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**Total no of credits required for the award of the degree** 75

### List of Electives- M. Arch (Landscape Architecture)

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L - Lecture     T - Tutorial     P - Practical / S - Studio     C - Credits
OBJECTIVES:
- Introduction to the characteristics and impact of the landform which are shaped by the forces of the Earth and its influences on the landscape.
- This course introduces these processes and their impact. In addition the objective of the course is also to give detailed knowledge on the soils.

UNIT I  INTRODUCTION  15

UNIT II  STUDY OF LANDFORMS  12
Evolution of land forms: Land forms produced by geomorphic process – Reclamation of land forms, Land forms along coasts. Man’s intervention into Ecology and Environment-case studies in India, Deterioration of landscapes by Mining of minerals. Suitability of land for various developments, Surface and Groundwater resources management, Quality of water for drinking. Hydraulic effects caused by rapid urbanization, Concept of rainwater harvesting.

UNIT III  SOIL CHARACTERISTICS  6
Soil forming minerals – Weathering & Erosion, Soil profile, Role of climate, Rainfall, Vegetation, Topography and Time factors in soil formation. Soil classification, Soil water, Soils of India. Soil properties, Physical, Chemical and Biological properties, Sustainability of soil for development activities.

UNIT IV  SOIL ANALYSIS  6
Soil analysis, Soil survey and field mapping, land capability classifications. Role of remote sensing in soil mapping.

UNIT V  SOIL MODIFICATIONS  6

TOTAL: 45 PERIODS

OUTCOMES:
- Characteristics of landforms, causes and effects.
- Soil characteristics, causes and effects and modifications.
- Methods of analysis of soils.

REFERENCES:
OBJECTIVES:
- Introduction of basic hydrology and its link with various landscape processes.
- To understand the issues, involved in macro and micro climate.
- To expose the students on Landscape design in various climate types
- To have and understanding on the evaluation tools in micro climate.

UNIT I HYDROLOGICAL SYSTEMS 6
Hydrological cycles and sources of water. Characteristics and management of drainage basins. Types of flow channels, management of surface water. Ground water occurrence, aquifer recharge areas, infiltration, water intrusion areas, water bearing properties of geological formations, salt water intrusion, leaching etc.,

UNIT II WATER MANAGEMENT 9
Ground water management, sources of ground water pollution and its control, use of saline brackish water for development. Impacts of hydrology on environment and landscape development, rain water harvesting methods, water treatment techniques, sewage water treatment and reuse in landscape, waste water and sewage water disposal methods on different types of soils, septic tank, soak pit designs.

UNIT III INTRODUCTION TO THE CLIMATE 12

UNIT IV CLIMATE AND LANDSCAPE DESIGN 10

UNIT V MICRO CLIMATE CONTROL 8
Impact of natural and man-made elements on climate. Radiation, wind, temperature, humidity and precipitation modification. Sustainable micro climatic design. Integration of microclimatic information in design and case studies.

TOTAL: 45 PERIODS

OUTCOMES:
- Knowledge about water management.
- General understanding of climate and elements of micro climate and the relationship to landscape elements.
- An understanding of micro climate modifiers.

REFERENCES:
2. Anne Simon Moeffat & Marc Schier, Landscape design that saves energy, William Marison & Co, N.Y. 1981
OBJECTIVES:
- Introduction to the characteristics of Plant materials which are an important part of soft landscape, international nomenclature used for plants and their associations in nature.
- To promote understanding of the factors that regulate the growth and characteristics of the plant material.

UNIT I CHARACTERISTICS OF PLANT MATERIALS

UNIT II FLORISTIC REGIONS OF INDIA
Different floristic regions and forest types of India. Dominant, endemic, occasional, prevalent species in select types.

UNIT III PLANT PROPAGATION
Nursery establishment and plant propagation. Establishment and maintenance of grass, shrubs and trees with respect to ground preparation, planting and transplanting, protection of plants during and after planting.

UNIT IV HORTICULTURAL PRACTICE

UNIT V LANDSCAPE MAINTENANCE
Maintenance methodology, maintenance economics and maintenance details for all soft landscape. Equipment for landscape maintenance.

TOTAL: 45 PERIODS

OUT COMES:
- Knowledge of Binomial nomenclature of plants.
- Aspects of Plant growth and propagation, thereby understanding the Maintenance requirement of plants.

REFERENCES:
1. Raunkier.C., the Life forms of Plants and statistical plant geography, 1934.
5. G.S.Puri, Forest types of India.
OBJECTIVES:
- The objective of this course is to equip the students in the techniques of detailing and drawing of Landscape design at site scale.

UNIT I LANDSCAPE GRAPHICS
Symbols of representation of landscape elements in plan, elevation and section.

UNIT II DESIGN OF LANDFORMS
Contours – representation of landforms and landform design, interpolation of contours, slope analysis, uses and function.
Grading – symbols and abbreviations, basic grading exercises, grading alignment of paths/roads, angle of repose and use of retaining walls.

UNIT III EARTHWORK FORMATION
Earth works – principles of earth work, cut and fill calculations – borrow pit method, average end area method, average spot level method, precautions taken in cut and fill methods in relation to soil conditions, amount of precipitation etc.,

UNIT IV HARD LANDSCAPES
Design and detail of hard landscapes – Roads, paving, barriers, edge conditions – functions, types, criteria for selection, design aspects, details.

UNIT V OUTDOOR FURNITURE
Criteria for the selection of materials and specifications for the street furniture in various environments. Design of signage and simple outdoor structures like pavilions, gazebos etc.
Use of waste materials in landscape, recycling and reuse of materials, their impact on landscape design.
Preparation of working drawings for hard landscaping and services.

TOTAL: 75 Periods

OUTCOMES:
- Techniques of drawing landscape and site elements.
- Detailing of site elements like earthwork, hard landscape and outdoor furniture.

REFERENCES:
OBJECTIVES:

- To study the social and cultural influences on traditional landscapes through analysis of form and space, siting principles of each period with examples.
- To study contemporary landscape and the manifestation in the western and Indian context.

UNIT I EASTERN TRADITIONS AND ISLAMIC LANDSCAPES


UNIT II RENNAISSANCE AND THE EVOLUTION OF NEW THOUGHTS


UNIT III THE EVOLUTION OF THE MODERN LANDSCAPE

Industrialization and urbanization – impacts and development of the concept of public open spaces, open space development in new towns, parks movement. Open space development and its urban design and planning context, Early industrial towns and the garden city movement. Public park as a major component of urban landscape, the works of F.L. Ohmstead, and other pioneers. Open space development and Close conceptual relationship between Town planning, urban design and landscape architecture. Examples.

UNIT IV THE MODERN MOVEMENT, CONTEMPORARY CONCEPTS AND CONCERNS

Changing concepts of space and the relationship of architecture to landscape. Study of selected works of modern architects and landscape architects. Postwar development in Europe. The influence of Ian Mcharg on Landscape architecture. The works of Jellicoe, Burle Marx and others.

Concept of sustainable landscape development, Cultural landscapes their definition, identification, characteristics, policies, Artistic sensibility in landscape architecture and land art, New development in urban Landscape design.

UNIT V INDIAN CONTEXT

Issues in contemporary India, Analysis and understanding of philosophies of contemporary landscape works in India, case studies.

TOTAL 45 PERIODS

OUTCOMES:

- Relationship between culture and Landscape design.
- Perception of open spaces in different cultures.
REFERENCES:
3. Penelope Hill, Contemporary history of garden design, Birkhauser publishers, 2004

LN8153 URBAN LANDSCAPE DESIGN L  T  P/S  C
3  0  0  3

OBJECTIVE:
• To expand the students knowledge on landscape within urban areas and open spaces in Urban context.

UNIT I INTRODUCTION
City and pattern – hierarchy of streets and squares – spatial organization and land use – road networks and basic services. Open spaces with in urban environment.

UNIT II URBAN SPACES
Cultural, social and aesthetic value of urban spaces and its perception, Imageability, Townscape elements. Urban space enhancement.

UNIT III OPEN SPACE SYSTEM

UNIT IV ELEMENTS IN URBAN LANDSCAPE
Design of public parks, roads, green ways, parkways, promenade and plaza. Public art. Plant selection criteria, furnishings and lighting of public space, maintenance and management of public spaces and parks.

UNIT V CASE STUDIES
Contemporary urban landscape issues. Case studies-Study, understanding and analysis of known examples at the national and international levels.

TOTAL: 45 PERIODS

OUTCOMES:
• Types, characteristics and elements of urban open spaces.
• Case studies of urban landscapes.
REFERENCES:
8. Tom turner, city as landscape, Eand FN spon, 1996.

LN8201 LANDSCAPE CONSTRUCTION L T P/S C
2 0 4 4

OBJECTIVES:
- To train the students in the detailing and drawing of landscape elements and features like lighting, play area, terraces and water features.
- The course discusses the management of water in site through landscape design.

UNIT I OUTDOOR LIGHTING
Definition of technical terms, types of electrical lighting, types of fixtures, auxiliary fixtures. Principles of design for outdoor illumination, design and type of effects with electrical lighting. Safety precautions and drawbacks of electrical lighting, electrical accessories and their installation. Solar energy and lighting.

UNIT II PLAY AREA AND TERRACE LANDSCAPING
Design of play areas -Totlots to play grounds. Design and detail of play equipments. Considerations, design and detail for terrace landscaping, concept of green roof - intensive and extensive.

UNIT III WATER FEATURES
Design of water features such as swimming pools, cascades, fountains etc., and their technical requirements. Consideration for design and detail. Water bodies and natural ponds.
Design of irrigation system – landscape area types, objectives and design, water needs and sources, application, methods of installation. Control systems, scheduling and maintenance.

UNIT IV STORM WATER MANGEMENT
Drainage – surface drainage, calculation of surface run off, design of surface and storm water drainage, design of swales and gutters.

UNIT V WATER RESOURCES PLANNING
Water shed and their characteristics, urban storm water drainage systems, protection of natural water bodies, water retention structures, water harvesting techniques and devices.

TOTAL:75 PERIODS

OUTCOMES:
- Detailing and drawing of landscape elements and features.
- Water management through landscape design.
REFERENCES:

LN8202 LANDSCAPE DESIGN STUDIO – I L T P/S C
0 0 12 6

OBJECTIVE:
- The objective of this course is to introduce the students to Landscape design.

Studio work shall deal with an appreciation of basic landscape design issues and elements – simple site planning, use of plant materials for defining and structuring the open spaces, landscape treatment in relation to the buildings, understanding the aesthetic qualities of the plant materials and their associations.

The studio exercises will involve three or four of the following situations – Campus landscape, Group housing, specialized human landscapes at different situations, parks and garden design. Understanding the function and structuring of outdoor spaces would be the underlying theme.

TOTAL:180 PERIODS

OUTCOME:
- Landscape Design of small projects primarily involving site planning and design.
- Introduction to Planting design.

LN8203 PLANTING DESIGN L T P/S C
3 0 0 3

OBJECTIVES:
- This course discusses in detail about the various aspects of designing plants.
- It also emphasizes on the applications of planting design in the practice.

UNIT I INTRODUCTION TO PLANTING DESIGN 9
Introduction to planting design. Plants as living materials, landscape architect’s view of plants. Plants as structural, functional and decorative elements. Structural characteristics of plants. Spatial functions of plants, ground level planting, below knee height, knee to eye level, above eye level planting, tree planting.

UNIT II CREATING SPACES WITH PLANTS 9
Experience of spaces, use of planting to manipulate spatial experience, elements of spatial composition – enclosure, dynamics and focus. Plant associations. Plant communities, Designing with canopy layers – 3 layers, 2 layers and single layer. Plants as a part of integral habitats.
UNIT III VISUAL COMPOSITION IN PLANTING DESIGN
Subjective and objective responses to plant material. A study on form, shape, colour, texture, growth characteristics and suitability to different environments. Principles of visual composition - harmony and contrast, Balance, Emphasis, Sequence, Scale, Unity and variety in planting design.

UNIT IV PLANTING DESIGN FOR HABITAT CREATION
Planting strategies and species for various types of habitats – wooded areas, grassland and meadows, wetlands, coastal edges, waterside and aquatic planting, slope retention, and plants for restoration of disturbed habitats.

UNIT V APPLICATIONS IN PRACTICE
Study of local plant materials, their botanical, common and regional names, growth characteristics and application in design. Visit to nurseries. Introduction to soft landscape working drawings, planting plans, specifications and estimation.

TOTAL: 45 PERIODS

OUTCOMES:
- Basics of planting design
- Applications of planting design

REFERENCES:

LN8251 LANDSCAPE ECOLOGY AND PLANNING L T P/S C
3 0 0 3

OBJECTIVES:
- To understand any developmental activity involves intervention in the natural processes and to minimize the impact due to this intervention.
- To outline the evolution of landscape planning, its premises and the process.

UNIT I ECOLOGY

UNIT II LANDSCAPE ECOLOGY
Introduction to landscape ecology – formation of various landforms – landforms and landscape process – pattern and structure of landscapes– concepts of patch, corridor and matrix - landscape dynamics and function – topological and chorological process within landscape - concept of landscape metrics – understanding dynamic interaction between landscape structure and function – ecological services of landscape.
UNIT III          LANDSCAPE PLANNING
Relationship between man and nature – analytical aspect of landscape - the natural and cultural setting - evolution of landscape planning – concepts and projects of McHarg, Carl Steinite, Warren Manning, Augus Hills, Phil Lewis – Izank Zonneveld, Ervin Zube - landscape planning models – METLAND concept

UNIT IV         PROCESS IN LANDSCAPE PLANNING
The purpose of landscape planning – domain and context for landscape planning – principles of planning – procedure in landscape planning - problem defining, goal setting, inventory and analysis - basic of collecting and analyzing, projecting and presenting data in landscape planning, visual assessment and aesthetic dimension.– Suitability analysis – techniques for identifying preferences - Planning options – proposing landscape plan.

UNIT V         CASE STUDIES: LANDSCAPE PLANNING
Reclamation and restoration of derelict landscapes - conservation and preservation of ecological fragile areas such as wetlands, creeks etc. - conservation ordinances. Case studies on landscape regional planning - policies and landscape.

TOTAL: 45 PERIODS

OUTCOMES:
- Landscape planning history, evolution, process and case studies.

REFERENCES:

LN8301     ADVANCED LANDSCAPE DESIGN STUDIO– II

OBJECTIVE:
- The objective of this course is to train students in advanced landscape design involving complex situations that require handling of multiple information and contexts.

The studio exercises will involve three or four of the following situations – urban context, historical landscape, specialized landscape situations, industrial landscapes, recreational landscapes. Understanding of ecologically sustainable development would be the underlying theme.

TOTAL: 180 PERIODS

OUTCOME:
- Training in advanced Landscape design.
LN8302  DISSERTATION  L T P/S C  0 0 6 3

OBJECTIVE:
- To promote research in Landscape architecture. In addition this course will also train the students in collecting, critically analyzing and presenting information in a logical sequence.

Topics related to various aspects of Landscape Architecture could be chosen in consultation with faculty members, comprehensively researched and findings presented in a series of seminars by individual students. The materials would be documented and formally presented as a dissertation at the end of the semester.

TOTAL: 90 PERIODS

OUTCOMES:
- Research on a chosen topic.
- Expertise in collecting, processing and presenting relevant information.

LN8303  ENVIRONMENTAL LEGISLATION AND EIA  L T P/S C  3 0 0 3

OBJECTIVE:
- To familiarize the students to the environmental legislation and its components and it’s role in checking the damage to the environment

UNIT I  COMPONENTS OF ENVIRONMENT  6
Environmental sciences, Environment – definition, important components, quality of total environment.

UNIT II  HUMAN IMPACT ON ECOSYSTEMS  12

UNIT III  ENVIRONMENTAL LEGISLATION  9

UNIT IV  CONSERVATION AND PRESERVATION  9
Legislation relating to preservation of parks, open spaces, playgrounds, trees and ancient monuments. Legislation related to air, water, Land pollution prevention.
UNIT IV  ENVIRONMENTAL IMPACT ASSESSMENT  9
Environmental impact assessment – definitions, methodologies, techniques, advantages
and disadvantages. Process – data collection, identification of study area, scope, aim,
environmental standards and their measurement. EIA in India, legislation related to EIA,
EIA in developed and developing countries

OUTCOMES:
- Background and evolution of Environmental legislation.
- The various legislation concerned with the environment.
- EIA and its components

REFERENCES:
2. Avjit gupta and Mukul.G.Asher, Environment and the developing world, John wiley
5. Rosencrany, a.Diwan, Noble.M, Environmental law and policy in India (Cases, 

AA8351  RESEARCH METHODOLOGIES IN ARCHITECTURE  L T P/S C
3 0 0 3

OBJECTIVES:
- To make the students to distinguish various theoretical ideologies influencing the
  philosophy and values of architecture.
- To establish the sense of systematic inquiry in students mind to analyze and
  infer the issues and aspects relating to Architecture.

UNIT I  INTRODUCTION  9
Basic research issues and concepts- orientation to research process- types of research: 
historical, qualitative, co-relational, experimental, simulation and modeling, logical
argumentation, case study and mixed methods- illustration using research samples

UNIT II  RESEARCH PROCESS  9
Elements of Research process: finding a topic- writing an introduction- stating a purpose
of study- identifying key research questions and hypotheses- reviewing literature- using
theory- defining, delimiting and stating the significance of the study, advanced methods
and procedures for data collection and analysis- illustration using research samples

UNIT III  RESEARCHING AND DATA COLLECTION  9
Library and archives- Internet: New information and the role of internet; finding and
evaluating sources- misuse- test for reliability- ethics
Methods of data collection- From primary sources: observation and recording, interviews
structured and unstructured, questionnaire, open ended and close ended questions and
the advantages, sampling- Problems encountered in collecting data from secondary
sources-

UNIT IV  REPORT WRITING  6
Research writing in general- Components: referencing- writing the bibliography-
developing the outline- presentation; etc.
UNIT V  
CASE STUDIES
12
Case studies illustrating how good research can be used from project inception to completion- review of research publications

TOTAL: 45 PERIODS

OUTCOMES:
- The student will develop the skill to identify, decipher and interpret the issues relating to Architecture, based on research enquiry methods.
- The student will widen the information and will prepare the students for scientific method of researching and research process.

REFERENCES:
1. Linda Groat and David Wang; Architectural Research Methods;
2. Wayne C Booth; Joseph M Williams; Gregory G. Colomb; The Craft of Research, 2nd Edition; Chicago guides to writing, editing and publishing;
4. Ranjith Kumar; Research Methodology- A step by step guide for beginners; Sage Publications; 2005
5. John W Creswell; Research design: Qualitative, Quantitative and Mixed Methods Approaches; Sage Publications; 2002

LN8401  
PROFESSIONAL PRACTICE OF LANDSCAPE ARCHITECTURE  
L T P/S C  
3 0 0 3

OBJECTIVE:
- The objective of this course is to educate the students on the various aspects of a Landscape design practice.

UNIT I  
THE PROFESSION OF LANDSCAPE ARCHITECTURE  
6
Brief history of profession, Professional career tracks, Registration and License, professional ethics and code of professional conduct.

UNIT II  
PRINCIPLES OF PROFESSIONAL PRACTICE  
9
The client- different kinds of clients and projects, general concept for engaging the services of landscape architect. The extent and variety of services performed by landscape architect, terms and conditions.

UNIT III  
PROFESSIONAL RELATIONSHIPS  
9
Interface with other consultants and contracting agencies. Prime consulting, Multiple direct- consulting, Sub consulting relationships. Relationship between the Landscape architect and Clients, Allied professional, contractor, General public.

UNIT IV  
PROFESSIONAL APPROACH  
12
UNIT V  PROJECT MANAGEMENT
Planning, and organizing the project. PERT and CPM. Project supervision, co-
ordination between different agencies, Monitoring a project during execution and
preparation of site reports.

TOTAL: 45 PERIODS

OUTCOMES:
- Knowledge about landscape consultancy practice.
- Information about the profession.

REFERENCES:
1. Walter Rogers, The Professional practice of landscape architecture, Van nostrand

LN8411  THESIS  L T P/S C
0 0 22 11

OBJECTIVE:
- The objective of this course is to train the students to work individually on
  projects.

Thesis will be an individual project dealing with complex problems of landscape
architecture including site planning and landscape planning and seeks to develop
concepts of landscape design as an interactive process of natural and man-made
environment.

TOTAL:330 PERIODS

OUTCOME:
- Training in handling projects alone.

LN8001  APPLICATION OF GIS IN LANDSCAPE DESIGN  L T P/S C
3 0 0 3

OBJECTIVES:
- GIS is being increasingly used worldwide for landscape planning and restoration
  projects.
- The objective of the course is to train the students in the application of GIS in
  Landscape design.

UNIT I  INTRODUCTION
Classification of Spatial and non-spatial data - spatial relationships among elements /
activities – fundamentals of topological relationship - spatial data and their
representation in maps - raster and vector based system to representing spatial objects
- objective and functions Geographical Information System – GIS software in general -
over view of GIS map components.

UNIT II  MAP PREPARATION AND DISPLAYING
Basics of GIS maps preparation – digitization of spatial data - concept of point, line and
polygon features - fundamental of coordinate system – map layers and geo-
referencing – displaying spatial features – adding attribute values to the features –
preparing and displaying thematic layers and maps - selecting and editing spatial
features and attribute data - preparing Grid surfaces form point, line and polygon
features.
UNIT III SPATIAL ANALYSIS USING GIS

UNIT IV APPLICATIONS OF GIS IN LANDSCAPE ARCHITECTURE

UNIT V LANDSCAPE PLANNING AND GIS

TOTAL: 45 PERIODS

OUTCOMES:
- Techniques of Map preparation and analysis using maps.
- Application of GIS in Landscape Architecture.

REFERENCES:

LN8002 COMPUTER APPLICATIONS AND MANAGEMENT
INFORMATION SYSTEMS
OBJECTIVE:
- To aid the students in gaining understanding of the various computer programs that can be used by them in their presentations.

UNIT I INTRODUCTION
The use of computer software (Photo-Shop and Illustrator) for the processing of words and images. Issues, ideas, themes of representation and imaging in digital media using some of graphic material.

UNIT II APPLICATION OF COMPUTERS IN THE DESIGN PROCESS
Various projection and graphic techniques. Developing skills in visualization and eidetic representation using the computer as tool for developing design projects. Advanced work with Photo-Shop and Illustrator, and in particular techniques with AutoCAD.
UNIT III  COMPUTERS AND DESIGN PRESENTATIONS  9
Means for integration of fundamentals and techniques. The interactive realm of 3D modeling and animation using primarily FORM-Z modeling programs.

UNIT IV  NON LINEAR PRESENTATION (FLASH AND DIRECTOR)  9
Importing files using standard and linking options. Using scripts and behaviors, understanding stage, cast and timeline, using cast library, Tweening, using swf movie, presentation using voice over and presentation demos, creating auto run cd roms.

UNIT V  CASE STUDIES  9
Exploring the various design media as they relate to form, image, sequence, movement, and animation through a series of weekly exercises.

OUTCOMES:
- Knowledge about computer software that can be used for presentations
- Application of these programs in producing their design presentations.

REFERENCES:

LN8003  LANDSCAPE MANAGEMENT  L T P/S C  3 0 0 3

OBJECTIVES:
- To introduce the students to Landscape management is an integral part of Landscape planning and design
- This course elaborates on the various techniques for assessment and valuation of natural resources and their management.

UNIT I  INTRODUCTION  9

UNIT II  ENVIRONMENTAL ECONOMICS IN LANDSCAPE  9
Valuation of landscape services– measuring benefits and cost- tangible costs of landscape development, capital and maintenance cost - modification of natural system and environmental costs.
UNIT III      LANDSCAPE ASSESSMENT

UNIT IV      MODELS IN LANDSCAPE ASSESSMENT

UNIT V      MANAGEMENT
Landscape management at the regional scale in relation to soil conservation. Land use planning and resource management - water management, forest management, grassland and agricultural management. Management practice related to urban ecology and urban habitats such as urban forests, urban water sheds, regional parks, green belts. Ecological. Economic and administrative issues, management models.

TOTAL: 45 PERIODS

OUTCOMES:
- Knowledge of Landscape Assessment techniques and valuation of natural resources.
- Case studies of Landscape management.

REFERENCES:
OBJECTIVE:

- To examine the role and application of Geographic Information Systems in environmental design, community charities and other urban design projects.

UNIT I INTRODUCTION

GIS – Spatial data, non Spatial data, Plan, Map, Scale, Map Projection, GPS, GCP collection, Spectral signature curve, Image processing – Geo coding / Geo referencing, GIS software, Two tier architecture, Three tier architecture, Thin client, Thick client

UNIT II DATABASE CONCEPTS

Data structures, Databases, Files, Types of Tables, Table operations, Creating a Table, Accessing Records in a Table, Manipulating records in a Table, Modifying Table structure, Reports, Advantages of database, Primary key and data access, Composite primary key, Defining a primary key, Sorting, Indexing, Master Detail relationships, Types of relationships, Foreign key, Deleting, updating and adding records to linked tables, ER Diagram, Data Model – Physical, logical and conceptual.

UNIT III SPATIAL DATA


UNIT IV INTRODUCTION TO GIS SOFTWARE

Arc Info – Coverage – Arc, Node, Tics, Add, get, put, Map extent, edit, Topology creation – Clean, Build, Tables – Creating tables, updating tables, join, drop item, Export, Import, overlay, union, intersection, buffer.

UNIT V MODELLING GIS PROJECTS FOR URBAN AREAS

Preparation of Land use map, Land use suitability analysis, Screen design, Visual Basic application using Map objects.

TOTAL:45 PERIODS

OUTCOMES

- The student will increase the knowledge on GIS and the various characteristics of Data.
- The student will accept the potential of GIS and develop integrated practice of using the GIS application with architecture.

REFERENCES:

1. Information systems for Urban Planning – Robert Laurini
2. Modelling our world – ESRI Press
3. An Introduction to Data base Systems – C.J.Date
4. Fundamentals of Data base Management System by Elmasri & Navethi
5. ESRI (1992) Understanding GIS, The Arc Info Methods, ESRI, USA
OBJECTIVES:
- To investigate the contemporary theories of media and their influence on the perception of space and architecture.
- To provide an overview of various contemporary design processes and its relation to computation.

UNIT I INTRODUCTION

UNIT II ASPECT OF DIGITAL ARCHITECTURE

UNIT III CONTEMPORARY PROCESS
Overview of various Contemporary design process and it relation to computation: Diagrams – Diagrammatic Reasoning – Diagrams and Design Process – Animation and Design – Digital Hybrid Design Protocols – Concept of Emergence - Introduction to Cellular Automata and Architectural applications – Genetic algorithms and Design Computation

UNIT IV GEOMETRIES AND SURFACES
Fractal Geometry and their properties – Architectural applications - Works of Zvi Hecker – Shape Grammar - Shapes, rules and Label - Shape Grammar as analytical and synthetic tools- Combining Shape grammar and Genetic algorithm to optimize architectural solutions - Hyper Surface– Introduction to Hyper surface and concepts of Liquid architecture.

UNIT V CASE STUDIES
Case studies- Study, understanding and analysis of known examples at the national and international levels which demonstrates the contemporary theories of media and their influence on the perception of space and architecture, contemporary design processes and its relation to computation.

TOTAL: 45 PERIODS

OUTCOMES:
- Understanding of the effect of contemporary theories of media on contemporary architectural design.
- Understanding of various contemporary design process and their relation to computation

REFERENCES:
1. Peter Eisenmann, Diagram: An Original Scene of Writing, Diagram Diaries
2. MOVE, UN Studio

DG8151 ARCHITECTURE AND CRITICAL THEORY

OBJECTIVES:
- To introduce the idea of architecture as enmeshed in the society and a product of larger socio-cultural issues and practices, and not as an autonomous object determined by a hermetically sealed discipline.
- To introduce the various interdisciplinary critical theories and explain their interpretation of architecture.

UNIT I INTRODUCTION

UNIT II POWER AND BUILT ENVIRONMENT
Definition of power- Forms of power- Power in the built environment at various scales- ideas of power and society, power-knowledge- Colonialism in India as a form of dominance- introduction to architecture and urbanism of colonialism in India- Production of Indo-Saracenic architecture- New Delhi as a part of imperial vision - Case studies of the architecture and urbanism of power in the modern world.

UNIT III PLACE AND ARCHITECTURE
Critical reactions to modernity/ modernism with reference to the concept of context/ place- Critical Regionalism and architectures of resistance- Place and phenomenology in architecture

UNIT IV SEMIOTICS AND ARCHITECTURE
Architecture as communication and representation- introduction to linguistic concepts of semiotics, structuralism, post structuralism and deconstruction- brief over view of postmodern and deconstructivist architecture with reference to these concepts

UNIT V CONTEMPORARY ISSUES IN ARCHITECTURE
Conditions of late capitalism and postmodern society- Society of spectacle- Architecture as spectacle and seduction- Theme parks and shopping malls- privatisation of public spaces- aesthetisation of architectural issues- influence of globalisation and digital revolution on architectural processes- debates of heritage- gender and space

24
OUTCOMES:
- The students would gain an understanding of architecture as an integral production of society as well as engage in critical thinking to interpret architecture.
- The students’ awareness through this course would inform their practice/research.

REFERENCES:
5. Thomas Metcalf Imperial vision, Oxford, 2002

DG8451 WEB DESIGN AND PORTFOLIO PRODUCTION L T P C
0 0 6 3

UNIT I INTRODUCTION TO WEB DESIGN
Basics of web design – Introduction to software used for web design – ADOBE IMAGE READY, DREAMWEAVER, FLASH etc.

UNIT II STATIC PAGES
Slice – URL in ADOBE IMAGEREADY. Creation and Editing of site map – layer, tables, frameset, - CSS style – Forms – tools like insert, roll over etc., in DREAMWEAVER

UNIT III ANIMATION IN FLASH
Introduction to MACROMEDIA FLASH, importing other file formats to Flash- saving and exporting Flash files, Frame by frame animation – Motion Tweening – Shape Tweening

UNIT IV INTRODUCTION TO SCRIPTING
Using Timeline – Frames –Key frames- Creating and using Symbols- Simple scripting in flash – Publishing SWF files

UNIT V DEVELOPING A WEB SITE
Using the skills and concepts learnt with the ADOBE IMAGEREADY, DREAMWEAVER, FLASH softwares . students will develop their portfolio in the form of web pages. These pages have to be uploaded in free public domains.

TOTAL: 90 PERIODS

REQUIRED READING

REFERENCES

LN8071 SUSTAINABILITY AND ENERGY CONSERVATION IN LANDSCAPE ARCHITECTURE. L T P/S C 3 0 0 3

OBJECTIVES:
- To expose the students on the issues of sustainability at the global level.
- To focus on the energy conservation landscape and sustainability at the micro level.
- Sustainable landscape design for various climates of India

UNIT I INTRODUCTION TO SUSTAINABILITY 10

UNIT II SUSTAINABLE SITE 7
Sustainable site – LEEDS, BREAM, rating erosion and sedimentation control, site selection, urban development, landscape and exterior design etc., Green Building in the context of sustainability. Ecology and sustainability. Eco-City.

UNIT III INTRODUCTION TO ENERGY CONSERVATION IN LANDSCAPE 9
Energy conservation and sustainability, principles of energy systems, energy and global environment, scope for energy conservation in landscape.

UNIT IV ENERGY CONSERVATION METHODS IN LANDSCAPE ARCHITECTURE-CASE STUDIES 10
Various methods of energy conservation in landscape architecture, energy conservation techniques in various climates- hot and humid, hot dry, etc. Energy efficient site planning and landscape development. Energy efficient planting design.

UNIT V SUSTAINABLE LANDSCAPE PRACTICES 9
Sustainable landscape maintenance and management, Sustainable planning and city form. Sustainable urban landscape, landscape sustainability at the national and regional level.

TOTAL: 45 PERIODS
OUTCOMES:

- Understanding of sustainability from macro to micro level.
- Knowledge on Energy conscious Landscape design

REFERENCES:

2. O.R.Gray, Landscape Planning for Energy Conservation,
4. Publications of Centre for science and environments, TERI, New Delhi