INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Landscape Ecology			Field of study	Environmental Sciences	
Master in	Management of Forest Resources			School	School of Agriculture	
Academic Year	2022/2023	Year of study	2	Level	2-2	ECTS credits 6.0
Type	Semestral	Semester	1	Code	6363-352-2101-00-22	

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
2. 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

1. English
2. Portuguese

Electronic validation

João Carlos Martins de Azevedo, José Manuel Correia Santos Ferreira Castro	João Paulo Miranda Castro	Felícia Maria Silva Fonseca	Maria Sameiro Ferreira Patrício
06-12-2022	07-12-2022	07-12-2022	19-12-2022