

## COURSE OUTLINE

### (1) General information

<b>FACULTY/SCHOOL</b>	Maritime and Industrial Studies		
<b>DEPARTMENT</b>	Maritime Studies		
<b>LEVEL OF STUDY</b>	Undergraduate		
<b>COURSE UNIT CODE</b>	NAAIT45	<b>SEMESTER</b>	<b>SPRING SEMESTER (OPTIONAL)</b>
<b>COURSE TITLE</b>	<b>RISK MANAGEMENT IN SHIPPING AND TRANSPORT</b>		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <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>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
	4	6	
<i>Add rows if necessary. The organization of teaching and the teaching methods used are described in detail under section 4</i>			
<b>COURSE TYPE</b> <i>Background knowledge, Scientific expertise, General Knowledge, Skills Development</i>	Scientific expertise		
<b>PREREQUISITE COURSES:</b>			
<b>LANGUAGE OF INSTRUCTION:</b>	English		
<b>LANGUAGE OF EXAMINATION/ASSESSMENT:</b>	English		
<b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b>	Yes		
<b>COURSE WEBSITE (URL)</b>	<b>TBD</b>		

### (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*

### **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,*

*Adapting to new situations*

*Decision-making*

*Individual/Independent work*

*Group/Team work*

*Working in an international environment*

*Working in an interdisciplinary environment*

*Introduction of innovative research*

*Project planning and management*

*Respect for diversity and multiculturalism*

*Environmental awareness*

*Social, professional and ethical responsibility and sensitivity to gender issues*

*Critical thinking*

*Development of free, creative and inductive thinking*

*.....*

*(Other.....citizenship, spiritual freedom, social awareness, altruism etc.)*

*.....*

By the end of the module, it is expected that the students will be able to:

- Understand risk-return trade-offs and identify the sources of business risks in the shipping markets.
- Explore the underlying assets of shipping derivatives and evaluate a wide set of such derivatives products.
- Implement hedging strategies by trading derivatives products in shipping.
- Manage shipping related risk exposures by evaluating the hedging effectiveness of shipping derivatives.
- Develop, appraise and implement shipping related risk management strategies.
- Apply advanced option trading strategies in shipping.

### **(3) COURSE CONTENT**

- Sources of Business Risks in Shipping and Traditional Risk Management  
Business Risk, Physical Risk, Freight Rate Risk, Vessel Price Risk, Credit Risk, Interest rate Risk, Currency Risk
- Underlying Assets of Shipping Derivatives  
Baltic Exchange Indices, Routes, Vessels, Container Markets
- Freight Rate Risk Management: Dry-bulk, Tanker and Container FFAs,  
Freight Futures & Derivatives Exchanges  
Freight Futures, Clearing Houses, Trading FFA's, FFA Brokers
- Basis Risk, Settlement Risk and Hedging Error  
Differences of FFA's with underlying markets, Hedging Efficiency
- Freight Options Contracts and their Mechanics  
Freight Option Trading Strategies
- Bunker Rate Risk Management  
Bunker Markets, Singapore, Rotterdam, Crude Oil
- Credit Risk and Market Risk in Shipping Markets

Types of Credit risk, Value at Risk, Expected Shortfall, Credit Derivatives, Interest Rate and Foreign Exchange Derivatives

#### (4) TEACHING METHODS--ASSESSMENT

<p><b>MODES OF DELIVERY</b> <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i></p>	Face to face																																																																											
<p><b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</b> <i>Use of ICT in teaching, Laboratory Education, Communication with students</i></p>	TBD																																																																											
<p><b>COURSE DESIGN</b> <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 data-bbox="687 907 1031 943"><i>Activity/Method</i></th> <th data-bbox="1035 907 1361 943"><i>Semester workload</i></th> </tr> </thead> <tbody> <tr> <td data-bbox="687 943 1031 978">Lecture</td> <td data-bbox="1035 943 1361 978">52</td> </tr> <tr> <td data-bbox="687 978 1031 1014">Non-guided study</td> <td data-bbox="1035 978 1361 1014">98</td> </tr> <tr> <td data-bbox="687 1014 1031 1050"></td> <td data-bbox="1035 1014 1361 1050"></td> </tr> <tr> <td data-bbox="687 1050 1031 1086"></td> <td data-bbox="1035 1050 1361 1086"></td> </tr> <tr> <td data-bbox="687 1086 1031 1122"></td> <td data-bbox="1035 1086 1361 1122"></td> </tr> <tr> <td data-bbox="687 1122 1031 1158"></td> <td data-bbox="1035 1122 1361 1158"></td> </tr> <tr> <td data-bbox="687 1158 1031 1193"></td> <td data-bbox="1035 1158 1361 1193"></td> </tr> <tr> <td data-bbox="687 1193 1031 1229"></td> <td data-bbox="1035 1193 1361 1229"></td> </tr> <tr> <td data-bbox="687 1229 1031 1265"></td> <td data-bbox="1035 1229 1361 1265"></td> </tr> <tr> <td data-bbox="687 1265 1031 1301"></td> <td data-bbox="1035 1265 1361 1301"></td> </tr> <tr> <td data-bbox="687 1301 1031 1337"></td> <td data-bbox="1035 1301 1361 1337"></td> </tr> <tr> <td data-bbox="687 1337 1031 1373"></td> <td data-bbox="1035 1337 1361 1373"></td> </tr> <tr> <td data-bbox="687 1373 1031 1408"></td> <td data-bbox="1035 1373 1361 1408"></td> </tr> <tr> <td data-bbox="687 1408 1031 1444"></td> <td data-bbox="1035 1408 1361 1444"></td> </tr> <tr> <td data-bbox="687 1444 1031 1480"></td> <td data-bbox="1035 1444 1361 1480"></td> </tr> <tr> <td data-bbox="687 1480 1031 1516"></td> <td data-bbox="1035 1480 1361 1516"></td> </tr> <tr> <td data-bbox="687 1516 1031 1552"></td> <td data-bbox="1035 1516 1361 1552"></td> </tr> <tr> <td data-bbox="687 1552 1031 1588"></td> <td data-bbox="1035 1552 1361 1588"></td> </tr> <tr> <td data-bbox="687 1588 1031 1624"></td> <td data-bbox="1035 1588 1361 1624"></td> </tr> <tr> <td data-bbox="687 1624 1031 1659"></td> <td data-bbox="1035 1624 1361 1659"></td> </tr> <tr> <td data-bbox="687 1659 1031 1695"></td> <td data-bbox="1035 1659 1361 1695"></td> </tr> <tr> <td data-bbox="687 1695 1031 1731"></td> <td data-bbox="1035 1695 1361 1731"></td> </tr> <tr> <td data-bbox="687 1731 1031 1767"></td> <td data-bbox="1035 1731 1361 1767"></td> </tr> <tr> <td data-bbox="687 1767 1031 1803"></td> <td data-bbox="1035 1767 1361 1803"></td> </tr> <tr> <td data-bbox="687 1803 1031 1839"></td> <td data-bbox="1035 1803 1361 1839"></td> </tr> <tr> <td data-bbox="687 1839 1031 1874"></td> <td data-bbox="1035 1839 1361 1874"></td> </tr> <tr> <td data-bbox="687 1874 1031 1910"></td> <td data-bbox="1035 1874 1361 1910"></td> </tr> <tr> <td data-bbox="687 1910 1031 1946"></td> <td data-bbox="1035 1910 1361 1946"></td> </tr> <tr> <td data-bbox="687 1946 1031 1982"></td> <td data-bbox="1035 1946 1361 1982"></td> </tr> <tr> <td data-bbox="687 1982 1031 2018"></td> <td data-bbox="1035 1982 1361 2018"></td> </tr> <tr> <td data-bbox="687 2018 1031 2054"></td> <td data-bbox="1035 2018 1361 2054"></td> </tr> <tr> <td data-bbox="687 2054 1031 2089"></td> <td data-bbox="1035 2054 1361 2089"></td> </tr> <tr> <td data-bbox="687 2089 1031 2125"></td> <td data-bbox="1035 2089 1361 2125"></td> </tr> <tr> <td data-bbox="687 2125 1031 2161"></td> <td data-bbox="1035 2125 1361 2161"></td> </tr> <tr> <td data-bbox="687 2161 1031 2197"></td> <td data-bbox="1035 2161 1361 2197"></td> </tr> <tr> <td data-bbox="687 2197 1031 2233"></td> <td data-bbox="1035 2197 1361 2233"></td> </tr> </tbody> </table>		<i>Activity/Method</i>	<i>Semester workload</i>	Lecture	52	Non-guided study	98																																																																				
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<p><b>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</b> <i>Detailed description of the evaluation procedures:</i></p> <p><i>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>	Final Exam 100%.																																																																											

<i>Specifically defined evaluation criteria are stated, as well as if and where they are accessible by the students.</i>	
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**(5) SUGGESTED BIBLIOGRAPHY:**

- *Suggested bibliography:*
  - Kavussanos, M. and Visvikis, I (2006), *Derivatives and Risk Management in Shipping*, Witherbys Publishing and Seamanship International, UK.
  
- *Other Textbooks and Key References*
  - Kavussanos M.G. and Tsouknidis D.A., (2019), "Credit Risk Analysis, Measurement and Management in the Shipping Industry", in P. M. Panayides (Ed), *Handbook in Maritime Management*, Routledge Taylor and Francis.
  - Kavussanos, M.G., Visvikis, I.D., (2016), *The International Handbook of Shipping Finance: Theory and Practice*. Chapter 15. Palgrave Macmillan Publishers, London.
  - Kavussanos, M. and Visvikis, I (2011), *Theory and Practice of Shipping Freight Derivatives*, Risk Books, Incisive Media, UK.
  - Kavussanos, M., Visvikis, I. and Dimitrakopoulos, D. (2015): "Freight Markets and Products", (In Eds.) Roncoroni, A., Fusai, G. and Cummins, M., *The Handbook of Multi-Commodity Markets and Products: Structuring, Trading and Risk Management*, John Wiley & Sons Limited.