SCHEME OF TEACHING AND EXAMINATION OF I SEM M.ARCHITECTURE (Habitat Design - 2018), CBCS Scheme

			Peri	iods per v	week(1 Per	iod=60 l	Mins.)	Sch	eme of Ex	aminatio	n	
SI No	Subject Code	Title of Subject	Lecture	Core	Applied exercise/ Seminar	Total	Duration (Hrs)	Theory Marks	Prog Marks /CIE Marks	Viva Marks	Total	Credits
1	18HDC11	Human Habitat: Studies and Design Thought	3		-	3	3	100	50	-	150	03
2	18HDC12	Planning Theory and Techniques	3		-	3	3	100	50	-	150	03
3	18HDC13	Advanced Theory of Design: Architecture and Human Settlements, Theory of Urbanism	3	-		3	3	100	50	-	150	03
4	18HDS14	Spatial and Socio-Economic Structure of Human Habitat	-	-	4	4	-	-	100	-	100	02
5	18HDS15	Urban Transportation and Networks: Spatial Structure of Habitat Systems	-	-	2	2	-	-	50	-	50	01
6	18HDC16	Habitat Design Studio - I (A small community level study of existing habitats)	1	4	10	15	-	-	300	300	600	12
7	18HDE17	Virtual Imaging Techniques	-	-	2	2	-	-			T 0	2.4
	18HDE18 (Any one Elective)	Heritage Habitats: Conservation and Renewal	-	-	2	2			50	-	50	01
Total		10		22	32	-	300	650	300	1250	25	

Courses:

HDC: Habitat Design Core Course

HDS: Habitat Design Supporting Course

HDE: Habitat Design Elective Course

Minimum Marks for Pass:

Theory: 40%

Progressive Marks: 50%

Viva-Voce: 50%

SCHEME OF TEACHING AND EXAMINATION OF II SEM M.ARCHITECTURE (Habitat Design - 2018), CBCS Scheme

			Periods per		s per week (1 Period=60 Mins.)				Scheme of Examination				
SI No	Subject Code	Title of Subject	Lecture	Core	Applied exercise/	Total	Duration (Hrs)	Theory Marks	Prog Marks /CIE Marks	Viva Marks	Total	Credits	
1	18HDC21	Land Use Structure and Urban Morphology	3		-	3	3	100	50	-	150	03	
2	18HDC22	Ecology and Sustainable Habitat Systems	3		-	3	3	100	50	-	150	03	
3	18HDC23	Landscape Design and Site Planning	1		2	3	-	-	100	-	100	02	
4	18HDS24	Infrastructure Planning and Management	-	-	4	4	-	-	100	-	100	02	
5	18HDS25	Research Methods	2		-	2	-	-	100	-	100	02	
6	18HDC26	Habitat Design Studio – II (Inner city regeneration and intervention)	1	4	10	15	-	-	300	300	600	12	
	18HDE27	Urban Economics	2		-	2	-	-	100	-	100	02	
7	18HDE28 (Any one Elective)	Humane Habitat and Revitalizing Core Areas	2		-	2							
Total			12		20	32	-	200	800	300	1300	26	

Courses:

HDC: Habitat Design Core Course

HDS: Habitat Design Supporting Course

HDE: Habitat Design Elective Course

Minimum Marks for Pass:

Theory: 40%

Progressive Marks: 50%

Viva-Voce: 50%

SCHEME OF TEACHING AND EXAMINATION OF III SEM M.ARCHITECTURE (Habitat Design - 2018), CBCS Scheme

			Periods per week(1 Per		riod=60	Mins.)	Scheme of Examination					
SI No	Subject Code	Title of Subject	Lecture	Core	Applied exercise/	Total	Duration (Hrs)	Theory Marks	Prog Marks/ CIE Marks	Viva Marks	Total	Credits
1	18HDC31	Urban Development and Environmental Laws	3	-		3	3	100	50	-	150	03
2	18HDC32	Housing and Community: Policy, Finance and Public Private Participation	3	-		3	3	100	50	-	150	03
3	18HDS33	Project Planning, Analysis & Appraisal / Evaluation	-	-	4	4	-	-	100	-	100	02
4	18HDC34	Dissertation Seminar	-	-	4	4	-	-	100	-	100	02
5	18HDC35	Habitat Design Studio - III (New extensions to existing city)	1	4	10	15	-	-	300	300	600	12
6	18HDP36*	Professional Training	-			-	-	-	-	250	250	05
TOTAL		TOTAL			22	29	-	200	600	550	1350	27

<u>Courses:</u> <u>Minimum Marks for Pass:</u>

HDC: Habitat Design Core Course Theory: 40%

HDS: Habitat Design Supporting Course Progressive Marks: 50%

HDP: Habitat Design Professional Training Viva-Voce: 50%

*The Professional Training of eight weeks shall be completed before the commencement of regular course work of III Semester.

SCHEME OF TEACHING AND EXAMINATION OF IV SEM M.ARCHITECTURE (Habitat Design - 2018), CBCS Scheme

			Perio	Periods per week(1 Peri			Mins.)		Scheme of Exa	cheme of Examination		
Sl No	Subject Code	Title of Subject	Lecture	Core	Applied exercise/	Total	Duration (Hrs)	Theory Marks	Prog Marks/CIE Marks	Viva Marks	Total	Credits
2	18HDC41	Dissertation	-	10	10	20	-	-	500	500	1000	20
3	18HDE42 18HDE43 (Any one Elective)	Future of Habitat: Critical Issues. Real Estate development and Finance.	2 2		-	2		-	100	-	100	02
	Total		2		20	22	-	-	600	500	1100	22

Courses:

HDC: Habitat Design Core Course

HDS: Habitat Design Supporting Course

HDP: Habitat Design Professional Training

Minimum Marks for Pass:

Theory: 40%

Progressive Marks: 50%

Viva-Voce: 50%

I SEMESTER

COURSE CODE	18HDC11
COURSE	HUMAN HABITAT: STUDIES AND DESIGN THOUGHT
CONTACT PERIODS	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

OBJECTIVE:

To introduce the students to the concept of holistic Habitat Design with Socio economic and Historic determinants and dimensions of urban design and planning.

OUTLINE:

Components of human habitat, Evolution of cities and towns in India, Socio economic and Historic determinants of urban growth and urban form.

Reading the city. Social structure, cognition, experience and urban form. Dimensions of urban design.

Grain texture scale, socio spatial schema. Urban design vocabulary.

Habitat Design, Urban Design and their relation with planning and architecture.

Views of Design of habitat as extension architecture (mega architecture) and as architectural expression of planning.

Evolution of concepts of urban form and design in different cultures and in India.

Utopian concepts.

Concepts in urban Design and planning.

Rise of Advocacy Planning, changing role of NGOs and Urban Social Movement in India.

Urban design survey - inventories; techniques/approaches to urban design.

Imageability, townscape and elements of urban design (Gordon Cullen, Kevin Lynch)

Historical examples of urban design projects.

Suggested seminar topics/term papers

Emerging issues – social and communal conflicts in urban area

Urban design at micro level: campus planning, city centers, transportation corridors, and residential neighbourhood; water fronts.

LEARNING OUTCOME:

Students would have understood the evolution of human habitats and be able to analyze the socioeconomic and cultural parameters, historical determinants and contemporary dimensions of urban design and urban planning.

- 1. Kevin Lynch, "Imageability of City", The MIT Press, 1960.
- 2. Camillo Sitte, "City Planning according to Artistic principles", Phaidon Press, 6th Edition, 1965.
- 3. Kevin Lynch, "Good City Form", The MIT Press, Reprint Edition, 1984.
- 4. Rob Krier, "Urban street and Squares", Architectural Press, 3rd Edition, 2003...
- 5. Gordon Cullen, "Townscapes", Architectural Press, 1st Edition, 1961.
- 6. Donald Watson, "Time-Savers Standards for Urban Design", McGraw Hill Education, 2017.

COURSE CODE	18HDC12
COURSE	PLANNING THEORY AND TECHNIQUES
CONTACT PERIODS	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

To introduce the basic concept of urban planning in terms of tools and methods and their application in modern context.

OUTLINE:

Planning terms and definitions. Basic principles of planning of settlements.

Aims and Objectives of Physical Planning, Levels of Planning in India, Characteristics of Planning, Models of the Planning Process, Components of settlement structure.

Preparation of Urban Development Plans, types, scope, purpose, contents and approaches to the interim and comprehensive plans: Structure Plan, Master Plan, Zonal Development Plan, and Strategic Planning.

Theories of Urban structure, Urban Sub-systems.

Concepts of Urban Land use, Systems affecting land uses and rationale for land use planning, Locational attributes of urban land uses.

Legal frame work, Regulations, byelaws, standards and norms and their basis.

Survey Research Process – Primary & Secondary sources of data, techniques of data collection, analyzing and presenting physical and socio-economic data, questionnaire design, administration of field surveys, Sampling, sample designs, size, types, sources of various data in India.

Techniques of understanding spatial structures of cities and towns. Analysis of structure of nodes, roads and networks and spatial structure.

Use of aerial and satellite remote sensing for planning. Introduction to GIS

Suggested seminar topics/term papers

Theories of Urban Planning, Choice Theory, Advocacy Planning, Action Planning, Mixed planning –

Relevance in Indian context

LEARNING OUTCOME:

Students would have understood the basic concepts of urban planning and have gained knowledge with respect to the tools and techniques of applying the same in the contemporary context.

- 1. Arthur Gallion, "Urban Pattern", John wiley & Sons; 5th Edition, 2003.
- 2. Siddhartha N.Mukherjee, "Cities -Urbanization and Urban System", Kitab Mahal, 12th Edition, 2017.
- 3. Peter Hall, "Urban and Regional Planning", Routledge, 5th edition.
- 4. K.P.Yadav, "Vol 1-5- Encyclopedia of Economic Planning and Development", Ivy Publishing House.

COURSE CODE	18HDC13
COURSE	ADVANCED THEORY OF DESIGN: ARCHITECTURE AND HUMAN SETTLEMENTS, THEORY OF URBANISM
CONTACT	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

To gain exposure to advances in Design theory and its impact on cities of India and other countries.

OUTLINE:

Design theory and its impact on cities of India and other countries. Modern architectural and urban design movements. Post modernism and contemporary movements in art and architecture and urbanism. Critical study of Contemporary views of urbanism.

Environmental perception, cognitive and mental maps, image of towns and cities. Theory of urban form. Metaphors and iconic structures and their impacts.

Impact of structuralism and post structuralism, ideas of self-similarity and fractals, neo classism, revivalism etc on habitat design theory.

Organic habitats and designed habitats. Impact of culture on human settlements.

Historic core and contempory urbanism. Study of Ideas of historic layering of space and networks, lattices v/s trees as urban structural metaphors, growth and value addition v/s sustainability. Gandhian thought and its relevance.

Behavioral issues in urban design; principles of urban spatial organization; urban scale, urban spaces, urban massing; quality of urban enclosure.

Suggested seminar topics/ term papers

Readings on urbanism from contemporary literary and social commentaries. Semiotics theory and reading habitat as a text. Myths and mythology of built environments.

LEARNING OUTCOME:

Students have gained knowledge about various design theories and their application in the design of cities in India and abroad. They can analyze the impact of these theories on the evolution of city form.

- 1. Jon Lang, "Creating Architectural Theory", John Wiley & Sons, 2nd edition.
- 2. Jon Lang, "Urban Design", Architectural Press, 2nd edition,2017,.
- 3. Kate Nesbit, "Theorizing A New Agenda For Architecture", 2nd edition, 1996.
- 4. Geoffrey Broadbent, Richard Bunt, and Charles Jencks ",Signs, Symbols and Architecture", John Wiley & Sons, 1st edition.

COURSE CODE	18HDS14					
COURSE	Spatial and Socio-Economic Structure of Human Habitat					
CONTACT	4hrs /Week (Studio)					
PROGRESSIVE	100					
EXAM MARKS	-					
TOTAL MARKS	100					
CREDITS	02					

To understand the correlation between social aspects and spatial structure within the human habitat.

OUTLINE:

Studio: Aims at study of formal or informal settlement in an Urban area to understand the correlation.

Structure of settlement and the geographic parameters of topography, climate, natural resources.

Study of culture, environment, society, community, groups; Social structure and institutions - continuity and change, their impact on the structure of human habitat.

Economic base and Economic growth, Dichotomy of rich –poor, Efficiency versus equity, Real estate setup, Market and demand analysis.

Effects of technological change, Management and Characteristics, States of conflict. Struggle for space, Density overcrowding, Urban stress and Gender issues.

Suggested seminar topics/ term papers

Social and spatial dimensions of poverty in India.

Crime and spatial structure of cities.

Concept of formal and informal sector.

LEARNING OUTCOME:

Students can analyze the spatial structure of selected existing habitats with respect to the socioeconomic and cultural parameters. They can generate strategies to address the challenges of such human habitats.

- 1. Ralph Thomlinson , "Urban structure, social and Spatial character of cities", Random House, 1969
- 2. G.Duscan Mitchell, "A new Dictionary of Sociology", Routledge & Kegan Paul PLC, 1979.
- 3. Dr. Naseem A. Azad, "Social and Economic Problems", Ramesh Publishing House.
- 4. Gordon Marshall, "Oxford Dictionary of Sociology", Oxford, 4th edition.
 Critical readings of selected essays and commentaries on contemporary urban society and habitat issues in India and developing countries.

COURSE CODE	18HDS15
COURSE	URBAN TRANSPORTATION AND NETWORKS: SPATIAL
	STRUCTURE OF HABITAT SYSTEMS.
CONTACT	2hrs /Week (Studio)
PROGRESSIVE	50
EXAM MARKS	-
TOTAL MARKS	50
CREDITS	01

To introduce the fundamentals of urban transport planning, urban networks and multimodal transport systems developed in response to and as an organizing factor of spatial structure of habitat systems.

OUTLINE:

Scope of urban transport planning, interdependency of transport and land use,

stages - system approach to transportation planning.

Urban Transportation systems; classification of transport systems; technological characteristics of transport modes and systems; the nature of demand and supply of transport services.

Mobility Concept – Introduction- Pedestrian and motorized and non-motorized vehicles- Mobility Measures.

Urban Transportation surveys: Definition of study area, zoning, types of surveys, Forecasting traffic in relation planned land use.

Stages in Urban Transportation:

Trip Generation- Introduction, Definitions, Trip Purposes-Factors associated with Trip generation and Attraction, Method of analysis, Multilinear Regression Analysis, Assumptions, Applications, Shortcomings (No Numerical Problems)

Trip Distribution- Introduction, Methods, Growth factor, Uniform growth factor, Average Growth factor, Fratar Methods and synthetic analysis, Gravity Model, (Simple Numerical Problems)

Trip Assignment – Definition, Applications, Resistance to travel, Minimum travel path tree-Assignment Techniques, All Or Nothing, Multiple Route, Capacity Restraint, Diversion Curves.

Modal Split: Introduction, Factors affecting, Modal Split in the Transportation Planning Process, Public Transportation modes: Systems in India, problems and prospects, present practices in urban transportation. Metro, Mono, and high capacity buses.

Parking in transport system, parking surveys, parking norms and standards and new approaches to parking systems.

Design of transport infrastructure.

Recent innovations in technologies and its probable impacts on future urban forms.

Government transport policies and evaluation of transportation proposals.

LEARNING OUTCOME:

Students have gained knowledge with respect to the fundamentals of urban transport planning, urban networks and multimodal transport systems. They are able to comprehend the same as organizing factors of the spatial structure of contemporary habitats.

- 1. Khanna and Justo,"Highway Engineering", Nem Chand & Bros, 10th edition.
- 2. Kadiyali L R., "Traffic Engineering and Transportation Planning", Khanna Publishers, $3^{\rm rd}$ Edition, 1987.
- 3. Dimitriou H.T, "Urban Transport Planning and Developmental Approach", Routledge $1^{\rm st}$ Edition, 2012.
- 4. Michael J Bruton, "An Introduction to Transportation Planning", Hutchinson, 2nd Edition,1970.
- 5. John Black, "Urban Transport Planning and Design", The Johns Hopkins University Press, 1981.

COURSE CODE	18HDC16
COURSE	HABITAT DESIGN STUDIO-I(A SMALL COMMUNITY LEVEL STUDY OF EXISTING HABITATS)
	EXISTING HADITATS)
CONTACT	15hrs /Week (Lecture + Studio)
PROGRESSIVE	300
VIVA	300
TOTAL MARKS	600
CREDITS	12

The Habitat Studies Studio aims at studying and understanding the fabric of an existing habitat and also to understand determinants and causative forces responsible for urban growth and change - the resulting physical manifestations- development process to provide the student with studio skills related to contemporary design issues to fulfill the broad conceptual frame of the courses.

OUTLINE:

Studio: Aims at detailed study and documentation of an existing urban fabric and suggestive interventions.

The Studio will be divided to the following modules:

- a) Documentation of a precinct-
 - 1. Addressing principles of site planning, natural features and environment, typology / morphology, density patterns etc.
 - 2. Infrastructure and habitat management standpoint
 - 3. Human network, through ownership, use cycles, associational value etc.
 - 4. Presentation techniques
- b) Identification of problems and issues.
- c) Compiling the documentation as a report.
- d) Proposed conceptual interventions.

The Design Workshop: The workshop - is a seminar course cum design conducted by invited professionals as well as faculty who may demonstrate, the design development process of project. Projects may vary in scale and content and should preferably raise urban level or fundamental design issues.

Studio exercises may be carried out in groups and interventions to be submitted individually.

Submissions shall be in the form of drawings and Report.

Knowledge of CAD is a prerequisite.

LEARNING OUTCOME:

Students have been equipped to conduct survey and collect data with respect to selected areas for a neighborhood to ward scale study. They are able to analyze this data and generate strategies and propose conceptual interventions to address the various issues and challenges at the local scale.

- 1. Cliff Moughtin Urban Design, "Street and Square", Architectural Press, 3rd Edition.
- 2. Kevin lynch, "Site Planning", The MIT Press, 3^{rd} edition, 1984.

I SEM M.ARCH. (Habitat Design) - DETAILED SYLLABUS

COURSE CODE	18HDE17
COURSE	VIRTUAL IMAGING TECHNIQUES
CONTACT	2hrs /Week (Studio)
PROGRESSIVE	50
EXAM MARKS	-
TOTAL MARKS	50
CREDITS	01

OBJECTIVE:

To sensitize the students with latest methods of three dimensional imaging tools for effective presentation of data, studies and proposals

OUTLINE:

Software like Flash, Maya, Rhinoceros and similar ones may be studied. Introduction to scripting, animation and short films, introduction to morphogenesis techniques etc. The subject could be introduced as intensive workshops with invited specialists. It will be done as practical subject.

LEARNING OUTCOME:

Students have learnt to apply the latest software of three dimensional imaging for representation of data, analysis and propose design solutions.

COURSE CODE	18HDE18
COURSE	HERITAGE HABITATS: CONSERVATION AND RENEWAL
CONTACT	2hrs /Week (Studio)
PROGRESSIVE	50
EXAM MARKS	-
TOTAL MARKS	50
CREDITS	01

To equip students to deal with conservation and recycling along with related design issues of existing urban environment, old cities, natural and urban heritage areas.

OUTLINE:

Interactive session of History heritage and cities, traditional water systems.

Introduction to conservation, historic and inner city areas and other Natural elements.

Concepts and approaches to conservation in India and other countries.

Socio-economic development, tourism infrastructure development, and role of urban conservation.

Institutional Aspects of Conservation - Charters - World Heritage legislation and Sites Conservation Acts.

Legislation Archaeological Acts Institutional framework for conservation in India and other countries.

Historic overview of recycling cities.

Conservation Area practice, adaptive reuse, upgradation programs in old areas, infill design.

Financial and Implementation framework for urban conservation and Adaptive Reuse Projects.

Urban recycling and brown field projects, urban renewal and development strategies for regeneration of inner city areas.

Conservation management, community participation, economic regeneration, upgrading infrastructure, financing and implementation framework for redevelopment and revitalization projects.

Legislation frameworks and institutional framework for special areas, urban conservation, and urban recycling.

Recent successful practices in urban conservation and regeneration in India and other countries.

Suggested seminar topics/ term papers

Case studies of adaptive reuse and Inner city revitalization.

LEARNING OUTCOME:

Students have gained knowledge about heritage conservation and urban renewal. They have been exposed to inner city revitalization projects and merits of adaptive reuse for sustainability.

- 1. Alan Dobby, "Conservation and Planning", Hutchinson, 1978.
- 2. Abdul Wasay Najimi, "Herat The Islamic City (A study in Urban Conservation)", Sanctum Books, 1987.
- 3. Bernard Feildan, "Conservation of Historic Buildings", Architectural Press, 3rd edition, 1982.

II SEMESTER

COURSE CODE	18HDC21
COURSE	LAND USE STRUCTURE AND URBAN MORPHOLOGY
CONTACT	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

OBJECTIVE:

To understand various perceptive and cognitive elements in city structure, their role in shaping urban morphology.

OUTLINE:

Introduction to urban geography - cognition, perception and spatial representation.

Renaissance and the reconfigurement of space. Industrial revolution, Technologies and the 19th century transformation of world views.

Compression of time-space and the birth of suburbia, Idealized space, romanticism and the Garden city movement. Ideal-space diagram and city form.

Astronomy and city structure. Vastu Shastra and the integrated world view. Sacred geographies, sacred cities, precincts and spaces. Sacred rivers, Ghats, mounds, trees and other totems in urban space. Mapping the sacred.

Cognitive mapping - contemporary and traditional methods.

Rhythms of the city. Modem work rituals and the definition of fragmented zones, time space and lives.

Nightlife and electronic definition of time.

Significance, signs and meaning of structure. Imagined places, collage of time space representations in literature, cinema and the performing arts.

SUGGESTED SEMINAR TOPICS/ TERM PAPERS

Urban growth and system of cities; growth of metropolitan and mega cities scale, complexity.

Metropolitan growth – Trends, characteristics, problems and socio-economic and political issues in India with reference to Asia.

LEARNING OUTCOME:

Students are able to distinguish between the perceptive and cognitive elements of city structure. They have gained a thorough understanding of the role of these elements in shaping the urban morphology.

- 1. Spiro Kostoff, "City shaped", Bulfinch, Reprint Edition, 1993.
- 2. Sumita Ghosh, "Introduction to settlement geography", Orient BlackSwan, 1998.
- 3. Michael Pacione, "Urban Geography: A Global perspective", Routledge; 1st Edition, 2009.
- 4. Paul Knox-Urbanization.

COURSE CODE	18HDC22
COURSE	ECOLOGY AND SUSTAINABLE HABITAT SYSTEMS
CONTACT	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

Sustainability of cities and the related EIA have become important issues that guide urban development. This course is designed to expose the student to the concerned issues so as to interact effectively with the environmental planner.

OUTLINE:

Concepts of settlement ecology- Nature as the primary layer, urban development as the secondary layer. Various aspects of ecology- ecological footprints, energy and resource depletion connected to development. Destruction of food chains.

Sustainability- Definition and Evolution.

Sustainability concepts w,r.t Nature, built heritage and community networks.

Cities as centers of consumption of land, water, energy resources and forest cover.

Circular metabolism and linear metabolism.

Issues of public health and sustainability.

Concepts of equity. Slums as an issue of sustainability.

Impact of technology on Alternative Energy and conservation of water.

Environment Impact Assessment-

Definition, need, objectives, scope, evolution and its role in the planning process

Methods, advantages, limitations.

Legal framework.

Assessment of impacts on land and human resources.

Public participation.

International agencies, National agencies and Focus groups for environmental and social assessment.

SUGGESTED SEMINAR TOPICS/TERM PAPERS

Water augmentation, Rain water harvesting, waste and waste water recycling, reuse and renewal of habitat resources.

LEARNING OUTCOME:

Students have been exposed to the concepts of environmental sustainability as well as application of tools and techniques of EIA.

- 1. Dominique Gauzin-muller, "Sustainable Architecture and Urbanism", Pearson; 3rd Edition, 2011.
- 2. Victor Olgay, "Design with Climate", Birkhauser, 1st Edition, 2002.
- 3. Givony B, "Urban Design in Different Climates", Princeton University Press, Revised Edition, 2015.
- 4. P.L.Lombardi, "Evaluation of the Built Environment for Sustainability", Wiley, 1989.
- 5. Sudhakar Reddy, "Urban Energy Systems", Blackwell; 1st Edition.
- 6. B.R.Barthwal, "Environment Impact Assessment", Concept Publishing Company;1st Edition.

COURSE CODE	18HDC23
COURSE	LANDSCAPE DESIGN AND SITE PLANNING
CONTACT	3hrs /Week (Lecture + Studio)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

Role of landscape in settlement planning and design.

OUTLINE:

Studio: Aims at an ecological approach to site analysis based on studies of geomorphology, hydrology etc. Planning demonstration by landform design, storm water management and other urban services.

Landscape & Site planning

- Introduction to ecological approach to site analysis and planning with emphasis on study of natural and manmade features of site.
- Historical perspective on natural and manmade landscapes including gardens and other open public spaces.

Urban services network

Introduction to planning standards, quantitative assessment methods and concepts of sustainable infrastructure development.

- Movement network; planning and design standards for parking, road geometry, etc.
- Solid waste management, surface water harvesting and ground water recharge, water based waste disposal and recycling concepts.
- Energy (Electrical, solar etc.) and related site infrastructure planning standards and disposition criteria.

Project Demonstration

Site surveys for natural and manmade features of site and its relationship with larger natural and urban ecological system.

Criteria for activity and built form disposition. Design of open space system.

Identification and programming of site services and related infrastructure development.

SUGGESTED SEMINAR TOPICS/TERM PAPERS

Landscape engineering techniques for site and related infrastructure development.

Case study of public spaces, roadside landscapes and their corresponding plant materials and design concepts etc.

LEARNING OUTCOME:

Students are equipped with the knowledge of basic concepts in landscape design and site planning which they can apply in small scale projects in urban areas.

- 1. Givoni B, "Climate and Urban Design", New Age International Private Limited; 2nd Edition, 2012.
- 2. Charles W. Harris and Nicholas T Dines , "TSS Landscape Design", McGraw-Hill Education; 2nd Edition, 1980.
- 3. UDPFI, CPHEEO Manuals, Govt of India, 2014.
- 4. Ian McHarg, "Design with Nature", John Wiley & Sons, 1995.
- 5. Kevin Lynch, "Site Planning", 2nd Revised Edition, 1971.
- 6. Brian Hackett, "Planting design", McGraw Hill, 1979.
- 7. Geoffrey Broadbent, "Emerging concepts in Urban Space Design", Taylor & Francis,1st Edition ,1995.

COURSE CODE	18HDS24
COURSE	INFRASTRUCTURE PLANNING AND MANAGEMENT
CONTACT	4hrs /Week (Studio)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To develop an insight amongst the students on urban infrastructure development & management and its impact on qualitative and quantitative aspects of urban built environment.

OUTLINE:

Concepts in urban infrastructure- Social and physical infrastructure.

Urban social infrastructure - qualitative and quantitative techniques of assessing requirements, Planning Amenities and institutions.

Urban physical infrastructure- qualitative and quantitative techniques of assessing requirements with emphasis on water supply, sewerage, solid waste, storm water.

Institutions and instruments of resource mobilization.

Public and private sector role in resource mobilization and infrastructure development and related issues.

Financing systems, sources of finance, leasing and contracting methods, pricing and financing, major National and International agencies involved. Quality control mechanism.

Introduction to urban management.

Evolution and structure of urban development bodies.

Concepts of decentralization of development and management.

Managing Infrastructure development, corporatization and related goals, decentralized and people led infrastructure provisions, social goals and equity, environmental and economic issues and assessments related to physical infrastructure.

Case studies from Asian cities of successful, innovative infrastructure provisions, equitable economic development, management and maintenance schemes.

SUGGESTED SEMINAR TOPICS/ TERM PAPERS

Case Studies and best practices in India and abroad

LEARNING OUTCOME:

Students are equipped to the conceptual understanding of urban infrastructure development and management and are able to distinguish between the qualitative and quantitative aspects of its impact on urban built form.

- 1. Eduardo Vasconcellos, "Urban Transport, Environment and Equity", Routledge; 1st Edition, February 2001.
- 2. B.G.Hutchinson, "Principles of Urban Transport Systems Planning", McGraw-Hill, 1974.

COURSE CODE	18HDS25
COURSE	RESEARCH METHODS
CONTACT	2hrs /Week (Lecture)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To introduce the students to the meaning, concepts and methods of Research.

To aid the students in adopting skills in writing technical papers and help in conducting research.

OUTLINE:

Scientific Research: Types and Methods

Science & Common sense, Empirical research, Normative research-Aims, steps, types and methods of Scientific Research Concepts, Constructs, Variables Hypotheses Construction, nature, types of Hypothesis, Difference between Proposition, Hypothesis and Theory Testing Hypothesis.

Research Design

Formulation of Research Problem and Questions, Meaning, Goals, Characteristics of Research Design.

Design for different types of Research, Cross-sectional, Trend, Cohort and Panel Studies.

Sampling

Purposes, Principles, Advantages, Types, Sample sizes.

Techniques of Data Collection

Questionnaire and Interview Schedule: Meanings, Format, Formulation, Types, Pretesting, Advantages, Limitations. Interviews: Functions, Characteristics, Types, Conditions of successful Interview, The Interviewer & the Respondent, Process of Interviewing, Merits & Limitations.

Observations: Characteristics, Purpose, Types, Process, The Observer, Problems, Advantages, Limitations, Recording of Observations, Schedule.

Case Studies: Purpose, Types, Sources of data Collection, Advantages, Criticisms.

Data processing and Analysis

Tabulation, Diagrammatic Representations and Analysis, Measurement and Scaling Techniques.

Statistical Techniques: Measures, Mean, Median, Mode.

Writing a Research Paper

Scientific Writing, Format, Preliminaries, Text, References & Conclusion.

Research Ethics

LEARNING OUTCOME:

Students are able to understand the research abilities and various techniques involved in data collection. By the end of the semester each student should be able to understand the technical aspects of writing a research paper.

- 1. Ram Ahuja, "Research Methods", Rawat Publications, 2001.
- 2. Dr Kothari, "Research Methodology: Methods & Techniques", New Age International, 2^{nd} Edition, 2014.
- 3. Fred N Kerlinger, "Foundations of Behavioral research", S.Chand (G/L) & Company Ltd, 4^{th} Edition, 1999.
- 4. Kumar, "Research methodology", Sage Publishing, 4th Edition, 2014.

COURSE CODE	18HDC26
COURSE	HABITAT DESIGN STUDIO-II(INNER CITY REGENERATION AND INTERVENTION)
CONTACT	15hrs /Week (Lecture + Studio)
PROGRESSIVE	300
VIVA	300
TOTAL MARKS	600
CREDITS	12

The objective of this studio is to sensitize and introduce students to inner city regeneration.

OUTLINE:

Study and Design of development / redevelopment / intervention in an existing urban district of a large city.

The studio exercises would examine issues of inner city regeneration and interventions through economic, environmental, urban conservation, participatory and infrastructure provision-led objectives.

The project definition, programme development, design and development process and implementation framework to form integral part of the project structuring.

Direct involvement of user groups and decision making agencies as part of the project to target appropriate development strategies. Feedback and interactive sessions to achieve workable economic and environmental regeneration objectives.

Finally -to diagnose implications of suggested interventions on the larger urban fabric, to re-examine values in terms of social, physical and the progressive nature of change.

Study should include model making and virtual models and use of graphics to highlight layers of interactive spaces and networks.

Studio exercises may be carried out in groups and interventions to be submitted individually.

Submissions shall be in the form of drawings and report.

SUGGESTED SEMINAR TOPICS/ TERM PAPERS

Understanding Residential layouts, in terms of patterns, housing densities and utility network and community facilities.

Slums and squatters settlements - problems and possibilities.

LEARNING OUTCOME:

Students are equipped to address the issues of inner city regeneration in an existing urban district of a large city. They are able to intervene through economic, environmental, urban conservation, participatory and infrastructure strategies to address the challenges.

- 1. Geoffrey Broadbent, "Emerging concepts in urban space design", Taylor & Francis,1st Edition,1995.
- 2. Dew, Berry and Davis, "Land Development Handbook, Planning Engineering and Surveying", McGraw-Hill ,3rd Edition 1998.
- 3. Cliff Moughtin, "Urban Design Green Dimensions", Architectural Press, 2nd Edition 1996.

COURSE CODE	18HDE27
COURSE	URBAN ECONOMICS
CONTACT	2hrs /Week (Lecture)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To expose the students to the fundamentals of Urban Land economics.

OUTLINE:

Key Concepts of urban economics, Scope of Land economics.

Economic principles of Urban Land uses, Urban Land use patterns – CBDs, Zone of Transition, Suburban areas, Rural-Urban fringe, Urban location theory, Location Models.

Relevance of Land economics for spatial planning, urban base – demand and supply.

Land utilization costs, capital costs, rent & price, building costs, professional charges.

Sources of finance, constraints in resources, Private & Public Sectors, replicability and feasibility.

Economic aspects of land policies at various levels of decision making.

SUGGESTED SEMINAR TOPICS/TERM PAPERS

Developments in India and abroad.

Learning outcome:

Students have gained knowledge about fundamentals of Urban Land economics. They are able to comprehend economic implications of various land policies in the development of human habitats.

- 1. Jack Harvey, "Urban Land Economics", Palgrave Macmillan,6th Edition, 2003.
- 2. Amitabh Kundu, "Urban land markets land price changes", Ashgate, 1997.

COURSE CODE	18HDE28
COURSE	HUMANE HABITAT AND REVITALISING CORE AREAS
CONTACT	2hrs /Week (Lecture)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To sensitize the students to issues which have been pushed to the margins in the race for development and to reinstate the citizen in the center of habitats especially the city cores.

OUTLINE:

Concepts of humane habitat, the nature and composition and character of Indian and western core cities, work home co-existence and conflicts.

Concepts of space and place. City as a human network. Private space, social space, community space and public space.

Public - Private sector interests - public space as a contested domain.

Pedestrian infrastructure and pedestrianization.

City as a communication network messages, markers, signage.

Designing the public spaces for the differently abled.

Cycles and related infrastructure.

The child in the city.

Gender issues in design of cities.

SUGGESTED SEMINAR TOPICS/TERM PAPERS

Case studies of best practices in brown field developments

LEARNING OUTCOME:

Students have gained knowledge of the concepts of humane habitat. They are able to identify the revitalization issues in the core areas.

REFERENCES:

1. Lewis Mumford, "Culture of Cities", Thomson Learning, 3rd Edition, 1970.

III SEMESTER

COURSE CODE	18HDC31
COURSE	URBAN DEVELOPMENT AND ENVIRONMENTAL LAWS
CONTACT PERIODS	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

OBJECTIVE:

To familiarize the student with legal terminology and legal frameworks that apply in Urban context.

OUTLINE:

Introduction to laws, concepts – sources of law, meanings terms- Law, Legislations, Ordinances, Bills, Acts, Regulations and bye-laws.

Evolution of Planning and Legislation in India. An overview of legal tools connected with Urban Planning & Development, Town and Country Planning, Improvement Trust and Development Authorities etc. - objectives, contents and procedures for preparation and implementation of Regional plans, Development plans, Town Planning Schemes, Area Plans.

Legislation related to use and control of land, land acquisition.

Significance of land development control – Objectives and legal tools, critical evaluation of zoning, sub division regulations, building regulations and bye-laws, development code.

Legislation on Conservation of natural resources including Mining and Forestry Acts, Conservation and Management of Ancient Monuments and Archaeological sites and ruins.

Coastal Zone Regulations, Transfer of Development Rights – Concepts and related issues.

Environment Management Systems (ISO – 14001 and its planning implications, Need of ISO, case studies of ISO certified industries, Environmental and Financial Benefits of ISO)

Suggested seminar topics/ term papers

Environment versus Development – Approaches and Analysis. Energy conservation issues and need of Energy Audit and related topics.

LEARNING OUTCOME:

Students have gained knowledge about the various rules, laws and legislations related to urban development, environmental conservation and their application.

- 1. Government of India, "UDPFI Guidelines", 2014.
- 2. The Karnataka Government Town And Country Planning Act, 1961.
- 3. "National Building Code", Nabu Press, 2016.
- 4. Herbert Girardet, "The GAIA Atlas of Cities", Anchor Books, New Edition, 1996.

- 5. C S Yadav, "URBAN PLANNING AND POLICIES -Volume 16-A -Part A: Reorientation of Policy Norms", Concept Publishing Company.
- 6. S. Kostoff, "The City Shaped. London", Thames and Hudson, 1991.
- 7. Kevin Lynch, "City sense and city design", The MIT Press, 1995.

COURSE CODE	18HDC32
COURSE	HOUSING AND COMMUNITY: POLICY, FINANCE AND PUBLIC
	PRIVATE PARTICIPATION
CONTACT PERIODS	3hrs /Week (Lecture)
PROGRESSIVE	50
EXAM MARKS	100
TOTAL MARKS	150
CREDITS	03

To understand the role of housing and its importance in Habitat Design.

To explore the policy aspects and finance mechanism in housing.

OUTLINE:

Housing concepts, definitions and components of housing. Role of housing in socio-economic development of the nation, housing in relation to non-residential components of settlement.

Housing norms and standards. Housing stress diagrams, stressed communities.

Social impacts of planned housing. Role of NGOs and self-help groups.

Sustainability of social and public housing – Planning, Design, Materials, Technology.

The role of government as a developer, financier and policy maker to be critically assessed in the era of privatization in the housing sector.

Housing scenario in India, National Housing Policy, Role of HUDCO, State Housing Boards.

Housing Finance- Role of NHB and other financial Institutions. Mechanisms for housing loans for various income groups & industry. Role of private sector in housing infrastructure development.

Impact of globalization. Effect of global capital participation in housing and urban infrastructure sector.

Suggested seminar topics/term papers

Evaluation of Housing policies of different countries/ states. Scope and Role of Various Agencies.

LEARNING OUTCOME:

Students have gained knowledge about the role of housing and its importance in habitat design. They are exposed to the policy aspects and financing mechanisms in housing.

- 1. P K Sarkar, "Housing laws in India Problems and Remedies", Eastern Law House; 2000.
- 2. Kavita Datta and G.A.Jones, "Housing Finance In Developing Countries", Routledge, 1st Edition.
- 3. Cedric Pugh, "Housing and Urbanization", SAGE Publications Pvt. Ltd; 1st Edition, 1990.
- 4. P K Guha, "Housing- An Indian Perspective", New Central Book Agancy, 1999.

III SEM M.ARCH. (Habitat Design) - DETAILED SYLLABUS

- 5. K Ranga Rao & M S A Rao, "CITIES & SLUMS A study of squatters' settlement in the city of Vijayawada", Concept Publishing Company.
- 6. Geoffrey Kayne, "Urban Housing in the 3rd world", New Central Book Agency;1999
- 7. N V Modak, "Town and Country Planning and Housing", Sangam Books Ltd,1979.

COURSE CODE	18HDS33
COURSE	PROJECT PLANNING, ANALYSIS & APPRAISAL / EVALUATION
CONTACT	4hrs /Week (Studio)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To introduce the students to the methods of implementation and management in urban planning and infrastructure areas.

OUTLINE:

Structure of the implementing authorities- Improvement trusts, Development authorities, Metropolitan Development Authorities and their relationship with local governments.

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.

The concept of project evaluation: Identification and estimation of project impacts, Desirable and undesirable project impacts.

Single criteria project evaluations: Details of cost -benefit analysis and its application with case studies, Cost- benefit analysis of public and private sector projects.

Concept of multi-criteria project evaluation and their applications: Concept of time scheduling, Project network and monitoring, PERT and CPM with their application in planning projects, Project monitoring under resource constraints.

Cost Benefit analysis: Identifying costs and benefits, Pricing, Opportunity costs, Shadow Prices, Cash flow, Payback periods, Internal Rate of Return.

Methods of Urban Finance: Financial perspective of Urban Development.

Local Planning and Budgeting: Municipal Corporate Planning, Program Planning and Budgeting, 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.

Suggested seminar topics/ term papers:

Current Infrastructure projects. Best practices in Implementation Management. Studies on Organizational design.

LEARNING OUTCOME:

Students have an understanding on the role of government agencies and the importance of citizen participation in the implementation and management of urban planning initiatives. Students are familiarized with the concepts of project evaluation and methods of urban financing and budgeting.

- 1. Daniel Halpin and Ronald Woodhead, "Construction Management", Wiley, 2nd Edition.
- 2. Krishnamurthy and S.V.Ravindra, "Construction Management", CBS Publishers & Distributors Pvt. Ltd, 1st Edition.
- 3. Prasanna Chandra, "Projects Planning, Analysis, Selection, Financing, Implementation and Review", McGraw-Hill, 8th Edition, 2017.
- 4. L S Srinath, "PERT and CPR-Principles and Application", Affiliated East-West Press, 2001.

COURSE CODE	18HDC34
COURSE	DISSERTATION SEMINAR
CONTACT	4hrs /Week (Studio)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To identify and select a topic for dissertation and analyze the parameters that impacts the proposed subject of Dissertation.

OUTLINE:

The study will focus on research related to the topic and analyze the critical factors of influence on the urban area pertaining to planning and design. The study may involve literature survey and relevant case studies to understand the subject and urban area in detail.

Each student will give at least three seminars and one will be on sustainable habitat issues linked to the dissertation topic. The study shall be formulated as a report /portfolio submitted for internal assessment.

LEARNING OUTCOME:

Students have identified the topic for dissertation, completed literature reviews and case studies for the same.

COURSE CODE	18HDC35
COURSE	HABITAT DESIGN STUDIO-III(NEW EXTENSIONS TO EXISTING CITY)
CONTACT	15hrs /Week (Lecture + Studio)
PROGRESSIVE	300
VIVA	300
TOTAL MARKS	600
CREDITS	12

To expose the students to dynamics of development and related design demonstration in the studio.

OUTLINE:

The studio problem may be a completely new development project covering a large area and population and to have sufficient complexity of functions. It could also be new extensions of an existing city. The project should start with a client (real or imaginary), site and ecological analysis, legal, ownership or other frameworks, development strategy, funding, cost recovery systems and consequent programme formulation, phasing and infrastructure development. Project should conclude in a three dimensional design expression.

Studio exercises may be carried out in groups and interventions to be submitted individually.

Suggested workshops/Seminar

EIA evaluation techniques.

LEARNING OUTCOME:

Students are equipped with an understanding of the dynamics of urban green field development and its associated design demonstration as in the case of the formulation of the master plan for the selected area.

- 1. C.A. Doxiadis, "Ekistics", Oxford University Press, 1st edition, 1968.
- 2. Le Corbusier, "Towards a new Architecture", Martino Fine Books, 2014.
- 3. David Bell & Mark Jayne, " SMALL CITIES Urban Experience beyond the Metropolis", Routledge, $1^{\rm st}$ Edition, 2006.
- 4. Peter Bosselmann, "REPRESENTATION OF PLACES Reality and Realism in City Design", University of California Press. 1998.
- 5. Cecilia Tacoli-, "RURAL URBAN LINKAGES", Routledge; 1st Edition, 1996.
- 6. Christa van Santen, "LIGHT ZONE CITY Light Planning in the Urban Context", Birkhauser, 1st Edition ,2006.

COURSE CODE	18HDP36
COURSE	PROFESSIONAL TRAINING
PROGRESSIVE	-
VIVA	250
TOTAL MARKS	250
CREDITS	05

The training is intended to be an introduction to the various dimensions of professional practice in a firm.

OUTLINE:

The student is expected to work in a large Urban Design and Planning firm handling the following types of projects:

- a) Large scale projects like layouts, housing complexes, campuses involving a number of related buildings, site planning and landscaping.
- b) Urban infill projects
- c) Urban Brown field projects
- d) Revitalization projects of decaying parts of the city

The student is expected to familiarize himself/herself in the design decision making process involving urban issues and parameters in the design of cities.

The student is expected to familiarize himself/herself with the following;

a) administration of office b) soliciting and obtaining projects c) client meetings d) site visits e) drawings and detailing f) design process and presentation.

For the viva exam, the following need to be presented

a) Statement indicating the various types of works done by the student, b) drawings related to projects with which the student was associated c) photographs of project sites and d) any other material in support of student's involvement in the work.

The eight weeks (56 days) should immediately precede the commencement of regular course work of third semester.

IV SEMESTER

COURSE CODE	18HDC41
COURSE	DISSERTATION
CONTACT	20hrs /Week (Studio)
PROGRESSIVE	500
VIVA	500
TOTAL MARKS	1000
CREDITS	20

OBJECTIVE:

To demonstrate the ability to study and analyze diverse urban issues of varied scale and complexity and conclude with a design solution.

OUTLINE:

The scope of the dissertation will encompass the study of urban issues and current dilemmas in the urban-scape and the related theoretical framework, culminating in Design.

The dissertation would examine social, physical, economic, environmental, urban conservation issues with participatory and infrastructure provision-led objectives.

The project definition, program development, design & development process and implementation framework to form integral part of the project structuring.

Each student is required to select and work on an area/ topic approved by the Institution. Topic should be based on current issues, research and professional interests.

Format & guidelines shall be as laid down by the Institution.

LEARNING OUTCOME:

Students are able to individually develop and present a design demonstration of the selected topic.

COURSE CODE	18HDE42
COURSE	FUTURE OF HABITAT: CRITICAL ISSUES
CONTACT	2hrs /Week (Lecture)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To sensitize the students on the alternative scenarios available and possible for sustainable habitats of future.

OUTLINE:

Evolution of urban settlements, economic systems, political power structure and city formations. Industrial revolution and urbanization.

Contemporary cities - New Urbanism, Infrastructuralism, Everyday urbanism, Adhoc urbanism as futures. Cities within Cities.

New Technologies and city form.

Wired cities, globalised cities and controlled districts, pricing, exclusion, information highway and the breakdown of National boundaries. Neonomadism. Search for identities by globalised communities -Neo classicism, vernacular architecture and regionalism.

Urban Future as the future of people, Parallels in human development and urban development.

Loss of place, breakdown of identities and formation of new class structure.

Biotechnology and the loss of rural identities. The fusion of town and country.

Suggested seminar topics/ term papers:

Future trends and examples.

LEARNING OUTCOME:

Students have gained knowledge about concepts, alternative scenarios and trends for sustainable habitats of the future.

- 1. Christopher Alexander, "Network Cities", Oxford University Press, 1st Edition.
- 2. Geoffrey Broadbent, "Emerging concepts in Urban Space Design", Taylor & Francis,1st Edition,1995.
- 3. Tom Verebes, "MASTER PLANNING The Adaptive City Computational Urbanism in the Twenty-First Century", Routledge, 1st Edition, 2013.
- 4. Mao-Lin Chiu, "INSIGHTS OF DIGITAL CITIES", Archidata Co., Ltd, 2nd Edition.
- 5. Victor Gruen, "THE HEART OF OUR CITIES The Urban Crisis: Diagnosis and Cure", Simon and Schuster; 1st Edition, 1964.

COURSE CODE	18HDE43
COURSE	REAL ESTATE DEVELOPMENT AND FINANCE
CONTACT	2hrs /Week (Lecture)
PROGRESSIVE	100
EXAM MARKS	-
TOTAL MARKS	100
CREDITS	02

To familiarize students to the real-estate market mechanisms and their implications on the process of city development and resource mobilization.

OUTLINE:

Introduction and history of Real-estate Development.

Real-estate market and assessment techniques, economic cycles, demand and supply, values and rental structure and advertising.

International investments and the packaging, implications on Real estate market, public-private participation and Real-estate development agencies.

Real estate laws, rent control laws and other legal framework.

Investment and risk assessment techniques, market surveys & research, rating system in Real-estate market.

Infrastructure development and quality control, post development management and maintenance in Real-estate development.

Case studies of good practices in development of Real estate.

Suggested seminar topics/ term papers

Documentation of Real Estate practices in Indian and foreign markets.

LEARNING OUTCOME:

Students have gained knowledge of the real estate market mechanisms and their impact on city development process.

- 1. Michael Ball, Colin Lizieri, Bryan D. Macgregor, "The Economics of Commercial Property Markets", Routledge; 1st Edition, 1998.
- 2. Adrienne Schmitz, "Real Estate Market Analysis: A Case Study Approach", Urban Land institute;2001.