

## COURSE OUTLINE

### 1. GENERAL

<b>SCHOOL</b>	AGRICULTURAL AND FORESTRY SCIENCES		
<b>DEPARTMENT</b>	FORESTRY AND MANAGEMENT OF THE ENVIRONMENT AND NATURAL RESOURCES		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE		
<b>COURSE CODE</b>	ΔΣΠΜΣΠΣΠΕΒ2Υ	<b>SEMESTER</b>	SPRING (2 <sup>th</sup> )
<b>COURSE TITLE</b>	ENGINEERING WORKS AND NATURAL ENVIRONMENT		
<b>TEACHING ACTIVITIES</b>		<b>TEACHING HOURS PER WEEK</b>	<b>ECTS CREDITS</b>
<p><i>If the ECTS Credits are distributed in distinct parts of the course e.g. lectures, labs etc. If the ECTS Credits are awarded to the whole course, then please indicate the teaching hours per week and the corresponding ECTS Credits.</i></p>			
		2,3	7,5
<p><i>Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.</i></p>			
<b>COURSE TYPE</b>	SPECIALISED SCIENTIFIC KNOWLEDGE		
<p><i>Background, General Knowledge, Scientific Area, Skill Development</i></p>			
<b>PREREQUISITES:</b>	NO		
<b>LANGUAGE OF INSTRUCTION AND EXAMINATIONS:</b>	GREEK		
<b>COURSE OFFERED TO ERASMUS STUDENTS:</b>	NO		
<b>COURSE URL:</b>	<a href="https://eclass.duth.gr/courses/1425301/">https://eclass.duth.gr/courses/1425301/</a>		

### 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 purpose of the course is to help students acquire deep insights into the philosophy of managing forest operations and infrastructure projects, and study the impact of such projects on the natural environment. In addition, the course aims at widening students' knowledge of the key role that forest operations play in protecting a wide variety of development projects (such as land improvement, transport, water supply, and hydroelectric works) as well as residential areas, and be informed about novel forestry management programs.

The course also aims at a) enabling students to acquire both theoretical and practical knowledge of fundamental principles, regulations in force, and requirements pertaining to technical safety plans, and familiarize themselves with research on forest operations management practices; and b) promoting knowledge of effective planning and its applications in mitigating the risks from natural disasters on existing infrastructures and particularly road networks; in this context, students will study examples of predicted impacts on the natural environment as specified for each category of projects and activities.

Upon completion of the course, students will:

- have acquired a thorough grounding in the basic principles of forest operations management and engineering as well as the problems associated with the design and construction of technical projects;
- be able to implement studies of various technical projects according to existing specifications and the legislation that governs them;
- incorporate economic and environmental considerations when elaborating technical studies aiming at high-quality feasible constructions;
- produce road construction solutions fully harmonized with the natural environment.

### General Skills

*Name the desirable general skills upon successful completion of the module*

*Search, analysis and synthesis of data and information, ICT Use*

*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 reasoning*

- Search, analysis and synthesis of data and information, ICT Use
- Decision making
- Autonomous work
- Respect for the natural environment
- Project design and management
- Working in an interdisciplinary environment
- Promoting free, creative and inductive reasoning
- Production of new research ideas

### 3. COURSE CONTENT

1. Environmental analysis and practices
2. Control of compliance with environmental conditions
3. Environmental impact assessment of the projects
4. Examples of predicted impacts on the natural environment for each category of projects and activities
5. Forest road networks: design and specifications
6. Forest network management programs;
7. Maintenance and repair programs
8. Reducing the risk from natural disasters on forest road networks
9. Construction equipment & materials
10. Forest protection projects
11. Specifications, Road Design Guidelines Manuals, forest operations management
12. Technical safety plans, construction costing
13. Financing; research on forest operations management practices.

#### 4. LEARNING & TEACHING METHODS - EVALUATION

<b>TEACHING METHOD</b> <i>Face to face, Distance learning, etc.</i>	Face to face - Distance learning	
<b>USE OF INFORMATION &amp; COMMUNICATIONS TECHNOLOGY (ICT)</b> <i>Use of ICT in Teaching, in Laboratory Education, in Communication with students</i>	Use of ICT in teaching, laboratory education, and communication with students <ul style="list-style-type: none"> <li>• Use of ICT in lectures (PowerPoint presentations, videos, etc.)</li> <li>• Teaching is also supported by the e-class platform.</li> <li>• Use of CAD software</li> </ul>	
<b>TEACHING ORGANIZATION</b> <i>The ways and methods of teaching are described in detail. Lectures, Seminars, Laboratory Exercise, Field Exercise, Bibliographic research &amp; analysis, Tutoring, Internship (Placement), Clinical Exercise, Art Workshop, Interactive learning, Study visits, Study / creation, project, creation, project. Etc.  The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</i>	<b>Activity</b>	<b>Workload/semester</b>
	Lectures	30
	Self-study	50
	Write a paper	60
	Literature study & analysis	47,5
	<b>Total</b>	<b>187,5</b>
<b>STUDENT EVALUATION</b> <i>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, Presentation in audience, Laboratory Report, Clinical examination of a patient, Artistic interpretation, Other/Others  Please indicate all relevant information about the course assessment and how students are informed</i>	Language of evaluation: Greek. Methods of evaluation include: <ul style="list-style-type: none"> <li>✓ written examination,</li> <li>✓ multiple choice test,</li> <li>✓ short answer questions,</li> <li>✓ written assignment.</li> </ul>	

#### 5. SUGGESTED BIBLIOGRAPHY

1. ΟΔΟΠΟΙΙΑ Ι - ΧΑΡΑΞΕΙΣ ΚΑΙ ΥΠΟΛΟΓΙΣΜΟΣ ΧΩΜΑΤΙΣΜΩΝ, Αναστάσιος Κ. Αποστολέρης  
 2. Εφαρμοσμένη Δασική Οδοποιία, Νίκου Νικόλαος, Εκδόσεις Σ. Γιαχούδης & ΣΙΑ Ο.Ε. (2004)

## ANNEX OF THE COURSE OUTLINE

### Alternative ways of examining a course in emergency situations

<b>Teacher (full name):</b>	Apostolos Kantartzis
<b>Contact details:</b>	Via the e-class platform or email: <a href="mailto:apkantar@fmenr.duth.gr">apkantar@fmenr.duth.gr</a>
<b>Supervisors: (1)</b>	No
<b>Evaluation methods: (2)</b>	Written examination with distance learning methods / written assignment / exercises
<b>Implementation Instructions: (3)</b>	
	Course evaluation will be implemented by means of a written personal assignment/essay, which will be uploaded in the e-class platform. All information about the assignment together with the relevant guidelines will be announced on the course website in the menu "Assignments".

(1) Please write 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:

a) in case of **written assignment and / or exercises**: the deadline (e.g. the last week of the semester), the means of submission, the grading system, the grade percentage of the assignment in the final grade and any other necessary information.

b) 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 administration of the questions to be answered, the distance learning platforms to be used, the technical means for the implementation of the examination (microphone, camera, word processor, internet connection, communication platform), the hyperlinks for the examination, the duration of the exam, the grading system, the percentage of the oral exam in the final grade, the ways in which the inviolability and reliability of the exam are ensured and any other necessary information.

c) in case of **written examination with distance learning methods**: the way of administration of the questions to be answered, the way of submitting the answers, the duration of the exam, the grading system, the percentage of the written exam of the exam in the final grade, the ways in which the integrity and reliability of the exam are ensured and any other necessary information.

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