



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY

NEW M. A. JINNAH ROAD KARACHI-74800 (PAKISTAN)

PHONE # 021-99231195 AND FAX # 021-99230710

**OFFICE OF THE
REGISTRAR**

DUET/REG/AR(G)/2024/0129


Date: 24-06-2024

NOTIFICATION

In pursuance of the decision taken in 21st Meeting of the Academic Council held on 21st May, 2024 vide the Resolution # 21.9.(b), it is hereby notified for the general information of all concerned that the PEOs and its mapping with PLOs and the revised mission and its mapping with PEOs of Energy and Environment Engineering have been approved.

2. This issues with the approval of the Vice Chancellor.

Prof. Dr. Syed Asif Ali Shah
Registrar



Enclosures:

1. The PEOs and its mapping with PLOs and the revised mission and its mapping with PEOs of Energy and Environment Engineering.

A copy is forwarded for the information to:

1. All Concerned.
2. Office Copy.

Vision and mission of the University:

Vision: The University of Relevance Leading to Techno-preneurial Excellence.

Mission: Dawood University of Engineering & Technology aims to invest in human capital for accelerated advancement in engineering knowledge and practices, new frontiers in R&D hence creating knowledge led economy and better future for Generation to come. (<http://duet.edu.pk>)

Revised Mission statement of the Department of Energy and Environment Engineering:

“To produce competent professionals who integrate engineering, science, and technology to develop sustainable systems and solutions while addressing critical challenges such as energy efficiency, resource depletion, climate change, and environmental protection through interdisciplinary approaches, adopting professional ethics, entrepreneurial skills, and a lifelong commitment to learning”.

Table 1. Existing and revised departmental PEOs:

Old PEOs	Updated PEOs
PEO-1. Utilize energy and environmental engineering knowledge to disseminate inventive engineering, science, and technology applications that enhance practices, using modern tools.	PEO-1. To produce graduates with exceptional expertise in energy and environment engineering to propagate inventive knowledge and applications of science, engineering, and technology using modern tools.
PEO-2. Conduct and communicate interdisciplinary research to gain a comprehensive understanding of problems and their solutions	PEO-2. To enable graduates to conduct interdisciplinary research to acquire a comprehensive understanding of complex engineering problems and their solutions exhibiting professional ethics
PEO-3 Demonstrate effective teamwork and entrepreneurial skills to address energy and environmental challenges through sustainable and socio-economic solutions	PEO-3. To empower graduates with lifelong learning, teamwork, and management skills to tackle environmental challenges and foster sustainable socio-economic solutions
PEO-4 Maintaining ethical standards in profession by adopting a lifelong learning attitude.	



Table 2. Mapping of Updated PEOs with Duet Vision, Mission, and Departmental Mission:

UPDATED PEOs	DUET VISION	DUET MISSION	DEPARTMENTAL MISSION (EEE)
PEO-1. To produce graduates with exceptional expertise in energy and environment engineering to propagate inventive knowledge and applications of science, engineering and technology using modern tools.	√	√	√
PEO-2. To enable graduates to conduct interdisciplinary research to acquire a comprehensive understanding of complex engineering problems and their solutions exhibiting professional ethics.	√	√	√
PEO-3. To empower graduates with lifelong learning, teamwork and management skills to tackle environmental challenges and foster sustainable socio-economic solutions.	√	√	√

Table 3. Mapping of PLOs to old and new PEOs:

PLOs	Old PEOs				Updated PEOs		
	PEO-1	PEO-2	PEO-3	PEO-4	PEO-1	PEO-2	PEO-3
PLO-1	X				X		
PLO-2		X				X	
PLO-3	X					X	
PLO-4		X				X	
PLO-5	X				X		
PLO-6			X				X
PLO-7			X				X
PLO-8				X		X	
PLO-9			X				X
PLO-10		X			X		
PLO-11			X				X
PLO-12				X			X





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**OFFICE OF THE
REGISTRAR**


DUET/REG/AR(G)/2024/0132

Date: 24-06-2024

NOTIFICATION

In pursuance of the decision taken in 21st Meeting of the Academic Council held on 21st May, 2024 vide the Resolution # 21.12.(e), it is hereby notified for the general information of all concerned that the course scheme and contents of MS Program in Landscape Architecture Program of Department of Architecture and Planning have been approved.

2. This issues with the approval of the Vice Chancellor.


Prof. Dr. Syed Asif Ali Shah
Registrar

Enclosures:

1. The course scheme and contents of MS Program in Landscape Architecture Program of Department of Architecture and Planning.

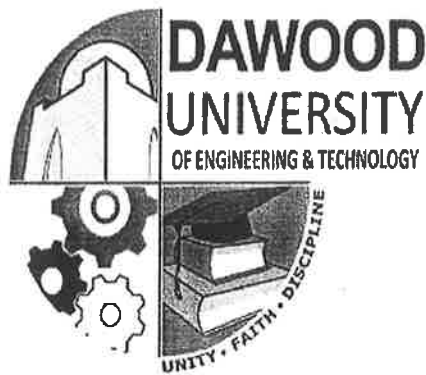
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DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY, KARACHI



MASTER (MS) IN LANDSCAPE ARCHITECTURE



Course Outline and Research work

MASTER (MS)
LANDSCAPE ARCHITECTURE

A handwritten signature in black ink, appearing to be "Dr. H. M. Khan", written over the text "LANDSCAPE ARCHITECTURE".



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

1. Program Educational Objectives (PEOs)

PEO1: Be productive and contributing members of the Landscape Architecture profession as practitioners, entrepreneurs, researchers, or teachers;

PEO2: Be engaged in learning, understanding, and applying new ideas as the field develops;

PEO3: Promote the safety, health, and welfare of the public and environment through professional practice and civic leadership.

2. Eligibility

- To be eligible for admission to the Master (MS) in Landscape Architecture Degree Program, a candidate must possess his or her Bachelor degree in Landscape Architecture / Architecture / Interior Design / Environmental Design from PCATP / HEC (as applicable) recognized institution of Pakistan or abroad.
- A minimum CGPA of 3.0 (out of 4.0 in the semester system) or First Division (in the annual system) in the most recent degree obtained is required, whether such was degree obtained from Pakistani or foreign universities.

3. Structure of MS Programs:

Number of Semesters	4 (Typical)
No of Courses	08 (Minimum)
Credit hours allowed per Semester	12 (Max) in spring/fall
Coursework Credit Hours	24
Thesis Credit Hours	06
Program Credit Hours	30 (Minimum)

4. Scheme of Study for MS Programs:

Semester-I		Semester-II	
Course Title	Credit Hours	Course Title	Credit Hours
Compulsory Course I	3	Elective Course-I	3
Compulsory Course II	3	Elective Course-II	3
Core-I	3	Elective Course-III	3
Core-II	3	Elective Course-IV	3
	12		12
Semester-III		Semester-IV	
Identify thesis topic/Initial seminar		Final Seminar	

5. Distribution of Courses and Credit Hours:

- (1) The duration of teaching time in each semester shall be sixteen (16) weeks.
- (2) The minimum number of contact hours for a course of three (03) Credit Hours shall be forty-two (42).

Courses Description	No. of Courses	Credit Hours
Core Courses	02	06
Elective Courses	06	18
Thesis / Dissertation	-----	06
Total		30

6. List of Courses

6.1 Core Courses

S. No.	Course Code	Courses Name	Credit Hours	Marks
1	AR-62XX	Advanced Landscape Design-I	3+0	100
2	AR-62XX	Advanced Landscape Design-II	3+0	100
3	AR-62XX	Urban Landscape	3+0	100
4	AR-62XX	Green Infrastructures	3+0	100

6.2 Elective Courses

S. No.	Course Code	Courses Name	Credit Hours	Marks
1	AR- 67XX	History of Landscape Architecture	3+0	100
2	AR-67XX	Landscape Materials and Construction	3+0	100
3	AR-67XX	Climatology and Environment in Landscape Design	3+0	100
4	AR-67XX	Ecology and Landscape Design	3+0	100
5	AR-67XX	Site Planning and Landscape laws	3+0	100
6	AR-67XX	Environmental Psychology and Landscape Design	3+0	100
7	AR-67XX	Project Management and Professional Practice in Landscape Architecture	3+0	100
8	AR-67XX	Digital Visualization for Landscape	3+0	100
9	AR-67XX	Contemporary Landscape Architecture	3+0	100
10	AR-67XX	Landscape Construction	3+0	100
11	AR-87XX	Landscape Seminar	3+0	100
12	AR-67XX	Research Methods	3+0	100
13	AR-67XX	Climate Action Planning	3+0	100

This list is not exhaustive and may be appended occasionally in the subsequent BoS meetings as and when required by the program.

6.3 Thesis Dissertation:

1	AR-79XX	Thesis	3+0	100
		Research		
		Design		

7. Exempt course Policy

If applicable, the admission committee shall decide the exempted courses for the applicant.





DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Advanced Landscape Design-I</u>
Course Code	:	AR-62XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Core Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To develop an understanding and relationship in landscape elements, nature and better environment. To develop a focus of student's interest, for an introductory studio work with rooting of minds referring to the landscape design. The elaboration of the process of development and alignment of minds in order to trigger creative attentiveness that can generate an urge for attempting excellence in landscape design.

Course Contents:

Basic and new understanding to enhance the knowledge of students about advanced landscape design principles that combine natural systems (such as landform, water, vegetation, wildlife habitat, soils, and climate) and man-built systems (such as green belts, neighborhood parks, buildings, utilities). All the projects include the understanding of above mentioned natural and manmade systems and also their amalgamation.

Books Recommended:

- Encyclopedia of landscape design by Chris Young
- Reading the French Garden Book by Denise Le Dantec and Jean-Pierre Le Dantec
- Zen Gardens: The Complete Works of Shunmyo Masuno, Japan's Leading Garden Designer by Mira Locher & Uchida Shigeru
- Invisible Gardens. The Search for Modernism in the American Landscape Book by Melanie Simo
- The Enclosed Garden, Rotterdam Book by Aben, Rob und Saskia de Wit



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Advanced Landscape Design-II</u>
Course Code	:	AR-62XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Core Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To provide opportunities for the students for developing and refining their knowledge and skills of landscape architectural design, especially design process.

Course Contents:

Projects will require the students to define goals and objectives; research background information; analysis of existing conditions; produce and articulate programmatic requirements, develop concepts; and prepare diagrams, text, plans, perspectives, sections and details that effectively communicate proposals. Creative and collaborative approaches will be encouraged. An emphasis will be placed on understanding the natural, built, and cultural context in which projects occur (site analysis with a concern for the human use of the environment); and on the organization and articulation of space.

To study the design vocabulary, concerns, influences and approaches of important 20th century landscape architects.

- Frederick Law Olmsted (1822-1903)
- Gertrude Jekyll (1843-1932)
- Geoffrey Jellicoe (1900-1996)
- Thomas Church (1902-1978)
- Pechère René (1908-2002)
- Roberto Burle Marx (1909-1994)
- Corajoud Michel (1937-2014)

Books Recommended:

- Design with Nature, by Ian McHarg.
- A Sand County Almanac, by Aldo Leopold.
- Landscape Architecture, by John Simonds.
- The Death and Life of Great American Cities, by Jane Jacobs.
- Manual of Woody Landscape Plants, by Michael Dirr, Hon. ASLA





Title of Subject	:	<u>Urban Landscape</u>
Course Code	:	AR- 62XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Core Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To inculcate the theories and approaches of Landscape urban design / planning for raising sensitivity towards inter-relation of Landscape Architecture and City taking into consideration three dimensional aspects of Physical Design. To enable student to demonstrate the ability to think independently and pursue original research about urban Landscape designs.

Course Contents:

Context in urban landscape design process importance of Context, Site context, functional context, and need based context. Etc. Process of site planning. Architecture and Nature. Examples of modern Urban landscape.

Study of orientation for Urban landscape. Orientation of Building with respect to approach, orientation of building with respect

to façade and elevation. Building forms for Urban landscape with respect to function, and orientation.

Study of requirements of formal and spatial architectural elements for urban landscape buildings.

Books Recommended:

- Calendar, Time Saver Standard (building type and design data) vol. 1-4.
- John, Handbook of sports and Environments, Building Design, Vol 1-3.
- Fawcett, Architecture: Design Notebook.
- Form, Space and Order by DK Ching.
- Analyzing Architecture by Simon Unwin Chapter Ideal Geometry and Space and Structure.
- Experiencing Architecture by Steen Eiler Rasmussen Chapter, on Solids and Cavities in Architecture.



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Green Infrastructure</u>
Course Code	:	AR- 62XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Core Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To enhance the advancement of student's knowledge and capabilities regarding Green Infrastructure concepts and the issues and techniques involved in implementation of Green Infrastructure.

Course Contents:

The course provides an overview as well as more in-depth coverage of the science, practical context, and creation of Green Infrastructure. The built environment of arid regions is emphasized, with Tucson Case Studies providing practical focus to content and learning objectives. The term Green Infrastructure, as used in this course, aligns with the following EPA description: "Green infrastructure uses vegetation, soils, and natural processes to manage water and create healthier urban environments.

Identification of risks from climate change to reduce them making infrastructure more resilient. Improved and new green space design to reduce the impact of environmental. Use of green infrastructure to reduce ambient heat and flooding in urban areas due to the cooling effects of individual trees.

Books Recommended:

- Sustainable Green Infrastructure Planning and Design by Robert L. Ryan, Professor
- Handbook on Green Infrastructure Planning, Design and Implementation
- Edited by Danielle Sinnett, Nick Smith and Sarah Burgess, University of the West of England, UK



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>History of Landscape Architecture</u>	
Course Code	:	AR- 67XX	
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)	
Effective	:	2025	
Course type	:	Elective Course	
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%	
Marks	:	Theory: 100	Practical: 00
Credit Hours	:	03	0
Teaching Scheme	:	3Hrs / Week	00

Course Objectives:

To make the students aware of historic developments of landscape architecture. This course will let students know how landscape was used for pleasure historically and then changed to necessity.

Course Contents:

Landscape Architecture for developing structures, improving aesthetics with studying ancient history of gardens and green places. History of Landscape Architecture to develop the solutions-oriented approach for rapidly urbanizing world. The solutions which are aesthetically pleasing, economically feasible and are Environment friendly.

This course examines landscape architecture from an historic and contemporary perspective as reflected in theory and practice. Through case reviews of built works including significant estates, gardens, urban designs, park systems, corporate landscapes, restored natural sites, heritage sites, waterfront projects, resorts, etc., we will explore the evolution of design ideology and application of theory in the practice of landscape architecture.

Books Recommended:

- Illustrated History of Landscape Design by Boult, Elizabeth, Sullivan
- The History of Landscape Design in 100 Gardens by Chisholm
- Gardens and the Picturesque: Studies in the History of Landscape Architecture by Hunt, John Dixon
- Mughal Architecture: An Outline of Its History and Development (1526-1858) by Ebba Koch



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Landscape Materials and Construction</u>	
Course Code	:	AR- 67XX	
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)	
Effective	:	2025	
Course type	:	Elective Course	
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%	
Marks	:	Theory: 100	Practical: 00
Credit Hours	:	03	0
Teaching Scheme	:	3Hrs / Week	00

Course Objectives:

To understand and investigate the origins, characteristics, and design applications and methodologies used in landscape construction.

Course Contents:

A comprehensive introduction to the character and uses of landscape building materials, with reference to trade literature and samples. The compatibility of materials and construction methods with the design of landscape structures and features. The process of designing, selecting, pricing, sourcing, constructing, and maintaining hard and soft landscape materials are discussed. Life cycle and sustainability of material selection is woven into the course content.

The course will focus on the preparation of construction drawing packages and specifications using standard drafting/graphic techniques. The proper selection and detailing of standard construction materials by understanding the materials' properties and characteristics as well as sound construction methods and techniques.

Books Recommended:

- Sauter, David. 2010. Landscape Construction (3rd Edition). Delmar Publishers Inc. Section 1: (Chapters 1,3 & 4)
- Harris, Charles W. & Dines, Nicholas, T. Time-Saver Standards for Landscape Architecture. McGraw-Hill Inc. Section 110: Pages 110-1 to 110-19
- Landphair, Harlow C & Klatt, Fred Jr. 1999. Landscape Architecture Construction (Third Edition). Prentice Hall PTR. New Jersey. Chapter 1: Pages 1-9



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Climatology and Environment in Landscape Design</u>
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To study the climatic and other environmental factors vis-e-vis built environment. Impact of buildings on the environment and flow of various forms of energies in environment / building. To understand how buildings, behave, the physics behind it, and to design buildings based on climate, passive design, principles and thermal comfort. The students are also exposed to issues concerning sustainability at the architectural design level.

Course Contents:

Concept and terminologies of environment, climatology, and sustainability. The study of climate and thermal system/ thermal store house, passive design strategies and passive /renewable source of energy.

- Introduction to climatology
- Importance of climatology
- Application in architecture

Understanding of building as an energy system and environmentally responsive design.

Climate: types, temperature, cool, hot humid, hot arid, insulation and wind.

Site: Topography, landscape/sun, wind control, water, build building form.

Thermal comfort: psychometric chart and comfort.

Solar control: shading, orientation, insulation and fenestration.

Passive heating and cooling: coordination with architectural design and landscape architecture.

Study and calculations of physical behaviors of buildings such as noise level, heating and cooling index, humidity, light intensity (artificial and natural), thermal index, through equipment.

Books Recommended:

- Thermal control, Aijaz Ahmad,
- Tropical Architecture, C.P kukreja
- Enercon.



Title of Subject	:	<u>Ecology and Landscape Design</u>
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To introduce different types of trees and plants related to Landscape Architecture. To make students aware about use of different types of trees as per building type usage. To equip students with specialized skill to manage spaces efficiently in a way that they are purpose built, work efficient, environment friendly and aesthetically pleasing; they can cope climate change and are in essence green building, which is the need of the hour.

Course Contents:

The emphasis of this course is the understanding and subsequent use of principles of landscape ecology. This will be accomplished through the study of how spatial heterogeneity in landscapes influences various ecological processes in natural and created landscapes.

Principles of planting design, planting design process, and functional and aesthetic uses of plants in designs are discussed. Studio projects focus on development of planting plans for sites with various scopes and conditions.

Local Seasonal Plants

Characteristics, identification, and design uses of deciduous trees, shrubs, vines, and ground covers. Emphasis on identification and appropriate use in landscape design. Botanical names of plants.

Books Recommended:

- The Emerald Planet: How Plants Changed Earth's History Paperback – by David Beerling
- The Planet in a Pebble: A journey into Earth's deep history (Oxford Landmark Science)
- Jan Zalasiewicz Jan Zalasiewicz
- Secret Life of Trees (Penguin Press Science)
- Colin F Tudge Colin F Tudge
- Plant, by Janet Marinelli Janet Marinelli



Title of Subject	:	<u>Site Planning and Landscape laws</u>
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To develop Knowledge and theory of site design and site analysis. Dimensional requirements and appropriate relationships of site elements and systems. Collection and analysis of site data including legal, physical and cultural factors.

Course Contents:

Analyses of existing landscape guidelines in Pakistan. Landscape buffer yard standards, perimeter landscape strip, Xeriscape and Water Conservation, Tree protection standards, safety standards, land ethics, land use ordinances.

Safety issues, applicable legislation, permits, building codes and regulations that are pertinent to landscape construction.

Books Recommended:

- Landscape design guidelines for Karachi City, Pakistan.
- Analyses of existing landscape guidelines.
- Anderson, Larz T. 2000. Planning the Built Environment. Chicago, IL: Planners Press
- Paradise on Earth, Gabrielle van Zuylen Ch. 1: The Gardens of Antiquity and the Legacy of Islam
- Landscape Ecology Principles, Richard TT Forman, Part 1: Principles
- The Image of the City, Kevin Lynch, Part 1: The Image of the Environment, Part 3: The City Image
- Denatured Visions: The American Ideology of Space, Leo Marx
- The Geography of Nowhere, James Kunstler, Ch. 2: American Space
- Simonds, John Ormsbee, and Barry W. Starke. 2006. Chapter 1 The Human Habitat. Landscape Architecture: A Manual of Environmental Planning and Design. Fourth ed. New York City, NY: McGraw-Hill (pages 1 – 18).
- Simonds, John Ormsbee, and Barry W. Starke. 2006. Chapter 2 Climate. Landscape Architecture: A Manual of Environmental Planning and Design. Fourth ed. New York City, NY: McGraw-Hill (pages 19 - 32)
- Lynch, Kevin, and Gary Hack. 1984-Chapter 1, the art of Site Planning. Site Planning. Third Ed. Cambridge. MA: MIT Press Pages (1-12)



Title of Subject	:	<u>Environmental Psychology and Landscape Design</u>	
Course Code	:	AR- 67XX	
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)	
Effective	:	2025	
Course type	:	Elective Course	
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%	
Marks	:	Theory: 100	Practical: 00
Credit Hours	:	03	0
Teaching Scheme	:	3Hrs / Week	00

Course Objectives:

To grasp the relationship between landscape architecture and the concepts of environmental psychology. To investigate the interactions between built outdoor environments and human perception, cognition, and behavior. To determine effective ways to apply psychological concepts in landscape design, case studies and research findings will be analyzed. Gain experience in incorporating psychological factors into design through practical projects and design exercises. To think about moral obligations and issues while creating settings that have an impact on people's physical and mental health.

Course Contents:

Introduction to Environmental Psychology and Landscape Design. Overview of environmental psychology principles. Human Perception and Cognition in Landscape Design.
User Behavior and Use Patterns in Outdoor Environments. Analysis of User behavior in different outdoor settings.
Emotional and Psychological Responses to Landscape Design.
Cultural and Social Influences on Landscape Perception.
Case studies of successful projects applying psychological principles.

Books Recommended:

- "Environmental Psychology for Design" by Dak Kopec
- "Designing for Behavior Change: Applying Psychology and Behavioral Economics" by Stephen Wendel
- "Healing Spaces: The Science of Place and Well-Being" by Esther M. Sternberg
- "Biophilic Design: The Theory, Science, and Practice of Bringing Buildings to Life" by Stephen R. Kellert et al.
- "Therapeutic Landscapes: An Evidence-Based Approach to Designing Healing Gardens and Restorative Outdoor Spaces" by Clare Cooper Marcus and Naomi A. Sachs



Title of Subject	<u>Project Management and Professional Practice in Landscape Architecture</u>	
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To understand the concepts of Project Management and Professional Practice for planning to execution of projects.

To understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation. To enable them to comprehend the fundamentals of contract administration, costing and budgeting.

To analyze, apply and appreciate contemporary project management tools and methodologies in the context.

Course Contents:

This course will provide a general introduction to project management. This course will also equip the students to various feasibility analyses – Market, Technical, Financial and Economic. To equip with the knowledge and skills required to be successful in applying Project Management. Theories and Methods of Landscape Architecture Practices. Changes reflect inclusion and integration of diverse aspects of professional practice within the profession.

Books Recommended:

- Chaudhary S.; Project Management, Tata Mc Graw Hill
- Kerzner H.; Project Management, II Edition, CBS Publishers
- Meredith Jack R., Mantel Samuel J.; Project Management, IV Edition, John Wiley & Sons
- Gopalakrishnan P., Ramamoorthy V.E; Textbook of Project Management, MacMillan Publishers
- Maylor Harvey, Project Management, MacMillan Publishers
- Matheen A. Prof., Comprehensive Project Management, Laxmi Publication
- Professional Practice for Landscape Architects Book by Clare Winsch, Nicola Garmory, and Rachel Tennant



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Digital Visualization for Landscape</u>
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00

Course Objectives:

To develop understanding of fundamentals for computer-aided design and drafting as a design and communication tool in the practice of landscape architecture. Intended as a continuation and progression beyond the fundamental drawing principles and graphic design tools introduced in the earlier visualization sequence of courses (Landscape Drawing & Design Communication).

Course Contents:

This course is designed to further the students' understanding of 2D and 3D space, form, and the application of the standards of visual representation in the practice of Landscape Architecture. Using digital drawing and representation as investigatory methods in design research, students will harness new methods for visualization in their study of a seminal work of landscape architecture.

Books Recommended:

- Landscape Modeling: Digital Techniques for Landscape Visualization 1st Edition by Stephen Ervin Hope Hasbrouck
- Visualization of Digital Terrain and Landscape Data A Manual, Mach, Rüdiger, Petschek, Peter
- Landscape Architecture and Digital Technologies Re-conceptualizing design and making by Jillian Walliss, Heike Rahmann
- Infographics Designers' Sketchbooks" by Steven Heller and Rick Landers
- Visual Thinking for Design" by Colin Ware
- Semiology of Graphics: Diagrams, Networks, Maps" by Jacques Bertin



DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & PLANNING

Title of Subject	:	<u>Contemporary Landscape Architecture</u>
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00.

Course Objectives:

To introduce the Contemporary Landscape Architecture facilitating the advanced exploration in the realm of contemporary trends and innovations. To enable the students be equipped with the concept of sustainable design and resilience and apply their knowledge to landscape design. To make the students knowledgeable about the emerging technologies and their application in landscape architecture.

Course Contents:

Introduction to Contemporary Landscape Architecture. Advanced Contemporary practice of Landscape Architecture at local and global level. Factors influencing the contemporary landscape architecture.

Contemporary Trends and Innovations. Exploration of current trends in landscape architecture (e.g., sustainable design, ecological restoration, placemaking). Emerging technologies and their application in landscape architecture. Case studies of innovative projects pushing the boundaries of the field.

Sustainable Design and Resilience in incorporating the understanding of cultural significance of landscape. Strategies for climate adaptation and resilience in landscape design. Selection and specification of contemporary materials for landscape construction.

Books Recommended:

- Detail in Contemporary Landscape Architecture by Virginia McLeod
- Contemporary Landscape Architecture by Sergi Costa Duran
- Groundswell: Constructing the Contemporary Landscape by Peter Reed
- Thinking the Contemporary Landscape by Christophe Girot, Dora Imhof
- The Sourcebook of Contemporary Landscape Design by Àlex Sánchez Vidiella



Title of Subject	:	<u>Landscape Construction</u>
Course Code	:	AR- 67XX
Disciplines	:	MS (LANDSCAPE ARCHITECTURE)
Effective	:	2025
Course type	:	Elective Course
Assessment	:	Literature review: 30%, Mid-Semester: 30%, Final-Semester: 40%
Marks	:	Theory: 100 Practical: 00
Credit Hours	:	03 0
Teaching Scheme	:	3Hrs / Week 00 ✓

Course Objectives:

To introduce the principles of landscape construction. To foster the understanding of advanced construction materials and their application in the landscape construction. To provide the knowledge about site management for landscape architecture projects.

Course Contents:

Introduction to Landscape Construction. Understanding the relationship between design intent and advanced construction implementation. Introduction to advanced construction materials, techniques, and equipment.

Introduction to the principles of landscape construction, site analysis and preparation. Techniques for site preparation considering drainage, compacting and erosion control etc. Soil preparation and amendment for landscape construction projects.

Materials and techniques involved in Hardscape and Softscape Construction (e.g., paving, walls, fences, decks, Selection, sourcing, and installation of plants for landscape projects). Water Features and their Design and construction (e.g., ponds, waterfalls, fountains). Water management strategies for sustainable landscapes. MEP system in coordination with landscape construction techniques accommodating all features e.g.; electrical, plumbing and mechanical arrangements.

Books Recommended:

- Materials and Their Applications in Landscape Design by Rob W. Sovinski
- Landscape Construction by David Sauter
- Sustainable Landscape Construction, Third Edition: A Guide to Green Building Outdoors By Kim Sorvig, J. William Thompson
- Time-Saver Standards Landscape Construction Details by Nicholas T. Dines, Charles W. Harris
- A Philosophy of Landscape Construction-The Vision of Built Landscapes by Bruce K. Ferguson