

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.

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

| Sl No | Subject Code | Title of Subject | Periods per week(1 Period=50 Mins.) | | | | Scheme of Examination | | | | Credits | |
|-------|----------------------------|---|-------------------------------------|--------|------------------------------|-------|-----------------------|--------|------------|------------|---------|-------|
| | | | Lecture | Studio | | Total | Duration (Hrs) | Theory | Prog Marks | Viva Marks | | Total |
| | | | | Core | Applied exercise/ Seminar | | | | | | | |
| 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 | - | 200 | 300 | 500 | 12 | |
| 7 | 18HDE17 | Virtual Imaging Techniques | - | - | 2 | 2 | - | - | - | - | 01 | |
| | 18HDE18 (Any one Elective) | Heritage Habitats: Conservation and Renewal | - | - | 2 | 2 | - | 50 | - | 50 | | |
| Total | | | 10 | 22 | 32 | - | 300 | 550 | 300 | 1150 | 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%

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.

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

| Sl No | Subject Code | Title of Subject | Periods per week(1 Period=50 Mins.) | | | | Scheme of Examination | | | | Credits | |
|-------|-------------------------------|---|-------------------------------------|--------|------------------------------|-------|-----------------------|--------|------------|------------|---------|-------|
| | | | Lecture | Studio | | Total | Duration (Hrs) | Theory | Prog Marks | Viva Marks | | Total |
| | | | | Core | Applied exercise/ Seminar | | | | | | | |
| 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 | 18HDC25 | Habitat Design Studio - II (Inner city regeneration and intervention) | 1 | 4 | 10 | 15 | - | - | 300 | 300 | 600 | 12 |
| 6 | 18HDE26 | Urban Economics | 2 | - | | 2 | - | - | 50 | - | 50 | 02 |
| | 18HDE27 (Any one Elective) | Humane Habitat and Revitalizing Core Areas | 2 | - | | 2 | - | - | | | | |
| Total | | | 10 | 20 | | 30 | - | 200 | 650 | 300 | 1150 | 24 |

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%

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.

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

| Sl No | Subject Code | Title of Subject | Periods per week(1 Period=50 Mins.) | | | | Scheme of Examination | | | | Credits | |
|-------|--------------|---|-------------------------------------|--------|------------------------------|-------|-----------------------|--------|------------|------------|---------|-------|
| | | | Lecture | Studio | | Total | Duration (Hrs) | Theory | Prog Marks | Viva Marks | | Total |
| | | | | Core | Applied exercise/ Seminar | | | | | | | |
| 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 | 18HDS34 | Research Methods | 2 | - | 2 | - | - | 50 | - | 50 | 02 | |
| 5 | 18HDC35 | Habitat Design Studio - III (New extensions to existing city) | 1 | 4 | 10 | 15 | - | 300 | 300 | 600 | 12 | |
| 6 | 18HDP36* | Professional Training | - | - | - | - | - | - | 300 | 300 | 04 | |
| TOTAL | | | 09 | 18 | 27 | - | 200 | 550 | 600 | 1350 | 26 | |

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%

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

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI.

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

| Sl No | Subject Code | Title of Subject | Periods per week(1 Period=50 Mins.) | | | | | Scheme of Examination | | | | Credits |
|-------|-------------------------------|--------------------------------------|-------------------------------------|--------|------------------------------|-------|----------------|-----------------------|------------|------------|-------|---------|
| | | | Lecture | Studio | | Total | Duration (Hrs) | Theory | Prog Marks | Viva Marks | Total | |
| | | | | Core | Applied exercise/ Seminar | | | | | | | |
| 1 | 18HDC41 | Dissertation Seminar | - | - | 4 | 4 | - | - | 100 | - | 100 | 02 |
| 2 | 18HDC42 | Dissertation | 1 | 10 | 10 | 21 | - | - | 400 | 400 | 800 | 21 |
| 3 | 18HDE43 | Future of Habitat: Critical Issues. | 2 | - | - | 2 | - | - | 50 | - | 50 | 02 |
| | 18HDE44 (Any one Elective) | Real Estate development and Finance. | 2 | - | - | 2 | - | | | | | |
| Total | | | 3 | 24 | | 27 | - | - | 550 | 400 | 950 | 25 |

Courses:

HDC: Habitat Design Core Course

HDE: Habitat Design Elective Course

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.

Reference books:

1. Kevin Lynch- Imageability of City
2. Camillo Sitte -City Planning according to Artistic principles
3. Kevin Lynch -Good City Form
4. Rob Krier -Urban street and Squares
5. Gordon Cullen -Townscapes
6. Time-Savers Standards for Urban Design

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

OBJECTIVE:

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

Reference books:

1. Arthur Gallion - Urban Pattern
2. Siddhartha N.Mukherjee -Cities -Urbanization and Urban System
3. Peter Hall -Urban and Regional Planning
4. K.P.Yadav, Vol 1-5- Encyclopedia of Economic Planning and Development

| | |
|--------------------|--|
| 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 |

OBJECTIVE:

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 contemporary 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.

Reference books:

1. Jon Lang -Creating Architectural Theory
2. Jon Lang -Urban Design
3. Kate Nesbit -Theorizing A New Agenda For Architecture
4. Geoffrey Broadbent, Richard Bunt, and Charles Jencks- Signs, Symbols and Architecture

| | |
|--------------------|--|
| 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 |

OBJECTIVE:

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.

Reference books suggested:

1. Ralph Thomlinson -Urban structure, social and Spatial character of cities
2. G.Duscan Mitchell -A new Dictionary of Sociology
3. Dr. Naseem A. Azad -Social and Economic Problems
4. Gordon Marshall -Oxford Dictionary of Sociology.

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 |

OBJECTIVE:

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.

Reference books suggested:

1. Khanna and Justo -Highway Engineering
2. Kadiyali L R.-Traffic Engineering and Transportation Planning
3. Dimitriou H.T.- Urban Transport Planning and Developmental Approach
4. Michael J Bruton,- An Introduction to Transportation Planning
5. John Black -Urban Transport Planning and Design.

| | |
|--------------------|--|
| COURSE CODE | 18HDC16 |
| COURSE | HABITAT DESIGN STUDIO-I(A SMALL COMMUNITY LEVEL STUDY OF EXISTING HABITATS) |
| CONTACT | 15hrs /Week (Lecture + Studio) |
| PROGRESSIVE | 200 |
| VIVA | 300 |
| TOTAL MARKS | 500 |
| CREDITS | 12 |

OBJECTIVE:

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.

Reference books:

1. Cliff Moughtin Urban Design - Street and Square
2. Kevin lynch -Site Planning

| | |
|--------------------|-----------------------------------|
| 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 3 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.

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

OBJECTIVE:

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.

Reference books:

1. Alan Dobby -Conservation and Planning
2. Herat – The Islamic City (A study in Urban Conservation)
3. Bernard Feildan- Conservation of Historic Buildings.

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 reconfiguration 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. Modern 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.

Reference books:

1. Spiro Kostoff -City shaped
2. Sumita Ghosh -Introduction to settlement geography
3. Michael Pacione -Urban Geography: A Global perspective.
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 |

OBJECTIVE:

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.

Reference books:

1. Dominique Gauzin-muller -Sustainable Architecture and Urbanism
2. Victor Olgay -Design with Climate
3. Givony B -Urban Design in Different Climates
4. P.L.Lombardi -Evaluation of the Built Environment for Sustainability
5. Sudhakar Reddy -Urban Energy Systems
6. B.R.Barthwal -Environment Impact Assessment.

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

OBJECTIVE:

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.

Reference books:

1. Givoni B -Climate and Urban Design
2. TSS - Landscape Design
3. UDPFI, CPHEEO Manuals
4. Ian McHarg -Design with Nature
5. Kevin Lynch- Site Planning
6. Brian Hackett - Planting design
7. Geoffrey Broadbent - Emerging concepts in Urban Space Design.

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

OBJECTIVE:

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

Reference books:

1. Eduardo Vasconcellos -Urban Transport, Environment and Equity
2. B.G.Hutchinson -Principles of Urban Transport Systems Planning .

| | |
|--------------------|---|
| COURSE CODE | 18HDC25 |
| COURSE | HABITAT DESIGN STUDIO-II(INNER CITY REGENERATION AND INTERVENTION) |
| CONTACT | 15hrs /Week (Lecture + Studio) |
| PROGRESSIVE | 300 |
| VIVA | 300 |
| TOTAL MARKS | 600 |
| CREDITS | 12 |

OBJECTIVE:

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.

Reference books

1. Geoffrey Broadbent -Emerging concepts in urban space design.
2. Land Development Handbook, Planning Engineering and Surveying by Dew, Berry and Davis.
3. Urban Design – Green Dimensions by Cliff Moughtin.

| | |
|--------------------|------------------------|
| COURSE CODE | 18HDE26 |
| COURSE | URBAN ECONOMICS |
| CONTACT | 2hrs /Week (Lecture) |
| PROGRESSIVE | 50 |
| EXAM MARKS | - |
| TOTAL MARKS | 50 |
| CREDITS | 02 |

OBJECTIVE:

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.

Reference books

1. Jack Harvey -Urban Land Economics
2. Amitabh Kundu-Urban land markets land price changes.

| | |
|--------------------|---|
| COURSE CODE | 18HDE27 |
| COURSE | HUMANE HABITAT AND REVITALISING CORE AREAS |
| CONTACT | 2hrs /Week (Lecture) |
| PROGRESSIVE | 50 |
| EXAM MARKS | - |
| TOTAL MARKS | 50 |
| CREDITS | 02 |

OBJECTIVE:

To sensitize the students to issues which pushed to the margins in the race for development and to reinstate the citizen in the centre 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

Reference books

1. Lewis Mumford- Culture of Cities.

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.

Reference books:

1. Government of India, UDPFI Guidelines.
2. The Karnataka Government Town And Country Planning Act.
3. National Building Code.
4. Herbert Girardet-The GAIA Atlas of Citie.
5. C S Yadav- URBAN PLANNING AND POLICIES -Volume 16-A -Part A: Reorientation of Policy Norms.
6. S. Kostoff. The City Shaped. London: Thames and Hudson, 1991.
7. Kevin Lynch: City sense and city design.

| | |
|------------------------|--|
| 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 |

OBJECTIVE:

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.

Reference books:

1. P K Sarkar -Housing laws in India – Problems and Remedies.
2. Kavita Datta and G.A.Jones - Housing Finance In Developing Countries.
3. Cedric Pugh - Housing and Urbanization.
4. P K Guha -Housing- AN Indian Perspective.
5. K Ranga Rao & M S A Rao -CITIES & SLUMS - A study of squatters' settlement in the city of Vijayawada.
6. Geoffrey Kayne- Urban Housing in the 3rd world.

7. N V Modak- Town and Country Planning and Housing.
8. A. Karan- The ownership and Management of housing in the New Town.

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

OBJECTIVE:

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.

Reference books:

1. Daniel Halpin and Ronald Woodhead- Construction Management.
2. Krishnamurthy and S.V.Ravindra- Construction Management.
3. Prasanna Chandra-Projects Planning, Analysis, Selection, Financing, Implementation and Review.
4. L S Srinath-PERT and CPR-Principles and Application.

| | |
|--------------------|-------------------------|
| COURSE CODE | 18HDS34 |
| COURSE | RESEARCH METHODS |
| CONTACT | 2hrs /Week (Lecture) |
| PROGRESSIVE | 50 |
| EXAM MARKS | - |
| TOTAL MARKS | 50 |
| CREDITS | 02 |

OBJECTIVE:

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, Pre- testing, 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

Reference books:

1. Ram Ahuja- Research Methods.
2. Dr Kothari-Research Methodology: Methods & Techniques.
3. Fred N Kerlinger- Foundations of Behavioral research.
4. Kumar- Research methodology.

| | |
|--------------------|---|
| 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 |

OBJECTIVE:

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.

Reference books:

1. C.A. Doxiadis –Ekistics.
2. Le Corbusier- Towards a new Architecture.
3. David Bell & Mark Jayne- SMALL CITIES - Urban Experience beyond the Metropolies
4. Peter Bosselmann- REPRESENTATION OF PLACES - Reality and Realism in City Design.
5. Cecilia Tacoli- RURAL URBAN LINKAGES.
6. Christa van Santen- LIGHT ZONE CITY - Light Planning in the Urban Context.

| | |
|--------------------|------------------------------|
| COURSE CODE | 18HDP36 |
| COURSE | PROFESSIONAL TRAINING |
| PROGRESSIVE | - |
| VIVA | 300 |
| TOTAL MARKS | 300 |
| CREDITS | 04 |

OBJECTIVE:

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
- 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 SEMINAR |
| CONTACT | 4hrs /Week (Studio) |
| PROGRESSIVE | 100 |
| EXAM MARKS | - |
| TOTAL MARKS | 100 |
| CREDITS | 02 |

OBJECTIVE:

To study any one component of an existing urban area 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.

| | |
|--------------------|--------------------------------|
| COURSE CODE | 18HDC42 |
| COURSE | DISSERTATION |
| CONTACT | 21hrs /Week (Lecture + Studio) |
| PROGRESSIVE | 400 |
| VIVA | 400 |
| TOTAL MARKS | 800 |
| CREDITS | 21 |

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 urbancape 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.

| | |
|--------------------|---|
| COURSE CODE | 18HDE43 |
| COURSE | FUTURE OF HABITAT: CRITICAL ISSUES |
| CONTACT | 2hrs /Week (Lecture) |
| PROGRESSIVE | 50 |
| EXAM MARKS | - |
| TOTAL MARKS | 50 |
| CREDITS | 02 |

OBJECTIVE:

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.

Reference books:

1. Christopher Alexander -Network Cities.
2. Geoffrey Broadbent- Emerging Concepts in Urban Design.
3. Tom Verebes- MASTER PLANNING - The Adaptive City - Computational Urbanism in the Twenty-First Century.
4. Mao-Lin Chiu ed- INSIGHTS OF DIGITAL CITIES.
5. Victor Gruen- THE HEART OF OUR CITIES - The Urban Crisis: Diagnosis and Cure.

| | |
|--------------------|--|
| COURSE CODE | 18HDE44 |
| COURSE | REAL ESTATE DEVELOPMENT AND FINANCE |
| CONTACT | 2hrs /Week (Lecture) |
| PROGRESSIVE | 50 |
| EXAM MARKS | - |
| TOTAL MARKS | 50 |
| CREDITS | 02 |

OBJECTIVE:

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

Reference books:

1. Michael Ball, Colin Lizieri, Bryan D. Macgregor-The Economics of Commercial Property Markets.
2. Adrienne Schmitz - Real Estate Market Analysis: A Case Study Approach.