COURSE OUTLINE

1. GENERAL

SCHOOL	Agricultural and Forestry Sciences		
DEPARTMENT	Department of Forestry and Management of the Environment and Natural Resources		
LEVEL OF STUDIES	LEVEL 7		
COURSE CODE	**ΔΣΠΜΣΠΣΠΕΘΠΕ3**	**SEMESTER**	**(3st)**
COURSE TITLE	Environmental Problems and Sustainability		

TEACHING ACTIVITIES *in case the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to a course as a whole, then please note down the teaching hours per week and the corresponding ECTS Credits.*	**TEACHING HOURS PER WEEK**	**ECTS CREDITS**
	2.3	7.5
Add lines if necessary. The teaching organization and methods used are described in the point 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skill Development*	Scientific Area
PREREQUISITES:	No
TEACHING & EXAMINATION LANGUAGE:	Greek
COURSE OFFERED TO ERASMUS STUDENTS:	No
URL COURSE:	https://eclass.duth.gr/courses/1425304/

2. LEARNING OUTCOMES

Learning Outcomes

Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.

The course aims to provide students with an understanding of environmental problems from all scientific dimensions in combination with modern theories for their solution. Issues related to pollution, biodiversity, air quality and their effect on citizens' health and quality of life are developed. The aim is to enable students understand the principles and procedures of the structure and function of the environment, with the principles of sustainability.

In the end of the course, students are expected to:

1. Understand the principles and procedures of functions of the environment.
2. Be able to evaluate the anthropogenic effects of environmental pollution and to deal rationally with their consequences, based on sustainability.
3. Acquire the necessary knowledge and skills to understand environmental problems and approach them from all scientific dimensions.

General Skills

Taking into account the general skills that the graduate must have acquired (as they are listed in the Diploma Supplement and are listed below), which of them is intended (for the course)?

Search, analysis and synthesis of data and information, using the necessary technologies
Adaptation to new situations
Decision making
Autonomous work
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project design and management
Equity and Inclusion
Respect for the natural environment
Sustainability
Demonstration of social, professional and moral responsibility and sensitivity to gender issues
Critical thinking
Promoting free, creative and inductive thinking

Search, analysis and synthesis of data and information, using the necessary technologies
Adaptation to new situations
Decision making
Autonomous work
Working in an interdisciplinary environment
Respect for the natural environment
Production of new research ideas

3. COURSE CONTENT

1. Important environmental issues: The notion of geographical scale.
2. Environmental Education and the Discipline of Sustainability. Land use for multiple purposes.
3. The general framework of sustainable development. From economic growth to sustainable development.
4. Causes of environmental problems.
5. The effects of environmental destruction. Mitigation measures.
6. Environmental, Social, Economic and Cultural dimensions of environmental problems.
7. Effects of environmental problems on the natural, social and economic environment.
8. Environmental accidents and environmental crisis management.
9. Future scenarios for the restoration, resilience and adaptability of species and their ecosystems.
10. Proposed solutions and good practices for the solution of environmental problems.
11. Case studies. Biodiversity loss. Pollution (of soils, atmosphere, water, etc.).
12. Student presentations.
13. Student presentations.

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD *Face to face, Distance learning, etc.*	Face to face
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) *Use of ICT in Teaching, in Laboratory Education, in Communication with students*	Use of ICT in Teaching and Laboratory Education (all lectures are supported by PowerPoint presentations and some by Videos) Electronic communication with students via e-mail or e-class
TEACHING ORGANIZATION *The way and methods of teaching are described in detail.* *Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research & analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.* *The student study hours for each learning activity are listed as well as the non-guided study hours so that the total workload at the semester level corresponds to the ECTS standards.*	

Activity	*Workload/semester*
Lectures	30
Bibliographic research & analysis	75
Individual perusal	35
Preparation of paper/presentation	47.5
Total	**187.5**

STUDENT EVALUATION *Description of the evaluation process* *Assessment Language, Assessment Methods, Formative or Concluding, Multiple Choice Test, Short Answer Questions, Essay Development Questions, Problem Solving, Written Assignment, Essay / Report, Oral Exam, Public Presentation, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others* *Explicitly defined assessment criteria and if and where are accessible to students are mentioned.*	• Oral exam (grade x 0.4). • Individual paper (grade x 0.4). • Paper presentation (grade x 0.2). • Students with verified dyslexia problems are examined orally instead of sitting for the written exam; this requires that the Department administration is prior informed. • After exams, the exam topics are displayed on the instructor's announcement board so that students can estimate their grade. The final grades are announced on the Departments' electronic platform. • Students are able to see their examination sheet and assess the grading as well as the comments on the sheet.

5. SUGGESTED BIBLIOGRAPHY

1. Liarakou, G. & Flogaiti, E. (2007). From environmental education to the education for sustainable development. Athens: Nesos.
2. Dimitriou, A. (2005). Environmental education: Environment, sustainability. Theoretical and pedagogical approaches. (No. IKEEBOOK-2020-133). Epicenter.
3. Agenda 21 and Local Administration: The application of the sustainable dimension of development on local communities, in: Tsaltas, G., Latsimpardis K. (editors). Sustainability and Environment. The European and national prospect, conference proceedings, Athens: Sideris Publications, 2004.

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Georgios Tsantopoulos – Veronika Andrea - - Michail Tsatiris - Eirene Katsarou
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Supervisors: (1)	YES
Evaluation methods: (2)	Written exam through the on-line learning platform e-class/ Supervision through Microsoft Teams
Implementation Instructions: (3)	**1. Paper.** The paper must be sent to the instructor's e-mail address mentioned in the course outline before the day of the exams. To be accepted, the paper must consist at least of 3,000 words. In addition, it should have a similarity index less than 20% (the paper will be monitored with "Turnitin" Plagiarism Checker). The topic of the paper must fall into one of the thematic areas analyzed in this course. Students are explicitly responsible for choosing the topic of the paper. The paper corresponds to 50% of the total grade. Evaluation criteria: 1. *Language proficiency & aesthetic presence (15%) (Accuracy, comprehensible speech, aesthetics, spelling and punctuation).* *2. Structure and coherence of the final text (25%) (paragraphs, titles and subtitles, cohesion with the previous content, connection to the following content).* *3. Content (40%) (Development of arguments, information accuracy, use of literature sources).* *4. Literature (20%) (Citations in the text and references at the end of the paper).* **2. Oral exam.** The exam will be held in alphabetic order according to the exam program which will be announced by the Secretariat of the Department. The oral exam corresponds to 50% of the final grade. The exam will be conducted through Microsoft Teams. The link will be sent to students through e-class, exclusively to the institutional accounts of students who have taken the course and have knowledge of the terms concerning distance exams. Students will have to connect to the exam room of the link through their institutional accounts, otherwise they will not be able to participate in the exam. During the exam, students must keep their cameras and microphones activated. Before the exam starts, students will demonstrate their identity card on camera in order to verify their identity. Every student must answer 4 questions and each question is graded with 2.5 points. Each student wishing to participate in the exams must connect to Microsoft Teams 15 minutes before the exam begins.

(1) To be completed with YES or NO

(2) Note down the evaluation methods used by the teacher, e.g.

- *written assignment* or/and exercises
- written or oral examination with distance learning methods, provided that the integrity and reliability of the examination are ensured.

(3) In the **Implementation Instructions** section, the teacher notes down clear instructions to the students:

α) in case of **written assignment and / or exercises:** the deadline (e.g. the last week of the semester), the means of submitting them to the teacher, the grading system, the participation of the assignment in the final grade and every other detail that should be mentioned.

β) in case of **oral examination with distance learning methods:** the instructions for conducting the examination (e.g. in groups of X people), the way of pronouncing topics, the applications to be used, the necessary technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the way the hyperlink is sent, the duration of the exam, the grading system, the participation of the exam in the final grade, the ways in which the inviolability and reliability of the exam is ensured and every other detail that should be mentioned.

γ) in case of **written examination with distance learning methods**: the instructions for assigning the topics, the way of submitting the answers, the duration of the exam, the grading system, the participation of the exam in the final grade, the ways in which the integrity and reliability of the exam is ensured and every other detail that should be mentioned.

There should be an attached list with the Student Registration Numbers only of the beneficiaries to participate in the examination.