



COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Technology		
ACADEMIC UNIT	Department of Environmental Sciences		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	AY606	SEMESTER	6th
COURSE TITLE	GENETICS and BIODIVERSITY CONSERVATION		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
Teaching Hours		4	4
COURSE TYPE	Special Background		
PREREQUISITE COURSES	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/ENV_U_179		

(2) LEARNING OUTCOMES

Learning outcomes
<p>The course aims to acquaint students with contemporary theories on the biodiversity of species and ecosystems and the necessity for conservation biology, by taking measures to protect habitats against overexploitation, due to climate change and environmental degradation in general.</p> <p>Upon successful completion of the course, students will be able to:</p> <ul style="list-style-type: none">• Develop and expand the necessary knowledge and skills, which will be used as tools for understanding Biodiversity and the ethical principles of conservation biology.• Understand principles and processes of the structure and operation of the ecosystem.• Assess the threats and risks from natural and anthropogenic effects, resulting in the loss of the habitats of species (flora and fauna), and rationally deal with their consequences, based on the sustainable viability of the ecosystems leading to the preservation of biodiversity.• Undertake actions to preserve biodiversity.• Process and evaluate results of management methods.
General Competences
<ul style="list-style-type: none">• Search, analysis and synthesis of data and information, using the necessary technologies• Decision making• Autonomous work• Group work – discussion in groups• Generating 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">• Genetics and breeding• Genes and genomes• Mutations• Mendelian and non-Mendelian genetics• Variety of species• Genetic diversity• Diversity of ecosystems• Biodiversity value
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- Threats to biodiversity
- Extinction rates
- *Ex situ* conservation strategies
- Management of protected and non-protected areas
- *In situ* conservation of genetic resources
- Ecosystem restoration
- Sustainable development
- Conservation educational programmes

(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
	Study and analysis of bibliography	38
	Essay writing	10
	Course total (25 hours workload per credit)	100
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 contributes 70% to the final grade, applying one or more of the following evaluation methods: Multiple choice questions, short-answer questions, problem solving. • The elaboration of individual or group work which contributes 30% to the final grade. <p>Final Grade = 70% Exam Grade + 30% Assignment Grade</p>	

(5) ATTACHED BIBLIOGRAPHY

- Gaston, K. J., & Spicer J. I. (2008). *Biodiversity, an Introduction*. Thessaloniki: University Studio Press. (in Greek)
- Primack, R. B., Arianoutsou, M., & Dimitrakopoulos, P. (2017) *A Primer of Conservation Biology*, (5th ed). Thessaloniki: University Studio Press. (in Greek)
- Veresoglou S. D., (2010) *Ecology*. Thessaloniki: D. Gartaganis Books. (in Greek)