PROGRAMME EDUCATIONAL OBJECTIVES (PEOs) :

I. To provide students with a solid foundation of landscape design issues and elements – simple site planning and structuring the open spaces, landscape treatment in relation to the buildings, to develop concepts of landscape design as an interactive process of natural and man-made environment, understanding the aesthetic qualities of the plant materials and their associations.

II. To prepare students to excel in – urban context, historical landscape, specialized landscape situations, industrial landscapes, recreational landscapes etc as well as get an understanding of ecologically sustainable development and familiarize the students to environmental legislation and its components and its role in checking the damage to the environment.

III. To prepare students to excel in Landscape Architectural design by providing a strong foundation in the fields of geology, geomorphology, soil, hydrology and its link with various landscape processes and management.

IV. To train students at micro and macro level Landscape design and to draw and detail out landscape elements.

V. To prepare students to excel in research or to succeed in Landscape Architecture profession through rigorous post graduate education.

VI. To educate the students on the various aspects of a Landscape design practice.

PROGRAMME OUTCOMES (POs):

On successful completion of the programme,

1. The graduate will have the ability to do Landscape Design involving site planning process and design, applications of planting design and other elements in practice.
2. The students will exhibit knowledge of landscape within urban areas and open spaces in urban context, of social and cultural influences on traditional landscapes, contemporary landscape and the manifestation in the western and Indian context.
3. The students will understand the broad range of contemporary and historic theories that influence design and planning and the link between culture and Landscape design.
4. The students will be able to apply ecological principles in a range of situations directed towards proposing design possibilities with minimum impact due to intervention, having knowledge of Environmental legislation and EIA.
5. The students will be able to use their knowledge of characteristics of landforms, soil characteristics, methods of analysis of soils, land and water management, climate and micro climate and their relationship to landscape elements during the design process.
6. The students will be able to draft technical drawings of landscape and site elements along with detailing of site elements like earthwork, soft and hard landscape and outdoor furniture.
7. The students will develop the skill to identify, decipher and interpret the issues relating to Landscape Architecture, based on research enquiry methods. And will be trained in collecting, critically analyzing and presenting information in a logical sequence.
8. The students will be exposed to landscape consultancy practice and other information relating to the profession.
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**Pre-requisites**

- Pass in Advanced Landscape Design Studio
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OBJECTIVES
This course introduces students to soil formation, characteristics and land formation and its influence on landscape.
- This course introduces gives detailed knowledge on the soils.
- Introduction of basic hydrology and its link with various landscape.

UNIT I INTRODUCTION
Geomorphic process: Epigenic or Exogenic process – Weathering, Erosion, Mass wasting, Fluvial cycle, Groundwater, Wind, Seas and Oceans, Glaciers. Major processes and associated landforms: Tectonic, fluvial, Aeolian, coastal, karst, glacial, and topography

UNIT II GEOMORPHOLOGY
Evolution of land forms: Land forms produced by geomorphic process Stratigraphy: principles, stratigraphy and geology of India Man’s intervention into Ecology and Environment case studies in India, Suitability of land for various developments.

UNIT III SOIL CHARACTERISTICS & ANALYSIS
Soil properties soil classification, soils of India.
Soil use and Management: A) Soil survey and field mapping B) land capability classifications (a) Soil evaluation and land-use planning. (b) Soil and water conservation. (c) Soil fertility and plant nutrition. (d) Soil degradation control, remedial actions and reclamation techniques, Role of remote sensing in soil mapping

UNIT IV HYDROLOGY

UNIT V WATER MANAGEMENT
Application of geological information in the interpretation of landscapes on maps and in the field. The relationships between geology, soil, hydrology and vegetation: Practical examples.

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

REFERENCES:
3. William D. Thornbury
OBJECTIVES:

- Introduction to the characteristics of Plant materials, which are an important part of soft landscape, international nomenclature, used for plants and their associations.
- To promote understanding of the factors that regulate the growth and characteristics of plant.

UNIT I  CHARACTERISTICS OF PLANT MATERIALS  9

UNIT II  FLORISTIC REGIONS OF INDIA  9
Different floristic regions and forest types of India. Dominant, endemic, occasional, prevalent species in select types.

UNIT III  PLANT PROPAGATION  9
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  9

UNIT V  LANDSCAPE MAINTENANCE  9
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,1960.
OBJECTIVES

- To understand site planning process and its significance; establishing relationship between site characteristics and design requirements. Inventory, documentation and site planning checklist.
- To understand the issues, involved in micro and macro climate.
- To expose the students on Landscape design in various climate types

UNIT I DESIGN OF LANDFORMS 9

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, across/along contours, Basics of road alignment (horizontal and vertical) Angle of repose and use of retaining wall.

UNIT II EARTHWORK FORMATION 10

Earth works – principles of earthwork, 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, etc.

UNIT III STORM WATER MANAGEMENT & WATER RESOURCES PLANNING 8

Drainage – surface drainage, calculation of surface run off, design of surface and storm water drainage, design of swales and gutters.

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

UNIT IV MICRO CLIMATE CONTROL 8

The role of landscape components in modifying microclimate with respect to temperature, humidity, precipitation, air corridors, heat islands, wind speed etc., in cities. Study of vegetation, landforms and water as modifiers of microclimate.

UNIT V EVALUATION OF MICROCLIMATE DATA 10

Air pollution and Bio-meteorology; climatic comfort indices; heat transfer; meteorological instrumentation and plant injury; Types of air pollutants, sources and consequences. Air pollution and plants. Air pollution monitoring and quality criteria

TOTAL: 45 PERIODS

OUTCOMES:

- Techniques of drawing landscape and site elements.
- Detailing of site elements like earthwork, hard landscape and outdoor furniture.
- General understanding of climate and elements of micro climate and the relationship to landscape elements.

REFERENCES:

OBJECTIVES:

- To understand a broad range of contemporary and historic theories that influence design and planning.
- To understand the outline of the chronology of development and evolution of landscape and garden design in relation to art, architecture and city planning from the earliest period to the present day.

UNIT I  
ATTITUDE TO NATURE AND WORLD VIEW  
Changing perceptions of man’s relationship with nature in various phases of history; responses and attitudes to nature and landscape resources as a function of this perception. Worldviews and their impact upon design (modernism and modernist design, postmodernism and its varied design manifestations)

UNIT II  
SOCIAL AND CULTURAL DIMENSIONS OF LANDSCAPE  
Overview of social, behavioral, and cultural theories and writings as they are applied to. Environmental and Behavioral theories: Entropy, Prospect and Refuge, Defensible space etc. An introduction to social and cultural dimensions of landscape.

UNIT III  
FORM, SPACE AND ORDER  
Place-making (sense of place theories, role of cultural geography research in design, regional issues). The comparative analysis of examples of landscape separated in time and space: siting, relationship to surroundings, use of landscape elements, function, scale, symbolism, etc. Illustrative range of examples from various geographic locations and periods, highlighting aspects of Form, Space and Order

UNIT IV  
INERT MEANING OF LANDSCAPE  
Historic landscape preservation issues (cultural landscapes, adaptive reuse, restoration approaches, and management theories). Ancient traditions; siting of structures, complexes and cities; symbolic meanings and sacred value attributed to natural landscapes.

UNIT V  
DEVELOPMENT OF LANDSCAPE DESIGN  
Development of landscape design and gardens till the early 19th century, Influences and linkages across cultures and traditions.

TOTAL: 45 PERIODS

OUTCOMES:

- Development of an analytical approach to the study of theory and developing an attitude towards critiquing and evaluating choices for design decisions in varied contexts.
- Appreciation of scale in terms of landscape and nature.

REFERENCES:

OBJECTIVES
The objective of this course is to introduce the students to Landscape design.
- Introductory exercises in Art, Architecture & Landscape
- Landscape Analysis and Site Planning for medium sized sites
- Landscape Design of small recreational or civic spaces.

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

OUTCOMES:
- Exposure to the process of site study and analysis.
- Understanding the site planning process
- Landscape Design of small projects primarily involving site planning and design.

TOTAL: 180 PERIODS

REFERENCES:

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
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

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.

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

REFERENCES:

LN7202 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 net works 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.
- Understanding of issues related to and design of Urban Landscape design.

REFERENCES:
AA7251  RESEARCH METHODOLOGIES IN ARCHITECTURE   L  T  P/S  C
3 0 0 3

OBJECTIVES
- To introduce the students to the importance of critical inquiry as a way of gaining knowledge and adding to it through research.
- To expose the students to the various forms of research and research methodologies/processes.
- To engage this understanding in the specific field of architectural research.

UNIT I  INTRODUCTION
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
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
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
Research writing in general- Components: referencing- writing the bibliography - developing the outline - presentation; etc.

UNIT V  CASE STUDIES
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 issues relating to architecture based on research enquiry methods.
- The student will gain knowledge of different methods of conducting research and research writing.

REFERENCES
2. Wayne C Booth; Joseph M Williams; Gregory G. Colomb; ‘The Craft of Research’ , 3rd Edition; Chicago guides to writing, editing and publishing;2008
4. Ranjith Kumar; Research Methodology- A step by step guide for beginners-3rd Edition ; Sage Publications;2011
5. John W Creswell; Research design: Qualitative, Quantitative and Mixed Methods Approaches; Sage Publications; 2011.
OBJECTIVES:
To train the students in the detailing and drawing of landscape elements – Hard and soft landscape elements

UNIT I HARD LANDSCAPES 15
Design and detail of hard landscapes – Roads, paving, barriers, edge conditions – functions, types, criteria for selection, design aspects, details.

UNIT II OUTDOOR LIGHTING 20
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 III PLAY AREA AND TERRACE LANDSCAPING 20
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 green walls.

UNIT IV WATER FEATURES 15
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 V OUTDOOR FURNITURE 20
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.

OUTCOMES:
• Detailing and drawing of landscape elements and features.
• Water management through landscape design.
• Detailing of site elements like earthwork, hard landscape and outdoor furniture.

REFERENCES:
OBJECTIVE:
- The objective of this course is to train students in landscape design in relatively large scale exercise of analysis and proposals.

The studio exercises will involve three or four of the following situations – Campus landscape, Group housing, urban civic spaces at urban design scale, and transportation and interchange systems and complexes.

TOTAL: 180 PERIODS

OUTCOMES:
- Understanding the function and structuring of outdoor spaces would be the underlying theme.

REFERENCES:

OBJECTIVES:
- To understand that 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  8

UNIT II  LANDSCAPE ECOLOGY  8
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  8
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 LANDSCAPE PLANNING & ENVIRONMENTAL LEGISLATION

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

REFERENCES:

LN7302 PROFESSIONAL PRACTICE OF LANDSCAPE ARCHITECTURE

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

Brief history of profession, Professional career tracks, Registration and License, professional ethics and code of professional conduct.

UNIT II PRINCIPLES OF PROFESSIONAL PRACTICE

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
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

UNIT V  PROJECT MANAGEMENT
Planning, and organizing the project. PERT and CPM. Project supervision, coordination between different agencies, monitoring a project during execution and preparation of site reports.

OUTCOMES:
• Knowledge about landscape consultancy practice.
• Understand code of conduct
• Understand the process and role of an architect in project execution.

REFERENCES:

LN7311  ADVANCED LANDSCAPE DESIGN STUDIO– III
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.

OUTCOME:
• Training in developing ecologically sustainable design.

REFERENCES:
LN7312 DISSERTATION

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.

REFERENCES:
1. Iain Borden and Kaaterina Ruedi; The Dissertation: An Architecture Student's Handbook; Architectural Press; 2000
2. Ranjith Kumar; Research Methodology- A step by step guide for beginners; Sage Publications; 2005

LN7411 THESIS

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:
- A comprehensive understanding in handling a major Landscape design independently.

REFERENCES:
2. Strom Steven, Site engineering for landscape Architects, John wiley and sons Inc., 2004.
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
Basic of GIS maps preparation – digitization of spatial data - concept of point, line and polygon features - fundamental of coordinate system – map layers and georeferencing – 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: 60 PERIODS

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

REFERENCES:
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  12
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 PROCE  12
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 PRESENTAIONS  12
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)  12
Importing files using standard and linking options. Using scripts and behaviors, understanding stage, cast and time line, using cast library, Tweening, using swf movie, presentation using voice over and presentation demos, creating auto run cd roms.

UNIT V     CASE STUDIES  12
Exploring the various design media as they relate to form, image, sequence, movement, and animation through a series of weekly exercises.

TOTAL: 60 PERIODS

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

REFERENCES:
OBJECTIVES:
- To understand the different types Landscape Assessment techniques and conservation
- To accommodate the knowledge of Landscape resources during planning.

UNIT I  INTRODUCTION  9
The concept of Landscape Planning and Landscape Conservation. Landscape Assessment techniques; Basic quantitative methods of collecting, analysing, projecting and presenting data for Landscape Planning.

UNIT II  LANDSCAPE CONSERVATION  9

UNIT III  LANDSCAPE PLANNING TECHNIQUES  9
The application of landscape planning techniques to large scale developments such as infrastructure and power projects, extractive and manufacturing industry, new towns and urban extensions, and developments for tourism and eco-tourism.

UNIT IV  LANDSCAPE ASSESSMENT  9
Landscape perception, visual assessment and the aesthetic dimension of landscape planning.

UNIT V  COST AND BENEFITS & LANDSCAPE MANAGEMENT  12
Cost and benefits related to open space development; Tangible costs of development; capital and maintenance costs: intangible costs, depletion of natural resources, modification of ecological systems rehabilitation cost, social and cultural changes. Unit cost of development of open space. Landscape management at the regional scale in relation to soil conservation, water management, grassland management, forestry and agriculture.

TOTAL: 45 PERIODS

OUTCOMES:
- Understanding of Landscape Planning and Landscape Conservation with proper assessment results and cost benefit analysis.
- Knowledge on Landscape management at the regional scale.

REFERENCES:
4. Götz Schroth, Agro forestry and Biodiversity Conservation in Tropical Landscapes, Island Press,
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 9

UNIT IV MODELS IN LANDSCAPE ASSESSMENT 9

UNIT V MANAGEMENT 9
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:
OBJECTIVES:
- To understand the different types of Landscape resources, the threats they are facing and the different means of conservation.
- To apply the different techniques for regional planning.

UNIT I  SETTLEMENTS AND LANDSCAPE  6
Siting and evolution of cities in relation to regional landscape resources. The role of landform, water systems, climate and vegetation. Illustrative studies of cities in India and elsewhere.

UNIT II  LANDSCAPE RESOURCES  9
Landscape resources specific to distinctive city types: for example: religious centers, historic cities, coastal or port cities, hill station etc. The urban forest: It's ecological social and environmental dimensions. Ways of studying urban vegetation. Its role in the urban landscape.

UNIT III  RESOURCES AT THE NATIONAL LEVEL  12
Overview of landscape resources at the national level. National Environment Policy. Developmental and Environmental issues associated with particular landscape regions: mountain and hill areas; deserts and wastelands; river and aquatic systems, coastal and estuarine regions, etc.

UNIT IV  THREATS TO URBAN LANDSCAPE RESOURCES  9
Threats to urban landscape resources; urban environmental issues such as solid waste management, air quality, conservation of water resources and vegetation cover. The rural landscape, the impact of industry and power generation. Agricultural practices and the formation of traditional rural landscape. Illustrative examples from different climatic and geographic regions.

UNIT V  POLICIES AND DEVELOPMENT CONTROLS  9
Introduction to Forest Policy and management of forest resources. Conservation Forestry, Agro-Forestry and Social Forestry. Significance of biodiversity, urban biodiversity, and wildlife conservation. City development Plans, Zonal Plans and structure plan. Development controls and their role in the conservation and creation of urban landscape.

TOTAL: 45 PERIODS

OUTCOMES:
- Understanding of resource management from macro to micro level.
- Knowledge on resource conscious Landscape design and planning

REFERENCES:
2. O.R.Gray, Landscape Planning for Energy Conservation
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

UNIT II  SUSTAINABLE SITE
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
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
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
Sustainable landscape maintenance and management, Sustainable planning and city form. Sustainable urban landscape, landscape sustainability at the national and regional level.

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

OBJECTIVES:
- To study the social and cultural influences on traditional landscapes through analysis of form and space, sitting 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 RENAISSANCE AND THE EVOLUTION OF NEW THOUGHTS 6

UNIT III THE EVOLUTION OF THE MODERN LANDSCAPE 9
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. Olmstead, 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 9
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 6
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