

COURSE OUTLINE

(1) General information

FACULTY/SCHOOL	Maritime and industrial studies		
DEPARTMENT	Maritime Studies		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	NA103	Semester	1
COURSE TITLE	Oceanography		
INSTRUCTOR'S NAME	Professor Fani Sakellariadou		
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	
Lectures and laboratory exercises	4	6	
<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:	No		
LANGUAGE OF INSTRUCTION:	Greek		
LANGUAGE OF EXAMINATION/ASSESSMENT:			
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)			

(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"> • 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 <p>APPENDIX B</p> <ul style="list-style-type: none"> • Guidelines for writing Learning Outcomes <p>The aim of the course is to provide students with a general knowledge of the field of</p>
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oceanography from a physical, chemical, biological, geological and operational point of view.

More specifically, upon successful completion of the course, the students will be able to:

- Understand the complexity of the Global Ocean (*understanding*).
- Realize the crucial role of seas and oceans (*understanding and knowledge*).
- Know the oceanic processes and the oceanic mechanisms (*knowledge*).
- Examine and explain how the study of oceanic parameters is useful for various human applications (*application and synthesis*).
- Evaluate the need for environmental awareness especially regarding coastal and marine systems (*evaluation*).

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>

- Individual/independent work
- Group/team work
- Decision making
- Environmental awareness
- Development of free, creative and inductive thinking

(3) COURSE CONTENT

- Physical oceanography (temperature, salinity, pressure, density, the propagation of sound in seawater, the color of seawater, waves, tides, sea currents, sea circulation models).
- Chemical oceanography (chemical composition of seawater, nutrients, metals, carbon, ocean chemical processes).
- Biological oceanography (marine food chain, marine flora, marine fauna, plants and animals, marine life interactions).
- Geological oceanography (geotectonic cycle, plate tectonics, orogenic cycle, ocean zones, mid-oceanic ridge, marine sediments, diagenesis, marine geochemistry).

- Operational oceanography and its uses.

(4) TEACHING METHODS--ASSESSMENT

<p>MODES OF DELIVERY <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i></p>	Face-to face									
<p>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>	The teaching process is supported by the e-class electronic platform.									
<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><i>Activity/Method</i></th> <th><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>52</td> </tr> <tr> <td>Self-directed study</td> <td>98</td> </tr> <tr> <td>Total</td> <td>150</td> </tr> </tbody> </table>		<i>Activity/Method</i>	<i>Semester workload</i>	Lectures	52	Self-directed study	98	Total	150
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Lectures	52									
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Total	150									
<p>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS <i>Detailed description of the evaluation procedures: 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 examination at the end of the semester including multiple choice tests and short answer questions, in Greek. Students showing an active participation during lectures, earn an up to 10% bonus. 									

(5) SUGGESTED BIBLIOGRAPHY:

-Suggested bibliography:

Sakellariadou F, 2007. Oceanography, 354 p Stamoulis (ed), ISBN: 978-960-351-695-8, (in Greek).

-Related scientific journals:

Progress in Oceanography

Journal of Oceanography

Ocean Science

Oceanography

Oceanologia