1. Quality and safety

COURSE OUTLINE

GENERAL

SCHOOL	Maritime and Industrial Studies				
ACADEMIC UNIT	Maritime Studies				
LEVEL OF STUDIES	Postgraduate				
COURSE CODE	MIS118		SEMESTER	1	
COURSE TITLE	Quality & Sa	fety			
INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits		course, e.g. arded for the the total credits	WEEKLY TEACHING HOURS		CREDITS
			3		7.5

Add rows if necessary. The organisation of methods used are described in detail at (d	^f teaching and the teaching).
COURSE TYPE general background, special background, specialised general knowledge, skills development PREREQUISITE COURSES:	General background
LANGUAGE OF INSTRUCTION and	English
EXAMINATIONS:	
IS THE COURSE OFFERED TO	Yes
ERASMUS STUDENTS	
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/MIS118/

LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

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- Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area
- Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B
- Guidelines for writing Learning Outcomes

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and	Project planning and management
information, with the use of the necessary technology	Respect for difference and multiculturalism
Adapting to new situations	Respect for the natural environment
Decision-making	Showing social, professional and ethical responsibility and
Working independently	sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment	
Production of new research ideas	Others

Decision-making, Team work, Working in an international environment, Working in an interdisciplinary environment, Production of free, creative and inductive thinking, Respect for the natural environment.

SYLLABUS

- Quality in Shipping: Definition
- The Shipping Environment: Business & Regulatory Domain (Relationship)
- Business Domain: Charter types
- Regulatory Domain: International Conventions, National Regulations & Market Standards
- Shipping Market: Supply (Fleet Structure) & Demand (Transport Work)
- Shipping Quality: Transport Work Vs Ship Losses Transport Work Vs Bunker Demand Transport Work Vs Ship Oil Pollution Port State Control (PSC) & Fleet Performance (inspections & detentions)
- Quality, Safety & Risk
- Risk Definition
- Risk Analysis: Risk Matrix (individual risk), FN Curves (societal risk) Risk Acceptance Criteria (tolerable, ALARP, intolerable) Risk Reduction
- Risk Analysis Methodologies: Fault Tree Analysis (FTA)

Event Tree Analysis (ETA) Bow-Tie Diagrams (FTA+ETA) Failure Mode and Effects Analysis (FMEA) HAZID, HAZOP, RCA

- Reliability: Definition and Relationship with Safety Series, Parallel and Complex Systems
- Human Element Human Factor Human Error & HFACS
- Human Reliability Analysis (HRA): THERP & HEART
- ISM Code & ISO Standards
- ISM & Risk: Risk Assessment Forms (examples) Emergency Preparedness Plans
- ISPS Code: Tier System & Plans
- OPRC Convention: Tier System & Plans
- Formal Safety Assessment (FSA) Definition Historical Background Comparison FSA vs Conventional
- FSA Structure (Steps)
 Preparatory Step
 Hazard Identification
 Risk Analysis: Frequency (FTA example) & Consequence (ETA example)
 Risk Assessment
 RCO ranking & recommendation
- RCO Acceptance Criteria Loss of Life (ICAF and GCAF, NCAF Oil Pollution (CATS, linear & non-linear) Case studies & Examples
- Safety, Reliability & Maintenance

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY Face-to-face & Online

Face-to-face, Distance learning, etc.

COMMUNICATIONS TECHNOLOGY

Use of ICT in teaching, laboratory education, communication with students TEACHING METHODS

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

STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure*

Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, shortanswer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other

Specifically-defined evaluation criteria are given, and if and where they are accessible to students.

Presentation of PPT slides & educational videos, with Interactive teaching.

Activity	Semester workload
Lectures	25
Project	50
Study	112.5
Course total	107 F
Course total	187.5

Multi-choice questionnaires

(1) ATTACHED BIBLIOGRAPHY

Lecture slides and associated info references.