ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH

Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

Abbreviation used:

AC	Audit course	LC	Lab Course	PA	Practical Assessment
PC	Professional Core	PR	Project/ Practical/ Internship	L	Lecture
PE	Professional Elective	SE	Seminar/ Expert Lecture/ Etc.	T	Tutorial
OE	Open Elective	IA*	Internal Assessment	P	Practical
MC	Mandatory/ Common Course	EA	End-Semester Assessment		

Subject Code Format:

A1	A2	B3	C4	C5	C6
School/ Dept. (Offering)		**Level**	**0:** AC	**Serial Number (01 to 99)**	
BH: Basic Sciences and Humanities		**1:** UG/ Int. Msc. (1st Year)	**1:** PC	01/ 03/…/ 19: Odd Sem. (GTE)	
CS: Computer Sciences		**2:** UG/ Int. Msc. (2nd Year)	**2:** PE	21/ 23/…/ 39: Odd Sem. (STE)	
EE: Electrical Sciences		**3:** UG/ Int. Msc. (3rd Year)	**3:** OE	41/ 43/…/ 59: Odd Sem. (WRE)	
EI: Electronic Sciences		**4:** UG/ Int. Msc. (4th Year)	**4:** MC	61/ 63/…/ 79: Odd Sem. (URP)	
IP: Infrastructure and Planning		**5:** UG/ Int. Msc. (5th Year)	**5:** LC	81/ 83/…/ 99: Odd Sem. (Prog-5)	
MS: Mechanical Sciences		**6:** PG (1st Year)	**6:** PR	02/ 04/…/ 20: Even Sem. (GTE)	
BT: Biotechnology		**7:** PG (2nd Year)	**7:** SE	22/ 24/…/ 40: Even Sem. (STE)	
TE: Textile Engineering		**8:** Ph.D.	**8:**	42/ 44/…/ 60: Even Sem. (WRE)	
			9:	62/ 64/…/ 80: Even Sem. (URP)	
				82/ 84/…/ 98: Even Sem. (Prog-5)	

1st Semester

Sl. No.	Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
				L	T	P		IA	EA	PA	Total
1	PC 1	IP6161	Evolution of Urban and Regional Planning	3	0	0	3	40	60	-	100
2	PC 2	IP6163	Planning Theory and Techniques	3	0	0	3	40	60	-	100
3	PC 3	IP6165	Infrastructure Planning	3	0	0	3	40	60	-	100
4	PC 4	IP6167	Socio Economic Basis for planning	3	0	0	3	40	60	-	100
5	MC 1	IP6461	Research Methodology and Technical Report Writing	3	0	0	3	40	60	-	100
6	LC 1	IP6561	Planning Studio-I (Area Appreciation and Neighbourhood Planning)	0	0	8	4	-	-	100	100
			Total	**15**	**0**	**8**	**19**	**200**	**300**	**100**	**600**

2nd Semester

Sl. No.	Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
				L	T	P		IA	EA	PA	Total
1	PC 5	IP6162	Regional Planning and Development	3	0	0	3	40	60	-	100
2	PC 6	IP6164	Land Economics and Real Estate Planning	3	0	0	3	40	60	-	100
3	PC 7	IP6166	Environmental Planning & Management	3	0	0	3	40	60	-	100
4	PC 8	IP6168	Inclusive Urban Planning	3	0	0	3	40	60	-	100
5	OE 1	Any One from the List of OE 1 (Appendix-I)		3	0	0	3	40	60	-	100
6	LC 2	IP6562	Urban Information System	0	0	4	2	-	-	100	100
7	LC 3	IP6564	Planning Studio–II (Development Plan)	0	0	8	4	-	-	100	100
			Total	**15**	**0**	**12**	**21**	**200**	**300**	**200**	**700**

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3rd Semester

Sl. No.	Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
				L	T	P		IA	EA	PA	Total
1	PC 9	IP7161	Planning Legislation	3	0	0	3	40	60	-	100
2	PC 10	IP7163	Development Management and Finance	3	0	0	3	40	60	-	100
3	PC 11	IP7165	Project Planning and Appraisal	3	0	0	3	40	60	-	100
4	PC 12	IP7167	Transportation Planning	3	0	0	3	40	60	-	100
5	PE 1	IP7261	Public Private Partnership in Development	3	0	0	3	40	60	-	100
		IP7263	Urban Heritage and Conservation								
		IP7265	Planning For Leisure and Tourism								
		IP7267	Public Policy and Politics								
6	LC 4	IP7561	Planning Studio-III (Regional Plan)	0	0	8	4	-	-	100	100
7	PR 1	IP7661	Professional Training (Summer)	0	0	4	2	-	-	100	100
			Total	**15**	**0**	**12**	**21**	**200**	**300**	**200**	**700**

4th Semester

Sl. No.	Subject Type	Subject Code	Subject Name	Teaching Hours			Credit	Maximum Marks			
				L	T	P		IA	EA	PA	Total
1	PC 13	IP7162	Professional Practice	3	0	0	3	40	60	-	100
2	PE 2	IP7262	Energy, Climate Change and Urban Development	3	0	0	3	40	60	-	100
		IP7264	City and Metropolitan Planning								
		IP7266	Disaster Risk Mitigation and Management								
3	PR 2	IP7662	Seminar Presentation	0	0	4	2	-	-	100	100
4	PR 3	IP7664	Thesis	0	0	12	6	-	-	100	100
			Total	**6**	**0**	**16**	**14**	**80**	**120**	**200**	**400**

Credits and Maximum Marks

Sl. No.	Semester	Credits	Maximum Marks
1	1st	19	600
2	2nd	21	700
3	3rd	21	700
4	4th	14	400
	Total	**75**	**2400**

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1st Semester

PC 1	IP6161	Evolution of Urban and Regional Planning	3	0	0	3

Course Objective: To enable the students to understand the evolution process of human settlement, cities along with different theories, basic principles of Urban & Regional Planning concepts and its implications in the city planning process.

Course Outcome: After successful completion of the course, student will be able to –

1. Detail out about the City history along with basic principles of different theories.
2. Inculcate about the emergence of planning from the ancient times to present day.
3. Understand the evolution of various planning techniques and guidelines over the years.
4. Have detailed knowledge on planning, starting from its formation to its execution and implementation.

Module I

The City in History, Settlement size, pattern and structure as a function of socio-cultural, economic, military and religious factors, Variations in civilizations- Egyptian, Mesopotamian, Greek, Roman Town planning in Medieval times and in Renaissance Europe.

Module II

Origin and evolution of civic planning; Impacts of Industrial Revolution on town and regional planning Concepts of garden City, City beautiful, Linear city etc., contributions of all leading masters in planning.

Module III

Socio-economic impacts of growth of urban areas; rural-urban migration, Impact of technology on urban forms, urban structure and form- land use distribution. Types of City Plans: Comprehensive Planning, Master plans, Structure Plans, Zonal Plans, Regional planning: Definition, hierarchy. Need for regional planning.

Text / Reference Books –

1. Hall, P. Cities of tomorrow: an intellectual history of urban planning and design in the twentieth century, 2001, Blackwell, London.
2. Birch, E.L. and Silver, C. One Hundred Years of City Planning's Enduring and Evolving Connections, 2009, Journal of the American Planning Association, Vol.75, Issue 2, pp.113-122.
3. Sandercock, L. Making the Invisible Visible: A Multicultural Planning History, 1998, University of California Press, London.
4. Geoffrey. Peter. Hall, Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century. 1996 Updated Edition, Blackwell Publishing.
5. Jayasri Roy Choudhuri, An Introduction to Development and Regional Planning, 2001, Orient Longman Ltd, Kolkata.
6. Faludi, A. A Reader in Planning Theory, 1973, Pergamon Press, London.
7. Peter, G.H. and Tewdwr-Jones, M. Urban and Regional Planning, 2011, Routledge, London. Fifth Edition.

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PC 2	IP6163	Planning Theory and Techniques	3	0	0	3

Course Objective: To enable the students to understand the classification, size of settlement, various terminologies, physical structure of city regions, different models of urban planning and to study mapping, survey techniques and spatial standards.

Course Outcome: After successful completion of the course, student will be able to –

1. To understand the classification, size of settlement, different models of urban planning.
2. Educate about the urban environment, structure and models of growth patterns.
3. Detail out about the methods and practices in comprehensive planning, Theories of implementation of planning policies and development plans.
4. Understand the techniques of conducting surveys for land use, building use, and data requirement for various types of plans.

Module I

Settlement system, classification of settlements, primate city, rank-size rule, central place concept, concepts of complementary area, central goods and services, range, threshold etc; city-region relationship; structure of city regions, area of influence, dominance; rural-urban fringes; push and pull factors; migration trends and impacts on urban and rural development. Compact city approach: concept, advantages and limitations; Forms of cities in developing world, Forms of cities in the developed world; Forms of cities in the former and present socialist countries.

Module II

Data requirements for various types of regional plans; Techniques for conducting regional surveys. Land suitability analysis, Land use classification, coding and analysis. Characteristics of the urban environment and its components; Land uses, physical structure & relationship between parts of a city. Classification of land use in urban area; structure and models of growth patterns of CBD, intra - urban inequalities. Theories of implementation of planning policies and development plans. Economic analysis: Multipliers, Input-Output Analysis, Brief introduction to projection techniques (ratio and econometric methods), Analysis of labour force; sectoral shifts and employment. Decision making Models: General introduction to various decisions making models.

Module III

Surveys, analyses and methods and practices in comprehensive planning. Techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of building, land utilization and physical features of land; Data requirement for various types of plans; Plan preparation Techniques. Formulation of spatial standards for residential, industrial, commercial and recreational areas, space standards for facility areas, utilities and networks; Population, Distance criteria; Performance standards.

Text / Reference Books –

1. Faludi, A. A Reader in Planning Theory, 1973, Pergamon Press, London.
2. Birch, E.L. and Silver, C. One Hundred Years of City Planning's Enduring and Evolving Connections, 2009,Journal of the American Planning Association, Vol.75, Issue 2, pp.113-122.
3. Margaret Robert, A introduction to town planning techniques, 1974, Hutchinson Educational, University of California.
4. Lewis B. Keeble, Principles and practice of town planning, 1967, Estates Gazette.
5. Ian Braken, Urban Planning Methods, 2007, Routledge.
6. Kruekeberg D. A. and Silvers A. A., Urban Planning Analysis, 1988, John Willey and Sons Inc.

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PC 3	IP6165	Infrastructure Planning	3	0	0	3

Course Objective: To enable the students to understand the significance of infrastructure, its elements in Urban and Regional Planning and to ascertain the role of water supply, sanitation, solid waste management in integrated Urban & Regional Infrastructure Planning.

Course Outcome: After successful completion of the course, student will be able to –

1. Help in understanding the significance of infrastructure, its elements in Urban and Regional Planning.
2. Summarize about the techniques and programming approaches for infrastructure planning along with its impact on urban & regional context.
3. Focus on the key planning issues including the processing and treatment of solid wastes.
4. Focus on the key planning issues for infrastructure facilities with appropriate planning guidelines and norms.

Module I

Water supply systems and networks, and network mapping; Water sources, quality and quantity requirements, and water requirement for various land uses; Factors affecting water demand; Storage facilities and distribution systems; Rain water harvesting systems and locational criteria, implications on land use and density of water harvesting system; Innovative Methods and successful urban water supply system practices; Water programmes and policies. Power – Sources of power procurement, distribution networks, demand assessment, norms and standards, planning provisions and management issues. Concepts and theories for design and operation of electricity networks, power generation (conventional and non-conventional).

Module II

Sanitation and Sewerage System and Storm Water Drainage – General considerations and principle of sanitation and sewerage systems; Sewage disposal and treatment methods; Characteristics of waste water, industrial pollutants and their affects; Open defecation; Manual scavenging; Innovative approaches of sewage disposal in urban areas and low cost appropriate technologies for sanitation; Strom water drainage networks, and network mapping; Estimations of sewer generation and network requirements; Elements of Solid Waste Management, Classification and Characteristics of Solid Wastes; Methods for Solid waste Collection, Storage, transportation and disposal; Processing and Treatment of Solid Wastes; Land Filling methods of Solid Waste Management.

Module III

Social Infrastructure Social infrastructure typologies; Planning norms and space standards for education, health, recreation and socio-cultural facilities; Amenities for urban and rural settlements; Significance of education and health infrastructure in planning; Locating education and health facilities; Fire Fighting: Planning for fire protection, services and space standards. Prevention fire requirements, fire classification of construction, firefighting, fittings and fixtures and design for tall building and neighbourhood lay out fire hazards, water demand calculations. Understanding scalogram and other techniques. Understanding prevalent policies, projects and missions, for example, JnNURM, AMRUT, HRIDAY, Smart Cities Mission, etc.; Norms and standards for different types of infrastructure; Nature and content of infrastructure in development plans at different geographical levels; Making assessment of infrastructure requirements in plans.

Text Books and References –

1. Hudson, W.R., Hass, R.C.G. Uddin, W. (1997) Infrastructure Management, McGraw Hill, London.

2. Gifford, J.W. Uzarski, D.R. and McNeil, S. (1993) Infrastructure Planning and Management, American Society of Civil Engineers, Reston, VA.
3. Goodman, A. and Hartak, M. (2000) Infrastructure Planning Handbook, ASCE Press, Reston, VA.
4. Parkin, J. and Sharma, D. (1999) Infrastructure Planning, Thomas Jelford Publishing, London.

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PC 4	IP6167	Socio Economic Basis for planning	3	0	0	3

Course Objective: To enable the students to understand the relevance of socio-economic planning and issues associated with it. Also, to study socio-cultural profile of Indian society along with economic growth development in the context of Urban and Rural Settlements.

Course Outcome: After successful completion of the course, student will be able to –

1. Inculcate Socio cultural profile of Indian society and urban transformation.
2. The role of socio-cultural aspects on growth patterns in city by highlighting the issues related to different groups of a society.
3. Outline the policies and strategies in economic planning, economic growth and development.
4. Focus on the experiences from developing countries regarding settlement structure, growth and spatial distribution.

Module I:

Sociological concepts and methods, man and environment relationships; Socio cultural profile of Indian society and urban transformation; Tradition and modernity in the context of urban and rural settlements; Issues related to caste, age, sex, gender, health safety, and marginalized groups; Displacement, resettlement and rehabilitation due to compulsory land acquisition.

Module II:

Social problems of slums and squatters communities, urban and rural social transformation and their impact on social life, safety, security; Crimes in urban areas and their spatial planning implications, social structure and spatial planning; Role of socio-cultural aspects on growth patterns of city and neighborhood communities; Social planning and policy, and community participation; Marginalization and concepts of inclusive planning, and gender concerns in planning. Settlement Policy: National Commission on Urbanization, Rural Habitat Policy and experiences from developing countries regarding settlement structure, growth and spatial distribution.

Module III:

Micro and Macro Economics –Concepts of demand, supply, elasticity and consumer markets; concept of revenue costs; Economies of scale, economic and social costs, production and factor market; Different market structures and price determination; market failures, cost-benefit analysis, public sector pricing, Economic growth and development, quality of life; Human development index, poverty and income distribution, employment and livelihood; Economic principles in land use planning; Policies and strategies in economic planning, balanced versus unbalanced growth, public sector dominance; changing economic policies, implications on land.

Text / Reference Books:

1. Sinha, V.C. and Acharia, E. Elements of Demography, 1984, Allied Pub., Delhi.
2. Martine.George, The New Global Frontier: Urbanization, Poverty and Environment in the 21st Century, 2008, Earthscan Publications
3. Friedrich.J, A Theory of Urban Decline: Economy, Demography and Political Elites, Urban Studies, Sage Journal, June 1993 vol. 30 no. 6907-917
4. Jhingan, M, The Economics of Development and Planning, 1998, Vrinda Publications, Delhi.

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MC 1	IP6461	Research Methodology and Technical Report Writing	3	0	0	3

Course Objective: To educate the students about the basic concept and methods of report writing and report preparation with detail understanding on analytical, fundamentals of research problem, process and design.

Course Outcome: After successful completion of the course, student will be able to –

1. Will familiarize the students with objectives, types of research and research process in planning.
2. Point out the types of research designs- exploratory, descriptive & diagnostic, experimental.
3. Details about Sampling- criteria of selecting samples with its characteristics and sub categories.
4. Develop the skills and ability of report writing by describing their ideas in a logical & systematic manner

Module I

Introduction, definition, objectives of research, Types of research: descriptive vs. Analytical, applied vs. fundamental, quantitative vs. qualitative, conceptual vs. empirical. Research Process: problem formulation, literature survey, development of working hypothesis, preparation of research design, determination of sample, data collection and analyses, hypothesis testing, generalization and interpretation, report preparation.

Module II

Hypothesis- nature, characteristics, basic concepts- null and alternative hypotheses, level of significance, types of errors. Hypothesis testing, Research Design- main concepts: dependent and independent variables, extraneous variable, control, research hypothesis. Types of research designs- exploratory, descriptive & diagnostic, experimental.

Module III

Collection of Primary data- methods- observations- structured, unstructured, interview, schedules and questionnaires. Applications, advantages and disadvantages of each type; Sampling- criteria of selecting samples, probability sampling, non-probability sampling, Characteristics and sub categories in each type. Data Tabulation- editing, coding, classification, tabulation. Preparation of Report /Thesis- prefatory part, main body, supplementary part, referencing and bibliography.

Text / Reference Books –

1. Kothari. C. R, Research Methodology: Methods and Techniques, 2004, New Age International.
2. Newman .Isadore, Benz. Carolyn R., Qualitative-quantitative Research Methodology: Exploring the Interactive Continuum, 1998,Southern Illinois University Press.
3. Hay. Lain, Qualitative Research Methods in Human Geography, 2000, Oxford University Press

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LC 1	IP6561	Planning Studio-I (Area Appreciation and Neighbourhood Planning)	0	0	8	4

Course Objective: To appreciate contextual location of area in relation to city and understand concepts of land use with its development issues.

Course Outcome: After successful completion of the course, student will be able to –

1. Introduction to representations, reading of drawings, and documentation.
2. Importance of case study, literature study, reference study of suitable scale for understanding of the urban context.
3. Exercises of varying complexity which would aim to develop the skills of planning.
4. Multi-disciplinary approach focusing on spatial, social, economic, land use zoning and environmental issues.

Content

This course provides basic introduction to GIS and Statistics to be applied to relevant exercises. Developing an appreciation of components of a settlement and develop an ability to read a city or small settlement. To understand about the Built-form and Regulations, achievesustainable and people orientedbuilt form and urban-forms. Second part of the studio will require the students to prepare a development plan for a neighbourhood or village for rural and urban areas based on a field visit. As planning endeavour is a team work, it is expected in this studio, the students make a beginning to learn to work in collaborative environments.

Text / Reference Books –

1. Bureau of Indian Standards (2005) National Building Code of India, Bureau of Indian Standards, New Delhi
2. Ministry of Urban Development (2015) The Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines, Government of India, New Delhi.

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2nd Semester

PC 5	IP6162	Regional Planning and Development	3	0	0	3

Course Objective: To study Concepts and Typology of Regions and Regional Dynamics and to expose students with various Regional Planning and Development Approaches in India.

Course Outcome: After successful completion of the course, student will be able to –

1. Familiarize the concept of a region, types, and regionalization along with regional planning process in the Indian context.
2. Understanding the functional attributes and spacing of settlements, potentialities and centrality of settlements.
3. Help to understand Regional inequalities, spatial inequalities of population distribution.
4. Interpretation with norms and standards for Regional Planning and Development Approaches in India.

Module I

Concept of regional planning: nature, objectives, levels and aims; Concept of a region, types, and regionalization. Elements of settlement system size, function, spacing, linkage, input tributary and output tributary, settlement patterns and factors responsible thereof.

Module II

Regional interaction- Measurement of distribution of settlements, size and class of settlements, cluster and agglomeration studies, functional at tributes and spacing of settlements, potentialities and centrality of settlements. Regional inequalities- Growth, density and spatial inequalities of population distribution, spatial patterns and characteristics of occupational types.

Module III

Regional planning processes: Identification of plan objectives; collection, classification and analysis of data; Norms and standards for regional planning; Formulation of alternative plan proposals with respect to population distribution, location of new regional economic activities, infrastructure and plan implementation. Selected case studies in regional development in the Indian Context.

Text / Reference Books –

1. Wang, X., Von Hofpe, R., Research Methods in Urban and Regional Planning, 2007, Springer.
2. McLoughlin, J. B. , Urban and Regional Planning. A systems approach, 1969, Faber and Faber, London.
3. Kulshrestha, S. K., Urban and Regional Planning in India: Handbook for Professional Practice, 2012, Sage Publications, New Delhi.
4. Misra. R.P., Regional Planning, Concept, Techniques, Policies and Case Studies, 2002, Concept Publishing Company, New Delhi.
5. John Glasson and Tim Marshall, Regional Planning, 2007, Routledge, Oxford shire.
6. Peter Hall and Mark Tewdwr John, Urban and Regional Planning, 2008, Routledge, New York.
7. Jayasri Roy Choudhuri, An Introduction to Development and Regional Planning, 2001, Orient Longman Ltd, Kolkata.

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PC 6	IP6164	Land Economics and Real Estate Planning	3	0	0	3

Course Objective: To introduce the students the basic definitions and concepts related to real estate legislation, planning and management and economic principles of land uses.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the economic concepts of land and the objectives and scope of land economics.
2. Analyze the concepts of private ownership and social control of land, including land use restrictions, compensation, and requisition taxation.
3. Analyze the real, local, national, and global factors that affect real estate markets.
4. Examine the dynamics of real estate markets in metropolitan cities and different tiers of cities, including their unique characteristics and challenges.

Module I

Economic concepts of land, objectives and scope of land economics; economic principles of land uses; economic rent, land use and land values, market dynamics and impact on land use pattern. Development of Land and Real Property process- cost of development, source of finance.

Module II

Economic aspects of land policies at various levels of decision making; Private ownership and social control of land; Land use restrictions, compensation and requisition taxation of capital gain on land; Valuation of land and property portfolios; Methods of valuation. Real estate as facilitator of development; Transaction and renting of real estate, Lease deeds/ sale deeds, sale documents, registration; Mortgage and pledging;

Module III

Definition of real estate - physical, financial and social perspectives, Comparison of real estate to other investment avenues; Real, local, national and global factors affecting real estate Concepts of real estate analysis-Mapping supply to understand markets, Demand factors affecting real estate development, Demand-Supply Gap analysis; Real estate dynamics in metropolitan cities and tier I, tier II & tier III cities.

Text / Reference Books –

1. Ratcliff, John, et.al., Urban Planning and Real Estate Development, 3rd edition,2009, Routledge publisher.
2. Weimer, Arthur M and Hoyt Homer, Principles of Real Estate, 6th edition, The Ronald Press Co., New York.
3. Grigsby, william G., Housing Markets and Public Policy, 1963, Pennsylvania Press.
4. Habibullah Wajahat, Land Reforms in India, 2005, Sage Publications.
5. Harvey.Jack, Jowsey.Ernie, Urban Land Economics, 6th edition,2003, Palgrave publisher.

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PC 7	IP6166	Environmental Planning & Management	3	0	0	3

Course Objective: To educate the students about environmental degradation, its impact on various ecosystems, the interface between environment, urban development and its degradation. Also focuses on various environmental evaluation parameters to familiarize the students with environmental risks.

Course Outcome: After successful completion of the course, student will be able to –

1. The need for ecosystem—its structure, function, degradation and its impact on various ecosystems.
2. Study the environmental evaluation and its parameters, administrative aspects of EIA.
3. Familiarize with environmental ethics, law & management design in the context of natural resource management.
4. Understanding the Environment Management systems, policies, norms and standards for measurement of environmental quality.

Module I

Fundamentals of ecosystem—its structure, function, environmental degradation and its impact on various ecosystems, Environmental degradation, pollution types, effects & control techniques; Case study of environmental land use analysis; preparation of comprehensive policy and programs for improving environmental quality in an urban context.Environmental Impact Assessment (EIA) - environmental evaluation and its parameters; Procedural and administrative aspects of EIA; methods of EIA matrices and networks; quantitative methods; techniques of assessment of environmental impacts on air water and land; economics and social impacts; risk assessment and management, Indicators of environmental quality assessment; principles of environmental approach to planning.

Module II

End of Pipe Treatment System/Pollution Control Measures for: (Air Pollutants (SPM/Sox/Nox), Domestic Waste Water, Industrial Waste Water, Solid and Hazardous Wastes., Environmental, Economic and Financial Implications of "End-of-Pipe Treatment Systems") Need of "In-Process Waste Reduction/ Minimization (Concept of Cleaner Production and Cleaner Technologies, Environmental benefits of "Environmentally Sound Technologies", Case Study.

Module III

Environmental Ethics, Law & management, Principles of ecological approach to planning, Indicators of sustainability in planning & development of settlement, Environmental design in the context of natural resource management; need for public awareness and participation.Environment Management systems, cleaner production; commercial and non-commercial fuels and the bio-mass economy; resource depletion; alternative fuels and technologies; energy accounting and auditing; energy policies, norms and standards for clean air and water; measurement of environmental quality.

Text / Reference Books–

1. Pritchard. Paul, Environmental Risk Management, 2001, Earthsan Publication Ltd.
2. Roberts. Peter, Ravetez. Joe and George. Clive, Environment and the City, 2009, Routledge, Taylor and Frances Group.
3. Brandom P.S., Lombardi P.L.andBentivejna. V, Evaluation of the Built Environment for Sustainability, 2005, E & FN Spon, London.
4. Roggemo. Rob, Adaptation to Climate Change: A Spatial Challenge, 2009, Springer.

ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH

Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PC 8	IP6168	Inclusive Urban Planning	3	0	0	3

Course Objective: To make the students understand about the significance of inclusion in planning and development with the role of various stakeholders and to identify the need and issues of different sector of society in urban planning process.

Course Outcome: After successful completion of the course, student will be able to –

1. Outline the importance of planning interventions like inclusive zoning and regulations.
2. Role of Stakeholders, linkages with formal sector, impact on Urban Development.
3. Interpretation of various policies, programmes and Legislation for participatory planning.
4. Planning interventions related to Inclusive zoning, regulations.

Module I

Understanding Inclusive Planning - Definitions and components

Module II

Stakeholders Profile and Needs, Access to Shelter, Services and Livelihoods - Urban Poor, Informal Sector, Gender, Children, Elderly, Disabled, Displaced people, etc.; Slums - dimensions, causative factors, determinants, location characteristics of settlements; Informal sector - growth, characteristics, functions, economic contributions, linkages with formal sector, impact on Urban Development

Module III

Participatory Planning Process and Policies, Programmes and Legislation - Methods, role of stakeholders (including civil society organizations), etc.; Related Acts, Five-year plans, policies and programmes at various levels. Planning interventions - Inclusive zoning, development and building regulations, Slum Improvement.

Text / Reference Books–

1. Datta, A. ,The Illegal City: Space, Law and Gender in a Delhi Squatter Settlement, 2012, Ashgate, Burlington.
2. Roy, A. and Ong,A. , Worlding Cities: Asian Experiments and the Art of Being Global, 2011, Wiley Blackwell, London.
3. Eijk, G.V., Unequal Networks: Spatial Segregation, Relationships and Inequality in the City, 2010, IOS Press, Amsterdam.
4. Harriss, J. Antinomies of Empowerment: Observations on Civil Society, Politics and Urban Governance in India, Economic and Political Weekly, Vol.42, No.26, pp.2716-2724. 2007.
5. Amnesty International. (2010). Insecurity and Indignity: Women Experiences in the Slums of Nairobi, Kenya. London: Amnesty International.
6. UN Habitat (2012), Gender issue guide – urban planning and design.

OE 1	Any One from the List of OE 1 (Appendix-I)	3	0	0	3

Refer Appendix-I for detailed Syllabus.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

LC 2	IP6562	Urban Information System	0	0	4	2

Course Objective: To introduce students to Geo-Informatics, satellite Images and Remote Sensing and conceptual models of spatial and non-spatial information system.

Course Outcome: After successful completion of the course, student will be able to –

1. Understanding the geographical concepts and terminology, application of GIS.
2. Mapping and management of digital image classification techniques.
3. Use of different types of remotely sensed data, techniques of photo-interpretation in urban planning.
4. Understanding the Database structures, Conventional database management systems, Application of GIS in various natural resources mapping and management.

Module I

Definitions and introduction to remote sensing, components of remote sensing system, active and passive remote sensing, electromagnetic radiations and their interactions with the earth features and atmosphere, Spectral windows and spectral signatures and their significance in remote sensing. Remote sensing satellite orbits, image acquisition process, repeativity, row/path and ground swath and coverage.

Module II

Various remote sensing platforms like ground based, air borne and satellite based. Passive and active remote sensors: Return Beam Videocon (RBV), Multi–Spectral Scanners (MSS), Thematic Mapper (TM), push broom scanners, Linear Imaging Self Scanner (LISS), thermal infrared scanning systems, radiometers, Radar, Lidar and SAR. Spectral and spatial resolution of various remote sensors with special relevance to Indian Remote Sensing satellites, Different types of remotely sensed data products. Geometry, radiometry and pre-processing of remotely sensed imagery. Ground truth collection and geo-referencing of imagery, Characteristics of photographic images, colour, tone and texture, photo-interpretation keys, techniques of photo-interpretation, Digital image classification techniques and extraction of thematic information.

Module III

Geographic Information System (GIS) – Introduction, Geographical concepts and terminology, Components of GIS, Data acquisition, Raster and vector formats, Scanners and digitizers, Method of digitization, Data pre-processing, Format conversion, Data reduction and generalization, Data merging, Edge matching, Rectification and registration, Database structures, Conventional database management systems Spatial database management, Data manipulation and analysis, Representation of real world problems, Problems solving and spatial modeling, Application of GIS in various natural resources mapping and management.

Text / Reference Books–

1. Bhatia, S.C. ,Fundamentals of Remote Sensing, 2008, Atlantic Publications, Delhi.
2. Longley Paula, et al, Geographic Information Systems and Science, 2001, John Whiley and Sons Ltd., Newyork.
3. Dixon, W.J. and Massey, F.J., Introduction to Statistical Analysis, 1951, McGraw Hill, New York.

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Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

LC 3	IP6564	Planning Studio–II (Development Plan)	0	0	8	4

Course Objective: The thrust of the studio is to identify urban planning issues and make them enable to understand the characteristics of the city for preparation of sustainable development plan.

Course Outcome: After successful completion of the course, student will be able to –

1. To develop the skills of planning through a multi-disciplinary approach focusing on development.
2. Importance of case study, literature study, reference study of suitable scale for understanding of the urban context.
3. Exercises of varying complexity which would aim to develop the skills of planning.
4. Implementation strategies including urban governance and management issues.

Content –

This studio is focused on the preparation of master development plan. Students are expected to not only prepare the master development plan for a city or city-region but also analyze debates around strengths and limitations of the ideas of a master development plan. Data collection, analysis and plan proposals need to be framed in a collaborative and participatory manner.

Text / Reference Books –

1. Bureau of Indian Standards (2005) National Building Code of India, Bureau of Indian Standards, New Delhi
2. Delhi Development Authority (2007) Master Plan for Delhi, 2021, DDA, New Delhi.
3. Ministry of Urban Development (1996) The Urban Development Plan Formulation and Implementation (UDPFI) Guidelines, Government of India, New Delhi.
4. Ministry of Urban Development (2015) The Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines, Government of India, New Delhi.

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Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

3rd Semester

PC 9	IP7161	Planning Legislation	3	0	0	3

Course Objective: To impart knowledge of various Legislations on urban planning and development, to expose students to basic concept of law and Indian Constitution and 73rd and 74th Constitution Amendments.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the meaning, significance, and objectives of planning legislation in the context of urban development.
2. Analyze the legislation related to land acquisition and land ownership, including rural and urban land ceiling acts, and understand their implications on development.
3. Analyze the legislation related to the conservation of natural resources, including mining and forestry acts, as well as the conservation and management of ancient monuments and archaeological sites.
4. Understand the role and responsibilities of planning consultants in the context of urban development.

Module I

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

Module II

Concepts and contents of Indian Constitution; Rights and their implication on planning; Fundamental provisions regarding property rights; evolution of planning legislation and overview of legal tools connected with urban planning and development; model town planning laws. Evolution of town planning legislation, town planning laws, town planning as a state subject.

Module III

73rd and 74th amendment and its implications for planning law, current amendments in planning and development laws. Current laws related to environment, heritage, housing, real estate, property law and their interaction with planning law; PPP and contract laws; Any other Acts relevant at a particular time, for example, special investment region acts model community participation law.

Text Books and References –

1. Lakshimikanth, M. (2007) Indian Polity, Tata McGraw Hill, India.
2. Bhattacharya, M. (2001) New Horizons of Public Administration, Jawahar Publishers and Distributors, New Delhi.
3. Government of India (2014) URDPFI Guidelines, Ministry of Housing and Urban Affairs, New Delhi.
4. Needham, B. (2006) Planning, Law and Economics: An investigation in the rules we make for using land, Routledge, London.
5. McAuslan, P. (2019) Bringing the Law Back In: Essays in Land, Law and Development, Routledge, London.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PC 10	IP7163	Development Management and Finance	3	0	0	3

Course Objective: To make the students understand about the processes and management of urban planning, development finance covering state finance, municipal finance and various mechanism of financing the development.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the national goals and political-economic systems that influence development management processes.
2. Evaluate the environment of urban finance, including its relationship with national plans and urban development
3. Analyze the role of financial information systems, municipal fiscal programming, project scheduling, and budgeting in effective local financial management.
4. Have detailed knowledge on planning, starting from its formation to its execution and implementation.

Module I

National goals and political-economic systems for development management processes; Systems of local governments in India; development administration of National, State and Local level and the process of decision making, development and management; Structure of implementing authorities: Improvement trusts; Development authorities, Metropolitan Development Authorities, and their relationship with local governments. Local planning and budgeting: Municipal Corporate Planning; program planning and budgeting.

Module II

Public relation and citizen participation, personnel management, manpower planning, performance, appraisal, motivation and morale; corporate management: systems approach to urban management, organizational design, management information systems. Organizational behavior: organization theories, authority and conflict, administration communication, leadership in administration, organizational changes.

Module III

Environment of Urban Finance: national plan and urban development; inter-governmental fiscal relationship, municipal fiscal system. Innovations in urban infrastructure finance: Equity participation by stake holders, debt financing. Municipal fiscal administration: property tax administration, rent control system, user changes and pricing of public services, municipal expenditure, administration of grants in-aids. local financial Management: financial control & delegation, performance evaluation techniques, cash flow management, local debt management, financial information system; municipal fiscal programming, project scheduling and budgeting.

Text / Reference Books –

1. Baud, I.S.A. and Wit, J. de, New Forms of Urban Governance in India: shifts, models, networks and contestations, 2008, Sage Publisher, New Delhi.
2. Rhodes, R.A.W., Understanding Governance: policy networks, governance, reflexivity and accountability, 1997, Open University Press, Maidenhead, GB, Philadelphia.
3. Government of India, 73rd and 74th Constitution Amendment, Acts, 1992, Government of India, New Delhi.
4. Joanna Autor Ledgerwood, Microfinance Handbook: An Institutional and Financial Perspective, 1999, The World Bank, Washington DC.
5. Report on Indian Urban Infrastructure and Services, 2011, Government of India – NIUA.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PC 11	IP7165	Project Planning and Appraisal	3	0	0	3

Course Objective: To study about the concept of projects, importance of project formulation, appraisal and management, techniques of project evaluation in urban and regional development projects.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the concept of projects and recognize the importance of project formulation, appraisal, and management in achieving desired outcomes.
2. Identify the need for project appraisal and understand the significance of project formulation in defining project objectives and requirements.
3. Explore the stages of project implementation and the key actors involved in project implementation processes.
4. Understand the life of a project and the stages, approaches, and steps involved in project evaluation.

Module I

The concept of projects, Importance of project formulation, appraisal and management; life cycle of project; detailed project report, and feasibility studies; concepts of financial feasibility (payback period, IRR, DCF, NPV, CBR); Methodology for project identification and formulation; Feasibility studies, input analysis, financial cost-benefit analysis, social-cost benefit analysis;

Module II

Need for project appraisal; Project formulation: definition, objectives; Stages of project form Network analysis; CPM, PERT, resource leveling and allocation, time-cost trade off aspects; Bar charts, Milestones, Standard oriented cost control techniques; Techno-economic analysis of projects. Project implementation, stages of implementation, actors in project implementation;

Module III

Project monitoring: monitoring techniques: BIM techniques, integrated reporting, Milestones, time and cost overrun and under runs, unit index techniques. Project evaluation: Life of a project; stages, approach and steps, techniques of project evaluation: input analysis, financial cost-benefit analysis, social-cost benefit analysis; Case studies in urban and regional development projects.

Text / Reference Books –

1. Forbes Davidson, Urban Projects Manual: A Guide to Preparing Upgrading and New Development accessible to Low Income Groups, 2nd edition, Liverpool University Press DFID.
2. Joseph Martial Ribeiro, International Development Projects: Appraisal, Execution Planning and Monitoring, 2011, Press Internationals Polytechnique.
3. Colin H. Kirkpatrick, John Weiss, Cost-benefit analysis and project appraisal in developing countries, 1996, Edward Elgar Publishing Inc.
4. Jain, D. K., Project planning and appraisal in planned economy the Indian context,1981, Uppal Publishing.
5. Srivastava, U.K., Project planning, financing, implementation and evaluation, 1981, IIM, Ahmedabad.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PC 12	IP7167	Transportation Planning	3	0	0	3

Course Objective: To study public transport network planning, scheduling and to introduce students with the methods of traffic survey techniques, types and hierarchy of road networks.

Course Outcome: After successful completion of the course, student will be able to –

1. To Study the design and operating characteristics of transportation systems and modes.
2. Understand different traffic management principles and techniques with its legal framework.
3. Focus on the transportation systems with the use of different analytical models including trip generation, trip distribution, trip assignment.
4. Study the organizational and legal framework, basis of regional network of roads, Characteristics of national, state and district highways.

Module I

Types and characteristics of transport systems; Determinants of transport demand; Planning norms and standards; Principles of transport infrastructure planning and design of roads and intersections, street infrastructure elements; Pedestrian and cyclist infrastructure; Parking facilities; and Principles of traffic management.

Module II

Land use transport integration: definitions and concepts, land use transport cycle, importance of accessibility; Factors affecting land use-transport integration, and tools for land use-transport integration; Key elements of integration; Integrating land use and transport in the planning process; Institutional integration and legal mechanisms for integration.Principles of traffic impact analysis, land development attributes, traffic generation rates of different land use;Travel demand estimate, Urban Goods Movement, Characteristics and planning of public transit system.

Module III

Land development impact on traffic congestion on road segments, intersections and parking, impact on public transportation, pedestrian traffic and safety.Transport planning policies of central and state governments; Transit Oriented Development: Definition, concepts and key components; Principles of TOD, planning norms and standards of TOD, pre-requisites of TOD, financing of TOD projects, role of stakeholders; Golden Quadrilateral project, corridor development projects, expressway projects; Metro rail networks projects of urban and regional significance.

Text/ Reference Books –

1. Kadiyali, L.R. (1999) Traffic Engineering and Transport Planning, Khanna Publishers, New Delhi.
2. Saxena, S.C. (1989) A Course in Traffic Planning and Design, Dhanpat Rai and Sons, New Delhi.
3. Sarkar, P.K., Maitri, V. and Joshi, G.J. (2014) Transportation Planning: Principles, Practices and Policies, Prentice Hall India Learning Private Limited, New Delhi.
4. Verma, A. and Ramanayya, T.V. (2014) Public Transport Planning and Management in Developing Countries, CRC Press, Taylor and Francis Group, London.
5. Ortúzar, J.d.D. and Willumsen, L.G. (2011) Modelling Transport, John Wiley & Sons.
6. Juan de Dios Ortuzar, Luis G. Willumsen (2011) Modelling Transport fourth edition, wiley Publication

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 1	IP7261	Public Private Partnership in Development	3	0	0	3

Course Objective: To study the need for PPP as an effective project delivery mechanism for infrastructure, affordable housing etc. and expose the students to different PPP models being practiced in international and domestic scenario.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the basis and need for Public-Private Partnerships (PPP) and the evolution of PPP as a concept.
2. Examine the enabling environment necessary for successful PPPs, including institutional mechanisms, financing mechanisms, and capacity-building programs.
3. Explore the structuring of PPP projects, considering aspects such as scope, cost recovery, duration, and PPP variants.
4. Evaluate the role of the government as a partner, regulator, and facilitator in PPPs.

Module I

Basis and need for PPP, Evolution of PPP, definition, salient features of PPP; Guidelines for successful PPPs. Approval methods and execution of PPP projects, different models of PPP – DB, DBM, DBO, BOOT, Concessions, Service contract etc. Scope and coverage of PPP- Policy level and Transaction Level; Key emerging challenges in PPP, Strength and weakness of PPP in India.

Module II

Enabling environment for successful PPPs – Institutional mechanism, Financing mechanism and Capacity Building Programme. PPP life cycle process; Pre-feasibility analysis, Demand analysis and Cost analysis. Project risk management - Types of Risk, assessment and their allocation between different parties; Risk mitigation measures. Nature of private participation in different sectors.

Module III

PPP structuring – Scope, cost recovery, duration, PPP variant. Recommended PPP models in India. Financing and operating of projects on PPP models. Role of PPP in Housing and Urban Development. Various approaches to PPP in Housing – Virtual land approach, slum rehabilitation approach, Rental approach, Direct/Cross Subsidy approach etc. International best practices and domestic experiences in PPP. Meeting needs of urban poor through PPP. Role of Government as partner, as regulator, as facilitator in PPPs. Tendering and Contracting; Key features of procurement, RFQ, RFP. Good Governance in Public Private Partnerships. Institutional and Governance mechanism in PPP

Text / Reference Books –

1. Robinson, H., Kanilo, P., Anumba, C.J. and Patel, M., Governance and Knowledgement for Public Private Partnership, 2010, Wiley – Blackwall, Oxford.
2. Ratcliff, John, et.al.Urban Planning and Real Estate Development,3rd edition, Routledge publisher.
3. Telliford, G., Public – Private Transportation Partnerships around the World, 2009, Nova Science Publishers.
4. Delmon, Jeffrey., Public-Private Partnership Projects in Infrastructure: An Essential Guide for Policy Makers, 2011, Cambridge University Press.
5. Yescombe,E.R., Public Private Partnerships- Principles of Policy and Finance,2007,Yescombe consulting Ltd.London, UK, Elsevier.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 1	IP7263	Urban Heritage and Conservation	3	0	0	3

Course Objective: To understand the importance of urban heritage, historic monuments along with its conservation practices with relevance to sustainable urban heritage conservation and to make students aware of the policies, programmes and legislation for heritage conservation.

Course Outcome: After successful completion of the course, student will be able to –

1. Introduce the concept of urban heritage, including its typology, classification, inventories, and mapping
2. Examine the conservation of natural heritage, including typologies, policies, regulatory measures, and community participation.
3. Analyze the relationship between heritage and tourism, including central and state government policies and programs.
4. Explore the determinants of design in human habitation, including social, cultural, ecological, and energy factors.

Module I

Introduction to Urban Heritage - Typology / classification, inventories, mapping; Human habitation in historical context; Heritage as a motivating force in sustainable urban conservation and development.

Module II

Heritage Conservation - Natural heritage conservation - typologies, policies for conservation, regulatory measures, community participation; Concept of Historic Urban Landscapes; Built heritage conservation - determinants of built form on heritage; Historic urban infrastructure and traditional water harvesting systems. Integration of historic monuments / areas / cores / urban systems in the developmental process and land use, regulatory measures and community involvement; Intangible cultural heritage and development: issues, conservation strategies. Preparation of conservation and heritage management plans.

Module III

Heritage and Tourism, Central and State Govt. Policies and Programmes, Legislation - Cultural and heritage based tourism - nature, potential and prospects, marketing aspects; Acts and laws recognizing conservation / regeneration; Heritage toolkit; Implications of 74th Constitution Amendment Act. Design in Human Habitation - Social / cultural / ecological / energy determinants of design; Imageaibility of the city; Structure of urban spaces – location criteria of activities and urban uses; Urban Regeneration, renewal, rehabilitation, revitalization, reconstruction and redevelopment - concepts, interventions, processes, approaches and methods, tools.

Text / Reference Books –

1. Girard , Luigi Fusco .and Nijkamp, Peter., Cultural Tourism and Sustainable Local Development, 2009, Ashgate, Burlington.
2. Khadpekar, Nirmala Rao., Urban revitalization : perspectives and initiatives, 2008, ICFAI University Press.
3. Longstreth, Richard., Cultural Landscapes: Balancing Nature and Heritage in Preservation Practice, 2008, University of Minnesota Press.
4. Cohen, Naoum, Urban Planning Conservation and Preservation, 2001, McGraw-Hill.
5. Serageldin Ismailb., Shluger, Ephim., Joan Martin-Brown, Historic Cities and Sacred Sites: Cultural Roots for UrbanFutures, 2001, The World Bank.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 1	IP7265	Planning For Leisure and Tourism	3	0	0	3

Course Objective: To study the role of tourism in urban and regional planning and make the students understand about the policies and programmes of tourism so as to ascertain parameters for planning for tourism sector.

Course Outcome: After successful completion of the course, student will be able to –

1. Analyze the social factors that shape leisure trends and international tourism trends, and their impact on national tourism markets.
2. Understand the involvement of multiple government authorities and agencies in tourism development and their respective roles and responsibilities
3. Explore the process of formulating and implementing tourism plans, including stakeholder engagement and coordination.
4. Recognize the need for infrastructure support planning in the context of tourism development, including transportation, water supply, solid waste disposal, and other related aspects.

Module I

Planning for leisure and tourism- key determinants, characteristics of tourism hubs, problems and issues; Social factors shaping leisure trends, international tourism trends, factors and impact on national tourism markets.

Module II

National and state govt. policies affecting tourist inflow, role of multiple government authorities and agencies involved in tourism development, private players in tourism development.

Module III

Tourism Plans- plan components, time frame, actors, cost and revenue, etc. Need for infrastructure support planning (transportation, water supply, solid disposal etc.) Local governance and security measures, impact on local life style. Revenue streams and fund rollover.

Text / Reference Books –

1. Luigi Fusco Girard and Peter Nijkamp, Cultural Tourism and Sustainable Local Development, 2009, Ashgate, Burlington.
2. Charles R. Goeldner , J. R. Brent Ritchie, Tourism: Principles, Practices, Philosophies, 2009, John Wiley & Sons.
3. Satish Babu, Tourism Development in India, 2008, APH Publishing Corporation, New Delhi.
4. K.K. Sharma, Planning for Tourism, 2003, Sarup & Sons, New Delhi.
5. Ministry of Tourism, Strategic Action Plan for Tourism in India, 2011, Ministry of Tourism, Government of India.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 1	IP7267	Public Policy and Politics	3	0	0	3

Course Objective: To study about the **set of laws, guidelines prevailing. To** learn how to influence public policy for the betterment of society.

Course Outcome: After successful completion of the course, student will be able to –

1. Learn about planning and its relation to public policies, theories of public policies and policy analysis, integration and coherence of planning policies.
2. Develop innovative solutions to complex challenges and issues identified, identification, implementation and evaluation of policies.
3. Learn urbanism, managerialism, and entrepreneurship.
4. Understand case study examples and acquire a broad set of transferable skills

Module I

Classical and modern notions of politics; Links between politics and planning; Meaning of public policy; Forms and components of public policies; Cycle of public policy formulation; and theories of public policies and policy analysis.

Module II

Policies Meaning of planning policy; Forms and components of planning policies; Sources and content of public planning policies; Joined-up government; and Policy implementation and evaluation. Reasons for linking urban and regional planning policies to public policies; Integration and coherence of planning policies;

Module III

Context and integration of planning policies with relevant other public policies; and Methods of making public planning policies. Welfarist planning policies; Managerialism and urban entrepreneurialism; Neoliberal urbanism; Gentrification; Spatial dialectics of injustice, the Right to the city; and some case examples of current and classical Indian planning policies.

Text/ Reference Books –

1. Cochrane, A. (2007) Understanding Urban Policy: A Critical Approach, Blackwell, Oxford.
2. Dikeç, M. (2007) Badlands of the Republic: Space, Politics and Urban Policy, Blackwell, Oxford.
3. Dunn, W.N. (2018) Public Policy Analysis: An Integrated Approach, Routledge, New York.
4. Harloe, M., Pickvance, C.G. and Urry, J. (1990) Place, Policy and Politics: Do Localities Matter?, Unwin Hyman, London.
5. Jenkins, R., Kennedy, L. and Mukhopadhyay, P. (2014) Power, Policy and Protest: The Politics of India's Special Economic Zones, Oxford University Press, New Delhi.
6. Knoepfel, P., Larrue, C., Varone, F. and Hill, M. (2007) Public Policy Analysis, Policy Press, Bristol.
7. Mathur, K. (2014) Public Policy and Politics in India, Oxford University Press, New Delhi. Third Edition.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

LC 4	IP7561	Planning Studio-III (Regional Plan)	0	0	8	4

Course Objective: The thrust of this studio would be on regional planning and would include the preparation of a regional development plan for a selected area. Special area planning would also form a part of the curriculum of this studio.

Course Outcome: After successful completion of the course, student will be able to –

1. Define the defining characteristics of the identified area or special area under study, considering its geographical, social, cultural, and economic aspects.
2. Conduct a field trip of two weeks' duration to the selected site for firsthand observation, data collection, and assessment of the site's physical and environmental characteristics.
3. Conduct data analysis on the collected data, employing appropriate analytical techniques and methods to derive meaningful insights and patterns.
4. Develop an implementation framework for the proposed development plan, considering the capital investment requirements, funding sources, and financial feasibility of the proposed interventions.

Contents –

Central to regional planning are two prominent ideas of integrated and balanced regional development. A regional plan is a spatial plan rather than sectoral plan and regional planning is directed at development efforts towards optimal utilization of region's resources benefitting people and physical environments to the maximum extent possible.

Economic growth may be an overriding objective of regional planning, but equally important are environmental concerns and quality of life issues in a region. All economic, environmental and social issues are intertwined and of equal significance. There are many forces that shape any region or sub-region extending around the core and the stirring growth and developments, directly or indirectly linked to political and economic developments taking place in the regions or sub-regions. Developments in the external and internal environment can have a positive or negative impact on the region, thus, priority should be given to policies and strategies that ensure a region's integrated and sustainable development and to put together micro-level plans which are tools to implement the Master/Development Plans. ie. Town Planning Schemes, Land Pooling, Local Area Plan.

Text/ Reference Books –

1. Misra, R.P. (ed.) (1992) Regional Planning Concepts Techniques Policies and Case Studies, Concept Publishing, New Delhi.
2. Sundaram, K.V. (1978) Urban and Regional Planning in India, Vikas Publishing, New Delhi.
3. Hall, P. and Tewdwr-Jones, M. (2010) Urban and Regional Planning, Routledge, London

ODISHA UNIVERSITY OF TECHNOLOGY AND RESEARCH

Techno Campus, Mahalaxmi Vihar, Ghatikia, Bhubaneswar-751029.

Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PR 1	IP7661	Professional Training (Summer)	0	0	4	2

Course Objective: The student is required to submit a performance report from the planner/ organization under which training is undertaken as well as a detailed report on the work carried out by him/her during the training.

Course Outcome: After successful completion of the course, student will be able to –

1. Gain practical experience in a professional setting.
2. To carry out specific tasks and projects.
   - Each student shall have to undergo Professional Training for a period of at least 6 Weeks in an establishment approved by the class coordinator and Professor In charge.
   - The practical training will commence during the summer break between second and third semester.
   - A student will be required to submit a performance report from the Planner under whom training is undertaken as well as a detailed report on the work carried out by him during the training;
3. The Internal assessment marks for the practical training will be awarded to each student by the Prof. in charge in consultation with the course coordinator on the basis of:
   A. The performance report from the Planner under whom the training was carried out.
   B. On the assessment of the report of works rendered by the student during the training.
4. The external Jury will award the marks for the practical training on the basis of Viva-voce examination of the student on the work rendered by the student during training.

Contents –

1. Each student shall have to undergo Professional Training for a period of at least 6 Weeks in an establishment approved by the class coordinator and Professor In charge.
2. The practical training will commence during the summer break between second and third semester.
3. A student will be required to submit a performance report from the Planner under whom training is undertaken as well as a detailed report on the work carried out by him during the training;
4. The Internal assessment marks for the practical training will be awarded to each student by the Prof. in charge in consultation with the course coordinator on the basis of:
   - The performance report from the Planner under whom the training was carried out.
   - On the assessment of the report of works rendered by the student during the training.
5. The external Jury will award the marks for the practical training on the basis of Viva-voce examination of the student on the work rendered by the student during training.

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Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

4th Semester

PC 13	IP7162	Professional Practice	3	0	0	3

Course Objective: To study about legislations, scope of services for different projects related to urban planning and development. To make students understand procedures, and legal tools required for professional practice in urban planning.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the role of a planner in decision-making processes at various levels and organizations, including their input as professionals and their influence on shaping policies and plans.
2. Identify the aims and objectives of professional institutes and sister bodies in the planning field, understanding their role in promoting professional standards and ethics.
3. Understand the key considerations, methodologies, and tools employed in each type of project and the specific planning challenges they entail.
4. Examine the legal and contractual aspects of consultancy agreements, including the necessary safeguards to protect the interests of both the planner and the client.

Module I

Role of Planner- Planner's input as professional at various levels and organizations, his role in decision making processes, relevant issues: generalists vs. specialists, professionals vs. technocrats, planner as decision maker vs. advisor to decision maker, relationship with client, developers, institutions and contractors; relationship with other experts such as engineers, architects, sociologists, economist, lawyers, etc. for specialized studies related to planning.

Module II

Organization - Aims and objectives of professional institutes, sister bodies; professional roles and responsibilities of planning consultants; professional ethics; Intellectual Property Right; responsibilities towards clients, fellow professionals and general public.

Module III

Scope of services for different projects like master plan for urban area, zonal district plan, sector/ neighborhood; layout, group-housing schemes, commercial centers, industrial estates, etc. Fees and scales of professional charges; Consultancy agreements and safeguards.

Text / Reference Books –

1. Planning Legislation and professional Practice, ITPI.
2. Bijlani, H.U. & Balachandran, Law and Urban Land, 1978, IIPA, New Delhi.
3. URDPFI Guidelines Vol. 2A, GOI.
4. Kulshrestha, S. K., Urban and Regional Planning in India: Handbook for Professional Practice, 2012, Sage Publications, New Delhi.
5. GoI, Indian Contract Act 1872; Indian Contract Act 1872; The Arbitration and Conciliation Act 1996. Constitution of India; Constitution (73rd & 74th Amendment) Acts 1992; Model Rent control Legislation; Slum (Improvement and Clearance) Act 1956; Land Acquisition Act 1894 and amendments thereof, Environment (Protection) Act 1986; Model Town Planning and Regional Planning Development Law; and other acts.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 2	IP7262	Energy, Climate Change and Urban Development	3	0	0	3

Course Objective: To study interface between energy, climate change in urban development by anthropogenic activities and to equip students with relationship of plans, policies, strategies with reference to energy planning.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the interface between energy, climate change, and urban development, recognizing the interconnectedness of these factors and their impact on sustainable urbanization
2. Examine energy generation and consumption patterns, including the supply and demand dynamics and the factors influencing energy demand in urban areas.
3. Study energy planning and management approaches in urban contexts, including strategies for energy-efficient development and the promotion of compact city forms.
4. Understand the role of urban planning and policy frameworks in integrating energy and climate change considerations into development processes

Module I

Introduction **-** Energy, Climate change and Urban Development – Interface.

Module II

Energy Generation and Consumption - Energy Supply and Demand, Energy Consumption in cities, determinants of energy demand, phenomenon of climate change, factors influencing climate change, impacts of climate change.

Module III

Energy Planning and Management, and Mitigation and Adaptation to Climate Change - Energy efficient development, Compact city form, Transit oriented development. Mechanisms and measures for mitigating and adapting to climate change at various levels. Plans, Policies and Strategies - Related to energy planning, conservation, climate change mitigation and adaptation.

Text / Reference Books –

1. Dash. S.K, Climate change: an Indian perspective, New Delhi, 2007, Cambridge University Press.
2. Jenks, Mike; Burgess, Rod, Compact cities: Sustainable urban forms for developing countries, 2000, Spon Press, London.
3. Bicknell, Jane, Adapting cities to climate change: understanding and addressing the development Change, 2009, Earthscan, London.
4. Andres Duany, Jeff Speck, Mike Lydon, The Smart Growth Manual, 2009, McGraw-Hill.
5. David Owen, Green Metropolis: Why Living Smaller, Living Closer, and Driving Less are the Keys to Sustainability, 2009.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 2	IP7264	City and Metropolitan Planning	3	0	0	3

Course Objective: To study the growth of metro and mega cities and their relationship with their respective regions; spatial planning approaches for their planned development.

Course Outcome: After successful completion of the course, student will be able to –

1. Understand the growth of cities in terms of scale, complexity, and their impact on national development, recognizing the role of cities as engines of growth.
2. Examine the linkages between cities and their surrounding regions, considering both physical and functional connections.
3. Explore the problems and issues associated with metro and mega cities, including issues of urban sustainability, diversity, unintended growth, and quality of life.
4. Explore urban development policies and programs at various levels, including national, regional, and local, and their impact on the development of metro and mega cities.

Module I

Urban Growth and System of Cities - Growth of cities scale, complexity and its impact on national development, cities as engines of growth, cities as ecosystems, resources in cities. Plans, Policies and Strategies - Related to energy planning, conservation, climate change mitigation and adaptation. City – Region Linkages, City, fringe and the periphery - physical and functional linkages, peri-urban development.

Module II

Metro and Mega Cities: Problems and Issues -Growth trends and processes, characteristics, problems, concepts and concerns of urban sustainability, issues related to diversity and unintended growth, economic, social and environmental sustainability, quality of life, inclusivity and equity, climate change, transit oriented development, participatory planning. Inner city – issues and problems, approach to development.

Module III

Techniques for the delineation metropolitan regions; Approaches to preparing metropolitan regional plans; Organizations involved in the planning of metropolitan regions. Human Settlement Planning, Urban Development Policies and Programmes - Concepts, approaches, strategies and tools; Policies and programmes at various levels, impact on metro and mega city development.

Text / Reference Books –

1. Ewing Reid, Measuring Urban Design: Metrics for Livable Places (Metropolitan Planning + Design) 2nd Edition, 2013, Island Press.
2. City and Metropolitan Planning and Design, ITPI, New Delhi.
3. Ramachandran, R., Urbanization and Urban Systems in India, 1998, Oxford University Press, New Delhi.
4. Bawa, V. K., Indian Metropolis: Urbanization, Planning and Management, 1987, Inter-India Publications, New Delhi.
5. Misra, R.P. & Misra, K., Million Cities of India Vol. 1&2, 1998, Sustainable Development Foundation, New Delhi.

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Syllabus (Effective from 2023-24)

School/ Department: School of Infrastructure and Planning
Course: M. Plan., Programme: Urban and Regional Planning (URP),
Duration: 2 years (Four Semesters)

PE 2	IP7266	Disaster Risk Mitigation and Management	3	0	0	3

Course Objective: To study about disaster management practices, definition, classification of disasters in India, and different technologies for rebuilding after disaster.

Course Outcome: After successful completion of the course, student will be able to –

1. Analyze the factors that contribute to the occurrence and severity of natural disasters and manmade calamities, recognizing the vulnerabilities and risks associated with each type.
2. Understand the importance of disaster preparedness, including measures for risk assessment, planning, and capacity building to mitigate the impact of disasters.
3. Understand the psychological impact of disasters on victims, including trauma, grief, and post-disaster mental health issues.
4. Understand the psychological impact of disasters on victims, including trauma, grief, and post-disaster mental health issues.

Module I

Disaster: Definitions, concepts, types and perceptions; Recent initiatives at national and state level; Kyoto Framework of disaster mitigation and management; Paris agreements; Disaster management policy at the national and state levels; Disaster management statutes at national and state levels.

Module II

Disaster management mechanisms at national, state and district levels; Select global practices; Disaster and development; Development plans and disaster management plans; Roles played in disaster management by INGOs, NGOs, CBOs and armed forces; and Community Based Disaster Preparedness. Natural Disasters: cyclones, floods, earthquakes, landslides etc.; Disaster as a physical phenomenon, causes and consequences of mitigation and management practices.Policies and Legislation Pertaining to Environment and Disaster Management i.e. Yokohama Strategy, Hyogo Framework of Action.

Module III

Risks' mitigation strategies in development plans inclusive of industrial, chemical and biological disasters; Land use planning, building bye laws and disaster safe construction practices. Forecasting and early warning systems for various types of disasters; Role of communication and information technologies in disaster management; Disaster education and awareness; Case studies on natural disasters; Climate change and its implications in disaster mitigation; Post-disaster management including rehabilitation and reconstruction of disaster affected areas; Safe hill area development guidelines and coastal zone regulations for safe habitation.

Text / Reference Books –

1. Capolla, D.P. (2007) Introduction to International Disaster Management, Butterworth Heinemann, London.
2. Joshi, A.D. (2009) Text Book of Disaster Management, Lotus Publication of Pvt. Ltd., Mumbai.
3. NDMA (2007) Disaster Management Guidelines, NDMA, Government of India, New Delhi.
4. Ministry of Home Affairs (2004) Model Amendment in Town and Country Planning Legislations, Regulation for Land Use Zoning and Building Byelaws for Structural Safety, Government of India, New Delhi.
5. Ministry of Home Affairs (2006) National Policy on Disaster Management, Government of India, New Delhi.

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Duration: 2 years (Four Semesters)

PR 2	IP7662	Seminar Presentation	0	0	4	2

Course Outcome: After successful completion of the course, student will be able to –

1. Enhance observation skills: Encourage students to observe and analyze the presentations of others, focusing on aspects such as delivery, visual aids, and overall effectiveness.
2. Foster critical questioning: Develop students' ability to formulate relevant and insightful questions that delve into the speaker's knowledge, methods, assumptions, and interpretations.
3. Provide opportunities for students to provide constructive feedback on presentations, highlighting both the strengths and areas for improvement.
4. Encourage students to conduct research and present on topics related to their thesis or areas of interest within urban and regional planning.

Observation: One of the most effective means of gaining an appreciation for the art of presentation is to observe the performance of others. The mannerisms and appearance, the voice, and the visual aids employed by a speaker may be viewed in light of what works and what doesn't.

Question: The formulation of relevant questions that probe a speaker's knowledge, experimental methods, assumptions, and interpretations is an important part of any presentation, and of the scientific method.

Critique: The critique offers the opportunity for observers to indicate to the areas within the presentation that were well-done, and areas within the presentation that could be improved upon.

Research: It is an expectation and goal of the Faculty of Planning that this seminar series will be a forum for our students and faculty to dispense and gain insight into the current and cutting edge activities in areas of Urban & Regional Planning. Students will be required to make presentations on areas related to his/her thesis topics.

Presentation: Public speaking is not normally a pleasant experience, particularly for those who are new to the activity; but it can become so. To attain confidence and comfort on the podium requires practice. Seminar Presentation enable students an opportunity to practice within the friendly confines of the department, observed by the faculty and your peers.

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PR 3	IP7664	Thesis	0	0	12	6

Course Outcome: After successful completion of the course, student will be able to –

1. Encourage students to apply the knowledge, skills, and professionalism acquired during the previous semesters to undertake a thesis project that demonstrates independent critical thinking and design/research abilities.
2. Require students to independently select and approve a topic of their choice for the thesis project, which should be in accordance with the faculty's guidelines.
3. Guide students through a process of thorough documentation, analysis, and synthesis related to their specific thesis topic and the relevant area of work.
4. Facilitate an iterative design process where students explore and develop alternative designs through a process of prioritization and elimination.

Contents –

The purpose of a postgraduate thesis is to take forward the literature review involving a deep study of theories and frameworks and develop elegant research questions. It is expected that a postgraduate student is clearly able to explain how a piece of research adds new knowledge to the existing body of knowledge in a field and show its practical significance to the profession of planning. Without a clearly defined purpose and strong theoretical grounding, the thesis is fundamentally flawed.

Text Books and References –

1. Booth, W.C., Colomb, G., Williams, J.M., Fitzgerald, W. (2016) The Craft of Research, University of Chicago Press, Chicago.
2. Eco, U. (2015) How to Write a Thesis, MIT Press, Massachusetts.
3. Oliver, P. (2008) Writing your Thesis, Sage, New Delhi