

## COURSE OUTLINE

### (1) General information

FACULTY/SCHOOL	Maritime and Industrial Studies		
DEPARTMENT	Maritime Studies		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	NA58	SEMESTER	Winter semester elective
COURSE TITLE	Applied Environmental Management of Port and Ship Operations		
INDEPENDENT TEACHING ACTIVITIES <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>		WEEKLY TEACHNG HOURS	CREDITS
Teaching in the lecture room		2	6
Teaching in the field (field work)		4	
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4			
COURSE TYPE <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise, Skills Development		
PREREQUISITE COURSES:	NONE		
LANGUAGE OF INSTRUCTION:	GREEK		
LANGUAGE OF EXAMINATION/ASSESSMENT:	GREEK		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	<a href="https://eclass.unipi.gr/courses/NAS/">https://eclass.unipi.gr/courses/NAS/</a>		

### (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*

<p>Learning and</p> <p><b>APPENDIX B</b></p> <p>• Guidelines for writing Learning Outcomes</p>																			
<p>After completing the course, students should be able to:</p> <ul style="list-style-type: none"> <li>• Understand the methods and tools that can be used in environmental assessments in the maritime sector</li> <li>• Critically approach the differences between procedural tools, analytical tools, and aggregate tools.</li> <li>• Describe the key features of the environmental impact assessments</li> <li>• Assess the issue of the use of indicators and indications</li> <li>• Pose questions in relation to the effectiveness of the various methods and tools</li> <li>• Evaluate the usefulness of life cycle assessment (LCA)</li> </ul> <p>Understand and apply environmental risk assessment in environmental management</p> <ul style="list-style-type: none"> <li>• Appreciate and understand the range of environmental issues and their impacts.</li> <li>• Develop and implement actions and policies that ensure environmental protection, along with the promotion of the port's business strategies.</li> <li>• Experience in laboratory analyses with the basic aim of understanding the work necessary for the development of environmental management plans</li> <li>• Apply the above mentioned in the field, either on the ship or the port</li> <li>• Write a professional report that can be useful to the shipping com[any or the port</li> </ul>																			
<p><b>General Competences</b></p> <p>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?</p> <table> <tr> <td>Search for, analysis and synthesis of data and information by the use of appropriate technologies,</td><td>Project planning and management</td></tr> <tr> <td>Adapting to new situations</td><td>Respect for diversity and multiculturalism</td></tr> <tr> <td>Decision-making</td><td>Environmental awareness</td></tr> <tr> <td>Individual/Independent work</td><td>Social, professional and ethical responsibility and sensitivity to gender issues</td></tr> <tr> <td>Group/Team work</td><td>Critical thinking</td></tr> <tr> <td>Working in an international environment</td><td>Development of free, creative and inductive thinking</td></tr> <tr> <td>Working in an interdisciplinary environment</td><td>.....</td></tr> <tr> <td>Introduction of innovative research</td><td>(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)</td></tr> <tr> <td></td><td>.....</td></tr> </table>		Search for, analysis and synthesis of data and information by the use of appropriate technologies,	Project planning and management	Adapting to new situations	Respect for diversity and multiculturalism	Decision-making	Environmental awareness	Individual/Independent work	Social, professional and ethical responsibility and sensitivity to gender issues	Group/Team work	Critical thinking	Working in an international environment	Development of free, creative and inductive thinking	Working in an interdisciplinary environment	.....	Introduction of innovative research	(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)		.....
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	.....																		
<ul style="list-style-type: none"> <li>• Applying the theory to practical cases</li> <li>• Goal analysis and prioritization</li> <li>• Group work</li> <li>• Design in environmental and general management</li> <li>• Exercise of critical thinking</li> <li>• Knowledge at practical level through fieldwork.</li> <li>• Promote free, creative and inductive thinking</li> <li>• Environmental awareness</li> </ul>																			

### (3) COURSE CONTENT

<p>Risk management in the port</p> <p>Risk analysis and assessment on the ship</p> <p>Risk management in the ship repair sector</p> <p>Soil – air and marine water quality fact parameters</p> <p>Key performance indicators in environmental management</p>
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Institutional and legal framework Novel issues in the shipping sector Energy management Port – city relations Noise and particulate matter measurements Field work where in practice the sampling and analysis methodology of the samples is checked Field work and Laboratory Exercises
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#### (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, In-class lecturing Field Work	
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</b> <i>Use of ICT in teaching, Laboratory Education, Communication with students</i>		
<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.</i>  <i>The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.</i>	<b>Activity/Method</b>	<b>Semester workload</b>
	Lectures	28
	Group Project	75
	Essay	5
	Field work report	42
	<b>TOTAL</b>	<b>150</b>
<b>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</b> <i>Detailed description of the evaluation procedures:</i>  <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>  <i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</i>	<ul style="list-style-type: none"> <li>Written final exam (80%) in English language which includes problem solving and short answers to the evaluation of theory data</li> <li>Individual laboratory work (5%) by submitting a short written report</li> <li>Group work (15%) by submitting a written report, oral presentation and examination</li> </ul>	

**(5) SUGGESTED BIBLIOGRAPHY:**

*-Suggested bibliography:*

***Shipping and the Environment***, K. Andersson, F. Baldi, S. Brynoff, J.F. Lindgren, L. Granhag and E. Svensson Springer 2016

Notes and handouts by the teacher