Department of Landscape Design and Ecosystem Management (LDEM)

Chairperson: Zurayk, Rami
Professors: Talhouk, Salma N.; Zurayk, Rami
Associate Professor: Farajalla, Nadim
Assistant Professors: Abunnasr, Yaser; Madani, Mehran; Trovato, Maria Gabriella
Lecturer: Al-Akl, Nayla
Associate: Makhzoumi, Jala

Graduate Programs

The graduate study program leading to the MS degree with thesis or non-thesis options is offered with a specialization in Ecosystem Management.

The program educates students in ecosystem science and management by integrating instruction in biophysical and human systems. It provides students with sufficient research experience and equips them with the necessary tools for professional practice and/or the pursuit of higher education.

The program crosses traditional boundaries by applying an interdisciplinary approach and multiple resource knowledge to ecosystem studies, while also emphasizing human-nature interactions.

Natural resources management involves not only the understanding of ecosystem structure and function when used for a variety of purposes, but also the incorporation of social, economic, and political considerations into decision-making. Consequently, the discipline involves the collection, analysis, interpretation, and integration of information not only from the more traditional areas of science but also from the areas of management.

For full details on the admission requirements for this interfaculty program, see the Admissions section of this catalogue and the Admission Policies for the Interfaculty Graduate Environmental Sciences Program.

Ecosystem Management Courses

LDEM 301 Urban Greening 3 cr.
This course focuses on the literal green aspect of urban greening that is plants and how they contribute to improve urban living. Topics covered in the course include urban agriculture, green roofs, walls, facades and corridors, parks and open spaces, urban forestry, and horticulture therapy.

ENSC 630/ LDEM 630 Natural Resource Management 3 cr.
Ecosystem approach to Natural Resources Management (NRM). Data sources and interpretation for NRM. Physical, socio-economic, cultural, political, and geographic specificity of NRM. Principles and processes of NRM. Case studies and practical examples in contrasting situations.
ENSC 631 / LDEM 631
Agricultural Pollution and Control  3 cr.
Fate of agrochemicals in the environment. Effect on terrestrial and aquatic systems. Contamination, monitoring residues, methodologies, and risk assessment models and research. *Annually.*

ENSC 633 / LDEM 633 /
URDS 664
Ecological Landscape Design and Planning  3 cr.
Introduction to the theory and methodology of ecological landscape design and planning, aims to introduce the holistic approach of landscape ecology and its application in sustainable management of natural and cultural landscape sterosystems. *Alternate years.*

LDEM 634 / ENSC 634
Sustainable Landscape Planning and Management  3 cr.
Introduction to the theory and methodology of sustainable landscape planning, which aims at introducing a holistic approach of sustainable planning on the national level of management, including the legal framework, relevant sector policies and prevailing practices.

LDEM 635 / ENSC 635
The Political Ecology of Water  3 cr.
This course provides an approach to understand water issues bringing together political economy and hydro-geography. The course objective is to introduce students to the modes of use and management of water resources, analyzing the causes of water injustice, revealing power relations and environmental hidden costs. The course is planned to emphasize on the situation of water politics in the Arab region.

ENSC 654
Physical and Biological Resources in Terrestrial Ecosystems  3 cr.
Physical and biological resources in ecosystems, soils in the ecosystem, soil conservation, water in the ecosystem, water conservation, principles of soil and water chemistry and microbiology, plant and animal biodiversity, collection and conservation of wild plants, preservation of endangered species, plant response to environmental stress.

LDEM 300
Directed Study in Ecosystem Management.  1-3 cr.

ENSC 395
Comprehensive Exam  0 cr.

ENSC 699
MS Thesis  6 cr.