

COURSE OUTLINE

(1) GENERAL

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| SCHOOL | School of Engineering | | |
| ACADEMIC UNIT | Department of Naval Architecture | | |
| LEVEL OF STUDIES | Undergraduate | | |
| COURSE CODE | NAOME1365 | SEMESTER | 9 th |
| COURSE TITLE | MOORING SYSTEMS OF OFFSHORE STRUCTURES | | |
| INDEPENDENT TEACHING ACTIVITIES | | WEEKLY TEACHING HOURS | CREDITS (ECTS) |
| Lectures | | 4 | 4 |
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| COURSE TYPE <i>general background, specialbackground, specialised general knowledge, skills development</i> | Specialized | | |
| PREREQUISITE COURSES: | | | |
| LANGUAGE OF INSTRUCTION and EXAMINATIONS: | Greek | | |
| IS THE COURSE OFFERED TO ERASMUS STUDENTS | Yes | | |
| COURSEWEBSITE(URL) | https://eclass.uniwa.gr/courses/NA206/ | | |

(2) COURSE GOALS / LEARNING OUTCOMES

The aim of the course is to:

- Familiarize the students with the static analysis and design of single and multi-leg mooring systems.
- Identify and evaluate several damping components on the floating structure (i.e. wave drift damping).

(3) COURSE CONTENT / SYLLABUS

Lectures:

- Mooring systems types (spread, multi-leg, taut, semi-taut, etc.)
- Mooring Lines
- Static analysis and design of single mooring systems
- Static analysis and design of multi-leg mooring systems
- TLP systems
- Second order wave drift damping
- Applications

Laboratory: Offshore Structures mooring systems experiments.

(4) TEACHING and LEARNING METHODS - EVALUATION

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| DELIVERY Face-to-face, Distance learning, etc. | Face-to-face | |
| USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students | <ul style="list-style-type: none"> Support learning through the electronic e-class platform. | |
| TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc. The student's study hours for each learning activity are given as well as the hours of non- directed study according to the principles of the ECTS</i> | Activity | Workload (hours) |
| | Lectures | 52 |
| | Homework assignment | 26 |
| | Study of Lectures | 39 |
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| | Course total | 117 |
| STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> | Lectures: Written examination (70%) Laboratory: Laboratory exercises (30%). | |

(5) ATTACHED BIBLIOGRAPHY

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| <ol style="list-style-type: none"> 1. D.T. Brown, G.J. Lyons: "Catenary Moorings design Design Manual", Bentham Press, Offshore Technology Series, 1994 2. Anchoring of Floating Structures, Design Guides for Offshore Structures, coordinated by CLAROM, AREGEMA, Editions Technip, 1990. 3. Handbook of Offshore Engineering, Ed. By Subrata K. Chakrabarti, Elsevier, Amsterdam, 2004, Elsevier Ocean Engineering Book Series, ISBN-9780080443812 (set). 4. Elements of Ocean Engineering, Robert Randall, 2010, ISBN: 978-0-939773-77-0 Greek Section of the Society of Naval Architects & Marine Engineers. 5. Mazarakos T. P. 2014. "Special Marine Constructions & Sailing Vessels", offshore structure experiments, Athens, 2014. |
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