

MODULE DESCRIPTION

General

School	Geotechnical Sciences
Department	Forest and Natural Environment Sciences

Module Information

Title	Landscape Restoration
Course Code	F.Y.4
Level of Studies	Undergraduate
Teaching Period	Spring Term
Attendance Type	Compulsory
Prerequisites	None

Orientation	Weekly Hours		Year	Semester	ECTS
	Lectures	Laboratory work			
LANDSCAPE ARCHITECTURE AND RESTORATION	2	2	3	6	5

Faculty Instructor

Ioannis Takos– Panteleimon Xofis

Type of Module

- General Foundation
- Specific Foundation / Core
- Knowledge Deepening / Consolidation

Mode of Delivery

- Face to face
- Distance learning

Digital Module availability

- E-Study Guide
- Departments Website
- E-Learning

Language

	Teaching	Examination
Greek	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
English	<input type="checkbox"/>	<input type="checkbox"/>

Erasmus

- The course is offered to exchange programme students

Learning Outcomes

Landscape restoration differs significantly in relation to the restoration of forest areas and the establishment of artificial stands, which is the subject of silvicultural practices. In landscape restoration, the goal is to restore an area that offer low quality services or no services at all, to an area that is part of a functional landscape and offers desirable services to both humans and the landscape. The aim of the course is to teach the principles, methods and practices of restoration of ecological processes, through the creation of a spatial pattern that will allow the complementarity between the compositional and structural elements of the landscape. Upon completion of the course students will know: the basic principles of landscape ecology and the compositional and structural elements of a landscape. The concept of spatial scale of processes and phenomena, its importance in the produced results and the role of the spatial pattern in ecological processes. Basic principles of landscape management, models of spatial pattern that optimize service delivery. Sustainable landscape management and management for the protection of biodiversity. Landscape restoration principles and implementation steps. Good landscape restoration practices after mining, industrial use and other disturbances.

List of General Competences

- Apply knowledge in practice
- Work autonomously
- Work in teams
- Work in an international context
- Work in an interdisciplinary team
- Respect natural environment
- Advance free, creative and causative thinking

Module Content (Syllabus)

- Historical evolution of the science of landscape ecology.
- Synthetic and structural elements of the landscape.
- The concept of spatial scale.
- Spatial patterns, causes of its creation, and its role in ecological processes.
- Land management principles and models of spatial pattern.
- Sustainable landscape management and management for biodiversity conservation.
- The concepts of landscape disturbance and restoration
- Steps and principles of landscape restoration
- Good landscape restoration practices

Educational Material Types

- Book
- Notes
- Slide presentations
- Video lectures
- Multimedia
- Interactive exercises
- Other:

Use of Information and Communication Technologies

- Use of ICT in Course Teaching
- Use of ICT in Laboratory Teaching
- Use of ICT in Communication with Students
- Use of ICT in Student Assessment

Module Organization

Please fill in the workload of each course activity

Course Activity	Workload (hours)
Lectures	26
Laboratory work	26
Field Trip/Short Individual Assignments	33
Independent Study	40
Total	125

* 1 ECTS unit corresponds to 25 hours of workload

Student Assessment Methods

- Written Exam with Multiple Choice Questions
- Written Exam with Short Answer Questions
- Written Exam with Extended Answer Questions
- Written Assignment
- Report
- Oral Exams
- Laboratory Assignment

Suggested Bibliography (Eudoxus and additional bibliography)

1. Μπρόφας, Γ. (2013) Το τοπίο και οι μεταλλευτικές εκμεταλλεύσεις. ΕΘΙΑΓΕ.
2. Καρέτσος, Γ, Ξανθόπουλος, Γ., Τσάρτσου Ε. (2014) Μέθοδοι και Σχεδιασμός Αποκατάστασης των δασικών οικοσυστημάτων και τοπίου από φυσικές καταστροφές οι άλλες επεμβάσεις. Ίδρυμα Σταύρος Νιάρχος, ISBN: 978-960-93-6557-4.
3. Forman, R. T. T. (1995) Land Mosaics, The ecology of landscapes and regions. Cambridge University Press
4. Molles Jr, M., C., (2008). Οικολογία, Έννοιες, Εφαρμογές. Εκδόσεις Μεταίχμιο.
5. Bissonette, J. A., Storch, I. (2003). Landscape Ecology and Resource Management. Island Press.
6. Turner, M., G., Gardner, R. H., O' Neill, R. V., (2015) Landscape Ecology in Theory and Practice. Island Press.