

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Environment		
ACADEMIC UNIT	Department of Environment		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	125KEY	SEMESTER	5
COURSE TITLE	Terrestrial Ecosystems		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
Lectures		6	
Field trips & laboratory		1	
Total credits			7
COURSE TYPE	Special background		
PREREQUISITE COURSES:	-		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	For exchange students, English literature is proposed and examinations are given in English.		
COURSE WEBSITE (URL)	https://www.env.aegean.gr/all_courses/terrestrial-ecosystems/		

(2) LEARNING OUTCOMES

Learning outcomes
<p>With the successful completion of the course students will be able to:</p> <ul style="list-style-type: none"> • understand the basic elements of the structure and function of terrestrial ecosystems and living organisms on land • know the main biotic and abiotic factors affecting living organisms on land • apply their knowledge of the properties and functioning of terrestrial ecosystems in the management of such ecosystems, including those of protected areas, as well as assess the impacts of human activities on terrestrial ecosystems
General Competences
<p>Search for, analysis and synthesis of data and information, with the use of the necessary technology Adapting to new situations Working in an international environment Working in an interdisciplinary environment</p>

Respect for the natural environment
Criticism and self-criticism
Production of free, creative and inductive thinking

(3) SYLLABUS

Lectures and tutorials on the following topics:

1. Introduction, temperature, humidity
2. Global vegetation zones and ecosystems
3. Vegetation zones in Greece
4. Conditions: general concepts. Temperature.
5. Ectotherms: regulation mechanisms
6. Endotherms: regulation mechanisms
7. Endotherm metabolism and energy balance.
8. Metabolic rate and body size.
9. Effect of temperature at the populations and species distribution level. Impact of climate change.
10. Humidity, snow, pH and other conditions.
11. Temperature as a stimulus – Light as a stimulus.
12. Photosynthesis, compensation points. Photosynthetic energy balance and productivity.
13. Resources: introduction. Defense mechanisms of plants and animals.
14. Grazing: effects on organisms, species and ecosystems.
15. Social systems in animals – space as a resource: territories and social systems.

Field trip: forest ecosystems

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Video projector, Powerpoint, Word & Acrobat files, email, Moodle.	
TEACHING METHODS	Activity	Semester workload
	Lectures	48
	Tutorials	26
	Field trip	6
	Study and analysis of bibliography	100
	Course total	180
STUDENT PERFORMANCE EVALUATION	Language of evaluation: Greek Interim test (multiple choice question quiz) (10%) Written examination (90%)	

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Basic Textbooks:

Molles, M.C. & Sher, A.A. 2021. Οικολογία. 1^η ελληνική έκδοση. Broken Hill Publishers [ελληνική μετάφραση]

Begon, M., J.L. Harper & C.R. Townsend. 2015. Οικολογία.1^η ελληνική έκδοση. UTOPIA ΕΚΔΟΣΕΙΣ Μ. ΕΠΕ.

Relyea, R. & Ricklefs, R. 2019. Οικολογία. Η οικονομία της Φύσης. BROKEN HILL PUBLISHERS LTD

Παφίλης, Π. (επιμέλεια) 2020. Η Πανίδα της Ελλάδας-Βιολογία και Διαχείριση της Αγριας Πανίδας, BROKEN HILL PUBLISHERS LTD

Lecture notes and powerpoint presentations are also provided. Further internet sources given for specific topics.