, 2009. *Urban Poverty and Vulnerability in Kenya*, Kenya: Oxfam GB Kenya Programme.
- Pasha, H. A., 2002. Pro Poor Policies. Fourth Global Forum on Citizens, Businesses, and Governments: Dialogue and Partnerships for the Promotion of Democracy and Development, *Marrakech, Morocco*, pp. 1-17.
- Sharma, S., 2004. Poverty Estimates in India: Some Key Issues. *ADB ERD Working Paper Series*, WP No. 51.
- Bruck, T., Danzer, A. M., Muravyev, A. and Weibhaar, N., 2007. Determinants of Poverty during Transition: Household Survey Evidence from Ukraine. *PRUS Working Paper Series*, WP No. 40.
- Health Planning Department, Ministry of Health, Uganda; Directorate of Water Development, Ministry of Water and Environment, Uganda; Uganda Bureau of Statistics; International Livestock Research Institute; and World Resources Institute, 2009. *Mapping a Healthier Future - How Spatial Analysis Can Guide Pro-Poor Water and Sanitation Planning in Uganda*, Washington DC and Kampala: World Resources Institute.
- Lavallee, E., Olivier, A., Doumer, L. P. and Robilliard, A.-S., 2010. *Poverty Alleviation Policy Targeting: A Review of Experiences in Developing Countries*. Document de Travail UMR DIAL.
- Wetlands Management Department, Ministry of Water and Environment, Uganda; Uganda Bureau of Statistics; International Livestock Research Institute; and World Resources Institute, 2009. *Mapping a Better Future: How Spatial Analysis Can Benefit Wetlands and Reduce Poverty in Uganda*, Washington DC and Kampala: World Resources Institute.
- Alkire, S. and Santos, M. E., 2010. Acute Multidimensional Poverty: A New Index for Developing Countries. *OPHI Working Paper Series*, WP No. 38.
- Alkire, S. and Santos, M. E., 2010. Multidimensional Poverty Index. *OPHI Research Brief*.
- Alkire, S. and Seth, S., 2008. Measuring Multidimensional Poverty in India: A New Proposal. *OPHI Working Paper Series*, WP No. 15.
- OPHI, 2010. *Multidimensional Poverty Index (MPI) At a Glance: Country Briefing - India*. Oxford Poverty and Human Development Initiative Country Briefs.
- IFAD, 2011. Rural Poverty Report 2011, *Rome: International Fund for Rural Development*.
- UNAIDS, 2010. *Global Report: UNAIDS report on the Global AIDS Epidemic*, s.l.: Joint United Nations Programme on HIV/AIDS.
- UN, 2000. United Nations Millennium Declaration. *Resolution adopted by the UN General Assembly*, Fifty-fifth session, Agenda item 60 (b).
- UNDP, 2010. *What Will It Take to Achieve the Millennium Development Goals? – An International Assessment*, New York: United Nations Development Programme.

- Government of India, 2008. *Report of the Committee on Slum Statistics/Census*, Delhi: National Building Organisation, Ministry of Housing and Urban Poverty Alleviation, GoI.
- Government of India, 2011. *Model Property Rights to Slum Dwellers Act, 2011*. Delhi: Ministry of Housing and Urban Poverty Alleviation, GoI.
- Hailu, D. and Tsukada, R., 2011. Measuring MDG Achievements: Rate of Progress Matters Most. *The International Policy Centre for Inclusive Growth One Pager*, No. 125.
- Hurley, G., 2010. Achieving Debt Sustainability and the MDGs in Small Island Developing States: The Case of the Maldives. *UNDP working Papers on Poverty Reduction*, pp. 1-38.
- Yadav, V., 2011. Urban Poverty: Issues and Remedies for Inclusive Development. *Spatio-Economic Development Record*, Vol.18, No.4.
- Hailu, D. and Tsukada, R., 2011. Achieving the Millenium Development Goals. UNDP International Policy Centre for Inclusive Growth: *Working Paper Series*, WP No. 78.
- World Bank, 2011. *Global Economic Prospects - Navigating Strong Currents*, Washington DC: World Bank. Vol. 2.
- David Dodman, G. M. a. B. D.C., 2013. *Integrating The Environment In Urban Planning And Management*, s.l.: UNON/Publishing Section Services.
- Elliott, J., 2012. *An Introduction to Sustainable Development*. London: Taylor and Francis group.Vol.4
- Emma Grant, J., 2002. *Urban Livelihoods*. UK, USA: Earthscan.
- Esser, J. B. a. D., 2005. *Shaping Urban Futures: Challenges to Governing and Managing Afghan Cities*, Afghanistan: Afghanistan Research and Evaluation Unit.
- Fox, J. B. a. S., 2007. *Urban Poverty and Development in the 21st Century*, London: Oxfam GB.
- Gibbs, D., 2000. Ecological modernisation, regional economic development and regional development agencies. *Elsevier*, Vol. 31, No.1, pp. 9-19.
- Haan, A. d., 2009. Urban Poverty and its Alleviation: Introduction. *IDS Bulletin*, pp. 1-8.
- Habitat, U., 2003. *Global Report on Human Settlements "The Challenge of Slums"*, UK, USA: Earthscan Publications Ltd.
- Isa Band, N. S. K. P., 2008. Mapping Urban Poverty for Local Governance in an Indian Mega-City: The Case of Delhi. *Sage Journals*, Vol. 45, No.7, pp. 1385-1412.
- Jorge Enrique Hardoy, D. M. D. S., 2001. Environmental problems in an urbanizing world: finding solutions for cities in Africa, *Asia and Latin America*. Vol.15. London: Earthscan.
- KAY, C., 2006. Rural Poverty and Development Strategies in Latin America. *Journal of Agrarian Change*, Vol. 6, No. 4, pp. 455-508.
- Lawrence Haddad, M. T. R. J. L. G., November 1999. Are Urban Poverty and Under nutrition Growing? Some Newly Assembled Evidence. *Elsevier*, Vol. 27, No.11, pp. 1891-1904.

- Mehta, D., 2000. Urbanisation of Poverty. *Habitat Debate*, Vol.6, No.4.
- Moser, C. O. N., 2004. Urban Violence and Insecurity, *Elsevier*, Vol.16, No.2, pp. 3-16.
- Office, I. L., 2018. *Women and Men in the Informal Economy*. Vol.3. Geneva: Printing and Distribution Branch (PRODOC) of the ILO. .
- Rakodi, C., 1995. Poverty lines or household strategies?: A review of conceptual issues in the study of urban poverty. *Elsevier*, Vol. 19, No.4, pp. 407-426.
- Satterthwaite, D., 2003. The Millennium Development Goals and urban poverty reduction: great expectations and nonsense statistics. *Sage Journals*, Vol. 15, No.2, pp. 179-190.
- Satterthwaite, D., 2009. Urban Poverty: Reconsidering its Scale and Nature. *IDS Bulletin*, Vol.28, No.2, pp. 9-23.
- Wratten, E., 1995. Conceptualizing urban poverty. *Sage Journals*, Vol.7, No. 1, pp. 11-38.
- Allen, T. and Thomas, A., 2000. *Poverty and Development*. Oxford University Press.
- McLoyd, V.C., 1998. *Children in Poverty: Development, Public Policy and Practice*.
- Lipina, S.J. and Colombo, J.A., 2009. *Poverty and brain development during childhood: An approach from cognitive psychology and neuroscience*. American Psychological Association.
- Agrawal, A. and Redford, K., 2006. Poverty, development, and biodiversity conservation: Shooting in the dark? *Ann Arbor MI*, Vol. 48109, No. 734, pp.647-5948.
- Gillis, M., Perkins, D.H., Roemer, M. and Snodgrass, D.R., 1992. *Economics of Development*, Vol.3. WW Norton and Company, Inc.
- Thomas, B.P., 1985. *Politics, participation and poverty; development through self-help in Kenya*.

Name of Department: Department of Regional Planning

1. Subject Code: RPE 207
2. Course Title: **Climate Change and its impact**
3. Contact Hours: 2 hours/week
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 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.
9. 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: Micro Climates

Urbanisation and its impact on micro climates; heat islands – causes and effects; research on heat islands globally and in India; Use of remote sensing and GIS in detecting 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 obtain the skills in understanding the various dimensions of climate change and how to address them in the regional planning process by undergoing this course.

Reading list:

- Berliner, L. M., 2003. Uncertainty and Climate Change. *Statistical Science*, Vol. 18, no.4, pp. 430 - 435.
- Center for Science and Environment, 2018. *Climate change - For the young and curious*.
- Dutt, G. and Gaioli, F., 2007. Coping with Climate Change. *Economic and Political Weekly*, Vol. 42, No. 42, pp. 4239 - 4250.
- Kapur, D., Khosla, R. and Mehta, P. B., 2009. Climate Change: India's Options. *Economic and Political Weekly*, Vol. 44, No. 31, pp. 34 - 42.
- Macpherson, C. C., 2014. Climate Change Matters. *Journal of Medical Ethics*, Vol. 40, No.4, pp. 288 - 290.
- Meevov, D., 2007. Climate Change and Cities. *Built Environment*, Vol. 33, No.1, pp. 4 - 9.
- Prabhakar, S. V. R. K., Shivakoti, B. R., Schayvens, H. and Corral, A. F., 2005. *Trans boundary Impacts of Climate Change in Asia: making a case for Regional Adaptation and planning and cooperation*. s.l.:Institute For Global Environmental Strategies (IGES).
- Romm, J., 2015. *Climate Change: What everybody needs to know*. Vol.1. New York: Oxford University Press.
- Beermann J., Damodaran A., 2016. Climate action in Indian cities, *Journal of integrative environmental sciences*, Vol. 13, pp. 55-66.
- Bush, Kathleen F., Frumkin, Howard and Rani K., 2011. The Impact of Climate Change on Public Health in India, Climate change and environmental health, *Journal slww*, Vol. 22, pp. 30-81.

- Climate Modelling Forum, 2009. *India's GHG Emissions Profile: Results of Five Climate Modelling Studies*. Delhi: Ministry of Environment and Forests Government of India.
- Estrada F, Richard S.J. T., 2017. Global economic impacts of climate variability and change, *journal pone*, Vol-10.
- Fadnavis, S., Kumar, K. R., Tiwari, Y. K. andPozzoli, L., 2016. Atmospheric CO2 source and sink patterns over the Indian region. *Annales Geophysical*, pp. 279 -291.
- INCCA Indian Network for Climate Change Assessment, 2010. *India: Greenhouse Gas Emissions 2007*. Delhi: Ministry of Environment and Forests, Government of India.
- Jingjin Li., and Nyuk H. W., 2016. Urban Micro-climate Research in High Density Cities: Case Study in Nanjing, Pprocedia Engineering, *Science direct*, Vol. 169, pp. 88-99.
- Fisher, K. and Popp, D., 2014. Introduction to the special issue on climate adaptation: improving the connection between empirical research and integrated assessment models, energy economics, *Elsevier journals*, Vol. 46, pp. 495-499.
- Marechal, K. 2010. The economics of climate change, and the change of climate in economics, Energy policy, *Science direct*, Vol.35, pp. 5181-5194
- Krishnan, N., Prasanna, M.V., and Vijith, H. 2018. Fluctuations in Monthly and Annual Rainfall Trend: A Statistical Assessment to Detect the Influence of Climate Change, *Journal of climate change*, Vol. 4, pp. 15-29.
- Kumar, R., Gautam, H.R., 2014. Climate Change and its Impact on Agricultural productivity in India, *Journal of climatology and weather forecasting*, Vol. 55, pp. 12-15.
- Green, M., Weather head, E.K., 2014. Coping with climate change uncertainty for adaptation planning: An improved criterion for decision making under uncertainty, Climate risk management, *Science direct*, Vol. 1, pp. 63-75.
- Widya, N., 2011. *Urban Heat Island towards Urban Climate, earth and environmental science*, IOP science, Vol. 118, conference-1.
- Peterson, Sonja, 2011. Uncertainty and Economic Analysis of climate change: a survey of approaches and findings, *Environmental modelling and assessment*, Vol. 11, pp. 1-17.
- Ramanathan, AL., 2018. Ablation of ice and snow of Kara-Batkak Glacier and its Impact on River Flow, *Journal of Climate change*, Vol. 4, pp. 1-14.
- Rui-li, ShuGeng, 2013. Impacts of Climate Change on Agriculture and Adaptive Strategies in China, *Journal of integrative agriculture*, Vol. 12, pp. 1402-1408.
- Sharma, S. K. and Chauhan, R., 2011. Climate change research initiative: Indian Network for Climate Change Assessment. *Current Science*, Vol. 101, No. 3, pp. 308 -311.
- Webster, M., Sokolov, A.P. and Reilly, J.M., 2012. Analysis of Climate Policy Targets under Uncertainty, *Climate change*, Vol. 4, pp. 569-583.
- Zonooz, M. R. F., Nopiah, Z. M., Yusof, A. M. &Sopian, K., 2009. A review of MARKAL energy Modelling. *European Journal of Scientific Research*, Vol. 26, No. 3, pp. 352 -361.

- Saryal R., 2018. *Climatic Change Policy of India*, South Asia research: Sage Journal.
- Bowen A. Rydge J., 2011. Climate Change policy in United Kingdom, *Policy paper-Centre for climate change economics and policy*, Vol. 35, pp. 3347-3359.
- Helm D, 2010. Government Failure, rent-seeking, and capture: the design of climate-change policy, *Oxford review of economic policy*, Vol. 26, pp. 182-196.
- Stern, N. 2011. *The Economics of Climate Change*, Cambridge University press.
- Tvinnereim E., 2017. Citizen's preferences for tackling climate change, Global environmental change, *Science direct*, Vol. 46, pp. 34-41.
- Edidah L., Ampaire, 2017. Institutional Challenges to Change Adaptation, Environmental science and policy, *Science direct*, Vol. 75, pp. 81-90.

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: RPC 301
2. Course Title: **Environment and Development**
3. Contact Hours: 2 hours/week
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 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: 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.
9. 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; 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, 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, tsunamis, 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 obtain 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.

Reading List:

- Arnold, M. et al., 2014. *Climate and disaster resilience – The role for community-driven development*. World Bank, GFDRR and Social Development Department.
- Boyd, J., 2007. Nonmarket benefits of nature: What should be counted in green GDP? *Ecological Economics*, Vol. 61, pp. 716-723.
- Dasgupta, S., Laplante, B., Wang, H. and Wheeler, D., 2002. Confronting the Environmental Kuznets Curve. *Journal of Economic Perspectives*, Vol. 16, No.1, pp. 147-168.

- Department of Civil Engineering, IIT Guwahati, 2012. *Urban Carrying Capacity...concept and calculation*, Guwahati: Center for Excellence: Integrated landuse planning and water resource management.
- Dwivedi, O. P. and Vajpeyi, D., 1995. *Environmental Policies in the Third World*. Vol.2, Westport: Greenwood Press.
- Ewing, B. et al., 2010. *Calculation Methodology for the National Footprint Accounts*, Oakland: Global Footprint Network.
- Frankel, J.A., Rose, A.K., 2002. *Is Trade Good or Bad For The Environment? Sorting Out Causality*. Washington: National Bureau of Economic Research, pp. 9201.
- Friedmann, J., 1992. *Empowerment: The Politics of Alternative Development*. Vol.1. Cambridge: Wiley-Blackwell.
- Gottman, J., 1961. *Megalopolis: The Urbanized northeastern seaboard of the United States*. New York: Twentieth Century Fund and Kraus International Publications.
- Jha, S. and Rabindran, S. G., 2001. *Environmental Impact of India's Trade Liberalization*. s.l.:s.n.
- Karan, P.P. 1994. Environmental Movements in India. *The Geographical Review*, Vol. 6, pp. 32- 41.
- Khator, R., 1991. *Environment, Development and Politics in India*. .Vol.1. New York: University Press of America.
- Kopp, Raymond J., Smith, V. Kerry, 1993. *Valuing Natural Assets*. Washington: Resources for the Future.
- Kousky, C., Rostapshova, O., Toman, M. and Zeckhauser, R., 2009. *Responding to Threats of Climate Change Mega - Catastrophes*, Washington: Resources for the Future.
- Liu, J and Diamond, J., 2008. Revolutionizing China's Environmental Protection. *Science*, Vol. 319, No. 4, pp. 37-38.
- Managi, S. and Jena, P. R., 2008. *Environmental productivity and Kuznets curve in India*. s.l.:ELSEVIER Ecological Economics.
- Millennium Ecosystem Assessment, 2005. *Ecosystems and Human Well - Being Synthesis*, Washington: Island Press.
- Revesz, R. L. and Stavins, R. N., 2003. *Environmental Law and Policy*. Cambridge: Harvard University.
- Satluj Vidyut Nigam Limited, 2007. *Environmental Assessment and Management Plan*. Shimla: DHI ,India ,Water & Environment Pvt. Ltd.
- Smith, J. B., Schellnhuber, H. J. and Mirza, M. M. Q., 2001. Vulnerability to Climate Change and Reasons for Concern: A Synthesis. In: C. Hope and S. K. Sinha, eds. *Climate Change 2001: Impacts, Adaptation, and Vulnerability*. Cambridge: *Cambridge University Press*, pp. 915 - 959.
- Stern, N., 2006. What is the Economics of Climate Change? *World Economics*, Vol.7, No.2, pp. 153 -157.
- Sorrell, S. et al., 2003. Carbon Trading In the Policy Mix. *Oxford Review Of Economic Policy*, Vol. 19, Issue No. 3, pp. 420-437.

- Talberth, J. and Bohara, A. (2006). Economic openness and green GDP. *Ecological Economics*, Vol. 58, pp. 743– 758.
- Tisdell, C. (2001), Globalisation and sustainability: environmental Kuznets curve and the WTO. *Ecological Economics*, Vol.39, pp. 185–196.
- UNEP Global Environmental Alert Service (GEAS), 2012. *One Planet, How many People? A Review of Earth's Carrying Capacity*. Chicago: UNEP.
- United States Environmental Protection Agency, 2014. *Greenhouse Gas Emissions: Overview of Greenhouse Gases*.
- World Bank, 2007. *Cost of Pollution in China: Economic Estimates if Physical Damages*. Washington: World Bank.
- World Bank, 2011. *Disaster Risk Management*.
- World Health Organization, 2011. *Disaster Preparedness and Response*.
- Peet, R. and Watts, M., 2004. *Liberation ecologies: environment, development and social movements*. Routledge Press.
- Bond, P. ed., 2002. *Unsustainable South Africa: Environment, development and social protest*. University of Natal Press.
- Zimmerer, K.S. and Bassett, T.J. eds., 2003. *Political ecology: an integrative approach to geography and environment-development studies*. Guilford Press.
- Nygren, A., 1999. Local knowledge in the environment–development discourse: From dichotomies to situated knowledges. *Critique of anthropology*, Vol.19, No.3, pp.267-288.
- Demeere, N., Stouthuysen, K. and Roodhooft, F., 2009. Time-driven activity-based costing in an outpatient clinic environment: development, relevance and managerial impact. *Health policy*, Vol.92, No.2-3, pp.296-304.
- Bradley, R.H., Caldwell, B.M., Rock, S.L., Hamrick, H.M. and Harris, P., 1988. Home observation for measurement of the environment: Development of a home inventory for use with families having children 6 to 10 years old. *Contemporary Educational Psychology*, Vol.13, No.1, pp.58-71
- Pearson, C.S., 1987. *Multinational corporations, environment, and the third world: business matters*. USA: Duke University Press.
- Winnicott, D.W., 1965. *The maturational processes and the facilitating environment: Studies in the theory of emotional development*. In *The Maturational Processes and the Facilitating Environment: Studies in the Theory of Emotional Development*, London: the Hogarth Press and the Institute of Psycho-analysis, pp. 1-276.
- Harel, D., Lachover, H., Naamad, A., Pnueli, A., Politi, M., Sherman, R., Shtull-Trauring, A. and Trakhtenbrot, M., 1990. Statemate: A working environment for the development of complex reactive systems. *IEEE Transactions on software engineering*, Vol.16, No.4, pp.403-414.
- Andreasen, A.R., 1995. *Marketing social change: Changing behavior to promote health, social development, and the environment*. San Francisco: Jossey-Bass.

- Eccles, J.S., Midgley, C., Wigfield, A., Buchanan, C.M., Reuman, D., Flanagan, C. and Mac Iver, D., 1993. Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American psychologist*, Vol.48, No.2, pp.90-97.
- Loehlin, J.C., 1992. *Genes and environment in personality development*. Sage Publications, Inc.
- Bradley, R.H., Caldwell, B.M., Rock, S.L., Ramey, C.T., Barnard, K.E., Gray, C., Hammond, M.A., Mitchell, S., Gottfried, A.W., Siegel, L. and Johnson, D.L., 1989. Home environment and cognitive development in the first 3 years of life: A collaborative study involving six sites and three ethnic groups in North America. *Developmental psychology*, Vol.25, No.2, pp.217-226.
- Hunter, C., 2002. Sustainable tourism and the touristic ecological footprint. *Environment, development and sustainability*, Vol.4, No.1, pp.7-20.
- Cunningham, H., Maynard, D., Bontcheva, K. and Tablan, V., 2002, July. A framework and graphical development environment for robust NLP tools and applications. *ACL*, pp. 168-175.
- Schmidheiny, S., 1992. *Changing course: A global business perspective on development and the environment*, Vol. 1. MIT press.
- Bellifemine, F., Poggi, A. and Rimassa, G., 2001, May. JADE: a FIPA2000 compliant agent development environment. In *Proceedings of the fifth international conference on Autonomous agents*, pp. 216-217.
- Osorio, L.A.R., Lobato, M.O. and Del Castillo, X.A., 2005. Debates on sustainable development: towards a holistic view of reality. *Environment, Development and Sustainability*, Vol.7, No.4, pp.501-518.
- Newman, L. and Dale, A., 2007. Homophily and agency: creating effective sustainable development networks. *Environment, Development and Sustainability*, Vol.9, No.1, pp.79-90.
- Pearce, D.W. and Warford, J.J., 1993. *World without end: economics, environment, and sustainable development*. Oxford University Press.
- Dahdouh-Guebas, F., 2002. The use of remote sensing and GIS in the sustainable management of tropical coastal ecosystems. *Environment, development and sustainability*, Vol.4, No.2, pp.93-112.
- Gennari, J.H., Musen, M.A., Ferguson, R.W., Grosso, W.E., Crubézy, M., Eriksson, H., Noy, N.F. and Tu, S.W., 2003. The evolution of Protégé: an environment for knowledge-based systems development. *International Journal of Human-computer studies*, Vol.58, No.1, pp.89-123.
- Knublauch, H., Ferguson, R.W., Noy, N.F. and Musen, M.A., 2004, November. The Protégé OWL plugin: An open development environment for semantic web applications. In *International Semantic Web Conference, Springer, Berlin, Heidelberg*, pp. 229-243.
- Carron, A.V., Widmeyer, W.N. and Brawley, L.R., 1985. The development of an instrument to assess cohesion in sport teams: The Group Environment Questionnaire. *Journal of sport psychology*, Vol.7, No.3, pp.244-266.

Name of Department: Department of Regional Planning

1. Subject Code: RPC302
2. Course Title: **Project Planning**
3. Contact Hours: 2 hours/week
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 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: 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 rural, fringe and peri-urban areas of India and case studies will be provided from developing and developed countries.
9. 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: United Nations Industrial Development Organization (UNIDO), Little-Mirrlees, Objectives-Oriented Project Planning (ZOPP), Goal-oriented Project Planning (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: Participatory Rural Appraisal (PRA), SARAR (an acronym based on five attributes the approach seeks to build: self-esteem, associative strength, resourcefulness, action planning, and responsibility), 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 Environmental Impact Assessment (EIA)/ Environmental Impact Statement (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 obtain the skills in understanding the various dimensions of project planning and how to incorporate them in the regional planning process.

Reading list:

- Chandra, P., 1987. *Projects: Preparation, Appraisal, Budgeting and Implementation*. Vol.2. Noida: Tata McGraw-Hill.
- Chandra, P., 2009. *Projects: Planning, Analysis, Selection, Financing, Implementation, and Review*. Vol.8. Noida: Mc Graw Hill India.
- Davies, D. G., 1996. *The economic evaluation of projects: papers from a curriculum development workshop*. Vol.1. Washington: Economic Development Institute of the World Bank.
- McCracken, J. R. and Narayan, D., 1998. *Participation and social assessment: tools and techniques*. Vol.1. Washington: The World Bank.
- United Nations Industrial Development Organization, 1986. *Manual for evaluation of Industrial projects*. Vol.1. Vienna: UNIDO publications.
- Dvir, D., Raz, T. and Shenhar, A.J., 2003. An empirical analysis of the relationship between project planning and project success. *International journal of project management*, Vol.21, No.2, pp. 89-95.
- Duy Nguyen, L., Ogunlana, S.O. and Thi Xuan Lan, D., 2004. A study on project success factors in large construction projects in Vietnam. *Engineering, Construction and Architectural Management*, Vol.11, No.6, pp.404-413.
- Kerzner, H. and Kerzner, H.R., 2017. *Project management: a systems approach to planning, scheduling, and controlling*. John Wiley and Sons.
- Haugan, G.T., 2001. *Project planning and scheduling*. Berrett-Koehler Publishers.
- Pinedo, M.L., 2005. *Project Planning and Scheduling. Planning and Scheduling in Manufacturing and Services*, pp.51-79.
- Speranza, M.G. and Vercellis, C., 1993. Hierarchical models for multi-project planning and scheduling. *European Journal of Operational Research*, Vol.64, No.2, pp.312-325.
- Munier, N., 2013. Project Planning and Scheduling. In *Project Management for Environmental, Construction and Manufacturing Engineers* Springer, *Dordrecht*, pp. 119-150.
- Hartmann, S. and Sprecher, A., 1996. A note on “Hierarchical models for multi-project planning and scheduling”. *European Journal of Operational Research*, Vol.94, No.2, pp.377-383.
- Emery, A.R., 2000. *Guidelines: integrating indigenous knowledge in project planning and implementation*. Washington: The World Bank.
- Nutt, P.C., 1983. Implementation Approaches for Project Planning. *Academy of Management Review*, Vol.8, No.4, pp.600-611.

- Ehie, I.C. and Madsen, M., 2005. Identifying critical issues in enterprise resource planning implementation. *Computers in industry*, Vol.56, No.6, pp.545-557.
- Pinto, J.K. and Slevin, D.P., 1987. Critical factors in successful project implementation. *IEEE transactions on engineering management*, Vol.1, pp.22-27.
- Pinto, J.K. and Prescott, J.E., 1990. Planning and tactical factors in the project implementation process. *Journal of Management studies*, Vol.27, No.3, pp.305-327.
- Ahuja, H.N., Dozzi, S.P. and Abourizk, S.M., 1994. *Project management: techniques in planning and controlling construction projects*. John Wiley and Sons.
- Frimpong, Y., Oluwoye, J. and Crawford, L., 2003. Causes of delay and cost overruns in construction of groundwater projects in a developing countries; Ghana as a case study. *International Journal of project management*, Vol.21, No.5, pp.321-326.
- Chan, A.P., Scott, D. and Chan, A.P., 2004. Factors affecting the success of a construction project. *Journal of construction engineering and management*, Vol.130, No.1, pp.153-155.
- Loucks, D.P., Van Beek, E., Stedinger, J.R., Dijkman, J.P. and Villars, M.T., 2005. *Water resources systems planning and management: an introduction to methods, models and applications*. Paris: UNESCO.
- Turner, J.R., 2014. *Handbook of project-based management*, Vol. 92. New York: McGraw-hill.
- Hans, E.W., Herroelen, W., Leus, R. and Wullink, G., 2007. A hierarchical approach to multi-project planning under uncertainty. *Omega*, Vol.35, No.5, pp. 563-577.
- Hulme, D., 1995. Projects, politics and professionals: alternative approaches for project identification and project planning. *Agricultural Systems*, Vol.42, No.2, pp.211-233.
- Caughron, J.J. and Mumford, M.D., 2008. Project planning: The effects of using formal planning techniques on creative problem-solving. *Creativity and Innovation Management*, Vol.17, No.3, pp.204-215.
- Antoniol, G., Di Penta, M. and Harman, M., 2005. Search-based techniques applied to optimization of project planning for a massive maintenance project. *In null*, pp. 240-249.
- Kelley Jr, J.E. and Walker, M.R., 1959. Critical-path planning and scheduling. *Eastern joint IRE-AIEE-ACM*, pp. 160-173.

Name of Department: Department of Regional Planning

1. Subject Code: RPC303
2. Course Title: **Institutional Analysis and Governance**
3. Contact Hours: 2 hours/ week
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, 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.
8. 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.
9. 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 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 governance as envisaged in 73 and 74 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 obtain 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.

Reading List:

Governance: When, Why, What

- Ahluwalia MS., 1999. India's economic reform: An appraisal In India in the era of economic reforms. Sachs J, Varshney A, Bajpai N (eds.) *Oxford University Press*, New Delhi. pp.26-80
- Asian Development Bank (ADB), 1997. *Governance: Promoting Sound Development Management*. Manila: ADB.
- Banerjee, A. M. and K. A. Chandrasekaran., 1996. *Renewing Governance: Issues and Options*. New Delhi: Tata McGraw Hill.
- Crook, Rand J. and Manor, 1995. Democratic Decentralization and Institutional Performance: Four Asian and African Experiences Compared. *Journal of Commonwealth and comparative Politics*, Vol. 33, No. 3, pp. 32-41.
- Currie, B., 1996. "Governance, democracy and Economic Adjustment in India: Conceptual and Empirical Problems", *Third World Quarterly*.

- Expert Group on Commercialisation of Infrastructure Projects. 1996. *The India Infrastructure Report: Policy Imperatives for Growth and Welfare*. New Delhi: Ministry of Finance, Govt. of India.
- International Monetary Fund (IMF). 1997. *Good Governance: The IMF's Role*. Washington: IMF.
- Jayal, N.G., 1997. The Governance Agenda: Making Democratic Development Dispensable, *Economic and Political Weekly*. Vol. 32, No. 8, pp. 22-27.
- Landell-Mills, Pierre and I. Seralgeldin, 1992, 'Governance and External Factor, *Proceeding of the World Bank Annual Conference on Development Economics 1991*, World Bank, Washington D.C.
- Leftwich, A., 1993. Governance, Democracy and Development in the Third World, *Third world Quarterly*, Vol. 14, No. 3, pp. 605-624.
- Mitra, S. K., 2001. Making Local Government Work: Local Elites, Panchayati raj and Governance in India in AtulKohli Ed The Success of India's Democracy Cambridge, *Cambridge University Press*, pp. 103-126.
- Sachs J, Varshney A. and Bajpai N., 1999. *India in the era of economic reforms*. New Delhi: Oxford University Press
- UNDP, 1997. *Governance for Sustainable Development*. New York: UNDP Policy Document.
- World Bank, 1997. *The State in a Changing World, World Development Report*. New York: Oxford University Press.
- Gupta, B., 1996. *India: Problems of Governance, Governing South Asia*. Vol. 5, New Delhi: Konark Publishers.
- Bagchi, S. and Kundu, 2003. A. Development of Municipal bond market in India: Issues concerning financing of urban infrastructure, *Economic and Political Weekly*, Vol.38, No. 8, pp.789-98.
- Balachandren, G., 2001. Urban Decentralisation: case Study – West Bengal, *SDR*, Vol.8, No.5, pp.18-24.
- Bewa and Kumar, V., 1987. *Indian Metropolis urbanization, Planning and Management*, New Delhi: Inter India Publications.
- Crook, R. and Manor, J., 1995. Democratic Decentralisation and Institutional Performance: Four Asian and African Experiences Compared, *Journal of Commonwealth and comparative Politics*, Vol. 33, No. 3, pp. 19-25.
- Datta and Abhijit, 1992. Constitutional Strengthening of local government a third world federation, *Indian Journal of Public Administration*, Vol.42, No.2, April, pp. 144-52.
- Jain, A.K., 2002. Urban Governance, Planning and Development in Delhi, *SDR*, Vol. 9, No. 2, pp. 13-20.
- Kohli, A., 1987. *State and Poverty in India: The Politics of Reform*, Cambridge University Press.
- Kundu, A., 2001. Politics and Economics of Credit Rating, *EPW*, Vol.35, No.4, pp.293-95.

- Kundu, A., 2003. Urban and Urban Governance: Scared for neoliberalism, *EPW*, Vol. 38, No.29, pp. 3079-87.
- Kundu, A. and Mahadevi, P., 2002. *Poverty & Vulnerability in Globalising Metropolis Ahmedabad*, New Delhi: Marab Publications.
- Merino R. and Pinto, 2000. *Metropolitan City Governance in India*, New Delhi: Sage Publications.
- Nayyar, D. 2002. *Governing Globalisation: Issues and Institutions*, Oxford University Press.
- Mathur, O. P., 1999. *India: The Challenge of Urban Governance*, NIPFP & Centre for Urban & Community Studies.

Governance: Definition, Measurement, Indicator

- Graham, J., Anos, B. and Plumptre, T., 2003. *Principles for Good Governance In The 21st Century, Policy brief no. 15*. Canada: Institute on Governance.
- Mehta, D., 1998. *Urban Governance: Lessons from Best Practices in Asia*, UMP-Asia Occasional Paper no. 40.
- Mohanty, P.K., 1999. *Municipal Decentralisation and Governance: Autonomy, Accountability and Participation in Jha, S.N. and Mathur, P.C (Eds) Decentralisation and Local Politics: Reading in Indian Government and Politics-2*. New Delhi: Sage Publications.
- Osborne, D. and Gaebler T., 1992. *Reinventing Government, MA: Addison-Wesley*.
- Putnam, R. D., 1993. *Making Democracy Work: Civic Tradition in Modern Italy*, Princeton, NJ.: Princeton University Press,
- United Nations Centre for Human Settlement (HABITAT), 1996. *An Urbanising World: Global Report on Human Settlements*. New York: Oxford University Press.
- United Nations Centre for Human Settlement, 2000. *Urban Indicators Tool kit guide*, New York: Oxford University Press.
- UNDP, 1997. *Public Private Partnership for the Urban Environment*. New York: UNDP.
- UNDP, 1999. *Human Development Report- Globalisation with a Human Face*. New York: UNDP.
- UNDP, 2002. *Urban Governance: A sourcebook on indicators*, New York: UNDP.
- UNDP, 2003. *What is Good Governance*, New York: UNDP.
- Urban Management Programme (UMP), 2000. Capacity Enhancement of Civil Societies for Good Governance, *UMP Asia News*, Vol. 3, No. 2, pp. 32-46.
- World Bank, 1994. *Governance: the World Bank's experience, The International Bank for Reconstruction and Development*, Washington, D.C.: The World Bank.
- World Bank, 1997. *The State in a Changing World- World Development Report*. , New York: Oxford University Press.

- Wickramasinghe, N. K., 1997. 'Governance: A Critique' in ed. M. Somasundram, *The Third Wave. Governance and Public Administration in Sri Lanka*, New Delhi: Konark Publications.
- Weisgrau, and Maxine, 1997. *Interpreting Development: Local Histories, Local Strategies*, Lanham, New York: University Press of America.

Governance, Civil Society and Development

- Barber, B., 1998. *A Place for Us: How to Make Society Civil and Democracy Strong*, New York: Hill and Wang.
- Gramsci and Antonio, 1971. *Selections from the Prison Notebooks of Antonio Gramsci*, New York: International Publishers.
- Mencher, J., 1999. NGO: Are they a Force for Change, *Economic and Political Weekly*, Vol. 34, No.30, pp. 32-39.
- Pearce J., 1997. Civil Society, Market and Democracy in Latin America. *Democratisation*, Vol.4, pp.57-83.
- United Nations Development Programme, 1993. *UNDP and Civil Society*, New York: UNDP.
- Walzer, M., 1997. *Concept of Civil Society in M. Walzer (ed.) Towards a Global Civil Society*. Berghahn Books, U.K: Oxford.

Global Governance

- Lamb, H., 1996. *Global Governance: Why? How? When?*, Murchison Chair of Free Enterprise College of Engineering, <http://www.engr.utexas.edu/cofe/governance/>
- Farer, T., Timothy D. and Sisk, 2007. *Global Governance: A Review of Multilateralism and International Organisations*. Japan: Lynne Rienner Publishers in association with ACUNS and United Nations University.
- Prado and De, C., 2000. *Global Multi-level Governance: European and East Asian Leadership*, Japan: United Nations University Press.
- Stuckler, D. and Basu, S., 2010. *Six Concerns about the data in the (Dead) Aid Debate*, Global Economic Governance Programme, GEG Brief, University College Oxford, University of Oxford and Department of Politics and International Relations

E-Governance

- Government of India, 2008. *Promoting E-Governance: The Smart Way Forward*. Second Administrative Reforms Commission, 11th Report, New Delhi.

Others

- Hajer, M., Hajer, M.A. and Wagenaar, H. eds., 2003. *Deliberative policy analysis: understanding governance in the network society*. Cambridge: Cambridge University Press.

- Congleton, R.D., 2007. *Understanding institutional diversity*. Cambridge: Cambridge University Press.
- Arts, B. and Buizer, M., 2009. Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest policy and economics*, Vol.11, No.5-6, pp. 340-347.
- Aoki, M., Jackson, G. and Miyajima, H., 2007. *Corporate governance in Japan: Institutional change and organizational diversity*. New York: Oxford University Press.
- Pollack, M.A., 1996. The new institutionalism and EC governance: the promise and limits of institutional analysis. *Governance*, Vol.9, No. 4, pp.429-458.
- Ostrom, E., 1994. Institutional analysis, design principles and threats to sustainable community governance and management of commons. *In ICLARM Conf. Proc. No. 45*, pp. 34-50.
- Clement, F., 2010. Analysing decentralised natural resource governance: proposition for a “politicised” institutional analysis and development framework. *Policy Sciences*, Vol.43, No.2, pp.129-156.
- Kang, N. and Moon, J., 2011. Institutional complementarity between corporate governance and corporate social responsibility: A comparative institutional analysis of three capitalisms. *Socio-Economic Review*, Vol.10, No. 1, pp.85-108.
- Vatn, A., 2010. An institutional analysis of payments for environmental services. *Ecological economics*, Vol.69, No.6, pp.1245-1252.
- Bowles, S. and Gintis, H., 2002. Social capital and community governance. *The economic journal*, Vol.112, No. 483, pp.F419-F436.
- Pollack, M.A., 1996. The new institutionalism and EC governance: the promise and limits of institutional analysis. *Governance*, Vol.9, No.4, pp.429-458.
- Andersson, K., 2006. Understanding decentralized forest governance: an application of the institutional analysis and development framework. *Sustainability: Science, Practice and Policy*, Vol.2, No.12, pp.25-35.
- Aoki, M., 2001. *Toward a comparative institutional analysis*. Cambridge: MIT press.
- Ostrom, E., 2011. Background on the institutional analysis and development framework. *Policy Studies Journal*, Vol.39, No.1, pp.7-27.
- Williamson, O.E., 1991. Comparative economic organization: The analysis of discrete structural alternatives. *Administrative science quarterly*, pp.269-296.
- Alexander, E.R., 2001. Governance and transaction costs in planning systems: a conceptual framework for institutional analysis of land-use planning and development control—the case of Israel. *Environment and Planning B: Planning and Design*, Vol.28, No.5, pp.755-776.
- Campbell, J.L., Pedersen, O.K. and Pedersen, O. eds., 2001. *The rise of neoliberalism and institutional analysis*. Princeton University Press.
- Campbell, J.L., 2006. Institutional analysis and the paradox of corporate social responsibility. *American Behavioural Scientist*, Vol.49, No.7, pp.925-938.

- Ostrom, E., 1991. Rational choice theory and institutional analysis: Toward complementarity. *American political science review*, Vol.85, No.1, pp.237-243.
- Imperial, M.T., 1999. Institutional analysis and ecosystem-based management: the institutional analysis and development framework. *Environmental management*, Vol.24, No.4, pp.449-465.
- Fedosov, V. and Paientko, T., 2018. Government financial accountability: key problems and main trends in post-communist countries. *Zeszyty Teoretyczne Rachunkowości*, Vol.99, No. 155, pp.25-39.
- Bennett, A., Acton, L., Epstein, G., Gruby, R.L. and Nenadovic, M., 2018. *Embracing conceptual diversity to integrate power and institutional analysis: Introducing a relational typology*.
- Fritz, B. and Mühlich, L., 2018. *Regional Financial Arrangements in the Global Financial Safety Net*. The Arab and the Eurasian Fund.
- Thiel, A. and Moser, C., 2018. Toward comparative institutional analysis of polycentric social-ecological systems governance. *Environmental Policy and Governance*, Vol.28, No.4, pp.269-283.
- Siddiki, S., 2018. Policy Compliance: Personal, Social, and Institutional Motivations. *In Contextualizing Compliance in the Public Sector*, pp. 34-47.

Name of Department: Department of Regional Planning

1. Subject Code: RPC 304
2. Course Title: **Legal Issues in Planning and Professional Practice**
3. Contact Hours: 2 hours/ week
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: 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.
9. 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 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 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.

Reading List:

- Banicki, K., 2014. Positive psychology on character strengths and virtues- A disquieting suggestion. *New Ideas in Psychology*, Vol. 33, pp.21-34.
- Barnett, J.E., 1996. Leaving a practice: Ethical dilemmas and concerns. *The Maryland Psychologist*, Vol. 5, pp.149-150.
- Bradley, L.J., Hendricks, B. and Kabell, D.R., 2012. The professional will: An ethical responsibility. *The Family Journal*, Vol.20, No.3, pp. 309-314.

- Cvetanovski, J. and Jex, S.M., 1994. Locus of control of unemployed people and its relationship to psychological and physical well-being. *Work & Stress*, Vol.8, No.1, pp. 60-67.
- Eby, L.T. and Buch, K., 1994. The effect of job search method, sex, activity level, and emotional acceptance on new job characteristics: Implications for counselling unemployed professionals. *Journal of Employment Counselling*, Vol.31, No.2, pp.69-82.
- Goldsmith, A.H. and Darity Jr, W., 1992. Social psychology, unemployment exposure and equilibrium unemployment. *Journal of Economic Psychology*, Vol.13, No.3, pp.449-471.
- Goldsmith, A.H., Veum, J.R. and William Jr, D., 1996. The impact of labor force history on self-esteem and its component parts, anxiety, alienation and depression. *Journal of Economic Psychology*, Vol.17, No.2, pp. 183-220.
- American Psychological Association. 1969. Guidelines for telephone directory listings. *American Psychologist*, Vol.24, pp.70-71.
- Davidson, G., Garton, A.F. and Joyce, M., 2003. Survey of ethics education in Australian university schools and departments of psychology. *Australian Psychologist*, Vol. 38, No.3, pp.216-222.
- Lerner, M.J. and Somers, D.G., 1992. Employees' reactions to 13 anticipated plant closure: The influence of positive illusions. *Life crises and experiences of loss in adulthood*, Vol.229, pp. 47-56.
- Barnett, J.E., 1996. Leaving a practice: Ethical dilemmas and concerns. *The Maryland Psychologist*, Vol.5, pp.149-150.
- Siebold, C., 1991. Termination: When the therapist leaves. *Clinical Social Work Journal*, Vol.9, NO.2, pp. 191-204.
- Turner, J.B., Kessler, R.C. and House, J.S., 1991. Factors facilitating adjustment to unemployment: Implications for intervention. *American Journal of Community Psychology*, Vol.19, No.2, pp.521-542.
- Brenner, M.H., 1973. Fetal, infant, and maternal mortality during periods of economic instability. *International Journal of Health Services*, Vol.3, No.2, pp. 145-159.
- Koocher, G.P., 2003. Ethical and legal issues in professional practice transitions. *Professional Psychology: Research and Practice*, Vol.34, No.4, pp. 383-387.
- Bradley, L.J., Hendricks, B. and Kabell, D.R., 2012. The professional will: An ethical responsibility. *The Family Journal*, Vol. 20, No.3, pp. 309-314.
- Gutheil, I.A. and Heyman, J.C., 2005. Communication between older people and their health care agents: results of an intervention. *Health and Social Work*, Vol.30, No.2, pp. 107-116.
- Leitch, V., 2010. Securing planning permission for onshore wind farms: the imperativeness of public participation. *Environmental Law Review*, Vol.12, No.3, pp. 182-199.
- Black, K., 2007. Advance care planning throughout the end-of-life: focusing the lens for social work practice. *Journal of social work in end-of-life and palliative care*, Vol.3, No.2, pp.39-58.

- Sridhar, K.S. and Narayanan, P., 2016. Suburbanization of Indian Cities: What is the Evidence from Gulbarga? *Environment and Urbanization ASIA*, Vol.7, No.1, pp. 93-112.
- Gleeson, B. and Low, N., 2000. [BOOK REVIEW] Australian urban planning, new challenges, new agendas. *Environment and Planning*, Vol.32, No.10, pp.1893-1894.
- Ahern, J., Cilliers, S. and Niemelä, J., 2014. The concept of ecosystem services in adaptive urban planning and design: A framework for supporting innovation. *Landscape and Urban Planning*, Vol.125, pp.254-259.
- Sridhar, K.S., 2016. Solid Waste Management in Asia Pacific: What Explains Its Coverage? *Public Works Management & Policy*, Vol.21, No.1, pp.53-70.
- Sacratees, J. and Govindaraj, G.H., 2014. Estimating Economic Costs of Municipal Solid Waste Management: Using Contingent Valuation Method. *In Urbanization in Asia* .pp. 179-197.

Name of Department: Department of Regional Planning

1. Subject Code: RPS 305
2. Course Title: **a) Resource Regional Planning, b) Mega and Metro Region Planning, c) District Planning, d) Special Regions**
3. Contact Hours: Studio 10
4. Relative Weightage: CWS: 50 (Consisting of regular weekly Presentation and reviews, and internal Jury), ETE: 50 (based on external examination by experts).
5. Credits: 10
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: 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 management and governance, which the students have acquired through theory subjects. It is also expected that the students after preparing the plan will present it to the stakeholders to get their viewpoint.
9. Expected Learning Outcome: Students are expected to obtain the skills in understanding the various levels of planning, planning institutions, sources of information for regional planning, and also develop public interaction.

Reading List:

- Aalborg, D. M. o., 2011. *The city regions Project - Synthesis report: Paths to growth in medium sized European cities - with particular emphasis on the role of city collaboration*, Denmark: s.n.
- Ache, P., 2000 Cities in old industrial regions between local innovative milieu and urban governance—Reflections on city region governance, *European Planning Studies*, Vol.8, No.6, pp. 693–709.
- Anderton, D., 2017. Changing leadership in peripheral city-region development: The case of Liverpool's high technology sectors. *Local Economy*, Vol.32, No.4, pp. 352 - 373.
- AromarRevi, G. J., 2011. *Urban India 2011: Evidence. Autumn Worldwide*.

- Bennett, R. J., 1985 Central city-city region fiscal disparities in Austria: Estimates for 1979, *Urban Studies*, Vol.22, No.1, pp. 69–81.
- Cairncross, F., 1997. *The Death of Distance* (Cambridge, MA: Harvard Business School Press).
- Cauthen, J. O., 1973. *New Plant Site Selection: A study of various factors with emphasis on human resource considerations in the decisions*. Florida: Florida Atlantic University.
- Christofakis, M. and Papadaskalopoulos, A., 2011. The Growth Poles Strategy in Regional Planning: The Recent Experience of Greece. *Theoretical and Empirical Researches in Urban Management*, Vol.6, No.2, pp. 5 - 20.
- Choudhary, P. and Adane, V., 2012. Spatial configurations of the urban cores in central India, *Santiago: Eighth International Space Syntax Symposium*.
- Davoudi, S., 2008. Conceptions of the city-region: a critical review. Newcastle, UK, *Proceedings of the Institution of Civil Engineers: Urban design and planning*.
- European Commission, 2016. *Smart Regions Conference: Driving Smart Specialisation Investments in Priority Areas for European Growth 1 – 2 June 2016*, Brussels.
- Galiani, S., and Kim, S., 2008. *The Law of the Primate City in the Americas*. Washington: Washington University.
- Galland, D., 2015. *Perspectives on Regions and City Regions*. Aalborg: Department of Development and Planning.
- Gopi, K.N., 1973. *Economic Hinterland of Vishakhapatnam Port*, Osmania Bulletin, No 1, Centre for Urban Research, Osmania University
- Jayasinghe, A. B., and Dissanayake, M. N., 2014. Validity of Rank Size Rule (GeargeZipf, 1949), Law of Primate City (Mark Jefferson, 1939) and Rank Size Class Concepts Case of Kerala. *SAITM Research Symposium on Engineering Advancements*, Vol. 34, pp. 186-191.
- Jefferson, M., 1939. *The law of Primate City*. Vol.29, No.2, pp. 34-39.
- Johnson, C., 2013. *Managing urban growth, Delhi: A metropolis in association with India's National Institute of Urban Affairs*.
- Kumari, A., 2015. City size distributions and hierarchy among cities in India. *The journal of Development Practice*, Vol. 2, pp.26-34.
- Kumari, K., 2014. Determining Rank Size Distribution of Urban Centres of Eastern Uttar Pradesh, India. *IOSR Journal of Humanities and Social Science*, Vol.19, Issue 9, pp.50-59.
- Lindsay, D., 2012. *The city-region concept in a Scottish context*, Glasgow: College of Social Sciences.
- Markkula, M. and H. Kune., 2015. 'Making Smart Regions Smarter: Smart Specialization and the Role of Universities in Regional Innovation Ecosystems', *Technology Innovation Management Review*, Vol. 5, Issue 10 (October, 2015).
- Mohammady, S. And Delavar, M. R., 2015. Urban Sprawl Monitoring. *Modern Applied Sciences*, Vol. 11, No. 9, pp. 1-12.

- Mokhtar, B., 2013. Urban system and Primate City in Onam. *British Journal of Arts and Social Sciences*, Vol. 13, No 1, pp.84-95.
- Mu, X. and Yeh, A. G., 2016. Measuring polycentricism of mega-city regions in China based on the intercity migration flows. *The international Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Vol. 41, No. 6, pp. 275 - 281.
- Myres, G., 2015. A World-Class City Region? Envisioning the Nairobi of 2030. *American Behavioural Scientist*, Vol.59, No.3, pp. 328 - 346.
- Myrdal, G., 1957. *Economic Theory and Underdeveloped Regions* (London: Duckworth). s.l.:s.n.
- New Local Government Network (NLGN), 2005. *Seeing the light? Next step for city Regions*, London: New Local Government Network (NLGN).
- Office of the Deputy Prime Minister, 2006. *A framework for city - regions*, London: University of Salford.
- Parr, J. B., 2005. Perspective on the city region. *Urban Studies*, Vol.44, No.2, pp. 381 - 392.
- Parr, J. B., 2007. Spatial definitions of the city: Four perspectives. *Urban studies*, Vol.44, No.2, pp. 381 - 392.
- RDAMNC Smart Region Strategy .,2017, *Regional Development Australia – Mid North Coast*, accessed from innovation@rdamnc.org.au
- Rodriguez-Pose, A., 2008. The rise of the 'city region' concept and it development policy implications. *European Planning studies*, Vol.16.No.8, pp. 1025 - 1046.
- Scott, A. J., 2001. *Global City - Regions*. Vol.1. Oxford: Oxford University Press.
- Scott, A. J. and Storper, M., 2014. The Nature of Cities: The scope and limits of Urban Theory. *International Journal of Urban and Regional Research*, pp. 1 - 16.
- Sharma, A. M. S. a. A. S., 2015. Peri urban Area: A Review of Problems and Resolutions. *International Journal of Engineering Research & Technology (IJERT)*, pp. 16-17.
- Sharma, K.D., 1985. *Urban Development in the Metropolitan Shadow: A Case Study from Haryana*, Inter India Publications, New Delhi, 161
- Sullivan, A. O., 2003. Market Areas and Central Place Theory. *Urban Economics*.
- Tewdwr-Jones, M. and McNeill, D., 2000. The politics of city-region planning and governance. Reconciling the national, regional and urban in the competing voices of institutional restructuring, *European Urban and Regional Studies*, Vol.7, No.2, pp. 119–134.
- Weber, R., Tammi, I., Anderson, T. and Wang, S., 2016. *A spatial analysis of the City - Regions: Urban form and service accessibility*, Stockholm: Nordregio - Nordic Centre for Spatial Development.
- Yndestad, H. 2014, *Smart Regions*, Aalesund University, accessed from <https://www.researchgate.net/publication/274194125>.

- Yousuf, T., and Shah, S. A., 2014. An analysis of urban primacy in Himalayan Settlements: The case of Srinagar city of Jammu and Kashmir. *International Journal of Recent Scientific Research*, Vol. 5, No. 9, pp.1670-1674.

Name of Department: Department of Regional Planning

Department Elective: Students are given the option to choose Department elective from the one offered by the Regional Planning Department.

1. Subject Code: RPE 306
2. Course Title: **Resettlement and Rehabilitation (R & R)**
3. Contact Hours: 2 hours/week
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:
The objective of this course is to understand issues due to displacement or the resettlement of the people due to natural or development reasons such as mining activities, dams and other multipurpose projects etc. It is also expected that the students will learn the ways in which displaced people can be given employment opportunities, resettlement in the neighborhood of their own environment with all kind of supporting infrastructure.
9. Details of Course

Module 1: Land Development and Resultant Resettlement

Land Acquisition Models and Practices in India and elsewhere for projects. Compulsory Acquisition, land sharing and adjustment models, land pooling, negotiated land acquisition. Development induced relocation – voluntary and involuntary resettlement; Resettlement and Rehabilitation Policies. Policies of multi-lateral/bilateral funding institutions: World Bank, Asian Development Bank Policies, National Policy on Resettlement and Rehabilitation and State Policies on R & R and Sector Specific Policies in large projects such as Multi-Purpose Dam Projects, Mining projects, Highway projects, SEZ, etc.

Module 2: Impact of Resettlement and Rehabilitation Plan

Poverty and Social Impact Assessment for Development projects: Linear Projects (Roads, railways, etc), vis-à-vis non-linear projects (Township/industrial area development, dams, forests). Impact on vulnerable and indigenous groups: Project Affected People and Project Affected Assets, Impact on Women and Children, Gender Action Plans. Resettlement Plan: Context, content, structure, principles and practices:

Economic, social and physical 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 obtain 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.

Reading List:

Government Policies/Legislations

- Delhi Development Authority, 2010. *Master Plan for Delhi - 2021*, New Delhi: Delhi Development Authority.
- Government of Gujarat, 1976. *The Gujarat Town Planning and Urban Development Act, 1976*. Gujarat: The Gujarat Government Gazette.
- Ministry of Law and Justice, 1985. *The Land Acquisition Act, 1894*. New Delhi: Government of India.
- Ministry of Rural Development, 2007. *The National Rehabilitation and Resettlement Policy, 2007*. New Delhi: Department of Land Resources.
- Ministry of Rural Development, 2012. *The land Acquisition, Rehabilitation and Resettlement Bill, 2011 (31 report)*. New Delhi: Lok Sabha Secretariat.
- Ministry of Rural Development, 2013. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement Act*. New Delhi: Government of India.
- Ministry of Rural Development, 2014. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement amendment ordinance*. New Delhi: Government of India.

- Ministry of Rural Development, 2015. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement (second amendment) bill*. New Delhi: Government of India.
- Ministry of Rural Development, 2015. *The right to fair compensation and transparency in land acquisition, rehabilitation and resettlement amendment bill*. New Delhi: Government of India.

Policies of International Agencies

- Asian Development Bank, 1995. *Policy on Involuntary Resettlement*. Indonesia: Asian Development Bank.
- Center on Housing Rights and Evictions, 2005. *The Pinheiro Principles: United Nations Principles on Housing and Property Restitution for Refugees and Displaced Persons*. Switzerland: COHRE.
- Japan International Cooperation Agency, 2010. *Guidelines for Environmental and Social considerations*. China: Jica.
- Nations, U., 2001. *Guiding Principles on Internal Displacement*. Vol.2. New York: United Nation Publication.
- OECD Development Assistance Committee, 1992. *Guidelines for Aid Agencies on Involuntary Displacement and Resettlement Projects*. Paris: Organisation for Economic Co-operation and Development.
- The World Bank, 2004. *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. Vol.1. Washington: World Bank.
- The World Bank, 2017. *Environmental and Social Framework*. Washington: The World Bank.
- United Nations, 1997. *Basic principles and guidelines on development - based evictions and displacement*. Switzerland: United Nations Human Rights.
- United State Agency International Development, 2004. *USAID Assistance to Internally Displaced Persons Policy Implementation Guidelines*.

Key Articles and Other readings:

- Asian Development Bank, 1998. *Handbook on Resettlement A guide to Good Practice*. Vol.1. Philippines: Asian Development Bank.
- Cernea, M. M., 2008. Compensation and benefit sharing: Why resettlement policies and practices must be reformed. *Water Science and Engineering*, Vol.1, No.1, pp. 89 - 120.
- Fernandes, W., 2009. India's Forced Displacement Policy and Practice. In: M. Cernea and H. Mathur, Eds. *Can Compensation prevent Impoverishment? Reforming Compensation through Investments and Benefit Sharing*. London: *Oxford University*, pp. 180-207.
- Flood, L. U., 1997. Sardar Sarovar Dam: A Case Study of Development induced Environmental Displacement. Refugees: *Canada's Journal on Refugees*, Vol.16, No.3, pp. 12 - 17.

- Sharma, R. N., 2010. Changing Facets of Involuntary Displacement and Resettlement in India. *Sage Journals*, Vol.40, No.4, pp. 503 - 524.
- Usha, R., 2008. *The Land Acquisition Act 1894: Displacement and state power*. New Delhi: Oxford University Press and Council for Social Development.
- World Bank, 1990. *Operational Directive: Involuntary Resettlement*. Washington: World Bank.
- Ahmad, N. and Lahiri D. K., 2006. Engendering mining communities: examining the missing gender concerns in coal mining displacement and rehabilitation in India. *Gender, Technology and Development*, Vol.10, No.3, pp.313-339.
- Nayak, A.K., (2010). Big dams and protests in India: A study of Hirakud dam. *Economic and Political Weekly*, pp.69-73.
- Kwokal, Z., Sarkar, S.K., Frančišković-Bilinski, S., Bilinski, H., Bhattacharya, A., Bhattacharya, B.D. and Chatterjee, M., (2012). Mercury concentration in sediment cores from Sundarban mangrove wetland, India. *Soil and Sediment Contamination: An International Journal*, Vol.21, No.4, pp.525-544.
- Bandyopadhyay, S., 1997. Natural environmental hazards and their management: a case study of Sagar Island, India. *Singapore Journal of Tropical Geography*, Vol.18, No.1, pp. 20-45.
- Bandyopadhyay, S., 2000. Coastal changes in the perspective of long term evolution of an estuary: Hugli, West Bengal, India. Quaternary sea level variation, shoreline displacement and coastal environments. *New Academic Publishers, New Delhi*, pp.103-115.
- Behera, D.K., 2013. Dams, Development and the Exclusion of Indigenous Groups: A Case from Odisha. *Navigating Social Exclusion and Inclusion in Contemporary India and Beyond: Structures, Agents, Practices*, pp.167-207.
- Bandyopadhyay, S., 1997. Coastal erosion and its management in Sagar Island, South 24 Parganas, West Bengal. *Indian Journal of Earth Sciences*, Vol. 24, No. 3-4, pp. 51-69.
- Bandyopadhyay, S., Mukherjee, D., Bag, S., Pal, D.K. and Rudra, K., 2004. 20th Century evolution of banks and Islands of the Hugli estuary. West Bengal, India: evidence from maps, images and GPS survey, geomorphology and environment. *ACB Publications, Kolkata*, Vol. 23, pp.235-263.
- Sharma, S., 2016. Endogenous Nuclear Deterrence: The Bomb and Security in South Asia. *Jadavpur Journal of International Relations*, Vol.20, No.2, pp.178-205.
- Cullet, P., 2017. The Sardar Sarovar Dam Project: An Overview. In *The Sardar Sarovar Dam Project*, *Routledge*. pp. 19-58.
- Danda, A.A., Sriskanthan, G., Ghosh, A., Bandyopadhyay, J. and Hazra, S., 2011. *Indian Sundarbans delta: a vision*. World Wide Fund for Nature-India, New Delhi, 40.
- Das, K., 2002. Social mobilization for rehabilitation: relief work in cyclone-affected Orissa. *Economic and Political Weekly*, pp.4784-4788.
- Ghosh, T., Hajra, R. and Mukhopadhyay, A., 2014. Island erosion and afflicted population: Crisis and policies to handle climate change. In *International Perspectives on Climate Change*, *Springer, Cham*, pp. 217-225.

- Disterheft, A., Caeiro, S., Azeiteiro, U.M. and Leal Filho, W., 2013. Sustainability science and education for sustainable development in universities: a way for transition. *In Sustainability assessment tools in higher education institutions*, Springer, Cham, pp. 3-27.
- Gopinath, G. and Seralathan, P., 2005. Rapid erosion of the coast of Sagar island, West Bengal-India. *Environmental Geology*, Vol. 48, No.8, pp.1058-1067.
- Kudaisya, G., 1997. Divided landscapes, fragmented identities: east Bengal refugees and their rehabilitation in India, 1947–79. *Singapore Journal of Tropical Geography*, Vol.17, No.1, pp.24-39.
- Harms, A., 2015. Leaving Lohāchāra: On circuits of emplacement and displacement in the Ganges Delta. *Global Environment*, Vol.8, No.1, pp.62-85.
- Hazra, S., Ghosh, T., DasGupta, R. and Sen, G., 2002. Sea level and associated changes in the Sundarbans. *Science and Culture*, Vol.68, No.9/12, pp. 309-321.
- McConnell, F., 2011. A state within a state. Exploring relations between the Indian state and the Tibetan community and government-in-exile. *Contemporary South Asia*, Vol.19, No.3, pp.297-313.
- Morse, B. and Berger, T.R., 1992. *Sardar Sarovar: Report of the independent review*. Published for the Independent Review of the Sardar Sarovar Projects by Resource Futures International.
- McConnell, F., 2013. Citizens and refugees: constructing and negotiating Tibetan identities in exile. *Annals of the Association of American Geographers*, Vol.103, No.4, pp.967-983.
- Garratt, K., 1997. Tibetan Refugees, Asylum Seekers, Returnees and the Refugees Convention—Predicaments, Problems and Prospects. *The Tibet Journal*, Vol.22, No.3, pp.18-56.

Name of Department: Department of Regional Planning

1. Subject Code: RPE 307
2. Course Title: **Spatial Data Infrastructure (SDI)**
3. Contact Hours: 2 hours/week
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:
The objective of this course is to understand use of spatial data infrastructure (SDI) in Regional Planning and integration of various departments to create spatial data infrastructure (SDI). It is also expected that the students will learn to link spatial and non-spatial data using the linked Open Data principles and new approaches for data sharing by users through applications and portals.
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: Global, National and Local SDI applications

Global and National SDI Initiatives: Natural Resources Data Management System (NRDMS): Multi-level spatial data infrastructure, National Spatial Data Infrastructure (NSDI): Assimilation and Dissemination and Data warehouse; State SDI: National Capital Territory of Delhi (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 (Dimensional) mapping of land and its use in city and regional planning, Geo visualization of landscapes, spatial inequalities.

Participatory Geographical Information Systems (PGIS): Definition, concept and need; PGIS and Public Participation Geographic Information System (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 and its application in 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.

Reading List:

- Coleman, D. J. and McLaughlin, J., 1998. Defining Global Geospatial Data Infrastructure (GGDI): Components, Stakeholders and Interfaces. *Geomatica*, Vol.52, No.2, pp. 129 - 143.
- Cooper, A. K. and Nielsen, A. S., 2000. *Global Spatial Data Infrastructure White Paper*, s.l.: ICA Commission on Spatial Data Standards.
- Federal Geographic Data Committee, 1997. *Framework Introduction and Guide*. Vol.1. Washington: Federal Geographic Data.
- Kresse, W. and Danko, D., 2012. *Springer Handbook of Geographic Information*. Vol.1. Berlin: Springer-Verlag Berlin Heidelberg.
- Masser, I., 1998. *The first Generation of National Geographic Information Strategies*. Canberra, Selected Conference Papers, 3 GSDI Conference.
- Ministry of Science and Technology, 2011. *National Spatial Data Infrastructure - India ASPIRATION*, New Delhi: Department of Science and Technology, Government of India.
- Moellering, H., 1991. *Spatial Database Transfer Standards: Current International Status*. vol.1. s.l.:Elsevier Spatial Database Transfer Standards.
- Cathy Macharis, J. C., 2014. A stakeholder-based assessment framework applied to evaluate development scenarios for the spatial data infrastructure for Flanders. *Computers, Environment and Urban Systems*, *Elsevier Journals*, Vol. 46, pp. 45-56.
- Christian Thellufsen, A. R. S. E. I. W., 2009. Awareness as a foundation for developing effective spatial data infrastructures. *Land Use Policy*, *Elsevier Journals*, Vol.26, No.2, pp. 254-261.

- Craglia, M., 2015. Spatial Data Infrastructures. International Encyclopedia of the Social Behavioral Sciences, *Elsevier Journals*, pp. 130-135.
- Danny Vandembroucke, E. D. J. C. A. K. B. J. V. O., 2013. A methodology to assess the performance of spatial data infrastructures in the context of work processes. Computers, Environment and Urban Systems, *Elsevier Journals*, Vol. 38, pp. 58-66.
- David J. Maguire, P. A. L., 2005. The emergence of geoportals and their role in spatial data infrastructures. Computers, Environment and Urban Systems, *Elsevier Journals*, Vol.29, No.1, pp. 3-14.
- Foley, R., 2009. Integrated Spatial Data Infrastructure. International Encyclopedia of Human Geography, *Elsevier Journals*, pp. 507-511.
- Gregory Giuliani, N. R. A. L., 2011. Grid-enabled Spatial Data Infrastructure for environmental sciences: Challenges and opportunities. Future Generation Computer Systems, *Elsevier Journals*, Vol.27, No.3, pp. 292-303.
- Lars Bernard, L. K. A. A. P. S., 2005. The European geoportal-one step towards the establishment of a European Spatial Data Infrastructure. *Elsevier*, Vol.29, No.1, pp. 15-31.
- León, L. F., 2018. A blueprint for market construction? Spatial data infrastructure(s), interoperability, and the EU Digital Single Market. Geoforum, *Elsevier Journals*, Vol. 92, pp. 45-57.
- Lisa Strain, A. R. I. W., 2006. Marine administration and spatial data infrastructure. Marine Policy, *Elsevier Journals*, Vol.30, No.4, pp. 431-441.
- Loenen, B. v., 2014. Spatial Data Infrastructures at Work; Analyzing the Spatial Enablement of Public Sector Processes. *International Journal of Applied Earth Observation and Geoinformation*, *Elsevier Journals*, Vol. 33, pp. 341-344.
- Luis Americo Conti, H. F. F. A. T. A. C. Z. A., 2018. Building a local spatial data infrastructure (SDI) to collect, manage and deliver coastal information. *Elsevier Journal*, Vol. 164, pp. 136-146.
- Łukasz Grus, W. C. J. C. T. O. A. K. B. B. v. L. A. v. G. A. R., 2011. An assessment view to evaluate whether Spatial Data Infrastructures meet their goals. Computers, Environment and Urban Systems, *Elsevier Journals*, Vol.35, No.3, pp. 217-229.
- Lutz, M, J. S. E. K. C. S. I. C., 2009. Overcoming semantic heterogeneity in spatial data infrastructures. Computers and Geosciences, *Elsevier Journals*, Vol.35, No.4, pp. 739-752.
- Mapping Science Committee, N. R. C., 1993. *Toward a Coordinated Spatial Data Infrastructure for the Nation*. s.l.:National Academies Press.
- Maria Teresa Borzacchiello, M. C., 2013. Estimating benefits of Spatial Data Infrastructures: A case study on e-Cadastrs. Computers, Environment and Urban Systems, *Elsevier Journals*, Vol. 41, pp. 276-288.
- Masser, I., 2005. GIS Worlds-Creating Spatial Data Infrastructures. *URISA Journal*, Vol.17, No.2, pp. 51-53.

- Maurice de Kleijn, R. d. H. O. M.-R., 2016. A 3D spatial data infrastructure for mapping the Via Appia. Digital Applications in Archaeology and Cultural Heritage, *Elsevier Journals*, Vol.3, No.2, pp. 23-32.
- Miguel Ángel Latre, F. J. L.-P. J. N.-I. R. B. P. R. M.-M., 2013. Spatial Data Infrastructures for environmental e-government services: The case of water abstractions authorisations. Environmental Modelling & Software, *Elsevier Journals*, Vol. 48, pp. 81-92.
- Nama Raj Budhathoki, B. B. Z. N.B., 2008. Reconceptualizing the role of the user of spatial data infrastructure. *Geo Journal*, Vol.72, No.3-4, pp. 149-160.
- Sarah M. Hamylton, J. P., 2012. Development of a spatial data infrastructure for coastal management in the Amirante Islands, Seychelles. International Journal of Applied Earth Observation and Geoinformation, *Elsevier Journals*, Vol. 19, pp. 24-30.
- Simmons, S., 2018. 1.09 - Metadata and Spatial Data Infrastructure. *Elsevier Journals*, pp. 110-124.
- Steve Jacoby, J. S. L. T. a. I. W., 2010. Developing a common spatial data infrastructure between State and Local Government--an Australian case study. *International Journal of Geographical Information Science*, Vol.16, No.4, pp. 305-322.
- Yalcin, G., 2014. Initial Organizational Studies on National Spatial Data Infrastructure at Government Level. Procedia Technology, *Elsevier Journals*, Vol. 12, pp. 572-576

Institute Elective: Students of other departments are given the option to choose Institute elective from the one offered by the Regional Planning Department or from the electives offered by other Departments.

Name of Department: Department of Regional Planning

1. Subject Code: RPI 308
2. Course Title: **Future Regions**
3. Contact Hours: 2 hours/ week
4. Relative Weightage: CWS: 100 Marks (Internal Assessment only)
5. Credits: 2
6. Semester: Winter
7. Pedagogic Method: Interaction, Presentations, Case Study Analysis, statistical techniques, Role-Play. Eminent experts working in this field from outside the School will be invited to deliver Special lectures.
8. Objective of the Course: This course will help to have an orientation towards visualizing future regions, develop a long term vision, understanding concepts of ecological economics ecological footprint, impact of climate change on Future Regions. It will appraise the students about futuristic planning of regions.
9. Details of Course

Module 1: Technological advancement and emerging Future Regions

Orientation and introduction to Visualising Future Regions in a rapidly changing World; Introduction to Futures perspectives and methods; Concepts and Perspectives for Planning Future Regions; Future Studies in India; Developing a broader and longer-term vision of Regional Planning (50 to 100 years) rather than making Regional Plan for standard 15-25 years; Key Determinants of shaping the Future Regions particularly ICT and other Technological Advancements.

Module 2: Rapid Economic changes, Future Engines of Growth and Sustainability challenges

Economic Development Planning in India and Changing Drivers of Economic Growth (Planning Commission and NITI Aayog Documents); Introduction to Ecological Economics and Sustainability Concepts; Concept of Ecological Footprint; Limits to Growth; Agricultural Productivity in Future; Natural Resources and Inclusive Growth; Sustainable Development issues with respect to Economic Development - Water, Land, Energy, Regulations.

Module 3: Population Dynamics and Future Regions

Population Dynamics and Global Change; Demographic Transitions; Demographic Dividend; Migration of populations due to Climate Change, Economic and other factors; Carrying Capacity.

Module 4: Climate Change and the Future Resource Regions

Impact of Climate Change on Global society (including debates about human extinction scenarios); Challenge of Sustainable Development of Future Regions in the context of impacts of disruptive Climate Change; Climate Change in Future Resource Regions such as Hilly Regions, Coastal Areas, Arid Areas etc.; Agricultural adaptation to Climate Change; Municipal Climate Change adaptations; Initiatives and Case Studies for Renewable Energy/Low-Carbon lifestyle and Consumption Choices.

Module 5: Globalisation and Development Critiques

Global Settlements and Economic Hubs; Human Scale Development; Globalizations and Critiques of Development.

Module 6: Policy Changes and its Impact on Future Regions

Concepts for Planning Future Regions and its implications on Future Policy changes; Visionary Societies; Future Studies Perspectives; Policy Context; Policy Changes (Pricing, Trade, Tax, Land, Resources) and their impact on Future Regions.

Reading List:

- Anon., 2010. Options for Energy Efficiency in India and barrier to their Adoption. Resources for the future, Issue 202-328-5000.
- Brar, J. et al., 2014. India's economic geography in 2025: States, Clusters and cities. Insights India.
- Clark, G. & Moonen, T., 2014. Mumbai: India's Global City. s.l.:s.n.
- Cohen, M. J., 2013. Collective dissonance and the transition to post-consumerism. Futures, Volume 52, pp 42-51.
- Creel, L., 2003. Ripple Effects: Population and Coastal Regions. population Reference Bureau .
- Eastin, J., Grundmann, R. & Prakash, A., 2011. The two limits debates: "Limits to Growth" and Climate Change. Futures, Volume 43 (1), pp 16-26.
- Ehrlich, P. R. & Ehrlich, A. H., 2013. Can a collapse of global civilization be avoided?. Proceedings of the Royal Society , 280 (2012-2845).
- Garcia, E., 2012. Degrowth, the Past, the Future, and the Human Nature. Futures, Volume 44, pp 546-552.
- Government of Andhra Pradesh (2015): Amravati: Draft Perspective Plan, 2050.
- Government of Andhra Pradesh (2016): Sunrise Andhra Pradesh Vision 2029: A Happy, Inclusive and Globally Competitive Society, draft June 2016.

- Jain, S., Panda, J. & Kant, . S., 2014. Possible Socio-scientific Issues of Land-use and Land-cover Change Impact and Associated Tools of Study with a Special Reference to Delhi-Mumbai Industrial Corridor Region. *International Journal of Earth and Atmospheric Sciences*, 1(2).
- Klapka, P., Halas, M. & Tonev, P., 2013. Functional Regions: Concept and Types. *Sborník příspěvků*, Volume XVI, pp 94-101
- Ministry of Urban Development (2012): Report of the National Mission on Sustainable Habitat.
- Moriarty, P. & Honnery, D., 2012. Preparing for a low-energy future. *Futures*, Volume 44, pp 883-892.
- NIPFP (2013): Towards Building Capabilities, Enhancing Freedom and Accelerating Development: Meghalaya Vision 2030.
- Niti Aayog (2017): INDIA: 3 year Action Agenda: 2017-18 to 2019-20.
- Piccioni, L., 2012. Forty Years Later.. *Fondazione Luigi Micheletti* .
- Planning Commission (2011): Faster Sustainable and More Inclusive Growth: An Approach to the 12th Five Year Plan (2012-2017).
- Planning Commission (2013). *Shaping India's Future*.
- Raskin, P. D., Electris, C. & Rosen, R. A., 2010. The Century Ahead: Searching for Sustainability. *Sustainability*, 1, p. 2626-2651.
- Rengasamy, S., n.d. *Regional Planning & Development*. s.l.: Madurai Institute of Social Sciences.
- Sadorsky, P., 2011. Some future scenarios for renewable energy. *Futures*, Volume 43 Issue 10, pp 1091-1104.
- Soderholm, P. et al., 2011. Governing the transition to low-carbon futures: A critical survey of energy scenarios for 2050. *Futures*, Volume 43, pp 1105-1116.
- Spangenberg, J. H., 2010. World civilisations at crossroads: Towards an expansionist or a sustainable future—Lessons from history. *Futures*, Volume 42 (6), pp 565-573.
- Taylor, N., 1999. Anglo-American town planning theory since 1945: three significant developments but no paradigm shifts. *Planning Perspectives*, Volume 14 (4), pp 327-345.
- The Bombay First (2003): *Vison Mumbai: Transforming Mumbai into a World Class city*, Mackinsey Report.
- Tonn, B. and Stiefel, D., 2014. Willow pond: A decentralized low-carbon future scenario. *Futures*, Volume 58, pp 91-102.
- UN-ESCAP (2016): Policy Brief – Integrated Resource management in Asian Cities: The Urban Nexus.
- UN-HABITAT (2015): *International Guidelines on Urban and Territorial Planning*.
- Wheeler, S., 2009. Regions, Megaregions, and Sustainability. *Regional Studies*, Volume 43.6. pp 863-876.

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 Department of Regional Planning offers only one theory subject as Institution Elective (IE) i.e. Politics and Public Policy. Students are given the option to choose Institute elective from the one offered by the Regional Planning Department or from the electives offered by other Departments. 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: RPS 401

2. Course Title: Thesis

Contact Hours: 14 hours/week

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.

Reading List:

- Appelbaum, M. et al., 2018. *Journal Article Reporting Standards for Quantitative Research in Psychology: The APA Publications and Communications Board Task Force Report*. s.l.:American Psychological Association.
- Choy, L. T., 2014. The Strengths and Weaknesses of Research Methodology: Comparison and Complimentary between Qualitative and Quantitative Approaches. *IOSR Journal of Humanities And Social Science*, Vol.19, No.4, pp. 99 - 104.
- Coughian, M., Cronin, P. and Ryan, F., 2007. *Step by-step guide to critiquing research. Part 1: quantitative research*. Dublin: School of Nursing and Midwifery. Trinity School.
- Greener, S., 2008. *Business Research Methods*. Chicago: Dr. Sue Greener & Ventus Publishing ApS.
- Igwenagu, C., 2016. *Fundamentals of research methodology and data collection*.Vol.1, Nsukka: University of Nigeria
- Kothari, C. R., 2004. *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.

- Kumar, R., 2011. *Research Methodology - A step by step guide*. London: SAGE Publications.
- MacDonald, S. And Headlam, N., n.d.*Research Methods Handbook - Introductory guide to research methods for social research*. Manchester: Centre for Local Economic Strategies.
- Malliari, A. & Togia, A., 2016. An analysis of research strategies of articles published in Library Science journals: the example of Library and Information Science Research. *Qualitative and Quantitative Methods in Libraries*, Vol.5, No.1, pp. 1 - 14.
- Mohajan, H., 2018. Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People*, Vol.7, No.1, pp. 23 - 48.
- Newman, I. et al., 2006. *Adolescent Alcohol Use: Mixed Methods Research Approach*. Lincoln: University of Nebraska.
- Pandey, D. P. and Pandey, D. M. M., 2015. *RESEARCH METHODOLOGY: TOOLS AND TECHNIQUES*, Romania: Bridge Center
- Walliman, N., 2011. *Research Methods - The Basics*. Oxon: Routledge.

Name of Department: Department of Regional Planning

1. Subject Code: RPI 402

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

Contact Hours: L & T 2

3. Relative Weightage: CWS: 100 (Consisting of Assignment, Presentation and a class test)

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; infrastructure; Decision Making; Decision-Taking process; Financing and Pricing.

Module 4: Case Studies

Case studies from India and abroad on planning, political decisions and their impact on settlements; 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.

Module 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 obtain 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.

Reading List:

- Chakrabarti, R. and Sanyal, R., 2016. *Public Policy in India*. New Delhi: Oxford University Press.
- Kraft, M. E. and Furlong, S. R., 2012. *Public Policy - Politics, Analysis and Alternative*. Los Angeles: Sage Publications. , Vol.4
- Mathur, K., 2013. *Public Policy and Politics in India*. New Delhi: Oxford University Press.

- Stone, D., 1997. *Policy Paradox - The art of Political Discourse Making*. United Kingdom: Longman Classic Edition.
- Frank Fischer, Gerald J. Miller, Mara S. Sidney., 2006. *Handbook of Public Policy Analysis: Theory, Politics, and Methods*. Boca Raton: CRC Press.Vol.1.
- Amanda Glassman, K. B., 2017. Politics, and Public Health Policy Reform. *International Encyclopaedia of Public Health*, Vol.2, pp. 527-532.
- Arye L. H, D. S. I. S. T. S., 2018. The Political Economy of Public Policy – Editorial introduction. *European Journal of Political Economy*, Vol. 54, pp. 1-4.
- Auerbach, G., 2013. Urban politics and public policy – Looking back and going forward: “Project Renewal” in one Israeli city. *Cities, Elsevier Journals*, Vol. 31, pp. 197-207.
- Azzone, G., 2018. Big data and public policies: Opportunities and challenges. *Statistics & Probability Letters*, Vol. 136, pp. 116-120.
- Calvin Wan, G. Q. S. S. C., 2017. A review on political factors influencing public support for urban environmental policy. *Environmental Science & Policy*, Vol. 75, pp. 70-80.
- Calvin Wan, G. Q. S. S. C., 2018. Understanding public support for recycling policy: To unveil the political side of influence and implications. *Environmental Science & Policy*, Vol. 82, pp. 30-43.
- Carlos Scartascini, E. S. M. T., 2013. Political Institutions, Intertemporal Cooperation, and The Quality Of Public Policies. *Journal of Applied Economics*, Vol.16, No.1, pp. 1-32.
- Casey B. Mulligan, K. K. T., 2015. Political entry, public policies, and the economy. *Research in Economics, Elsevier Journals*, Vol.69, No.3, pp. 377-397.
- Sim.F, P. M., 2015. Politics, policies and public health. *Public Health*, Vol.129, No.4, pp. 291-292.
- Grechyna, D., 2016. Political frictions and public policy outcomes. *Journal of Comparative Economics*, Vol.44, No.3, pp. 484-495.
- Guilherme de A. Dantas, N. J. d. C. L. D. C. H. A. L. Z., 2018. Public policies for smart grids in Brazil. *Renewable and Sustainable Energy Reviews*, Vol. 92, pp. 501-512.
- Kristof De Witte, B. G. N. L. S., 2018. Strategic public policy around population thresholds. *Journal of Urban Economics*, Vol. 106, pp. 46-58.
- Lintelo, D. J. H. t., 2017. Enrolling a goddess for Delhi’s street vendors: The micro-politics of policy implementation shaping urban (in) formality. *Geoforum*, Vol.84, pp. 77-87.
- Marcesse, T., 2018. Public Policy Reform and Informal Institutions: The Political Articulation of the Demand for Work in Rural India. *World Development, Elsevier Journals*, Vol.103, pp. 284-296.
- Marianne Aasen, A. V., 2018. Public Attitudes Toward Climate Policies: The Effect of Institutional Contexts and Political Values. *Ecological Economics*, Vol.146, pp. 106-114.

- Myriam Merad, B. D. T., 2018. The legitimacy principle within French risk public policy: A reflective contribution to policy analytics. *Science of The Total Environment*, Vol. 645, pp. 1309-1322.
- Nelida Cervantes, Z. R., 2018. Weber's bureaucratic model in Brazil: The corruption of ideas as obstacles to the implementation of public policies. *Geoforum*, Vol. 95, pp. 165-168.
- Ng, Y. K., 2018. Ten rules for public economic policy. *Economic Analysis and Policy*, Vol. 58, pp. 32-42.
- Philippe Delacote, C. M. H., 2012. Political consumerism and public policy: Good complements against market failures?. *Ecological Economics, Elsevier Journals*, Vol.73, pp. 188-193.
- Real Arai, K. N. T. O., 2018. Intergenerational policies, public debt, and economic growth: A politico-economic analysis. *Journal of Public Economics*, Vol. 166, pp. 39-52.
- Sascha Alexander Wagner, S. V. R. K., 2016. The future of public participation: Empirical analysis from the viewpoint of policy-makers. *Technological Forecasting and Social Change*, Vol.106, pp. 65-73.
- Sebastian Ellingsen, Q. H., 2018. The impact of commercial television on turnout and public policy: Evidence from Norwegian local politics. *Journal of Public Economics*, Vol. 159, pp. 1-15.
- Valentina Ferretti, I. P. A. T., 2018. Studying the generation of alternatives in public policy making processes. *European Journal of Operational Research*, Vol. 273, pp. 353-363.
- Yu-Kang Lee, C.T. C., 2010. Framing public policy: The impacts of political sophistication and nature of public policy. *The Social Science Journal, Elsevier Journals*, Vol.47, No.1, pp. 69-89.

MASTER OF PLANNING (WITH SPECIALISATION IN REGIONAL PLANNING)
Scheme of Examination

FIRST SEMESTER (INTEGRATED)

The first Semester of Master of Planning course is an integrated course that is offered in a combined mode to all students of five planning streams (Environment Planning, Housing, Regional Planning, Transport Planning and Urban Planning).

Classification of Course	Course code	Subject Offered	Hours/Week	Credits	Marks Allocated			External Exam Type	Duration of External Exam
					Internal	External	Total		
Foundation		Geo Informatics for Planning	1	1	50	0	50	-	-
		Demography & Statistical Application	1	1	50	0	50	-	-
Department Core	CA1	Planning History and Theory	2	2	50	50	100	Written-Exam	3 hours
	CA 2	Socio-Economic Base for Planning	2	2	50	50	100	Written-Exam	3 hours
	CA 3	Planning Techniques	2	2	50	50	100	Written-Exam	3 hours
	CB 1	Infrastructure and Transport Planning	2	2	50	50	100	Written-Exam	3 hours
	CB 2	Housing and Environment Planning	2	2	50	50	100	Written-Exam	3 hours
Studio Courses		Planning and Design Studio	12	12	200	200	400	Jury Exam	-
		Computer Application (Non-Audit)	0	0	0	0	0	-	-
Total			24	24	550	450	1000		

SECOND SEMESTER

Classification of Course	Course code	Subject Offered	Hours/Week	Credits	Marks Allocated			External Exam Type	Duration of External Exam
					Internal	External	Total		
Department Core	RPC201	Planning for Regions	2	2	50	50	100	Written Exam	3 hours
	RPC202	Regional Infrastructure	2	2	50	50	100	Written Exam	3 hours
	RPC203	District Planning and Rural Development	2	2	50	50	100	Written Exam	3 hours
	RPC204	Land Markets and Management	2	2	50	50	100	Written Exam	3 hours
	RPC205	Advanced GIS Application	2	2	50	50	100	Written Exam	3 hours
Studio	RPS206	Village Planning and Block Planning	10	10	250	250	500	Jury Exam	-
Department elective (Choose any one of the following)	RPE 207	Poverty and Development	2	2	50	50	100	Written Exam	3 hours
	RPE 208	Climate change and its Impact							
Total			22	22	550	550	1100		

THIRD SEMESTER

Classification of Course	Course code	Subject Offered	Hours/Week	Credits	Marks Allocated			External Exam Type	Duration of External Exam
					Internal	External	Total		
Department Core	RPC 301	Environment and Development	2	2	50	50	100	Written Exam	3 hours
	RPC 302	Project Planning	2	2	50	50	100	Written Exam	3 hours
	RPC 303	Institutional Analysis and Governance	2	2	50	50	100	Written Exam	3 hours
	RPC 304	Legal Issues in Planning and Professional Practice	2	2	50	50	100	Written Exam	3 hours
Studio	RPS 305	Studio	10	10	250	250	500	Jury Exam	-
Department Elective (Choose any one of the following)	RPE 306	Resettlement and Rehabilitation	2	2	50	50	100	Written Exam	3 hours
	RPE 307	Spatial Data Infrastructure							
Institute Elective***			2	2	100	0	100	-	-
Total			22	22	600	500	1100		

FOURTH SEMESTER

Classification of Course	Course code	Subject Offered	Hours/Week	Credits	Marks Allocated			External Exam Type	Duration of External Exam
					Internal	External	Total		
Studio	RPS 401	Thesis	14	14	350	350	700	Jury Exam	-
Institute Elective***			2	2	100	0	100		
Total			16	16	450	350	800		
Overall Total			84	84	2150	1850	4000		

Institute Electives offered by Department of Regional Planning (to be chosen by students of other Departments)

July – December (Odd Semester)

Institute Elective	RPI 308	Future Regions	2	2	100	0	100		
--------------------	---------	----------------	---	---	-----	---	-----	--	--

January – May (Even Semester)

Institute Elective	RPI 402	Politics and Public Policy	2	2	100	0	100		
--------------------	---------	----------------------------	---	---	-----	---	-----	--	--

*** The Students of Department of Regional Planning will chose the institute elective subject from the electives offered by other Departments