COURSE OUTLINE

(1) General information

FACULTY/SCHOOL	Maritime and Industrial Studies		
DEPARTMENT	Maritime studies		
LEVEL OF STUDY	Undergraduate		
COURSE UNIT CODE	**ΝΑΑΓΓ20**	**SEMESTER**	Fall Semester Elective
COURSE TITLE	Ports and Intermodal Transport		
INSTRUCTOR'S NAME	Professor Maria Poulia Boile		
INDEPENDENT TEACHING ACTIVITIES *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*		**WEEKLY TEACHNG HOURS**	**CREDITS**
	Lectures	4	6
Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4			
COURSE TYPE *Background knowledge, Scientific expertise, General Knowledge, Skills Development*	General Knowledge		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION:	English		
LANGUAGE OF EXAMINATION/ASSESSMENT:	English		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https: //eclass.unipi.gr/courses/ΝΑΑΓΓ20/		

(2) LEARNING OUTCOMES

Learning Outcomes

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:

APPENDIX A

- *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*

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 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?

Search for, analysis and synthesis of data and information by the use of appropriate technologies,	*Project planning and management*
Adapting to new situations	*Respect for diversity and multiculturalism*
Decision-making	*Environmental awareness*
Individual/Independent work	*Social, professional and ethical responsibility and sensitivity to gender issues*
Group/Team work	*Critical thinking*
Working in an international environment	*Development of free, creative and inductive thinking*
Working in an interdisciplinary environment	*……*
Introduction of innovative research	*(Other…….citizenship, spiritual freedom, social awareness, altruism etc.)*
	…….

- *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) COURSE CONTENT

1. Definition of Intermodal Freight Transport
2. EU Intermodal Transport Policies
3. Intermodal Transport in Europe and the US
4. The Road Haulage role in Intermodal Transport
5. Rail Freight Operations, Ship-to-rail transfer
6. Inland waterway, Short-Sea and Coastal Shipping
7. Intermodal Networks and Freight Interchanges
8. Intermodal Port Hinterland Transportation Networks
9. Dry Ports and Inland Terminals
10. Maritime Logistics and Intermodality

11. The Role of Intermodal Transport in Port Regionalization
12. Case studies – Belt and Road Initiative, Port of Rotterdam, The South East Transport Axis

(4) TEACHING METHODS--ASSESSMENT

MODES OF DELIVERY *Face-to-face, in-class lecturing, distance teaching and distance learning etc.*	*Face to face, in-class lecturing*
USE OF INFORMATION AND COMMUNICATION 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
COURSE DESIGN *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.* *The study hours for each learning activity as well as the hours of self-directed study are given following the principles of the ECTS.*	

Activity/Method	***Semester workload***
Lectures	52
Group Project with technical report and presentation	30
Case study analysis	15
Independent Study	53
Total	**150**

STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS *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.* *Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.*	• Written final exam (70%) that includes brief answers to questions assessing the knowledge, understanding, and critical thinking of the student (Oral examination where required - cases of certified learning difficulties requiring oral examination) • Teamwork (30%) with written report submission, oral presentation and examination

(5) SUGGESTED BIBLIOGRAPHY:

Suggested bibliography:

- Lecture notes based on the following English bibliography
  - Juan Carlos Villa, Maria Boile, Sotirios Theofanis (2020), International Trade and Transportation Infrastructure Development: Experiences in North America and Europe, Elsevier Science Publishing Co Inc, ISBN10: 0128157410, ISBN13: 9780128157411
  - Jurgen Bose (2011), Editor, Handbook of Terminal Planning. Springer Science & Business Media, LLC (www.gbv.de/dms/tib-ub-hannover/645043818.pdf)
  - Jean-Paul Rodrigue (2017), The Geography of Transport Systems, New York: Routledge, 440 pages, ISBN 978-1138669574 (https://transportgeography.org)
  - 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)

- 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/