

## 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 – 7th		
<b>COURSE CODE</b>	ΔΣΠΜΣΠΣΠΕΘΠΕ1	<b>SEMESTER</b>	3rd EDUCATIONAL PERIOD
<b>COURSE TITLE</b>	ECOSYSTEM SERVICES		
<b>TEACHING ACTIVITIES</b> <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>		<b>TEACHING HOURS PER WEEK</b>	<b>ECTS CREDITS</b>
		2,3	7,5
<i>Please, add lines if necessary. Teaching methods and organization of the course are described in section 4.</i>			
<b>COURSE TYPE</b> <i>Background, General Knowledge, Scientific Area, Skill Development</i>	SCIENTIFIC AREA		
<b>PREREQUISITES:</b>	NO		
<b>TEACHING &amp; EXAMINATION LANGUAGE:</b>	GREEK		
<b>COURSE OFFERED TO ERASMUS STUDENTS:</b>	YES		
<b>COURSE URL:</b>	<a href="https://eclass.duth.gr/courses/1425288/">https://eclass.duth.gr/courses/1425288/</a>		

### 2. LEARNING OUTCOMES

<p><b>Learning Outcomes</b> Please describe the learning outcomes of the course: Knowledge, skills and abilities acquired after the successful completion of the course. Consult Annex A</p> <ul style="list-style-type: none"> <li>• Description of the Level of Learning Outcomes for each study cycle according to the Qualifications Framework of the European Higher Education Area</li> <li>• Descriptive Indicators for Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning</li> </ul> <p>and Annex B</p> <ul style="list-style-type: none"> <li>• Comprehensive Guide in writing Learning Outcomes</li> </ul>
<p><b>The purpose of the course is</b> students to get used with nature and the role of ecosystem services in sustainable development</p> <p>After successful completion of the course students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand the basic concepts of ecosystem services evaluation</li> <li>• Can use the classification systems of ecosystem services</li> <li>• Can implement certain approaches and assessment and economic evaluation tools for ecosystem services</li> <li>• Use available technology to collect data on ecosystem services, process them, analyze them and draw conclusions to improve them</li> <li>• Have understood and appreciated the importance of ecosystem services in the</li> </ul>

- development of a country
- Can coordinate and conduct studies and economic valuation surveys of ecosystem services

### General Skills

Taking into account the general skills that the graduate must have acquired (as these are written in the Diploma Appendix and listed below) *in which of those the course aims*

*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*

- Autonomous Work
- Team Work
- Search, analysis and synthesis of data and information, using the necessary technology
- Decision making
- Working in an international environment
- Production of new research ideas
- Respecting natural environment
- Criticism and self – criticism practice

### 3. COURSE CONTENT

1. Ecosystems, functions and services. Historical background
2. Territorial and institutional consideration of ecosystem services
3. Mapping and evaluation of ecosystem services. Biological renewable resources through ... ecosystem services – examples and case studies
4. Quantification and market creation for ecosystem services
5. Evaluation of ecosystem services
6. Social impact of ecosystem services
7. Restrictions and criticism in ecosystem services evaluation
8. Experimental perspective and monitoring of ecosystem functions and services with on site visits in certain natural ecosystems and agencies that make use of these services
9. Priorities, coordination, impact solution
10. European and international strategy for ecosystem services
11. Problem tracing, on site ecosystem services evaluation, research action (project)
12. Problem tracing, on site ecosystem services evaluation, research action (project)
13. Problem tracing, on site ecosystem services evaluation, research action (project)

### 4. LEARNING & TEACHING METHODS – EVALUATION

<b>TEACHING METHOD</b> <i>Face to face, Distance learning, etc.</i>	Face to face
<b>USE OF INFORMATION &amp;</b>	Use of I.C.T. in teaching and communication with

<p><b>COMMUNICATIONS TECHNOLOGY (ICT)</b> Use of ICT in Teaching, in Laboratory Education, in Communication with students</p>	students	
<p><b>TEACHING ORGANIZATION</b> 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.</p> <p>The supervised and unsupervised workload per activity is indicated here, so that total workload per semester complies to ECTS standards.</p>	<b>Activity</b>	<b>Semester workload</b>
	Lectures	30
	Bibliography study and analysis	60
	Project presentation	42,5
	Individual work	45
<b>Total</b>	<b>187,5</b>	
<p><b>STUDENT EVALUATION</b> Description of the evaluation process</p> <p>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</p> <p>Please indicate all relevant information about the course assessment and how students are informed</p>	<p>Written examination – Questions with essays as answers (50%) Written assignment (50%) Evaluation of the course is been held in Greek language. Students having ascertained dyslexia problems are examined with oral methods. Students have access to his/her essay at any time</p>	

## 5. SUGGESTED BIBLIOGRAPHY

Dimopoulos, P., Kokkoris, I. (2017). Mapping and Evaluation of Ecosystems and their Services. Katagramma editions. (In Greek).

Arabatzis G., Polyzos S. 2008. Natural resources, environment and development. Tziola editions. Thessaloniki. (In Greek).

Polyzos, S. 2022. Natural Resource Management and Sustainable Development. Tziola editions. Thessaloniki. (In Greek).

Halkos, G. 2016. Economics of natural resources and environment. Disigma editions. Thessaloniki. (In Greek).

### -Related scientific journals:

Ecosystem Services, Journal of Environmental Management, Sustainability, Ecological Indicators, Forest Policy and Economics, Sustainable Development, European Journal of Sustainable Development Research

## ANNEX OF THE COURSE OUTLINE

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

<b>Teacher (full name):</b>	Garyfallos Arabatzis, Apostolos Kyriazopoulos, Georgios Korakis, Anastasia Paschalidou
<b>Contact details</b>	E-Class platform or email in: <a href="mailto:garamp@fmenr.duth.gr">garamp@fmenr.duth.gr</a> ; <a href="mailto:apkyriaz@fmenr.duth.gr">apkyriaz@fmenr.duth.gr</a> ; <a href="mailto:gkorakis@fmenr.duth.gr">gkorakis@fmenr.duth.gr</a> ; <a href="mailto:apascha@fmenr.duth.gr">apascha@fmenr.duth.gr</a>
<b>Supervisors: (1)</b>	Yes
<b>Evaluation methods: (2)</b>	Written examination using remote methods / written project
<b>Implementation Instructions: (3)</b>	The examination in the course will take place through written individual work/project that will be announced in the e-class platform. All project items and instructions will be contained in the active tools in the sub-menu "Tasks". Project should be submitted until last week of the semester via e-class

(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

(4) 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 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.

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 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.

c) 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.