

**DEPARTMENT OF ARCHITECTURE**  
**ANNA UNIVERSITY, CHENNAI**

**VISION OF DEPARTMENT OF ARCHITECTURE**

The Department of Architecture is committed to excellence in the field of architectural education and the discipline of architecture through its pedagogical, research, extension and outreach activities, directed towards the betterment of the world that we inhabit, in all realms shaped by architecture. It shall uphold universal moral and ethical values in all endeavours that it undertakes and be exemplary in creating positive transformations.

**MISSION OF DEPARTMENT OF ARCHITECTURE**

The Mission of the Department of Architecture is

- To tap and strengthen the innate potential of each student and deepen their knowledge/skills in order to enable them to self-actualise as well as become catalysts for positive change.
- To contribute to immediate context, larger society and the world through knowledge creation and dissemination.
- To engage and extend the expertise of the department in addressing and solving of issues/problems related to the built environment.
- To actively interact and collaborate with professionals, educational institutions and other related organisations at all scales in order to collectively further the cause of appropriate architecture.

ANNAUNIVERSITY, CHENNAI - 600 025  
UNIVERSITY DEPARTMENTS

REGULATIONS 2023

CHOICE BASED CREDIT SYSTEM

M.Arch (Landscape) Full-Time Programme

1. PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

- I. Become a landscape architect with ability to design open spaces, find environmentally suitable solutions and become a landscape planner capable of promoting sustainable development of natural resources.
- II. Find gainful employment in landscape architectural firms / infrastructure firms / environmental solutions providers through offering of specialised knowledge.
- III. Be a part of organizations that influence policy and decision making through contributing in-depth knowledge in relevant fields of study.
- IV. Become a teacher/researcher with ability to apply critical, investigative and analytical thinking towards future society.
- V. Become a thinker and entrepreneur who can anticipate and project future transformations in the environment.

2. PROGRAMME OUTCOMES (POs)

After going through two years of study, our M.Arch (Landscape) graduates will exhibit ability to:

PO#

Programme Outcome

1. An ability to independently carry out research /investigation and landscape design to solve practical problems
2. An ability to write and present a substantial technical report/document.
3. An ability to design outdoor environments for people and an ability to plan for the effective management of natural resources for use by people.
4. Students will be able to resolve landscape architectural problems with due consideration to environmental and urban issues.
5. Students will be able to bring contemporary tools/ methods/ approaches to analyse situations and explore design.
6. The students will develop skill to identify, decipher and interpret the issues relating to Landscape Architecture and will also be trained in collecting, critically analysing and presenting information in a logical and clear manner.

PEO / PO Mapping

PROGRAMME EDUCATIONAL OBJECTIVES	PROGRAMME OUTCOMES					
	PO1	PO2	PO3	PO4	PO5	PO6
I			3	3	1	2
II			3	3	1	
III	1	3	3			
IV	2	3				3
V	1		3			3

3- High 2-Moderate 1-Low

### Mapping of Course Outcome and Programme Outcome

Year	Sem ester	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	
I	1	Geology and Watershed Management				3		2	
		Planting and Horticultural Practices				3		2	
		Theory of Landscape Architecture		2					3
		Landscape Construction Detailing	3		3	1			
		Site Planning and Design Studio	3		3	1	1	1	
	Professional Elective I								
	2	Research Methodologies for Human Environment		3					3
		Planting Design				3	3		
		Urban Landscape Design				3	3		
		Professional Elective II							
Application of GIS in Landscape Planning					2	3	3		
Urban Landscape Design Studio	3		3	3	1	1			
II	3	Professional Practice of Landscape Architecture	3				1	1	
		Professional Elective III							
		Professional Elective IV							
		Internship Training	3		1	1	2		
		Pre-Thesis	3	2	1			1	
	Regional Landscape Planning Studio	3		1	2	3	3		
4	Thesis	2	1	3	1	2	3		

**3- High 2-Moderate 1-Low**

**ANNA UNIVERSITY, CHENNAI**  
**UNIVERSITY DEPARTMENTS**  
**M.ARCH (LANDSCAPE) FULL-TIME PROGRAMME**  
**REGULATIONS 2023**  
**CHOICE BASED CREDIT SYSTEM**  
**I TO IV SEMESTERS CURRICULA AND SYLLABUS**  
**SEMESTER I**

S. NO.	COURSE CODE	COURSE TITLE	CATE-GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
<b>THEORY</b>								
1.	LN3101	Geology and Watershed Management	PCC	3	0	0	3	3
2.	LN3102	Planting and Horticultural Practices	PCC	3	0	0	3	3
3.	LN3103	Theory of Landscape Architecture	PCC	3	0	0	3	3
<b>THEORY CUM STUDIO</b>								
4.	LN3111	Landscape Construction Detailing	PCC	1	0	3	4	4
<b>STUDIO</b>								
5.	LN3121	Site Planning and Design Studio	PCC	0	0	10	10	10
<b>TOTAL</b>				<b>10</b>	<b>0</b>	<b>13</b>	<b>23</b>	<b>23</b>
<b>PROFESSIONAL ELECTIVE</b>								
6.		Professional Elective I	PEC	X	X	X	3	3
<b>TOTAL</b>							<b>26</b>	<b>26</b>

**SEMESTER II**  
**(Prerequisite - Pass in Site Planning and Design Studio)**

S. NO.	COURSE CODE	COURSE TITLE	CATE-GORY	PERIODS PERWEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
<b>THEORY</b>								
1.	LN3201	Research Methodologies for Human Environment	RMC	3	0	0	3	3
2.	LN3202	Planting Design	PCC	3	0	0	3	3
3.	LN3203	Urban Landscape Design	PCC	3	0	0	3	3
<b>THEORY CUM STUDIO</b>								
4.	LN3211	Application of GIS in Landscape Planning	EEC	1	0	3	4	4
<b>STUDIO</b>								
5.	LN3221	Urban Landscape Design Studio	PCC	0	0	10	10	10
<b>TOTAL</b>				<b>10</b>	<b>0</b>	<b>13</b>	<b>23</b>	<b>23</b>
<b>PROFESSIONAL ELECTIVE</b>								
6.		Professional Elective II	PEC	X	X	X	3	3
<b>TOTAL</b>							<b>26</b>	<b>26</b>

**SEMESTER III**  
(Prerequisite - Pass in Urban Landscape Design Studio)

S. NO.	COURSE CODE	COURSE TITLE	CATE-GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
<b>THEORY</b>								
1.	LN3301	Professional Practice of Landscape Architecture	PCC	3	0	0	3	3
<b>STUDIO</b>								
2.	LN3321	Pre-Thesis	PCC	0	0	6	6	6
3.	LN3322	Regional Landscape Planning Studio	PCC	0	0	10	10	10
<b>TOTAL</b>				<b>3</b>	<b>0</b>	<b>16</b>	<b>19</b>	<b>19</b>
<b>PROFESSIONAL ELECTIVE</b>								
4.		Professional Elective III	PEC	x	x	x	3	3
5.		Professional Elective IV	PEC	x	x	x	3	3
<b>INTERNSHIP TRAINING</b>								
6.	LN3311	Internship Training	EEC	X	X	X	X	2
<b>TOTAL</b>							<b>27</b>	

\* 4weeks in Summer Vacation between II and III Semesters

**SEMESTER IV**  
(Prerequisite- Pass in Regional Landscape Planning Studio & Pre-Thesis, 40 Credits)

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
<b>STUDIO</b>								
1.	LN3421	Thesis	PCC	0	0	16	16	16
<b>TOTAL</b>							<b>16</b>	<b>16</b>

**TOTAL NO. OF CREDITS: 95**

**PROFESSIONAL CORE COURSES (PCC)**

S NO.	COURSE CODE	COURSE TITLE	CATE-GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
1.	LN3101	Geology and Watershed Management	PCC	3	0	0	3	3
2.	LN3102	Planting and Horticultural Practices	PCC	3	0	0	3	3
3.	LN3103	Theory of Landscape Architecture	PCC	3	0	0	3	3
4.	LN3111	Landscape Construction Detailing	PCC	1	0	3	4	4
5.	LN3121	Site Planning and Design Studio	PCC	0	0	10	10	10
6.	LN3201	Research Methodologies for Human Environment	RMC	3	0	0	3	3
7.	LN3202	Planting Design	PCC	3	0	0	3	3

8.	LN3203	Urban Landscape Design	PCC	3	0	0	3	3
9.	LN3221	Urban Landscape Design Studio	PCC	0	0	10	10	10
10.	LN3301	Professional Practice of Landscape Architecture	PCC	3	0	0	3	3
11.	LN3321	Pre-Thesis	PCC	0	0	6	6	6
12.	LN3322	Regional Landscape Planning Studio	PCC	0	0	10	10	10

### **PROFESSIONAL ELECTIVE COURSES (PEC)**

#### **SEMESTER I, ELECTIVE I**

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
1.	LN3001	Sustainability and Energy Conservation in Landscape Architecture	PEC	3	0	0	3	3
2.	LN3002	Universal Design	PEC	3	0	0	3	3
3.	LN3003	Traditional and Contemporary Landscapes	PEC	3	0	0	3	3

#### **SEMESTER II, ELECTIVE II**

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
1.	LN3004	Environmental Planning and Legislation	PEC	3	0	0	3	3
2.	LN3005	Landscape Resources	PEC	3	0	0	3	3
3.	LN3006	Energy, Climate Change and Urban Development	PEC	3	0	0	3	3

#### **SEMESTER III, ELECTIVE III**

S. No.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
1.	LN3007	Landscape Assessment	PEC	3	0	0	3	3
2.	LN3051	Landscape Urbanism	PEC	3	0	0	3	3
3.	LN3008	Cultural Landscapes and Landscape Conservation	PEC	3	0	0	3	3
4.	LN3009	Environment, Development and Disaster Management	PEC	3	0	0	3	3

### SEMESTER III, ELECTIVE IV

S. No.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
1.	LN3010	Landscape Management	PEC	3	0	0	3	3
2.	LN3011	Landscape Ecology and Planning	PEC	3	0	0	3	3
3.	LN3012	Environmental Impact Assessment	PEC	2	0	2	4	3

### EMPLOYMENT ENHANCEMENT COURES (EEC)

S No.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P/S		
1.	LN3211	Application of GIS in Landscape Planning	EEC	1	0	3	4	4
2.	LN3311	Internship Training	EEC	X	X	X	X	2

### SUMMARY

S. No	Subject Area	Credits per Semester				Credits Total
		I	II	III	IV	
1	PCC	23	16	19	16	74
2	PEC	3	3	6		12
3	RMC		3			03
4	EEC		4	2		06
<b>Total</b>		<b>26</b>	<b>26</b>	<b>27</b>	<b>16</b>	<b>95</b>

**OBJECTIVES**

- To give introduction to soil formation, characteristics of land formation and its influence on landscape.
- To give detailed knowledge on the formation of landforms.
- To introduce basic hydrology and its link with various landscape elements.

**UNIT I INTRODUCTION 6**

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, and glacial topography.

**UNIT II GEOMORPHOLOGY 7**

Evolution of land forms: Land forms produced by geomorphic process and theories of Plate tectonics.

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 10**

Soil properties soil classification, soils of India.

Soil use and Management: A) Soil survey and field mapping. Basics of Soil Testing and Analysis. 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 10**

Rainfall regime with specific reference to the Indian region. Characteristics and management of drainage basins: Introduction to watersheds. Types of Flow: channel and over-land. Occurrence and movement of ground water. Water bearing properties of geological formation. Sea water intrusion in Coastal areas. Rainwater Harvesting for urban agglomerations.

**UNIT V WATER MANAGEMENT 12**

Application of geological information in the interpretation of landscapes on maps and in the field. Identifying land forms and land use through remote sensing for Landscape Applications.

The relationships between geology, soil, hydrology and vegetation: Practical examples.

**TOTAL: 45 PERIODS**

**COURSE OUTCOMES:**

On completion of the course, the student is expected to be able to

- CO1** Familiarity with characteristics of landforms, causes and effects.
- CO2** Knowledge about soil characteristics, causes and effects and modifications.
- CO3** Knowledge about methods of analysis of soils.
- CO4** Knowledge about water management

**REFERENCES**

1. P.Abrol and V.V.DhruvaNarayana, 'Technologies for Wasteland Development', ICAR, New Delhi, 1990.
2. Arthur.V.Strahler, 'Physical Geography'-3rd Edition, John Wiley and Sons Inc, 2005.
3. William D. Thornbury, 'Principles of Geomorphology', John Wiley and Sons Inc, 1954.



## CO-PO Mapping

CO	PO					
	1	2	3	4	5	6
1	-	-	-	3	-	2
2	-	-	-	3	-	2
3	-	-	-	3	-	2
4	-	-	-	3	-	2
Avg.	-	-	-	3	-	2

'1' = Low; '2' = Medium; '3' = High

**LN3102**

**PLANTING AND HORTICULTURAL PRACTICES**

**L T P/S C**

**3 0 0 3**

### OBJECTIVES

- To give 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**

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.

### **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**

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.

### **UNIT V LANDSCAPE MAINTENANCE 9**

Maintenance methodology, maintenance economics and maintenance details for all soft landscape. Equipment for landscape maintenance.

**TOTAL: 45 PERIODS**

### **COURSE OUTCOMES:**

On completion of the course, the student is expected to be able to

**CO1** Knowledge of binomial nomenclature of plants.

**CO2** Familiarity with aspects of plant growth and propagation, thereby having understanding of maintenance requirement of plants.

## REFERENCES

1. Raunkier.C, 'The Life Forms of Plants and Statistical Plant Geography', Oxford Clarendon Press,1934.
2. Venkateswaralu.V.A, 'Textbook of Botany'-Vol III, Guntur.
3. Lawrence.H.M, 'Taxonomy of Vascular Plants', Oxford, IBH, 1964.
4. Rao.K.N.R. and Krishnamurthy.K.N, 'Angiosperms', S.Viswanathan Printers and Publishers.
5. G.S.Puri, 'Forest Types of India', The Indian forester, 1960.

## CO-PO Mapping

CO	PO					
	1	2	3	4	5	6
1	-	-	-	3	-	2
2	-	-	-	3	-	2
Avg.	-	-	-	3	-	2

'1' = Low; '2' = Medium; '3' = High

**LN3103**

**THEORY OF LANDSCAPE ARCHITECTURE**

**L T P/S C**  
**3 0 0 3**

## OBJECTIVES

- To give understanding of a broad range of contemporary and historic theories that influence design and planning.
- To give 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**

**9**

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**

**9**

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**

**9**

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**

**9**

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****9**

Development of landscape design and gardens till the early 19th century, Influences and linkages across cultures and traditions.

**TOTAL: 45 PERIODS****COURSE OUTCOMES:**

On completion of the course, the student is expected to be able to

- CO1** Ability to engage analytical approach to the study of theory and developing an attitude towards critiquing and evaluating choices for design decisions in varied contexts.
- CO2** An appreciation of scale in terms of landscape and nature.

**REFERENCES**

1. Pregill Philip and Nancy Volkman, 'Landscapes in History, Design and Planning in the Western Tradition', John Wiley and Sons Inc, New York, 1999.
2. Swaffield, Simon, 'Theory in Landscape Architecture', University of Pennsylvania Press, Philadelphia, 2002.
3. Birnbaum, Charles A and Robin Karson, 'Pioneers of American Landscape Design', McGraw Hill, New York, 2000.
4. Francis, Mark and Randolph T. Hester, Jr, 'The Meaning of Gardens'. The MIT Press, Cambridge, 1993.
5. Tishler, William H, 'American Landscape Architecture, Designers and Places', American Society of Landscape Architects, Preservation Press, 1999.
6. Boults, Elizabeth and Chip Sullivan, 'Illustrated History of Landscape Design', Hoboken, John Wiley and Sons, New Jersey, 2010.
7. Rogers, Elizabeth Barlow, 'Landscape Design: A Cultural and Architectural History', Harry N. Abrams, Inc, New York, 2001.
8. Geoffrey & Susan Jellicoe, 'The Landscape Of Man'-3rd Edition, Thames and Hudson, 1995.
9. Tobey George. 'History of Landscape Architecture, 'The Relation Of People To Environment', Elsevier And Co, New York, 1973.

**CO-PO Mapping**

CO	PO					
	1	2	3	4	5	6
1	-	2	-	-	-	3
2	-	2	-	-	-	3
<b>Avg.</b>	-	<b>2</b>	-	-	-	<b>3</b>

1' = Low; '2' = Medium; '3' = High;

**LN3111****LANDSCAPE CONSTRUCTION DETAILING****L T P/S C****1 0 3 4****OBJECTIVE**

- To train the students in the detailing and drawing of landscape elements – Hard and soft landscape elements

**UNIT I HARD LANDSCAPES AND OUTDOOR FURNITURE****10**

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

Criteria for the selection of materials and specifications for the street furniture in various environments. Design of 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.

**UNIT II OUTDOOR LIGHTING 10**

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. Solar energy and lighting. Preparation of electrical drawing for landscape area.

**UNIT III LAND AND WATER FEATURES 25**

Design of water features such as swimming pools, cascades, fountains etc., and their technical requirements. Consideration for design and detail, Water bodies.

Design of irrigation system. Landscape area types, objectives and design, water needs and sources, application, methods of installation. Control systems, scheduling and maintenance. Representation of land forms, slope analysis-uses and function, Grading – symbols and abbreviations, principles of earthwork- cut and fill calculations, precaution taken while performing cut and fill in relation to soil condition. Design of grading alignments for paths /roads.

**UNIT IV PLAY AREA AND TERRACE LANDSCAPING 15**

Design of play areas -Tot lots 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.

**TOTAL: 60 PERIODS**

**COURSE OUTCOMES:**

On completion of the course, the student is expected to be able to

**CO1** Detailing and drawing of landscape elements and features.

**CO2** Water management through landscape design.

**CO3** Detailing of site elements like earthwork, hard landscape and outdoor furniture

**REFERENCES**

1. David Sauter, Landscape Construction, Pelmer Thomson Learning, 2000.
2. Michael Little wood, Landscape Detailing Volume I-IV, Architectural Press, 1993.
3. Roger Narboni, Lighting the Landscapes- Art Design technologies, Birkhauser, Switzerland, 2004.
4. 2004.
5. Strom Steven, Site engineering for landscape Architects, John Wiley and sonsInc., 2004.
6. Charles.W.Harris& Nicholas T. Dines, Time saver Standards for Landscape Architecture,
7. Mc. Graw Hill.
8. Jack E. Ingels, Landscaping – Principles & Practices , Pelmer Publishers Inc., 1992

**CO-PO Mapping**

CO	PO					
	1	2	3	4	5	6
1	3	-	3	1	-	-
2	3	-	3	1	-	-
3	3	-	3	1	-	-
<b>Avg.</b>	<b>3</b>	<b>-</b>	<b>3</b>	<b>1</b>	<b>-</b>	<b>-</b>

'1' = Low; '2' = Medium; '3' = High;























































