

COURSE OUTLINE

(1) General information

FACULTY/SCHOOL	Maritime and Industrial Studies		
DEPARTMENT	Maritime Studies		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	NA641	SEMESTER	3rd
COURSE TITLE	Port Environmental Management		
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 TEACHING HOURS	CREDITS	
Teaching in the lecture room	4	6	
Teaching in the field (field work)	2		
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>			
COURSE TYPE <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	BACKGROUND KNOWLEDGE		
PREREQUISITE COURSES:	NONE		
LANGUAGE OF INSTRUCTION:	GREEK		
LANGUAGE OF EXAMINATION/ASSESSMENT:	GREEK		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/NAS152/		

(2) LEARNING OUTCOMES

<p>Learning Outcomes <i>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:</i></p> <p>APPENDIX A</p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each level of study, in accordance with the European Higher Education Qualifications' Framework.</i> • <i>Descriptive indicators for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and</i> <p>APPENDIX B</p> <ul style="list-style-type: none"> • <i>Guidelines for writing Learning Outcomes</i> <p><i>Students extend their knowledge gained in previous courses on the environmental impacts of shipping activities and their management.</i></p>
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This knowledge is further sustained through fieldwork in commercial ports and tourist ports. After completion of the course, students will be aware of the choices in terms of structure and organization for the company (shipping company and port organization) based on its environmental impact in the context of modern perspectives on sustainable development. This course approaches "ship" and "port" as a unity, highlighting the holistic approach to managing the environmental impact of shipping. Students recognize that the concepts "Environment", "Health" and "Safety" are dealt with as a whole highlighting the complementarity of various management and certification approaches. The students are exposed to existing quality certification systems, given that in recent years environmental impacts from maritime activity are a predominant issue. Familiarization with the methodology and practical applications of environmental management in port areas and shipbuilding zones is achieved by recording the environmental burden of maritime activity and developing practical environmental management applications in port areas. Due to the fact that issues related to the Environmental Management of Port Operations are now subject to extensive studies and present significant themes from ports and tourist ports worldwide, the students are well aware of the implementation and applicability of this knowledge.

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?

<i>Search for, analysis and synthesis of data and information by the use of appropriate technologies,</i>	<i>Project planning and management</i>
<i>Adapting to new situations</i>	<i>Respect for diversity and multiculturalism</i>
<i>Decision-making</i>	<i>Environmental awareness</i>
<i>Individual/Independent work</i>	<i>Social, professional and ethical responsibility and sensitivity to gender issues</i>
<i>Group/Team work</i>	<i>Critical thinking</i>
<i>Working in an international environment</i>	<i>Development of free, creative and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>.....</i>
<i>Introduction of innovative research</i>	<i>(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)</i>
	<i>.....</i>

- Goal analysis and prioritization
- Group work
- Design in environmental and general management
- Exercise of critical thinking
- Knowledge at practical level through fieldwork.
- Promote free, creative and inductive thinking
- Environmental awareness

(3) COURSE CONTENT

1. Institutional and legal framework for the Environmental Management of Port Operations
2. Developments and trends in the European Port Facility (ESPO), IMO and the EU
3. Environmental quality assurance tools (EMAS, ISO 14001, SDM, PERS)
4. Presentation and Analysis of the SDM and PERS processes
5. Applications in European and Greek ports (PPA and ThPA)
6. Ship Waste Management Plans
7. Oil spill and hazardous and noxious substances, contingency plans
8. Energy auditing,
9. Health and safety issues
10. Noise management
11. Dust emission
12. Integrated Management of Waste Produced in the Port

13. Tools for Evaluation and Review of the above-mentioned Schemes.
14. Developing Environmental Monitoring Plans (ports)

(4) TEACHING METHODS--ASSESSMENT

<p>MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i></p>	<p>Face-to-face, In-class lecturing Field Work</p>													
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>														
<p>COURSE DESIGN <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></p> <p><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></p>	<table border="1"> <thead> <tr> <th data-bbox="692 779 1031 815">Activity/Method</th> <th data-bbox="1031 779 1361 815">Semester workload</th> </tr> </thead> <tbody> <tr> <td data-bbox="692 815 1031 846">Lectures</td> <td data-bbox="1031 815 1361 846">52</td> </tr> <tr> <td data-bbox="692 846 1031 878">Class study visit</td> <td data-bbox="1031 846 1361 878">50</td> </tr> <tr> <td data-bbox="692 878 1031 909">Essay</td> <td data-bbox="1031 878 1361 909">5</td> </tr> <tr> <td data-bbox="692 909 1031 940">Field work report</td> <td data-bbox="1031 909 1361 940">43</td> </tr> <tr> <td data-bbox="692 940 1031 994">TOTAL</td> <td data-bbox="1031 940 1361 994">150</td> </tr> </tbody> </table>		Activity/Method	Semester workload	Lectures	52	Class study visit	50	Essay	5	Field work report	43	TOTAL	150
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<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS <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>	<ul style="list-style-type: none"> • Written final exam (80%) in English language which includes problem solving and short answers to the evaluation of theory data • Individual laboratory work (5%) by submitting a short written report • Group work (15%) by submitting a written report, oral presentation and examination 													

(5) SUGGESTED BIBLIOGRAPHY:

-Suggested bibliography:

1. Nicole Darnall and Daniel Edwards Jr., Predicting the cost of environmental management system adoption: the role of capabilities, resources and ownership structure, **Strategic Management Journal**, Volume 27, Issue 4, pages 301–320, April 2006
2. R.M. Darbra, A. Ronza, J. Casal, T.A. Stojanovic, C. Wooldridge, The Self Diagnosis Method: A new methodology to assess environmental management in sea ports **Marine Pollution Bulletin**, Volume 48, Issues 5–6, March 2004, Pages 420–428
3. E. Peris-Mora, J.M. Diez Orejas, A. Subirats, S. Ibáñez, P. Alvarez, Development of a system of indicators for sustainable port management **Marine Pollution Bulletin** Volume 50, Issue 12, December 2005, Pages 1649–1660
4. Christopher F. Wooldridge, Christopher McMullen, Vicki Howe, Environmental management of ports and harbours — implementation of policy through scientific monitoring, **Marine Policy**, Volume 23, Issues 4–5, July 1999, Pages 413–425
5. R.M. Darbra, A. Ronza, T.A. Stojanovic, C. Wooldridge, J. Casal, A procedure for identifying significant environmental aspects in sea ports, **Marine Pollution Bulletin** Volume 50, Issue 8, August 2005, Pages 866–874
6. A. K. Gupta, S. K. Gupta, Rashmi S. Patil, Environmental management plan for port and harbour projects, *Clean Technologies and Environmental Policy* May 2005, Volume 7, Issue 2, pp 133-141
7. R.M. Darbra, N. Pittam, K.A. Royston J.P. Darbra, H. Journee, Survey on environmental monitoring requirements of European ports, *Journal of Environmental Management*, Volume 90, Issue 3, March 2009, Pages 1396–1403
8. Khalid Bichou, The ISPS Code and The Cost of Port Compliance: An Initial Logistics and Supply Chain Framework for Port Security Assessment and Management, *Maritime Economics & Logistics* (2004) **6**, 322–348, doi:10.1057/palgrave.mel.9100116