## **COURSE OUTLINE**

### (1) General information

FACULTY/SCHOOL	TECHNOLOGY					
DEPARTMENT	ENVIRONMENTAL SCIENCES					
LEVEL OF STUDY	Undergraduate					
COURSE UNIT CODE	NEW COURSE	SEMESTER		3		
COURSE TITLE	ENVIRONMENTAL ECONOMICS					
INDEPENDENT TEACHIN	INDEPENDENT TEACHING ACTIVITIES					
in case credits are awarded for separa	ate component	ts/parts of the	WEEKLY			
course, e.g. in lectures, laboratory e	f credits are	TEACHNG	CREDITS			
awarded for the entire course, give	awarded for the entire course, give the weekly teaching hours HOURS					
and the total c	and the total credits					
THEORETICAL BACKGROUND			4	5		
	LABORAT	ORY PRACTICE				
		TOTAL	4	5		
COURSE TYPE Background knowledge, Scientific expertise, General Knowledge, Skills Development	Background					
PREREQUISITE COURSES:						
LANGUAGE OF INSTRUCTION & EXAMINATION/ASSESSMENT:	GREEK					
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES					
COURSE WEBSITE (URL)						

## (2) LEARNING OUTCOMES

#### Learning Outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate (certain) level, which students will acquire upon successful completion of the course, are described in detail. It is necessary to consult:

### APPENDIX A

- Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.
- Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and

#### APPENDIX B

Guidelines for writing Learning Outcomes

#### 1. General aims – General learning outcomes

The aim of the module is

1. To contribute in the understanding by the students of the deep two-way interdependence between nature and economics by highlighting that the biggest challenge for people's prosperity is the preservation of the good relation between the natural environment and the economy. and therefore

the causes of degradation in nature are revealed and related to the public cures for proper management and protection of the environment as the foundation for sustainable spatial development , and

2. To offer the possibility to students to be able to acquaint the knowledge necessary (methods and techniques) for the application of analytical tools and paradigms of the economic theory in environmental problems.

#### How are they specialized in the following categories:

1.1. KNowledge

The module aims in:

- 1. Proven knowledge and understanding of concepts and methods of the economics of the environment and of natural resources.
- 2. The concept of the impact of production and consumption of goods and services in the environment using an applied methodological analysis framework that can be used for the solution of real environmental problems.
- 3. Acquisition of abilities for critical analysis, evaluation and synthesis of complex and multidimentional concepts , and
- 4. The promotion of progress within the knowledge society.

#### 1.2. Skills

At the end of the module the students will be able to get skills for general overview from an economic point of view , in contemporary environmental issues, (like the degradation of the environment, the decrease of the ozone layer, the climatic change, the acidification, the energy crisis, the food crisis, the correct management of coastal areas and fishing, etc) and also the issues arising from (hyper) exploitation of natural resources.

### 1.3. Abilities

By the end of the module, the students will be able to:

- Understand the correlation of Economy and the Environment, defining and explaining various important relevant to the environment concepts and terminology,
- Deepen in theoretical foundations of Economics of the Environment and Natural Resources, and finally
- Analyse the known environmental problems, at international level, focusing on the methods used to solve them

#### **General Competences**

Taking into consideration the general competences that students/graduates must acquire (as those are described in the Diploma Supplement and are mentioned below), at which of the following does the course attendance aim?

Search for, analysis and synthesis of data and information by the use of appropriate technologies, Adapting to new situations Decision-making	Project planning and management Respect for diversity and multiculturalism Environmental awareness Social, professional and ethical responsibility and sensitivity to gender issues Critical thinking
Individual/Independent work	Development of free, creative and inductive thinking
Group/Team work Working in an international environment Working in an interdisciplinary environment Introduction of innovative research	(Othercitizenship, spiritual freedom, social awareness, altruism etc.) 
Οι γενικές ικανότητες που θα πρέπει ν	α έχει αποκτήσει ο φοιτητής/φοιτήτρια και στις οποίες αποσκοπεί το μάθημα είναι:

Οι γενικές ικανότητες που θα πρέπει να έχει αποκτήσει ο φοιτητής/φοιτήτρια και στις οποίες αποσκοπεί το μάθημα είναι: (Αναφέρετε ικανότητες από τις παραπάνω ή συνδυασμούς αυτών που θα τεκμηριώνονται με συγκεκριμένα στοιχεία της εκπαιδευτικής διαδικασίας του μαθήματος) The module aims in developing the following abilities:

- Adaptation to new situations (exploratory analysis of future developments/scenaria)
- Decision making
- Writing of an assignment in a multi-disciplinary environment
- Critique and self-critique
- Writing autonomously within a group of an assignment in a future interdisciplinary environment.
- Respect for the natural environment
- Promotion of free, creative and inductive thinking

The above are  $T\alpha \pi\alpha\rho\alpha\pi\dot{\alpha}\nu\omega$  secured from the lecture content, the active participation during lectures, the assignments to be submitted in the module and their presentations.

## (3) COURSE CONTENT

The module covers the deep two-way interdependence of economics with the natural environment in space, the emphasis being on the economics related to the environment and the application of analytical tools and paradigms of economic theory in environmental .problems. The module includes the following thematic areas:

- 1. Introductory concepts and terminology of the economics of the environment and natural resources Interdependence of Economics and Environment
- 2. Environmental thinking in Economics The main currents of thought
- 3. Economics of Prosperity and the Environment: Distinctions of goods Productivity curve Partial and general equilibrium
- 4. Theory of externalities, property and environmental rights
- 5. Environmental policy measures: Immediate settings Financial means
- 6. Economic evaluation of the environment: Concepts
- 7. Economic evaluation of the environment: Methods
- 8. Excellency in natural resource management: Theory of exhaustible natural resources Theory of renewable natural resources Transition from exhaustible to renewable natural resources
- 9. Analysis of environmental problems: Energy, aciidification
- 10. Analysis of environmental problems: the grrenhouse effect and the ozone hole.
- 11. Analysis of environmental problems: biodiversity, desertification
- 12. Analysis of environmental problems: liquid and solid waste, sea pollution

Review of taught material

## (4) TEACHING METHODS-ASSESSMENT

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MODES OF DELIVERY	Lectures	
Face-to-face, in-class lecturing,		
distance teaching and distance		
learning etc.		
USE OF INFORMATION AND	• Use of software for presentations, internet and	
COMMUNICATION TECHNOLOGY	teleconferencing plat	tform.
Use of ICT in teaching, Laboratory	Communication via e-mail.	
Education, Communication with	<ul> <li>Use of the e-class. platform</li> </ul>	
students		
COURSE DESIGN	Activity/Method	Semester workload
Description of teaching techniques,	Lectures	25

		20		
practices and methods:	Workshop	30		
Lectures, seminars, laboratory	Laboratory work	25		
practice, fieldwork, study and	Theory study	45		
analysis of bibliography, tutorials,	Weekly individual			
Internship, Art Workshop,	evaluation reports for	125		
Interactive teaching, Educational	laboratory exercises			
visits, projects, Essay writing, Artistic	Course total 25			
creativity, etc.	(25 hours of workload per			
	credit unit)			
The study hours for each learning				
activity as well as the hours of self-				
directed study are given following				
the principles of the ECTS.				
STUDENT PERFORMANCE				
EVALUATION/ASSESSMENT	Evaluation			
METHODS				
Detailed description of the	<ul> <li>Optional assignment = 40%</li> </ul>			
evaluation procedures:	• Final exam = 60% or 100% if there is no assignment			
Language of evaluation, assessment				
methods, formative or summative				
(conclusive), multiple choice tests,				
short- answer questions, open-				
ended questions, problem solving,				
written work, essay/report, oral				
exam, presentation, laboratory				
work, otheretc.				
Specifically, defined evaluation				
criteria are stated, as well as if and				
where they are accessible by the				
students.				

# (5) SUGGESTED BIBLIOGRAPHY:

## -Suggested bibliography

Προτεινόμενη Βιβλιογραφία :

- Vlachou, A., 2001, (In Greek) Environment and physical resources, Volume A, Kritiki Publications
- Bithas, K. , 2004, Economic Theory of Environmental Protection, Typotheto Publications
- Halkos, G., 2016, Economics of Natural Resources & Environment, Athens: Disigma Publications
- Faucheux S., Noel J.F. (2007), Economics of Natural Resources & Environment, Athens,: GUTENBERG.Publications
- Pearce D. (2002), An Intellectual History of Environmental Economics, Annual Review of Energy and the Environment, 27:57–81.
- Stavins N.R., 2008), "Environmental economics," The New Palgrave Dictionary of Economics, 2nd Edition.
- Tietenberg T., Lewis L., 2010, Economics of Natural Resources & Environment, GUTENBERG.Publications
- Field B. & Field M. (2020) (In Greek) Environmental Economics, Broken-Hill Publishers
- Arabatzis G. & Polyzos S. (2008) Natural Resources, Environment And Developemnt, Tziolas & Sons Publications

## -<u>Complementary bibliography</u>

Lecture presentations are available on eclass.