Ports and Intermodal Transport (ECTS 4)

COURSE OUTLINE

(1) GENERAL

SCHOOL	MARITIME AND INDUSTRIAL STUDIES		
ACADEMIC UNIT	MARITIME STUDIES		
LEVEL OF STUDIES	POSTGRADUATE		
COURSE CODE	**MNA407**	**SEMESTER**	**A**
COURSE TITLE	Ports and Intermodal Transport		

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	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 Background
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/NAS374/

(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 course presents a comprehensive description of intermodal freight transportation with an emphasis on port-centric intermodal transport systems. It outlines the components, main players, transport and loading units, infrastructure, equipment and technologies of the intermodal freight transportation system. Emphasis is given on the comprehension of the characteristics and the competitiveness of each mode. It explains the collaborations between the modes. Special consideration is also given on the description of intermodal freight networks and corridors and the role of ports in these networks. With emphasis on port hinterlands, special attention is given on the purpose and functions of dry ports and inland terminals. Several case studies are detailed.

At the end of this course the students will be able to describe the intermodal transportation system, name and describe its components, classify them according to their characteristics and compare and contrast different modes based on their characteristics and competitiveness. They will be able to outline and explain collaborations between modes. They will be able to describe and give examples of intermodal freight networks and corridors, assess their effectiveness and elaborate on the role of ports in these networks and corridors. They will be able to describe and analyze the role of dry ports and inland terminals and appraise port – hinterland transport systems.

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 *Adapting to new situations* *Decision-making* *Working independently* *Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Project planning and management* *Respect for difference and multiculturalism* *Respect for the natural environment* *Showing social, professional and ethical responsibility and sensitivity to gender issues* *Criticism and self-criticism* *Production of free, creative and inductive thinking* *……* *Others…* *…….*

- Search for, analysis and synthesis of data and information by the use of appropriate technologies
- Working in an international environment
- Working in an interdisciplinary environment
- Decision-making
- Group/Team work
- Project planning and management
- Development of free, creative and inductive thinking

(3) SYLLABUS

- Introduction-External Environment
- Intermodal Transport: Intermodal & Multimodal Systems, Terminal Facilities - Introduction
- Intermodal Transport: effects, network structure, means of transport
- Ports & Terminal Facilities
- Ports – impact of container ship growth, terminals, urban environment, hinterland, Siting of new large scale freight facilities
- Ports & Inland, Logistics, Warehousing, Inventory Management, Spatial Imaging
- Ports as a link in the Supply Chain: Competitiveness, Digital capabilities

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face, Distance learning
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	- Using the Internet as a source of recent information and in identifying and understanding the trends and developments in the sector. - Using digital videos with significant visual messages that capture the terminal functions and operations - Using digital videos featuring expert interviews on topics of interest to the course - Encourage and support students to create their own videos as part of class assignments and presentations - Support of the learning process 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*	

Activity	***Semester workload***
Lectures	21 hours
Case study analysis	30 hours
Independent study	69 hours
Course total	***120***

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 (90%) in the Greek language that includes brief answers to questions assessing the knowledge, understanding, and critical thinking of the student Participation in lectures and case studies (10%)

(5) ATTACHED BIBLIOGRAPHY

- *Suggested bibliography:*

  - Lecture notes based on the following English bibliography

- Agerschou, Hans, "Planning and Design of Ports and Marine Terminals", Thomas Telford, 2004, 2nd Edition
- Jurgen Bose, Editor, Handbook of Terminal Planning. Springer Science & Business Media, LLC 2011
- David Lowe (2005), Intermodal Freight Transport, Elsevier Ltd. 304 pages, ISBN 978-0-7506-5935-2 (https://www.sciencedirect.com/book/9780750659352/intermodal-freight-transport)
- Gunther, H. O., Kim, K. H. (eds), "Container Terminals and Automated Transport Systems: Logistics Control Issues and Quantitative Decision Support", 2004
- Lecture notes

All the lecture notes and course related material are posted on the course support electronic platform, categorized by lecture and delivery module

- *Additional Bibliography:*
  - Scientific articles including articles published by the instructor
  - Manuals and reports of relevant research projects

- *Related scientific magazines:*
  - Maritime Policy and Management
  - Maritime Economics and Logistics
  - Transportation Research Part B – Methodological
  - Transportation Research Part E – Logistics and Transportation Review
  - European Transport Research Review

- *Related sites:*
  - *https://www.porttechnology.org/news/list*
  - *https://www.lloydslistintelligence.com/*