

Department of Landscape Design and Ecosystem Management (LDEM)

Chairperson:	Zurayk, Rami
Professors:	Talhok, Salma; Zurayk, Rami
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Lecturer:	Battikha, George

The department of Landscape Design and Ecosystem Management adopts a holistic, integrative framework in design and management that equally prioritizes natural and cultural resources through inter-faculty and interdisciplinary teaching and research. It aims to provide students with a liberal education, and to produce good citizens and skilled professionals.

The mission of the department is to graduate students that adopt a holistic view of landscape and the environment; and are equipped with cutting edge scientific knowledge and creative, flexible skills for the design and management of natural and cultural resources. The essence of the department lies in its interdisciplinary nature, in teaching and in research with applications in the Middle East region.

Course Descriptions

Core Courses for the BS Degree in Landscape Design and Ecosystem Management

LDEM 202 Landscape Design I 6 cr.
An introductory studio that guides students through the multi-layered meaning of landscape. Visual, perceptual, and spatial qualities are explored and alternatives for their graphic representation investigated. *Prerequisite: ARCH 100.*

LDEM 203 The Environment and Sustainable Development 3.0, 3 cr.
An introduction to sustainable development: concepts, goals, and economic and social aspects; environmental issues associated with development: natural resource management, population, food production, and energy; institutional framework; standards and policies; emerging technological applications and their impacts; resolution of environmental conflicts; future trends.

- LDEM 204 Ecological Landscape Design I 6 cr.**
An introduction to the objectives and methodology of ecological landscape design in Mediterranean and semi-arid ecosystems. This course emphasizes the larger context for landscape design introducing students to environmental sustainability, use of native plant resources and, biodiversity conservation. Applications are selected from urban and rural public spaces. *Prerequisite: LDEM 246.*
- LDEM 209 Plant Biology 3.3; 4 cr.**
An introduction to botany and the general principles of plant biology. Course material is aimed at developing an understanding and appreciation of the interaction of plants with their environment, and providing applications and insights relevant to landscape students.
- LDEM 211 Landscape Horticulture I 2.3; 3 cr.**
Principles and practices in the production and management of landscape plants; the identification of landscape plants; introduction to sexual and asexual plant propagation, identification, selection, and management of annuals, perennials, trees and shrubs, herbs and vegetables, indoor plants, cut flowers, plants for dry lands, landscape plants, and their ecological impact.
- LDEM 212 Landscape Horticulture II 2.3; 3 cr.**
Survey, identification, landscape characters, and management of herbaceous and woody landscape plants. The student will learn about the landscape uses of plants and the management requirements in different site/use situations. *Prerequisite: LDEM 211.*
- LDEM 215 Introduction to Landscape Pests 2.3; 3 cr.**
The fundamentals, biology, and ecology of landscape insects, mites, plant pathogens, and weeds.
- LDEM 216 Landscape Design II 6 cr.**
The process of landscape design is introduced, starting with site appreciation and analysis, through concept development and articulation using building materials, plants, and landscape furniture. The focus is on conceptual thinking and communication both verbally and graphically. *Prerequisite: LDEM 202.*
- LDEM 227 Applied Plant Protection in Landscape 2.3; 3 cr.**
The diagnosis of landscape pests including diseases, insects, mites, and weeds of major importance, and applied measures for their prevention and control in urban and natural environments.
- LDEM 228 Ecological Landscape Design II 6 cr.**
A course offered at the Agricultural Research and Educational Center (AREC) in the Beka'a. The concepts and methods introduced in the previous term are applied to rural and agricultural landscapes with a hands-on approach to landscape design. *Prerequisite: LDEM 204.*
- LDEM 229 Turfgrass Culture, Machinery, and Management 2.3; 3 cr.**
An introduction to turfgrass use, establishment, and management. This course focuses on the environmental impact of turfgrass landscapes in arid regions. Students are introduced to the machinery used in landscape management.
- LDEM 230 Water and the Environment 3.0; 3 cr.**
Physical hydrological processes, natural environment and the role of human activities and interactions. Topics covered include hydrologic cycle, watershed hydrology, runoff generation, precipitation, evapotranspiration, infiltration, stream processes, groundwater, erosion, and statistical hydrology.

LDEM 241 Final Year Project: Landscape Design 6 cr.

Each student will work on a project of his/her choice, with the guidance and approval of an appointed faculty committee. The natural, environmental, socio-cultural, and legal constraints, together with the specific requirements of the project, will form the basis for developing the landscape design.

Prerequisite: LDEM 228.

LDEM 242 Final Year Project: Landscape Implementation and Management 6 cr.

Having finalized the landscape design in the previous term, the last term focuses on developing technical and implementation drawings and a management plan. Working on their individual projects, the students have the opportunity to integrate the knowledge and skills gained in the previous years into a comprehensive landscape design proposal. *Prerequisite: LDEM 241.*

LDEM 245 Irrigation Methods for Landscape Designs 3 cr.

A course that acquaints students with the design and production of economical irrigation systems that keep landscapes green while conserving water.

LDEM 246 Landscape Design III 6 cr.

This studio continues the emphasis on landscape design development with a focus on design details, building materials and construction, landscape furniture, plant selection and their role in articulating the landscape design. Landscape specifications, bills of quantities, and costing are also introduced. *Prerequisite: LDEM 216.*

LDEM 250 Computer-Aided Design 2,3; cr.

An introduction to computer-aided landscape design and analysis. Students are provided with software tools for landscape drafting that can be applied in landscape design projects. *Prerequisite: LDEM 202.*

LDEM 295 Landscape Seminar 1 cr.

Current issues in landscape design and ecosystem management.

LDEM 296 Landscape Seminar 1 cr.

Current issues in landscape design and ecosystem management.

Elective Courses for the BS Degree in Landscape Design and Ecosystem Management

LDEM 201 Landscape History and Theory 3 cr.

A historical review of garden and landscape design that explores the role of regional resources and environmental, socio-economic, and political factors in shaping garden and landscape design concepts.

LDEM 260 Current Issues of Landscape 3 cr.

A review of recent developments in landscape design on an international basis. The course emphasizes case studies and a critical review of the contemporary role of the profession.

