

# Department of Landscape Design and Ecosystem Management (LDEM)

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| Chairperson:         | Talhouk, Salma N.                                |
| Professors:          | Makhzoumi, Jala; Talhouk, Salma N.; Zurayk, Rami |
| Associate Professor: | Farajalla, Nadim                                 |
| Lecturer:            | Weltzien, Julie                                  |

## 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 it 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.

## Ecosystem Management Courses

**ENSC 630                      Natural Resource Management                      3 cr.**  
**LDEM 630**

Ecosystem approach to 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/                      Agricultural Pollution and Control                      3 cr.**  
**LDEM 631**

Fate of agrochemicals in the environment. Effect on terrestrial and aquatic systems. Contamination, monitoring residues, methodologies, and risk assessment models and research. *Annually.*

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**ENSC 633 / Ecological Landscape Design and Planning 3 cr.**  
**LDEM 633**

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 systems. *Alternate years.*

**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.