

## COURSE OUTLINE

### (1) GENERAL INFORMATION

<b>FACULTY / SCHOOL</b>	MARITIME AND INDUSTRIAL STUDIES		
<b>DEPARTMENT</b>	MARITIME STUDIES		
<b>LEVEL OF STUDY</b>	UNDERGRADUATE		
<b>COURSE UNIT CODE</b>	NA641	<b>SEMESTER</b>	4
<b>COURSE TITLE</b>	Port Environmental Management		
<b>INSTRUCTOR'S NAME</b>	Assistant Professor Anastasia Christodoulou		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <i>in case credits are awarded for separate components/parts of the course, e.g. in lectures, laboratory exercises, etc. If credits are awarded for the entire course, give the weekly teaching hours and the total credits</i>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>
		4	6
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>			
<b>COURSE TYPE</b> <i>Background knowledge, Scientific expertise, General knowledge, Skills development,</i>	Background knowledge		
<b>PREREQUISITE COURSES:</b>			
<b>LANGUAGE OF INTRODUCTION:</b>	Greek		
<b>LANGUAGE OF EXAMINATION/ASSESSMENT:</b>			
<b>THE COURSE IS OFFERED TO ERASMUS STUDENTS:</b>			
<b>COURSE WEBSITE (URL):</b>	eclass.unipi.gr		

### (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

Upon completion of this course, students will be able to:

- Assess the impacts of climate change and multidimensional environmental externalities associated with ports.
- Analyze policies and governance levels (local, national, supranational) for port environmental management.
- Describe best practices and technological innovations developed to enhance sustainability in the maritime and port industries.
- To apply the principles of sustainable development to enhance the positive and minimize the negative impacts resulting from maritime and port activities.
- To understand the concept of environmental management and the existing quality certification systems, given that in recent years the environmental impacts from maritime and port activities have become a major issue at the local, national, and international level.

### 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

Individual/Independent work

Group/Team work

Working in an international environment

Working in an interdisciplinary environment

Introduction of innovative research

Project planning and management

Respect for diversity and multiculturalism

Environmental awareness

Social, professional and ethical responsibility and sensitivity to gender issues

Critical thinking

Development of free, creative and inductive thinking

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(Other.....citizenship, spiritual freedom, social awareness, altruism, etc.)

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- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Adapting to new situations
- Individual/Independent work
- Group/Team work
- Working in an international environment
- Working in an interdisciplinary environment
- Project planning and management
- Environmental awareness
- Critical thinking
- Development of free, creative and inductive thinking

### (3) COURSE CONTENT

- Introduction to port environmental management (definitions and basic concepts)
- Environmental challenges in ports (water/air pollution, noise, hazardous cargo, ballast water)
- Regulatory and legal frameworks (UN, IMO, EU) governing environmental management of port activities
- Sustainability and ports: Pillars of sustainability, innovation, and new technologies to minimize negative environmental externalities
- Green port fees
- Green ports and environmental quality management tools (EMAS, ISO 14001, SDM, PERS)
- Role of ports in decarbonizing shipping and the entire transport chain
- Energy management in ports (ISO 50001)
- Role of digitalization in sustainable port management

### (4) TEACHING METHODS – ASSESSMENT

<b>MODES OF DELIVERY</b> <i>Face-to-face, in-class lecturing, distance teaching and distance learning, etc.</i>	Face-to-face	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</b> <i>Use of ICT in teaching, Laboratory Education, Communication with Students</i>	Use of ICT in teaching and communication with Students	
<b>COURSE DESIGN</b> <i>Description of teaching techniques, practices and methods: Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, Internship, Art Workshop, Interactive teaching, Educational visits, projects, Essay writing, Artistic creativity etc.  The study hours for each learning activity as well</i>	<b>Activity/Method</b>	<b>Semester workload</b>
	Lectures	52
	Non-guided study	98
	<b>Total</b>	<b>150</b>

as the hours of self-study are given following the principles of ECTS.		
<p><b>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</b></p> <p><i>Detailed description of the evaluation procedures:</i></p> <p><i>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, other.....etc.</i></p> <p><i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students</i></p>	<p>a) Class participation, assignments, case studies, exercises (20%)</p> <p>b) Written examinations (80%): A final written exam</p>	

#### (5) SUGGESTED BIBLIOGRAPHY

- *Suggested bibliography:*
  - ΝΑΥΤΙΛΙΑ ΚΑΙ ΠΕΡΙΒΑΛΛΟΝ – Βελτιώνοντας την Περιβαλλοντική Απόδοση στις Θαλάσσιες Μεταφορές, J. Fredrik Lindgren, Selma Brynolf, Magda Wilewska-Bien, Karin Andersson. Μετάφραση - Επιμέλεια Βασίλειος - Στέλιος Τσελέντης.
  - Course slides
  - Selected academic articles
- *Related scientific journals:*
  - Transportation Research Part D
  - Marine Policy
  - Marine Pollution Bulletin
  - Ocean and Coastal Management
  - Maritime Policy and Management
  - Maritime Economics and Logistics