

COURSE OUTLINE

1. GENERAL

SCHOOL	AGRICULTURAL AND FORESTRY SCIENCE		
DEPARTMENT	FORESTRY AND MANAGEMENT OF THE ENVIRONMENT AND NATURAL RESOURCES		
LEVEL OF STUDIES	7		
COURSE CODE	ΔΣΠΜΣΠΣΠΕΑ3Υ	SEMESTER	1
COURSE TITLE	CLIMATE CHANGE, MITIGATION AND ADAPTATION		
TEACHING ACTIVITIES <i>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.</i>		TEACHING HOURS PER WEEK	ECTS CREDITS
Lectures		1,5	
Laboratory Practice		0,8	
Sum		2,3	7,5
<i>Add lines if necessary. The teaching organization and methods used are described in the point 4.</i>			
COURSE TYPE <i>Background, General Knowledge, Scientific Area, Skill Development</i>	Scientific Area		
PREREQUISITES:	None		
TEACHING & EXAMINATION LANGUAGE:	Greek		
COURSE OFFERED TO ERASMUS STUDENTS:	Yes		
URL COURSE:	https://eclass.duth.gr/courses/1425297/		

2. LEARNING OUTCOMES

<p>Learning Outcomes <i>Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course.</i></p> <p>Upon successful completion of the course students will be able to:</p> <ul style="list-style-type: none"> • identify the natural vs anthropogenic greenhouse effect, • identify the differences among exposure, adaptation, vulnerability and resilience, • understand and interpret climate model predictions, • understand the multi-dimensionality of climate models. <p>-</p>																
<p>General Skills <i>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)?</i></p> <table border="0"> <tr> <td><i>Search, analysis and synthesis of data and information, using the necessary technologies</i></td> <td><i>Project design and management</i></td> </tr> <tr> <td><i>Adaptation to new situations</i></td> <td><i>Equity and Inclusion</i></td> </tr> <tr> <td><i>Decision making</i></td> <td><i>Respect for the natural environment</i></td> </tr> <tr> <td><i>Autonomous work</i></td> <td><i>Sustainability</i></td> </tr> <tr> <td><i>Teamwork</i></td> <td><i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i></td> </tr> <tr> <td><i>Working in an international environment</i></td> <td><i>Critical thinking</i></td> </tr> <tr> <td><i>Working in an interdisciplinary environment</i></td> <td><i>Promoting free, creative and inductive thinking</i></td> </tr> <tr> <td><i>Production of new research ideas</i></td> <td></td> </tr> </table> <ul style="list-style-type: none"> • Literature search, data analysis and synthesis • Critical thinking • Working in an interdisciplinary environment • Production of new research ideas • Promoting free, creative and inductive reasoning 	<i>Search, analysis and synthesis of data and information, using the necessary technologies</i>	<i>Project design and management</i>	<i>Adaptation to new situations</i>	<i>Equity and Inclusion</i>	<i>Decision making</i>	<i>Respect for the natural environment</i>	<i>Autonomous work</i>	<i>Sustainability</i>	<i>Teamwork</i>	<i>Demonstration of social, professional and moral responsibility and sensitivity to gender issues</i>	<i>Working in an international environment</i>	<i>Critical thinking</i>	<i>Working in an interdisciplinary environment</i>	<i>Promoting free, creative and inductive thinking</i>	<i>Production of new research ideas</i>	
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- Respect for the natural environment.

3. COURSE CONTENT

1. Introduction to the atmosphere and radiation
2. Natural processes of climate change
3. Paleoclimatic changes
4. Anthropogenic climate change
5. Exposure, adaptation and vulnerability
6. Global climate trends
7. Climate change scenarios and predictions for the future
8. Climate change and public health
9. Climate change and food security
10. Climate change and forest ecosystems
11. Climate policy and climate change mitigation
12. Case study (I)
13. Case study (II)

4. LEARNING & TEACHING METHODS - EVALUATION

TEACHING METHOD <i>Face to face, Distance learning, etc.</i>	Face to face (65%) Distance learning (35%)	
USE OF INFORMATION & COMMUNICATIONS TECHNOLOGY (ICT) <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i>	Power point presentations, videos, e-class platform	
TEACHING ORGANIZATION <i>The way and methods of teaching are described in detail.</i> <i>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.</i> <i>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.</i>	Activity	Workload/semester
	Lectures	20
	Laboratory Practice	10
	Non-guided study	50
	Bibliographic research and analysis	50
	Project	57,5
	Total	187,5
STUDENT EVALUATION <i>Description of the evaluation process</i> <i>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</i> <i>Explicitly defined assessment criteria and if and where are accessible to students are mentioned.</i>	The evaluation process is conducted in Greek. In case of Erasmus students, the examination language is English. The evaluation process includes: <ul style="list-style-type: none"> - Written final examination (essay development and problem solving) – 34% of the final grade - Laboratory exercise in the classroom – 33% of the final grade - Project – 33% of the final grade. 	

5. SUGGESTED BIBLIOGRAPHY

1. Κλιματική αλλαγή, 2021, Α. Πασχαλίδου, Εκδόσεις ΤΖΙΟΛΑ, ISBN: 978-960-418-812-3
2. Εισαγωγή στη Φυσική της Ατμόσφαιρας και την Κλιματική Αλλαγή, 2015, Π. Κατσαφάδος και Η. Μαυροματίδης, Αποθετήριο Κάλλιπος, ISBN: 978-960-603-053-6.
3. Urban Climates, 2017, T.R. Oke, G. Mills, Cambridge University Press, ISBN-10: 1107429536, ISBN-13: 978-1107429536

ANNEX OF THE COURSE OUTLINE

Alternative ways of examining a course in emergency situations

Teacher (full name):	Anastasia Paschalidou
Contact details:	By email to apascha@fmenr.duth.gr or through the e-class platform
Supervisors: (1)	-
Evaluation methods: (2)	Written examination with distance learning methods (platform e-Class), ensuring the integrity and reliability of the examination.
Implementation Instructions: (3)	The students will be given a multiple-choice test consisting of 20 questions. All questions are equal in terms of grading and account for 0,5 units. Wrong answers have negative grading. The duration of the exam is 15 mins.

(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.