(1) GENERAL

SCHOOL	HEALTH SCIENCES			
ACADEMIC UNIT	DEPARTMENT OF BIOLOGICAL APPLICATIONS AND TECHNOLOGY			
LEVEL OF STUDIES	UNDERGRADUATE COURSE			
COURSE CODE	BEE733	SEMESTER	7th	
COURSE TITLE	FAUNA OF GREECE - TERRESTRIAL INVERTEBRATES			
INDEPENDENT TEACHING ACTIVITIES			WEEKLY TEACHING HOURS	CREDITS
			4	4
COURSE TYPE	SPECIFIC BACKGROUND			
PREREQUISITE COURSES:				
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK			
IS THE COURSE OFFERED TO ERASMUS STUDENTS	ENGLISH			
COURSE WEBSITE (URL)				

(2) LEARNING OUTCOMES

Learning outcomes
The course is offered to students in order to develop their specific knowledge of the great diversity of the invertebrate fauna of Greece, with emphasis on the group of insects. It is considered of key importance for biology graduates who would like to work in the field of biodiversity conservation and in the wider environmental field, because: (a) insects are a crucial group of animal organisms on the planet, comprising half of the biodiversity of known organisms and performing key ecosystem functions, and (b) the entomological diversity of Greece is high, including a large proportion of endemic and/or threatened species at national and global level. At the end of the course, students are expected to: o Become familiar with the main groups of terrestrial invertebrates of Greece o Know the basic morphology and systematics of terrestrial invertebrates, become familiar with identification keys and be able to identify characteristic species of invertebrates o Understand the ecological factors that shape the diversity patterns of invertebrates in Greece o Understand the importance of invertebrates and their ecological role and function, as well as their importance and relations with humans o Become familiar with the international literature on the conservation and management of invertebrate fauna o Develop critical thinking, evaluate, organize and synthesize existing scientific information on the conservation and management of the populations of invertebrate fauna o Be able to communicate and support their positions to the public using communication technologies on the basis of scientific evidence o Be able to work in a team
General Competences
o Search, analysis and synthesis of data and information, using ICT o Independent work o Teamwork o Respect for the natural environment o Promotion of free, creative and deductive thinking

○ Communication skills to disseminate knowledge to the general public and/or to oppose scientific arguments

(3) SYLLABUS

A. THEORY

A. Invertebrate fauna of Greece

Greece: factors affecting the diversity and distributions of invertebrates. Presentation of the importance of Greece in terms of the diversity and endemism of invertebrates.

B. Morphology, systematics and ecology of invertebrates

Presentation of the main groups of invertebrate organisms of Greece in terms of their morphological traits, systematics, biological cycle and ecology.

C. Methods of recording invertebrates

Indicative methods and techniques for sampling invertebrates in the field are presented, with emphasis on insects.

D. Conservation and management

Ecological importance of invertebrates, their pressures and threats, the conservation status of selected species, conservation measures, indicative action plans, interaction with humans and human activities, European and national framework for their protection.

E. Insects responses to climate change

Impact of climate change on insects. Adaptations to climate change: phenological shifts, distribution shifts, change of behavioural patterns.

The lectures on the above topics cover the following orders of insects (Insecta): Coleoptera, Neuroptera, Hymenoptera, Hemiptera, Lepidoptera, Diptera, Orthoptera, Odonata, other arthropod groups such as myriapods, spiders and isopods, and other important taxonomic groups such as land snails (Mollusca), earthworms (Annelida) and nematodes (Nematoda).

B. TUTORIAL

The content of the tutorial will be dynamic and will follow the theory. It will include student presentations, paper reviews, and open discussions. Students will be asked to present individual or group projects on selected topics on invertebrate fauna.

C. LAB

The lab will include species identification from photographic material using different keys.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face. Use of e-course. Alternative teaching: Part of the content to be presented by the students, under the tutor's guidance.
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Use of ICT in **teaching**: power point with integrated audiovisual material and international links (Theory/ Tutorials). Using e-course platform for uploading scientific papers and online collection of answers and projects from students. Use of ICT communication with students: ○ Communication through e-course platform ○ Teaching: uploading lectures (pdfs), ○ Tutorial: uploading of scientific papers, environmental studies, action plans and relevant scientific documentation triggering open discussion in class.

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Project: uploading aim of the project, guidelines, references, and international links.
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<tr><td>TEACHING METHODS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>20</td></tr>
<tr><td>Tutorial</td><td>10</td></tr>
<tr><td>Lab</td><td>10</td></tr>
<tr><td>Independent study</td><td>40</td></tr>
<tr><td>Project</td><td>30</td></tr>
<tr><td>Total</td><td>110</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION</td><td>
Informing student: Informing on the process and criteria used in student evaluation in the first lecture of the course.

Evaluation language: Greek. English (Erasmus)

Tests: 25%
Written tests including short answer and/or multiple-choice exams during the semester (2-3 tests)

Assignments: 25%
Completion of an exercise to be assigned at the beginning of the course

Project: 50%
Evaluation criteria
A. Written report - 60%
○ Covering the main issue of the subject within word limit - 25%
○ Writing [structure - wording - concise text) -15%
○ Number and relevance of bibliographic sources used– 10%
○ Delivering date (before deadline)– 5%
○ Adequate integration of citations -5%

B. Public presentation – 40%
○ Covering the main issue of the subject within time limit 20%
○ Structure and aesthetic quality of the presentation– 10%
○ Knowledge and communication skills of the presenter– 10%
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(5) PROPOSED BIBLIOGRAPHY

1. Pafilis, P. 2020. The Fauna of Greece. Biology and management of wildlife. Broken Hill Publishers LTD. [Code : 86055696] [In Greek]
2. Gullan, P.J., Cranston, P.S. 2016. The insects. Wiley. [Code for Greek version: 59396272]
3. Pamperis, L. 2009. The butterflies of Greece. Pamperis editions.
4. Willemse, L., Kleukers, R., Ode, B. 2018. The Grasshoppers of Greece. EIS Kenniscentrum Insecten & Naturalis Biodiversity Center, Leiden
5. https://fauna-eu.org/
6. Santos, JC., Fernandes, G.W. (Eds). 2021. Measuring Arthropod Biodiversity. A handbook of sampling methods. Springer.

* Additional literature resources and links will be provided in each lecture