Department of Landscape Design and Ecosystem Management (LDEM)

Chairperson:	Talhouk, Salma
Professors:	Talhouk, Salma; Zurayk, Rami
Associate Professors:	Farajalla, Nadim; Makhzoumi, Jala
Senior Lecturer:	[P]Battikha, George
Lecturers:	[P]Alamuddine, Hana; [P]Nasrallah, Maha; Weltzien, Julie
Instructors:	[P]Abdulhosen, Hiba; [P]Fabian, Monika; [P]Issa, Maha; [P]Jaroush, Najah; [P]Melhem, Wissam; [P]Shibli, Rabih.
Assistant Instructor:	[P]Markarian, Gamar

Undergraduate Program

The mission of the department is to graduate students that adopt a holistic view of landscape and 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 interdisciplinarity, equally in teaching and in research with applications in the Middle East region. To that end, the Department builds on the strong linkages established with other academic units within and outside FAFS. The Department offers a B.Sc. degree in Landscape Design and Eco-management, which draws on strongly collaborative efforts with the Department of Architecture.

The following design courses are part of the program requirement. There is a grade average requirement for: LDEM 202, 204, 216, 228 and 246 an average of 70 must be attained in the two preceding design courses in each case.

Course Descriptions

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

LDEM 200 Landscape Technical Drawing 4 cr.
An introduction to basic graphical skills in landscape design. Students learn to use different drawing tools and techniques, 2D-orthographic projections and 3D-drawings. Course material also covers understanding of scale and of shade and shadow.

P Part time

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. The 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.
This course explores the science, the technique and the art of landscape horticulture. Students will identify plants, learn how to represent and produce them through practical sessions, and understand the theory behind successful plant management practices. They will become familiar with the landscape horticulture literature through written exercises, and will be introduced to concepts of environmental horticulture and its role in promoting nature conservation.

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 217 Soils in the Landscape 2.3; 3 cr.
Specifically designed for landscape students, the course aims at developing an understanding of the relationship between geology, landform, soils and landscapes. The course also aims to emphasize the management actions essential in landscaping, such as soil preparation, soil amendments and fertilization.

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.
Introduces physical hydrological processes and their interactions with natural environment and human activities. 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; 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 265 Landscape Management 2.3; 3 cr.
This course is designed to help students develop field expertise and practical skills by building on knowledge acquired in previous science courses (plant biology, introduction to soils, and soils in the landscape, water in the environment) and learn implementation and management actions essential in landscaping.

LDEM 290 Professional Practice 3.0; 3 cr.
This course discusses the professional practice of the landscape architecture profession. It introduces basic issues in the practice and the profession of landscape design, challenging the students to critically examine professional, political, commercial, and other problems in current practice. *Prerequisite: ENGL 203 and junior standing*.

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 in Landscape Design 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.

LDEM 261 Spatial Structure and Movement 3 cr.
The course is concerned with the experience of outdoor and indoor spaces, and the direct influence the placement of any object has on the perception of the latter and the movement within. The course is based on the assumption that the notion of movement and body proportion for mankind has been a primary design tool throughout history, and will try to reevaluate this tool for contemporary design.

LDEM 262 Healing Gardens: Theoretical Perspectives and Applications 3 cr.
This course is offered relative to the current view that an outdoor garden at health care facility is an essential supplement to medical interventions. Introducing the concepts of healing environments in terms of medical geography and environmental psychology, the course proceeds to examine prevailing approaches to the design of healing gardens at medical settings in the present day. Theoretical perspectives from social sciences are used to interpret these healing places as well as those associated with historic precedents for healing - The Japanese garden and the landscape traditions of medieval Christianity and Islam.

LDEM 270 Ornamental Plants for Dry Landscapes 2 cr.
A survey of native, wild, and domesticated plants adapted to dry areas with potential use in dry landscapes, with an overview of the different environmental and physiological factors that determine plant growth and developments under such dry conditions.