

**M. ARCH (LANDSCAPE) – FULL TIME  
CHOICE BASED CREDIT SYSTEM I TO IV SEMESTERS  
CURRICULA & SYLLABI**

<b>M - ARCH LANDSCAPE (SEMESTER I)</b>						
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>THEORY</b>						
1	P18PCLA101	GEOLOGY AND SOILS	3	0	0	3
2	P18PCLA102	HYDROLOGY AND MICRO CLIMATE	3	0	0	3
3	P18PCLA103	PLANTING AND HORTICULTURAL PRACTICES	3	0	0	3
4	P18PELA104	SITE PLANNING AND DETAILING	1	0	4	3
5	P18PCLA105	<b>TRADITIONAL AND CONTEMPORARY LANDSCAPES</b>	3	0	0	3
<b>STUDIO</b>						
1	P18PCLA1L1	URBAN LANDSCAPE DESIGN	0	0	12	6
<b>TOTAL</b>			<b>16</b>	<b>0</b>	<b>4</b>	<b>21</b>

<b>M - ARCH LANDSCAPE (SEMESTER II)</b>						
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>THEORY</b>						
1	P18PCLA201	LANDSCAPE CONSTRUCTION	0	0	6	3
2	P18PCLA202	PLANTING DESIGN	3	0	0	3
3	P18PCLA203	<b>LANDSCAPE ECOLOGY AND PLANNING</b>	3	0	0	3
4	P18PELA204	PROFESSIONAL ELECTIVE-I	-	-	-	3
5	P18PELA205	PROFESSIONAL ELECTIVE-II	-	-	-	3
<b>STUDIO</b>						
1	P18PCLA2L1	LANDSCAPE DESIGN STUDIO I	0	0	12	6
<b>TOTAL</b>			<b>8</b>	<b>0</b>	<b>16</b>	<b>22</b>

<b>M - ARCH LANDSCAPE (SEMESTER III)</b>						
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>THEORY</b>						
1	P18PCLA301	ENVIRONMENTAL LEGISLATION AND EIA	3	0	0	3
2	P18PCLA302	<b>RESEARCH METHODOLOGIES IN ARCHITECTURE</b>	3	0	0	3
4	P18PELA303	PROFESSIONAL ELECTIVE-I	-	-	-	3
5	P18PELA304	PROFESSIONAL ELECTIVE-II	-	-	-	3
<b>STUDIO</b>						
1	P18PCLA3L1	ADVANCED LANDSCAPE DESIGN STUDIO II	0	0	14	7
2	P18PCLA3L2	DISSERTATION	0	0	6	3
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>18</b>	<b>21</b>

<b>M - ARCH LANDSCAPE (SEMESTER IV)</b>						
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>STUDIO</b>						
1	P18PCLA401	PROFESSIONAL PRACTICE OF LANDSCAPE ARCHITECTURE	3	0	0	3
2	P18PCAR4L1	THESIS	0	0	22	11
<b>TOTAL</b>			<b>3</b>	<b>0</b>	<b>22</b>	<b>14</b>

<b>LIST OF ELECTIVES- M. ARCH (LANDSCAPE)</b>						
<b>SL. NO.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>THEORY</b>						
1	P18PELA001	APPLICATION OF GIS IN LANDSCAPE DESIGN	3	0	0	3
2	P18PELA002	COMPUTER APPLICATIONS AND MANAGEMENT INFORMATION SYSTEMS	3	0	0	3
3	P18PELA003	LANDSCAPE MANAGEMENT	3	0	0	3
4	P18PELA004	GIS MODELING IN URBAN PLANNING	3	0	0	3
5	P18PELA 005	CONTEMPORARY PROCESSES IN ARCHITECTURAL DESIGN I	3	0	0	3
6	P18PELA006	ARCHITECTURE AND CRITICAL THEORY	3	0	0	3
7	P18PELA007	WEB DESIGN AND PORTFOLIO PRODUCTION	0	0	6	3
8	P18PELA 008	SUSTAINABILITY AND ENERGY CONSERVATION IN LANDSCAPE ARCHITECTURE	3	0	0	3
<b>TOTAL</b>			<b>21</b>	<b>0</b>	<b>6</b>	<b>24</b>

**L- Lecture    T- Tutorial    P- Practical    S- Studio    C- Credits**

### PROFESSIONAL CORE COURSES (PC)

Sl. No.	Course Code	Course title	Category	Contact periods	L	T	P	C
1.	P18PCLA101	GEOLOGY AND SOILS	PC	3	3	0	0	3
2	P18PCLA102	HYDROLOGY AND MICRO CLIMATE	PC	3	3	0	0	3
3	P18PELA104	SITE PLANNING AND DETAILING	PC	3	3	0	0	3
4.	P18PCLA103	PLANTING AND HORTICULTURAL PRACTICES	PC	3	3	0	0	3
5	P18PCLA105	TRADITIONAL CONTEMPORARY LANDSCAPES	PC	3	3	0	0	3
6.	P18PCLA201	LANDSCAPE CONSTRUCTION	PC	6	0	0	6	3
7	P18PCLA202	PLANTING DESIGN	PC	3	3	0	0	3
8	P18PCLA203	LANDSCAPE ECOLOGY PLANNING	PC	3	3	0	0	3
9	P18PCLA301	ENVIRONMENTAL LEGISLATION AND EIA	PC	3	3	0	0	3
10	P18PCLA302	RESEARCH METHODOLOGIES IN ARCHITECTURE	PC	3	3	0	0	3
11	P18PCLA401	PROFESSIONAL PRACTICE OF LANDSCAPE ARCHITECTURE	PC	3	3	0	0	3
12	P18PCAR4L1	THESIS	PC	22	0	0	22	11

### PROFESSIONAL ABILITY ENHANCEMENT COURSES (PAEC)

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
1.	P18PCLA1L1	URBAN LANDSCAPE DESIGN	PAEC	12	0	0	12	6
2.	P18PCLA2L1	LANDSCAPE DESIGN STUDIO I	PAEC	12	0	0	12	6
3.	P18PCLA3L1	ADVANCED LANDSCAPE DESIGN STUDIO II	PAEC	14	0	0	14	7
4.	P18PCLA3L2	DISSERTATION	PAEC	6	0	0	6	3

## M. ARCH (LANDSCAPE) I TO IV SEMESTERS OF CURRICULA AND SYLLABI

COURSE CODE	COURSE TITLE	L	T	P/S	C
P18PCLA101	GEOLOGY AND SOILS	3	0	0	3

### 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.

<b>UNIT I</b>	<b>INTRODUCTION</b>	<b>15</b>
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The Earth – Origin of Earth, Solar system. Earth's Structure, Composition, Land and Sea distribution, Earth and its Atmosphere. Rock-Rock forming minerals – Igneous, Metamorphic and Sedimentary rocks, Economic importance of mineral deposits. Geomorphic process : Epigenic or Exogenic process – Weathering, Erosion, Mass wasting, Fluvial cycle, Groundwater, Wind, Seas and Oceans, Glaciers. Hypogenic or Endogenic process – Earth quake, Tsunami, Fold, Fault, and Volcanism, Plate tectonics.

<b>UNIT II</b>	<b>STUDY OF LANDFORMS</b>	<b>12</b>
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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.

<b>UNIT III</b>	<b>SOIL CHARACTERISTICS</b>	<b>6</b>
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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.

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

<b>UNIT V</b>	<b>SOIL MODIFICATIONS</b>	<b>6</b>
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Soil modifications, Problems of soils, Acid, Alkaline, Saline soils, soil pH, Essential mineral nutrients of soils, Manure and Fertilizers. Soil conservation, type, factors, methods of conservation, prevention of soil erosion, Soil conditioning, soil mixtures and alternative to soils.

**TOTAL: 45 PERIODS**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	Characteristics of landforms, causes and effects.												
CO2	Soil characteristics, causes and effects and modifications.												
CO3	Methods of analysis of soils.												
CO4	Compare and contrast stress versus strain in the Earth's crust.												
CO5	Identify geologic structures created by deformation.												
CO6	Investigate the causes and common locations of earthquakes.												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1		H						M				
	CO2				M						L		
	CO3	M					M						
	CO4		L						M				H
	CO5	H				H						L	
3	Category	PC											
4	Approval	29TH Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA102</b>	<b>HYDROLOGY AND MICRO CLIMATE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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 an understanding on the evaluation tools in micro climate.

<b>UNIT I</b>	<b>HYDROLOGICAL SYSTEMS</b>	<b>6</b>
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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.,

<b>UNIT II</b>	<b>WATER MANAGEMENT</b>	<b>9</b>
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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.

<b>UNIT III</b>	<b>INTRODUCTION TO THE CLIMATE</b>	<b>12</b>
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General Climatology. Composition of atmosphere, Elements of climate. Climate and Civilization, Climate classification worldwide and India. Climate – Macro, Micro and Crypto Climate, Urban and Rural Climate. Global Warming and Climate Change.

<b>UNIT IV</b>	<b>CLIMATE AND LANDSCAPE DESIGN</b>	<b>10</b>
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Soil classification and vegetation in the tropics. Hard, Soft landscape and Climate. Pollution effects in Landscape. Evaluation tools of Micro climate. Landscaping in various climates of tropics. Role of landscape in energy conservation.

<b>UNIT V</b>	<b>MICRO CLIMATE CONTROL</b>	<b>8</b>
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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**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	Knowledge about water management.												
CO2	General understanding of climate and elements of micro climate and the relationship to landscape elements.												
CO3	An understanding of micro climate modifiers.												
CO4	The students obtain the complete knowledge on hydrologic cycle, hydrometeorology and formation of precipitation.												
CO5	The students are able to apply the various methods of field measurements and empirical formulas for estimating the various losses of precipitation, stream flow and runoff.												
CO6	The students know the various methods of rainwater and runoff harvesting. Then apply the knowledge of soil erosion and sedimentation to estimate the life of the reservoir.												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1		M				L				M		
	CO2	L			M					L			
	CO3		M			H					L		
	CO4	M						M					L
	CO5		L		L					M			
3	Category	PC											
4	Approval	26TH Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA103</b>	<b>PLANTING &amp; HORTICULTURAL PRACTICES</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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.

<b>UNIT I</b>	<b>CHARACTERISTICS OF PLANT MATERIALS</b>	<b>9</b>
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Classification of plant kingdom, rules of nomenclature and identification. Plant processes, water relation, mineral nutrition, photosynthesis and respiration. Stem, root and leaf relationship, growth and flowering, response to stimuli and modification. Plant multiplication and adaptation.

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

<b>UNIT III</b>	<b>PLANT PROPAGATION</b>	<b>9</b>
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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.

<b>UNIT IV</b>	<b>HORTICULTURAL PRACTICE</b>	<b>9</b>
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Plant nutrition and supplements. Fertilizers and Manures- types, methods of applications, advantages and disadvantages. Common plant pests, diseases and their control, insecticides and their application, weed control. Sustainable practices in pest management and weed control. Water budgeting .

<b>UNIT V</b>	<b>LANDSCAPE MAINTENANCE</b>	<b>9</b>
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Maintenance methodology, maintenance economics and maintenance details for all soft landscape. Equipment for landscape maintenance.

**TOTAL: 45 PERIODS**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	Knowledge of Binomial nomenclature of plants												
CO2	Aspects of Plant growth and propagation, thereby understanding the Maintenance requirement of plants.												
CO3	Familiarization with principles and practices of propagation and nursery management for Horticultural Crops.												
CO4	Study of introduction to propagation, cellular basis for propagation, sexual propagation, apomixis, polyembryony, chimeras.												
CO5	Principle factors influencing seed germination of horticultural crops, dormancy, hormonal regulation of germination and seedling growth.												
CO6	Knowledge of nursery management, nursery establishment and nursery rules and regulation.												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1			L			M				H		
	CO2	H				M			L				L
	CO3		M		M			L					
	CO4	H					M				M		
	CO5		M					H				L	
3	Category	PC											
4	Approval	30TH Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA104</b>	<b>SITE PLANNING &amp; DETAILING</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>3</b>

### **OBJECTIVES:**

- The objective of this course is to equip the students in the techniques of detailing and drawing of Landscape design at site scale.

<b>UNIT I</b>	<b>LANDSCAPE GRAPHICS</b>	<b>5</b>
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Symbols of representation of landscape elements in plan, elevation and section.

<b>UNIT II</b>	<b>DESIGN OF LANDFORMS</b>	<b>15</b>
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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.

<b>UNIT III</b>	<b>EARTHWORK FORMATION</b>	<b>15</b>
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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.,

<b>UNIT IV</b>	<b>HARD LANDSCAPES</b>	<b>20</b>
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Design and detail of hard landscapes – Roads, paving, barriers, edge conditions – functions, types, criteria for selection, design aspects, details.

<b>UNIT V</b>	<b>OUTDOOR FURNITURE</b>	<b>20</b>
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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**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	Techniques of drawing landscape and site elements.												
CO2	Detailing of site elements like earthwork, hard landscape and outdoor furniture.												
CO3	General understanding of climate and elements of micro climate and the relationship to landscape elements.												
CO4	To understand site planning process and its significance; establishing relationship between site characteristics and design requirements. Inventory, documentation and site planning checklist												
CO5	To understand the issues, involved in micro and macro climate.												
CO6	To expose the students on Landscape design in various climate types												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1		H				M				L		
	CO2	M			M				L				
	CO3		L			L		H					
	CO4	M					M					L	
	CO5		M			M					H		
3	Category	PC											
4	Approval	28TH Meeting of Academic Council											

COURSE CODE	COURSE TITLE	L	T	P/S	C
<b>P18PCLA105</b>	<b>TRADITIONAL &amp; CONTEMPORARY LANDSCAPE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### 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.

<b>UNIT I</b>	<b>EASTERN TRADITIONS &amp; ISLAMIC LANDSCAPES</b>	<b>15</b>
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Early traditions and beliefs about landscape and environment in east. Ancient Indian traditions – Vedic, Jainism, Buddhism and later Hindu movements. Symbolic meanings and sacred value of natural landscapes. Transfer of concepts through Buddhism to China –Chinese landscape development – gardens of China – Pre Buddhist Japanese landscapes – impact of China on Japanese gardens – Japanese gardens. Nomadic culture of central Asia – advent of Islam – concept of Paradise as a garden – spread of Islamic traditions to the West and East. Eastern expression of Islam – Samarkhand and Mughul India – Tomb and pleasure garden – Moghul concepts of site planning. Western expression of Islam – Spain Alhambra and Generalife, Granada.

<b>UNIT II</b>	<b>RENAISSANCE AND THE EVOLUTION OF NEW THOUGHTS</b>	<b>6</b>
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Development of the enclosed garden in the Middle ages. Renaissance – Italy, France and England, Romanticism. Influences and linkages across cultures. Study of the western landscapes till the nineteenth century.

<b>UNIT III</b>	<b>THE EVOLUTION OF THE MODERN LANDSCAPE</b>	<b>9</b>
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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.

<b>UNIT IV</b>	<b>THE MODERN MOVEMENT, CONTEMPORARY CONCEPTS &amp; CONCERNS</b>	<b>9</b>
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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.

<b>UNIT V</b>	<b>INDIAN CONTEXT</b>	<b>6</b>
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Issues in contemporary India, Analysis and understanding of philosophies of contemporary landscape works in India, case studies.

**TOTAL 45 PERIODS**

<b>COURSE OUTCOMES (COs)</b>	
<b>The student will be able</b>	
CO1	Relationship between culture and Landscape design.
CO2	Perception of open spaces in different cultures.
CO3	To study the social and cultural influences on traditional landscapes through analysis of form and space, siting principles of each period with examples.
CO4	To study contemporary landscape and the manifestation in the western and Indian context.
CO5	Concepts of individuality in visual creations are enriched through the subjects Drawing, Painting and Composition.
CO6	Courses of studies in Sculpture have been planned with emphasis on the creative expression as well as a refinement in a student's development in practical/technical aspects.

**Mapping of Course Outcomes with Program Outcomes (POs)**  
(H/M/L indicates strength of correlation) H-High, M-Medium, L-Low

1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1		M				M				H		
	CO2	H			H					M			
	CO3		M				L				L		
	CO4	M			M			H					
	CO5		M			H							L
3	Category	PC											
4	Approval	29THMeeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA1 L1</b>	<b>URBAN LANDSCAPE DESIGN</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

**OBJECTIVE:**

- To expand the students' knowledge on landscape within urban areas and open spaces in urban context.

<b>UNIT I</b>	<b>INTRODUCTION</b>	<b>6</b>
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City and pattern – hierarchy of streets and squares – spatial organization and land use – road networks and basic services. Open spaces with in urban environment.

<b>UNIT II</b>	<b>URBAN SPACES</b>	<b>9</b>
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Cultural, social and aesthetic value of urban spaces and its perception, Imageability, Townscape elements. Urban space enhancement.

<b>UNIT III</b>	<b>OPEN SPACE SYSTEM</b>	<b>9</b>
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Open space development in urban design context. Evolution of public park as a major component of urban landscape. Open space development in new towns. Park systems, water fronts. Green infrastructure. Urban ecology, urban water sheds.

<b>UNIT IV</b>	<b>ELEMENTS IN URBAN LANDSCAPE</b>	<b>12</b>
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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,

<b>UNIT V</b>	<b>CASE STUDIES</b>	<b>9</b>
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Contemporary urban landscape issues. Case studies-Study, understanding and analysis of known examples at the national and international levels.

**TOTAL: 45 PERIODS**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	Types, characteristics and elements of urban open spaces.												
CO2	Case studies of urban landscapes.												
CO3	To expand the students' knowledge on landscape within urban areas and open spaces in urban context.												
CO4	Spatial organization and land use												
CO5	Perception, Imageability, Townscape elements.												
CO6	Urban space enhancement.												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H				M					H		
	CO2		L				L					H	
	CO3	M			M			H					
	CO4		L				L				M		
	CO5			H					H				M
3	Category	PC											
4	Approval	32ND Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA201</b>	<b>LANDSCAPE CONSTRUCTION</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>4</b>

### **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.

<b>UNIT I</b>	<b>OUTDOOR LIGHTING</b>	<b>10</b>
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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.

<b>UNIT II</b>	<b>PLAY AREA AND TERRACE LANDSCAPING</b>	<b>15</b>
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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.

<b>UNIT III</b>	<b>WATER FEATURES</b>	<b>25</b>
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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.

<b>UNIT IV</b>	<b>STORM WATER MANGEMENT</b>	<b>10</b>
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Drainage – surface drainage, calculation of surface run off, design of surface and storm water drainage, design of swales and gutters.

<b>UNIT V</b>	<b>WATER RESOURCES PLANNING</b>	<b>15</b>
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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**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	Detailing and drawing of landscape elements and features.												
CO2	Water management through landscape design.												
CO3	To train the students in the detailing and drawing of landscape elements and features like lighting, play area, terraces and water features.												
CO4	The course discusses the management of water in site through landscape design.												
CO5	Principles of design for outdoor illumination, design												
CO6	Considerations, design and detail for terrace landscaping												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H			H				M				
	CO2		M			M					H		
	CO3	L		M			H						
	CO4		M					M					L
	CO5	M				L					M		
3	Category	EEC											
4	Approval	30TH Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA202</b>	<b>PLANTING DESIGN</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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.

<b>UNIT I</b>	<b>INTRODUCTION TO PLANTING DESIGN</b>	<b>9</b>
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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.

<b>UNIT II</b>	<b>CREATING SPACES WITH PLANTS</b>	<b>9</b>
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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.

<b>UNIT III</b>	<b>VISUAL COMPOSITION IN PLANTING DESIGN</b>	<b>9</b>
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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.

<b>UNIT IV</b>	<b>PLANTING DESIGN FOR HABITAT CREATION</b>	<b>9</b>
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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.

<b>UNIT V</b>	<b>APPLICATIONS IN PRACTICE</b>	<b>9</b>
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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**

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	This course discusses in detail about the various aspects of designing plants.												
CO2	It also emphasizes on the applications of planting design in the practice.												
CO3	Basics of planting design												
CO4	Applications of planting design.												
CO5	Planting strategies and species for various types of habitats												
CO6	Experience of spaces, use of planting to manipulate spatial experience												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H				H					M		
	CO2		L				L						H
	CO3	M			M				L				
	CO4		H				M						
	CO5	L				L					H		
3	Category	PC											
4	Approval	27TH Meeting of Academic Council											

COURSE CODE	COURSE TITLE	L	T	P/S	C
<b>P18PCLA203</b>	<b>LANDSCAPE ECOLOGY AND PLANNING</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### 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.

<b>UNIT I</b>	<b>ECOLOGY</b>	<b>9</b>
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Understanding the ecosystem and their functioning — components of ecosystem - natural process- Fundamentals of ecology - **Ecological processes and dynamics— understanding ecological concepts like population growth, regulation, carrying capacity- colonization and succession-stability and resilience of ecosystem—ecosystem degradation.**

<b>UNIT II</b>	<b>LANDSCAPE ECOLOGY</b>	<b>9</b>
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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.

<b>UNIT III</b>	<b>LANDSCAPE PLANNING</b>	<b>9</b>
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**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

<b>UNIT IV</b>	<b>PROCESS IN LANDSCAPE PLANNING</b>	<b>9</b>
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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.**

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**

COURSE OUTCOMES (COs)													
The student will be able													
CO1	Basics of Ecology and Landscape Ecology.												
CO2	Landscape planning history, evolution, process and case studies.												
CO3	To understand any developmental activity involves intervention in the natural processes and to minimize the impact due to this intervention.												
CO4	To outline the evolution of landscape planning, its premises and the process.												
CO5	Procedure in landscape planning												
CO6	Understanding dynamic interaction between landscape structure and function												
Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H				L					M		
	CO2		M				L						M
	CO3	M			M					L			
	CO4		L			M					H		
	CO5	H					L					M	
3	Category	PC											
4	Approval	28TH Meeting of Academic Council											

COURSE CODE	COURSE TITLE	L	T	P/S	C
P18PCLA2 L1	LANDSCAPE DESIGN STUDIO-I	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**

COURSE OUTCOMES (COs)													
The student will be able													
CO1	Landscape Design of small projects primarily involving site planning and design.												
CO2	Introduction to Planting design.												
CO3	Basic landscape design issues and elements												
CO4	Understanding the function and structuring of outdoor spaces												
CO5	Landscape treatment in relation to the buildings												
CO6	Understanding the aesthetic qualities of the plant materials and their associations.												
Mapping of Course Outcomes with Program Outcomes (POs)													
(H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H			M						M		
	CO2		L				M						H
	CO3	M		L				L					
	CO4		H				H				M		
	CO5	M				H							
3	Category	EEC											
4	Approval	25TH Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA301</b>	<b>ENVIRONMENTAL LEGISLATION &amp; EIA</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **OBJECTIVE:**

- To familiarize the students to the environmental legislation and its components and its role in checking the damage to the environment

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

<b>UNIT II</b>	<b>HUMAN IMPACT ON ECOSYSTEMS</b>	<b>12</b>
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Environmental impact of man's activities on earth, impacts of agriculture, industrialization, urbanization. Relations between local modification and global phenomena. Green house effect, acid rain etc., Pollution – definition, pollution of air, water, land and noise, effect on humans, vegetation and other life forms, degradation of land. International treaties on environment, sustainable development – ecological and environmental parameters, public participation and role of NGOs. Status of environment in India.

<b>UNIT III</b>	<b>ENVIRONMENTAL LEGISLATION</b>	<b>9</b>
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Concept of law constitution in relation to environment. Introduction to town planning legislation and legal tools for development control and their relationship for landscape design objectives. Indian forests acts – preserved, protected, private and village forests, wild life sanctuaries act. Legislative and administrative framework for national parks in U.K., U.S.A. and India. Periphery control legislation and green belt concept. Preservation of the countryside.

<b>UNIT IV</b>	<b>CONSERVATION AND PRESERVATION</b>	<b>9</b>
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Legislation relating to preservation of parks, open spaces, playgrounds, trees and ancient monuments. Legislation related to air, water, Land pollution prevention

<b>UNIT V</b>	<b>ENVIRONMENTAL IMPACT ASSESSMENT</b>	<b>9</b>
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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

**TOTAL: 45 PERIODS**

### OUTCOMES:

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

### REFERENCES:

1. Michael Allaby, Basics of Environmental Science, Routledge, 2000.
2. Avjit gupta and Mukul.G.Asher, Environment and the developing world, John wiley and sons, Inc, 2000.
3. Larry W.Canter, Environmental Impact Assessment, McGraw – Hill, Inc,1996
4. H.N.Tiwari, Environmental Law, Allahad law agency, 1997.
5. Rosencrany, a.Diwan, Noble.M, Environmental law and policy in India (Cases, Materials, and statutes), Tripathi Bombay, 1991.

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	To understand what constitutes the environment and how to conserve it.												
CO2	To analyse the need for natural resource management, and sustainable lifestyles												
CO3	To evaluate the value of ecosystem and the need and methods for conserving the same.												
CO4	To understand the how pollution and hazards can be mitigated.												
CO5	To analyse with case studies on various social causes and understand the need to spread and learn more about the causes and the ways to prevent them.												
CO6	An overview of important regulations and bylaws												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

COURSE CODE	COURSE TITLE	L	T	P/S	C
<b>P18PCLA302</b>	<b>RESEARCH METHODOLOGIES IN ARCHITECTURE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

## 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.

<b>UNIT I</b>	<b>INTRODUCTION</b>	<b>9</b>
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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 sample.

<b>UNIT II</b>	<b>RESEARCH PROCESS</b>	<b>9</b>
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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

<b>UNIT III</b>	<b>RESEARCHING AND DATA COLLECTION</b>	<b>9</b>
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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-

<b>UNIT IV</b>	<b>REPORT WRITING</b>	<b>6</b>
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Research writing in general- Components: referencing- writing the bibliography- developing the outline- presentation; etc.

<b>UNIT V</b>	<b>CASE STUDIES</b>	<b>12</b>
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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, 2<sup>nd</sup> Edition; Chicago guides to writing, editing and publishing;
3. Iain Borden and Kaaterina Ruedi; The Dissertation: An Architecture Student's Handbook; Architectural Press; 2000
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

COURSE OUTCOMES (COs)													
The student will be able													
CO1	To introduce methods and process of research, in order to understand the significance of the same with reference to landscape architecture and to develop skills of conducting and communicating research.												
CO2	Introduction to research: Types of research and the process of formulating a research Project and their applications												
CO3	Research Methods: Various methods of research, their relative advantages and disadvantages												
CO4	Research Writing: Introduction to technical writing and presenting a research paper												
CO5	Research Publication: Introduction to various form of publication of research												
CO6	Cyber security and laws related to the same. Plagiarism in research: Introduction to the concept, Problem of plagiarism & software to check the same												
Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

COURSE CODE	COURSE TITLE	L	T	P/S	C
P18PCLA3L1	ADVANCED LANDSCAPE DESIGN STUDIO– II	0	0	12	6

**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.

COURSE OUTCOMES (COs)													
The student will be able													
CO1	To understand site context and to resolve complex landscape issues in urban and rural fabric, dealing with residential / commercial / institutional / recreational land use in relation to landform, vegetation & water												
CO2	Documentation & Mapping, Analysis, Synthesis, Suitability, Zoning and planning with landscape land uses (for medium to large scale projects)												
CO3	Evolving landscape structure for sites & suggesting an appropriate landscape design with respect to ecological, functional, cultural & visual context.												
CO4	Process of landscape project formulation and landscape design development/planning in response to contextual analysis, synthesis & theoretical bearings												
CO5	Students will work on above mentioned in detail and will submit the work in the form of drawings and/ models												
CO6	To resolve complex landscape issues in urban and rural fabric with landscape design and Planning & To be able to derive an open space structure for the site/zone with suitable landuses/activities in response to the context												
Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l

2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA3L2</b>	<b>DISSERTATION</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>

### **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.
- On the successful completion of the course, students will be able to

<b>COURSE OUTCOMES (COs)</b>	
<b>The student will be able</b>	
CO1	Develop the skill to identify, decipher and interpret issues relating to architecture based on research enquiry methods.
CO2	Understand CO2 Analyse different methods of conducting research and research writing.
CO3	Redefine a social Problem into a Research Problem, generate a methodology to prove it and convert it into technical /Popular Reports.
CO4	Apply, Analyse and Create Course Level Assessment Questions
CO5	Enumerate the types of Research and Illustrate with examples. & Discuss the Research Process in detail.
CO6	Analyse different methods of conducting Research and suggest a suitable method for a particular Research & Discuss in detail the criteria for selecting a sampling procedure.

**Mapping of Course Outcomes with Program Outcomes (POs)**  
 (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low

1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	M	
	C06				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PCLA401</b>	<b>PROFESSIONAL PRACTICE OF LANDSCAPE ARCHITECTURE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

**OBJECTIVE:**

- The objective of this course is to educate the students on the various aspects of a Landscape design practice.
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<b>UNIT I</b>	<b>THE PROFESSION OF LANDSCAPE ARCHITECTURE</b>	<b>6</b>
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Brief history of profession, Professional career tracks, Registration and License, professional ethics and code of professional conduct.

<b>UNIT II</b>	<b>PRINCIPLES OF PROFESSIONAL PRACTICE</b>	<b>9</b>
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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.

<b>UNIT III</b>	<b>PROFESSIONAL RELATIONSHIPS</b>	<b>9</b>
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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.

<b>UNIT IV</b>	<b>PROFESSIONAL APPROACH</b>	<b>12</b>
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Methods of working – surveys, preparation of policy and design proposals. Reports, contents and production techniques. Types and contents of Drawings prepared in a landscape architect's office. Contracts- Definition and terminologies, Contract documents. Preparation of tender documents. Different types of tender.

<b>UNIT V</b>	<b>PROJECT MANAGEMENT</b>	<b>9</b>
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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 Reinhold, 1997.
2. John.L.Motloch, Introduction to Landscape design, 2001.
3. Jack.E.Ingels, Landscaping, Principles and Practices, Delmar publishersinc, 1992.
4. W.F.Hill, Landscape handbook of Tropical Landscape, Garden Art Press, 1995.

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	to obtain knowledge of basic concepts, methods, and applications in Professional career and Professional conduct.												
CO2	to examine and understand the ways in which Professional ethics												
CO3	Spatial processes operate in an ecological context												
CO4	to learn and become familiar with the techniques used by landscape architects in their work												
CO5	to understand the relevance of landscape ecology to human society												
CO6	to apply the concepts, models, and techniques in landscape ecology in natural resources management & Project management.												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

COURSE CODE	COURSE TITLE	L	T	P/S	C
P18PCLA4L1	THESIS	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:

Thesis will be an individual project dealing with landscape architecture including development of particular interested areas concepts of landscape design as an interactive process of natural and man-made environment.

COURSE OUTCOMES (COs)													
The student will be able													
CO1	To use all the skills acquired in the duration of preceding academic courses.												
CO2	Methodically self-direct effort by choosing the project of choice, builds capacity to work independently and methodically in a variety of intellectually and professionally demanding contexts.												
CO3	Learn to make an original and individual, creative contribution to the academic discipline and/or the professional field in some cases.												
CO4	Be able to interpret the urban forms of the past and present.												
CO5	Articulate their stance and position as a designer within discourses of urbanism.												
CO6	Research and analyse information relevant to developing the proposal												
Mapping of Course Outcomes with Program Outcomes (POs)													
(H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA001</b>	<b>APPLICATION OF GIS IN LANDSCAPE DESIGN</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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 6**

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 12**

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 9**

Spatial joining - concept of geo processing – union, intersect, clip and merge – features to raster - preparing surfaces - creating TIN surfaces and contours - surface analysis – spatial joining of geographic features.

### **UNIT IV APPLICATIONS OF GIS IN LANDSCAPE ARCHITECTURE 6**

Overlaying features and analyzing using overlay function – feature selection – buffering – table joining and analysis - manipulating attribute data – classification and reclassifications - GIS modeling – 3D display.

### **UNIT V LANDSCAPE PLANNING AND GIS 12**

Introduction to landscape GIS model - Case problem on landscape analysis – suitability analysis using GIS – preparing land-use maps – landscape impact analysis using GIS - landscape suitability analysis – application of GIS in assessing Landscape Ecological risks.

**TOTAL: 45 PERIODS**

## REFERENCES:

1. Brail K.R (1990) Integrating GIS into Urban Regional Planning, Alternative approaches for developing countries, regional development Dialogue, Vol.11, No.3 UNCRD, Japan, 1990.
2. Karen C.Hanna, GIS for Landscape Architects, ESRI press, 1999.
3. Andy Mitchell, GIS Analysis Volume 1. Geographic patterns and Relationships, ESRI Press 2005.
4. David Maquire and Michael Batty (Editors) GIS, Spatial Analysis and Modeling, ESRI Press, 2005.
5. Cynthia A. Brewer, Designing Better Maps: A Guide for GIS Users, ESRI Press

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	To introduce the principles of aerial and satellite based remote sensing for studying earth resources.												
CO2	To introduce geophysical well logging techniques for interpretation of subsurface geology												
CO3	well logging, classification of well logging methods, formation evaluation and its importance.												
CO4	Basic principles, SP log, normal and lateral logs, focused logs, micro resistivity tools and their role in formation evaluation; Applications.												
CO5	Basic principles of different types of radiation logs including gamma ray, gamma-gamma, neutron thermal and chlorine logs; Porosity determination and cross plots; Applications												
CO6	Permeability, bound and free-water estimation using NMR logging techniques; Applications Caliper, dip meter, cement bond logging, casing collar locators, temperature logging; Applications												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA002</b>	<b>COMPUTER APPLICATIONS AND MANAGEMENT INFORMATION SYSTEMS</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **UNIT I INTRODUCTION 9**

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 9**

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 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 9**

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

### **TOTAL: 45 PERIODS**

#### **OUTCOMES:**

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

#### **REFERENCES:**

1. J.Jeffcoate, Multimedia in Practise: Technology and Applications, Prentice hall, New jersey, 1994.
2. Apple computer Inc., Multimedia demystified – a guide to the world of multimedia, Random house, New Media, Newyork, 1994.
3. Kirk, Ross and Hunt, Andy, Digital Sound Processing for music and multimedia, Focal press, Oxford, 1999.
4. S.Robert Tannenbaum, Theoretical foundations of Multimedia, Computer Science Press, Newyork, 1998.
5. Mark Von Wodtke, Mind over media: creative thinking skills for electronic media, McGraw hill, Newyork, 1993

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	To introduce the principles of Software like AutoCAD												
CO2	To introduce Software – Photoshop and illustrator												
CO3	well logging, classification of well logging methods, formation evaluation and its Importance.												
CO4	Basic principles, standard and linking options. Using scripts and behaviors, understanding stage, cast and time line, using cast library												
CO5	Basic principles of different types voice over presentations												
CO6	Case study of form image and sequence movement and animation												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	C06				M				L				
3	Category	Professional Core(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA003</b>	<b>LANDSCAPE MANAGEMENT</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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**

Fundamentals and concepts in Environmental Economics– Ecosystem Services and Valuation - natural capitals and their benefits to the society– externalities and public goods – non renewable resource depletion and their social costs - intangible cost associated with social and cultural changes – Economics of global climate change – Kyoto protocol – pollution control and Carbon trading - Economic definitions of sustainability - Ecological vs. Economic sustainability.

### **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**

Assessing the landscape value – landscape quality – aesthetic, heritage and sensitivity values. – Landscape Perception - Evaluating natural process, pattern and elements of landscape. Classification and ranking of landscape. Basic quantitative methods of collecting and analyzing, projecting and presenting data for landscape planning, visual assessment and aesthetic dimension.

### **UNIT IV MODELS IN LANDSCAPE ASSESSMENT 9**

Models for assessing landscape resources – land use impact assessment models – model to assess the ecological values – Land Evolution and Site Assessment model (LESA) – Ecological modeling – GIS models in landscape assessment.

### **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:

1. Conrad, J. M. (1999). Resource Economics. Cambridge University Press. Field, B. C. and Field, M. K. (2006). Environmental economics. McGraw-Hill/Irwin.
2. Hanley, N., Shogren, J. F., and White, B. (1997). Environmental economics in theory and practice. Oxford university press, New York.
3. Kolstad, C. D. (2003). Environmental economics. Oxford university press.
4. Solow, R. M. (1993). An almost practical step toward sustainability. Resources policy, 19(3):162–172.
5. Varian, H. R. (2007). Intermediate microeconomics: A modern approach. W. W. Norton & Company.
6. Daly, H. E. and Farley, J. Ecological Economics: Principles and Applications. Washington, D.C.: Island Press, 2004.

### 7. COURSE OUTCOMES (COs)

The student will be able													
CO1	To learn Landscape management is an integral part.												
CO2	Understand the Landscape planning and design.												
CO3	Execute the various techniques for assessment.												
CO4	Analyze the valuation of natural resources.												
CO5	Evaluate the resources and their management.												
C06	To understand the economics and ecological values												
Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	C06				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA004</b>	<b>GIS MODELLING IN URBAN PLANNING</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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 6**

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 12**

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 9**

Spatial joining - concept of geo processing – union, intersect, clip and merge – features to raster - preparing surfaces - creating TIN surfaces and contours - surface analysis – spatial joining of geographic features.

### **UNIT IV APPLICATIONS OF GIS IN LANDSCAPE ARCHITECTURE 6**

Overlaying features and analyzing using overlay function – feature selection – buffering – table joining and analysis - manipulating attribute data – classification and reclassifications - GIS modeling – 3D display.

### **UNIT V LANDSCAPE PLANNING AND GIS 12**

Introduction to landscape GIS model - Case problem on landscape analysis – suitability analysis using GIS – preparing land-use maps – landscape impact analysis using GIS - landscape suitability analysis – application of GIS in assessing Landscape Ecological risks.

**TOTAL: 45 PERIODS**

**REFERENCES:**

6. Brail K.R (1990) Integrating GIS into Urban Regional Planning, Alternative approaches for developing countries, regional development Dialogue, Vol.11, No.3 UNCRD, Japan, 1990.
7. Karen C.Hanna, GIS for Landscape Architects, ESRI press, 1999.
8. Andy Mitchell, GIS Analysis Volume 1. Geographic patterns and Relationships, ESRI Press 2005.
9. David Maquire and Michael Batty (Editors) GIS, Spatial Analysis and Modeling, ESRI Press, 2005.
10. Cynthia A. Brewer, Designing Better Maps: A Guide for GIS Users, ESRI Press

<b>COURSE OUTCOMES (COs)</b>													
<b>The student will be able</b>													
CO1	To introduce the principles of aerial and satellite based remote sensing for studying earth resources.												
CO2	To introduce geophysical well logging techniques for interpretation of subsurface geology												
CO3	well logging, classification of well logging methods, formation evaluation and its importance.												
CO4	Basic principles, SP log, normal and lateral logs, focused logs, micro resistivity tools and their role in formation evaluation; Applications.												
CO5	Basic principles of different types of radiation logs including gamma ray, gamma-gamma, neutron thermal and chlorine logs; Porosity determination and cross plots; Applications												
CO6	Permeability, bound and free-water estimation using NMR logging techniques; Applications Caliper, dip meter, cement bond logging, casing collar locators, temperature logging; Applications												
<b>Mapping of Course Outcomes with Program Outcomes (POs)</b> (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA005</b>	<b>CONTEMPORARY PROCESSES IN ARCHITECTURE DESIGN</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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**

**6**

Investigation of contemporary theories of media and their influence on the perception of space and architecture. Technology and Art – Technology and Architecture – Technology as Rhetoric – Digital Technology and Architecture

### **UNIT II ASPECT OF DIGITAL ARCHITECTURE**

**9**

Aspects of Digital Architecture – Design and Computation – Difference between Digital Process and Non-Digital Process – Architecture and Cyber Space – Qualities of the new space – Issues of Aesthetics and Authorship of Design – Increased Automatism and its influence on Architectural Form and Space

### **UNIT III CONTEMPORARY**

### **PROCESS**

**12**

Overview of various Contemporary design process and its 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**

**12**

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**

**6**

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**

## REFERENCES:

1. Peter Eisenmann, Diagram: An Original Scene of Writing, Diagram Diaries
2. MOVE, UN Studio
3. Grey Lynn, The Folded, The Pliant and The Supple, Animate form
4. Contemporary Techniques in Architecture, Halsted Press, 2002
5. Ali Rahim, Contemporary Process in Architecture, John Wiley & Sons, 2000.
6. Walter Benjamin, Practices of Art in the Age of Mechanical Reproduction Colin press, 1977
7. Work of Architecture in the Age of Mechanical Reproduction, Differences MIT press, 1997.
8. William J Mitchell, the Logic of Architecture: Design, Computation and Cognition. MIT Press, Cambridge, 1995
9. Marcos Novak, invisible Architecture: An Installation for the Greek Pavilion, Venice Biennale, 2000.

### 10. COURSE OUTCOMES (COs)

#### The student will be able

CO1	To impart knowledge of computer and GIS applications in Landscape architecture and planning projects.
CO2	To understand and Application of software such as Revit Architecture Suite including building information modeling (BIM) and 3D Max.
CO3	To understand and Application of Presentation software: Photoshop, coral draw, etc
CO4	To understand and Application of software such as Sketchup, Podium and E-view.
CO5	To understand and Application of software such as Catia, Primavera for construction planning management.
C06	To understand and Application of software such as Design Builders and other software related to energy simulation modeling.

#### Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low

1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	C06				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA006</b>	<b>ARCHITECTURE AND CRITICAL THEORY</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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 6**

Definition of theory - Architectural theory and its nature, purpose and its relation to practice - overview of some traditional architectural theories- context for the rise of more critical theories in architecture – Introduction to Critical Theory- Architecture and Critical Theory.

### **UNIT II POWER AND BUILT ENVIRONMENT 10**

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 10**

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 10**

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 9**

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

### **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:

1. Neil Leach (ed) Rethinking Architecture, Routledge 2000
2. Michael Hays (ed) Architectural Theory since 1960, MIT Press, 2000
3. Kate Nesbitt, Theorizing a New Agenda for Architecture, Princeton Architectural Press, 1996
4. Anthony D. King, Colonial Urban Development, Routledge & Paul, London, 1976
5. Thomas Metcalf Imperial vision, Oxford, 2002
6. Jane Rendell, Barbara Penner, Iain Borden, Gender Space Architecture, Routledge, 2000
7. Kim Dovey, Framing Places: Mediating Power in Built Form, Routledge 1999.
8. Neil Leach, Anaesthetics of Architecture, MIT Press 1999,
9. Guy Debord. Society of Spectacle, Ian Borden & Jane Rendell, (ed), Intersections, Routledge 2000
10. Paul Allan Johnson, Theory of Architecture, Routledge 2000
11. Christian Norberg Schulz- Towards a Phenomenology of Architecture, Rizzoli New York, 1980

COURSE OUTCOMES (COs)													
The student will be able													
CO1	Understanding of the effect of contemporary theories of media on contemporary architectural design.												
CO2	Understand the Increased Automatism and its influence on Architectural Form and Space												
CO3	Understand the methods of computation Design and diagrammatic representations												
CO4	Application of various concepts of process of digital architecture design												
CO5	Understanding of various contemporary design process and their relation to computation												
CO6	To understand the architectural issues and architectural processes.												
Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low													
1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5			M	M	M			M		H	W	
	CO6				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA007</b>	<b>WEB DESIGN AND PORTFOLIO PRODUCTION</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **UNIT I INTRODUCTION TO WEB DESIGN 15**

Basics of web design – Introduction to software used for web design – ADOBE IMAGE READY, DREAMWEAVER, FLASH etc.

### **UNIT II STATIC PAGES 15**

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 15**

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 15**

Using Timeline – Frames –Key frames- Creating and using Symbols- Simple scripting in flash – Publishing SWF files

### **UNIT V DEVELOPING A WEB SITE30**

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**

1. Photoshop 7 Bible Professional Edition, Wiley John & Son INC, New York.
2. Flash Web Design, The Art of Motion Graph, Curtis Hillman, New Riders Publishing, Indianapolis, IN. U.S.A, 2000
3. M.E. Morris, and R.J. Hinrichs, Web Page Design, Prentice Hall, 1996.
4. Mark Von Wodtke, Mind over Media : Creative Thinking Skills for Electronic Media, McGraw-hill, New York, 1993
5. Adobe Flash CS3 professional on demand by Steve Johnson, Andy Anderson, Perspection inc, 2012.

### **REFERENCES**

1. Adobe Photoshop CS3 studio techniques, Ben Wilmore, 2012.
2. Adobe Dreamweaver CS6 classroom in a book, Adobe creative team, 2012.

<b>COURSE OUTCOMES (COs)</b>	
<b>The student will be able</b>	
CO1	To understand Basics of web design,Introduction to software used for web design
CO2	To understand the Creation and Editing of site map layer, tables, frameset, CSS style tools like insert, roll over etc
CO3	Introduction to macromedia flash, importing other file formats to Flash- saving and exporting Flash files, Frame by frame animation
CO4	Using Timeline ,Frames ,Key frames, Creating and using Symbols Simple scripting in flash
CO5	Using the skills and concepts learnt with the adobe image ready, dream weaver, flash software's. Students will develop their portfolio in the form of web pages. These pages have to be uploaded in free public domains.
CO6	To implement with the web design and to prepare a model in software

**Mapping of Course Outcomes with Program Outcomes (POs)**  
(H/M/L indicates strength of correlation) H-High, M-Medium, L-Low

1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	C06				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											

<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P/S</b>	<b>C</b>
<b>P18PELA008</b>	<b>SUSTAINABILITY AND ENERGY CONSERVATION IN LANDSCAPE ARCHITECTURE</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### **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**

Need and concept of sustainability, Brundtland report, World Commission on environment and development, sustainable development, sustainable growth, sustainable economy and sustainable use. Visions of sustainability. Source and ethics of sustainability. Sustainability and Climate Change.

### **UNIT II SUSTAINABLE SITE 7**

Sustainable site – LEEDS, BREEM, 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:

1. John.F.Benson and Maggie.H.Roe, Landscape and sustainability, John Wiley Publication, New York, 2000.
2. O.R.Gray, Landscape Planning for Energy Conservation,
3. Anne Simon Moffat and Marc Schiller, Landscape design that saves energy, William Monow and co.,Inc., New York, 1981.
4. Publications of Centre for science and environments, TERI, New Delhi

### 5 COURSE OUTCOMES (COs)

#### The student will be able

CO1	To make aware of the Sustainable design aspects for landscape and Green buildings design concepts.
CO2	Introduction to sustainable development in relation to natural resource conservation energy conservation, environmental pollution and conservation of bio-diversity
CO3	Global issues such as global warming, ozone layer depletion, green house gases and depletion of natural resources in relation to energy generation;
CO4	Sustainable development from the perspective of regional and urban planning; Issues at regional and micro level;
CO5	Climate considerations in design of buildings in various climates;
CO6	Eco-friendly architecture.

#### Mapping of Course Outcomes with Program Outcomes (POs) (H/M/L indicates strength of correlation) H-High, M-Medium, L-Low

1	COs/POs	a	b	c	d	e	f	g	h	i	j	k	l
2	CO1	H	H	M		M			M	H	H		H
	CO2	L		M	M						L	H	L
	CO3		L			L			M				H
	CO4									M		M	H
	CO5		M	M	M				M		H	W	
	CO6				M				L				
3	Category	Professional Elective(PC)											
4	Approval	32 <sup>nd</sup> Meeting of Academic Council											