



COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Technology		
ACADEMIC UNIT	Department of Environmental Sciences		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	AY404	SEMESTER	4th
COURSE TITLE	TERRESTRIAL ECOSYSTEMS		
INDEPENDENT TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	CREDITS	
Teaching Hours	4	5	
COURSE TYPE	General background		
PREREQUISITE COURSES	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	None		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/ENV_U_183		

(2) LEARNING OUTCOMES

Learning outcomes
<p>The course aims to introduce students to the understanding of basic principles related to the Terrestrial Ecosystems of Greece (natural and agricultural) and their rational management. The course material includes basic characteristics and functions of terrestrial Ecosystems, their contribution to the qualitative composition of the atmospheric air and the upgrading of the natural environment in general. It also deals with the threats and dangers of natural Ecosystems, and the methodology and means of their management. Upon successful completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the types of terrestrial forest, rural and urban ecosystems and their operation. • Assess threats and risks from natural and anthropogenic effects of pollution, and rationally deal with their consequences, based on their sustainable viability. • Undertake actions based on sustainable development and strategic planning of innovative solutions, at the service of a sustainable development of rural populations. • Process and evaluate the results of the management methods they will apply in every case.
General Competences
<ul style="list-style-type: none"> • Search, analyse and synthesize data and information, using necessary technologies • Decision making • Working independently • Team work • Generation of new research ideas • Project planning and management • Respect for the natural environment • Promotion of free, creative and inductive thinking

(3) SYLLABUS

<ul style="list-style-type: none"> • Introduction – General concepts. Biocommunities – Ecosystems. Analysis of terrestrial characteristics Ecosystems. • Populations, interactions between populations – adaptive strategies. • Diversity of the terrestrial flora of Greece – Phytogeographical location and phytogeographical apartments of Greece. Description of plant forms. • Forest Ecosystems, grassland and agroforestry. • Plant magnifications - Plant chorology. • National Parks - Protected natural areas, internationally and regionally. Urban and suburban natural environment. Green open recreation areas.

- Anthropogenic effects on flora composition. Threats and risks of degrading Ecosystems. Endemicity - Preservation of Biodiversity.
- Sustainable management of forest species and ecosystems, protection of rare endemic species (flora and fauna).
- Wetlands - Threats and dangers of anthropogenic interventions.
- Fires in Mediterranean ecosystems. Adaptive mechanisms of plants in dealing with threats (drought, grazing, fires).
- Tourism (Alternative forms of tourism) and Natural environment – Impacts.
- Sources of pollution and modern environmental problems. - Ways of treatment.
- Threats - risks of terrestrial ecosystems from natural causes. Methods and techniques of restoration of disturbed ecosystems. Applications in practice.

(4) TEACHING and LEARNING METHODS – EVALUATION

DELIVERY	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	<ul style="list-style-type: none"> • Use of PowerPoint slides • View material in video • Communication with students via e-mail • Use of asynchronous distance learning (e-class) 	
TEACHING METHODS	Activity	Semester workload
	Lectures	52
	Literature Study & Analysis	48
	Tasks by groups	25
	Course total (25 hours workload per credit)	125
STUDENT PERFORMANCE EVALUATION	<p>Students' performance is evaluated in the Greek language. The final grade is determined by:</p> <ul style="list-style-type: none"> • A written exam (at the end of the semester) that forms 80% of the final score and includes some of the following assessment methods: multiple-choice test, short-answer questions, problem-solving. • The elaboration of individual work (in the 2nd half of the semester) which constitutes 20% of the final score. The individual work may be presented by the students in class. <p>Final Grade = 80% Exam Grade + 20% Assignment Grade</p>	

(5) ATTACHED BIBLIOGRAPHY

- Chapin III, Stuart F., Matson, Pamela A., & Vitousek, Peter (2018) *Principles of Terrestrial Ecosystem Ecology*. (2nd ed.) Athens: Parisianou Publications. (in Greek)
- Hatzimpiros, Kimon, (2014) *Ecology, Ecosystems and Environmental Protection*. (3rd edition) ISBN: 978-960-266-121-5. Publisher: SYMMETRY. (in Greek)
- Veresoglou, D. (2010). *Ecology*. (3rd Edition) ISBN: 978-960-7013-36-1. Athens: D. Gartaganis Publications. (in Greek)