

Course Unit	Landscape Ecology	Field of study	Environmental Sciences
Bachelor in	Environmental Engineering	School	School of Agriculture
Academic Year	2022/2023	Year of study	3
Type	Semestral	Semester	1
Level	1-3	ECTS credits	6.0
Code	9099-309-3102-00-22		
Workload (hours)	162	Contact hours	T 30 TP - PL 30 TC - S - E - OT 20 O -

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) José Manuel Correia Santos Ferreira Castro, João Carlos Martins de Azevedo

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. - Know concepts and applications of landscape ecology at the levels of composition, organization, functioning and change of landscapes
2. - Know methods and tools for the description and analysis of landscapes
3. - Apply landscape ecology principles and methods in conservation, planning and management of the territory in activities with relevance at the landscape scale

Prerequisites

Before the course unit the learner is expected to be able to:

1. Ecology and GIS

Course contents

- Landscape structure, function and change - Quantitative methods for the description and analysis of structure and change in landscapes - Analysis of ecological processes relevant at the landscape scale and their relationship with landscape structure - Applications of landscape ecology to land planning and management and nature conservation

Course contents (extended version)

1. Introduction to landscape ecology
2. Theories and models used in Landscape Ecology -
3. Scale of pattern and processes in landscapes
4. Immerging landscape processes
5. Immerging landscape patterns
6. Principles of landscape dynamics
7. Principles of landscape conservation, management, and planning

Recommended reading

1. Landscape Ecology in Theory and Practice: Pattern and Process. Turner, Monica G. ; Gardner, Robert H. ; O'Neill; Robert V. 2001. Springer, New York.
2. Principles and methods in landscape ecology. Farina, A. 1997. Chapman & Hall, London
3. Ecología del paisaje: Conceptos, métodos y aplicaciones. Burel, Françoise and Baudry, Jacques 2002. Mundi-Prensa, Madrid
4. Landscape Ecology. Forman, Richard T. T. ; Godron, Michel, A. 1986. Wiley, New York
5. Landscape Ecological Analysis: Issues and Applications. Klopatek, Jeffrey M. ; Gardner, Robert H. 1999. Springer.

Teaching and learning methods

Lectures, tutorial classes, and laboratory classes (computer lab)

Assessment methods

1. Alternative 1 - (Regular) (Final)
 - Final Written Exam - 60% (8 marks minimum)
 - Practical Work - 40%
2. Alternative 2 - (Student Worker) (Final)
 - Final Written Exam - 100%
3. Alternative 3 - (Regular, Student Worker) (Supplementary, Special)
 - Final Written Exam - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

João Carlos Martins de Azevedo, José Manuel Correia Santos Ferreira Castro	Marina Maria Pedrosa Meca Ferreira Castro	Artur Jorge de Jesus Gonçalves	Maria Sameiro Ferreira Patrício
05-12-2022	12-12-2022	17-12-2022	19-12-2022