*ICT Applications in Shipping, Ports and Logistics (ECTS 4)**

COURSE OUTLINE

(1) GENERAL

SCHOOL	MARITIME AND INDUSTRIAL STUDIES		
ACADEMIC UNIT	MARITIME STUDIES		
LEVEL OF STUDIES	POSTGRADUATE		
COURSE CODE	**MNA39**	**SEMESTER**	B
COURSE TITLE	ICT Applications in Shipping, Ports and Logistics		

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*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures and Applied Exercises	3	4
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	General knowledge
PREREQUISITE COURSES:	NO
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/NAS355/

(2) 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

- *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*

The main purpose of the course is to introduce students to the aspects of the design and implementation of Information Systems (IS) related to maritime activity. The course analyzes software (databases etc.) and hardware (communication devices and networks) involved in Maritime IS (MIS).

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

- Understand and explain how a MIS operates (understanding)
- Understand and be aware of the contribution of new technologies (databases, networks) in the efficient performance of MIS (understanding and knowledge)
- Be aware of and assess the particularity of MIS with respect to IS in general, as well as relevant data sources, such as AIS data (knowledge and assessment)

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 information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and 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 • Promoting free, creative and inductive thinking

(3) SYLLABUS

- Introduction to IS and, in particular, MIS
- Maritime activity surveillance (AIS and other systems)
- Principles of database design (relational model)
- Maritime data management and analytics using SQL
- Hands-on with a real database system (PostgreSQL)
- Applications through real-world examples

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to- face (in class lecturing)
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	Support Learning through the e-class platform
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, 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* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	- Written final exam including multiple choice questions

Activity	***Semester workload***
Lectures	21 hours
Non-guided study	99 hours
Course total	***120***

(5) ATTACHED BIBLIOGRAPHY

Suggested bibliography:

- A. Artikis and D. Zissis, Guide to Maritime Informatics, Springer, 2021. http://maritime-informatics.com
- Database Systems Concepts, Silberschatz, Korth και Sudarshan.