

Annexes 5 & 6.
Course syllabi and
Structure of the curriculum



Annex 5 & 6. Course Syllabi & Structure of the Joint Programme

Course List

Y1. First semester. *Leaving the safe harbour!*

Module 1. Port Services & Operations. 30 ECTS.

MIP1.1	Introduction to MIPMAL
MIP1.2	Operations and Services in Ports
MIP1.3	Terminal Design & Construction
MIP1.4	Cargo-handling Equipment Technology
MIP1.5	Energy Transition
MIP1.6	Sustainable Port Cities

Y1. Second semester. *Full steam ahead!*

Module 2. Port Economics & Logistics. 30 ECTS

MIP2.1	Port Governance
MIP2.2	Strategic and Port Master Plans
MIP2.3	Economic Evaluation of Port Infrastructure
MIP2.4	Port Competition & Competitiveness
MIP2.5	Supply Chain Management
MIP2.6	Port Logistics

Y2. Third semester. *Fair winds and following seas!*

Module 3. Port Law & Digitalisation. 30 ECTS

MIP3.1	Logistics Modelling
MIP3.2	Digitalisation and IT Tools
MIP3.3	Introduction to the International Law of the Sea
MIP3.4	Core Issues and Development of Maritime Shipping Law
MIP3.5	Port Activities and the Environment
MIP3.6	Research Methods

Y2. Fourth semester. *Riding the wave!*

Module 4. Research Track. 30 ECTS

MIP4.1	OPTION A. Industrial Master's dissertation
MIP4.2	OPTION B. Research track

MODULE 1: PORT SERVICES & OPERATIONS

MIP1.1. Introduction to MIPMAL

Course name: <i>Introduction to MIPMAL</i>			
Course Code: MIP1.1			
Field(s)/area(s) of study: Applied Economics			
University coordinating the course: UCA			
Participating universities: UAlg, UM, UG, UNIST			
Total ECTS:	5	Language of instruction:	<i>English</i>
Mode of Delivery	Onsite 70% Online 30%	Is it possible for students (e.g., those following microcredentials) to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites*			
Short course description*: This course welcomes students to postgraduate studies. and provides an introduction and overview of the port management and logistics program, by covering the basic definition and role of ports and port cities in a dynamic coastal environment, with shipping, port infrastructure and community, as well as its logistical aspect. It also introduces the basic English terminology for the port industry and relevant terminological resources for this specialised type of English . The course emphasises the socio-economic value of ports as hotbeds of economic activity and gateways for globalisation, but also in the context of the emerging issue of environmental contribution and sustainability considerations. Additionally, a brief			

introduction to regulatory framework (policies) is presented, while addressing current and future trends, especially digitalization and sustainable development.

Course Content:

Lectures

1. English for the port industry
2. Shipping and ports – dynamics and relations
3. Basic definition and role of ports
4. Socio-economic impact of ports
5. Port – environmental aspect
6. Port markets
7. Typology of ports – cargo ports
8. Typology of ports – passenger ports
9. Port community
10. Port logistics and supply chain
11. Port safety and security
12. Port policies
13. Port-city interface
14. Port development and financing
15. Drivers of change in the port industry
16. Managing risks and uncertainties

Seminars: 6

Keywords: port management; shipping and ports; port logistics; policies and development; impacts and drivers of ports

Programme Learning Outcomes (PLOs)

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

PLO5: Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Evaluate the dynamics of port markets and correlation with shipping.*
- *Re-examine the port business and its impact on the local community.*
- *Critically judge the role of ports in logistic and maritime chains.*

- Assess the effects of policy and development factors on port performance.

2. **Skills** (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- Appraise and apply recent developments in the port industry
- Demonstrate reflective and evidence-based practice of ports and shipping
- Be able to identify complex environment of ports and report on findings

3. **Autonomy & Responsibility**: Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Work independently in applying specialised theoretical and practical knowledge in the creation of academic papers and other relevant research.
- Manage specialised tasks and activities in the area of port business, and develop new ideas

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, field trips, etc.).

Method	Number of sessions	Duration
Lectures	12	2h (Total 24h)
Workshops	11	1h (total 11h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Final written exam	2h	70%
Final oral exam	1h	30%

Assessment Criteria*: In the written exam (2 hours), the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the oral exam (1h) the student must demonstrate

the ability to put into practice and to execute, with critical awareness, the most important aspects of ports discussed in the course.

Study materials/Course literature:

Notteboom, T., Pallis, A., & Rodrigue, J.-P. (2022). *Port Economics, Management and Policy* (1st ed.). Routledge.

Yap, W.Y. (2020). *Business and Economics of Port Management: An Insider's Perspective* (1st ed.). Routledge.

Wayne K. Talley. *Port Economics*, Routledge – Taylor and Francis Group. London and New York, 2018.

de Langen, P.W. (2020). *Towards a Better Port Industry: Port Development, Management and Policy* (1st ed.). Routledge.

UNCTAD: *Review of Maritime Transport*. United Nations Publications 2023.

Inclusiveness: The course will foster an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating a safe and inclusive but stimulating and challenging teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP1.2. Operations and Services in Ports

Course name: Operations and Services in Ports			
Course Code: MIP1.2			
Field/area of study: Port economics			
University coordinating the course: UNIST			
Participating universities: UCA, UM, UALG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description: Acquiring the necessary knowledge in the field of operations and port services, paying special attention to analysis of individual stakeholder activities. The course aims to perform differentiation of port operation managing bodies, port authorities and terminal operators. Also, the impact of trade unions, customs procedures, information systems, risk assessment, environmental issues and other relevant components of port operations will be presented in detail.			
Course Content:			
Lectures:			
<ol style="list-style-type: none"> 1. Stakeholder involvement in port operations and services. 2. The role of port authorities and private entities as port operations managing bodies. 3. Port Authorities and regulatory framework (ISM, ISPS, ISO, HAZMAT, BWM, etc.). 4. Port and terminal investment. Terminal concessions and land leases. 			

5. Concept, typology and characteristics of the port services: pilotage, towing, bunkering, mooring and other port-related services involved in the value chain.
6. Cargo and cargo handling services and equipment. Port berth and terminal design.
7. Analysis of port operations (Port management services; Port and charter party terms; Shipyards; Port agents and freight forwarders; Port-related claims and legal liabilities, Multimodal transport).
8. Customs procedures and free trade zones.
9. Digital transformation. Information systems and port operations. Port community system.
10. Leadership and teambuilding. Port labor and trade unions.
11. Port marketing and customer management.
12. Ports and maritime shipping (supply chain, container shipping, distribution networks, and cruise).
13. The port and the environment. Green port development and operations
14. Managing risk and uncertainties in ports. Port-centric maritime clusters. Port coordination and cooperation.
15. Measuring the port performance indicators (efficiency, effectiveness, resilience).

Practical Study-Units:

1. Calculation of port tariffs (port management body, services third-party).
2. Calculation of various aspects of port operations – nautical ports, demurrage and detention.
3. Calculation of concessions fee. Evaluation and selection of concession providers.
4. Economic and financial analysis of port operations - Economic indicators. Calculation of depreciation. Loan repayment calculation.
5. Economic and financial analysis of port operations - Net present value method and investment payback period method.

Keywords: Port services and operations; port community; risk assessment; environmental issues; trade unions and customs

Programme Learning Outcomes (PLOs)

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases, and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review, and develop reports, presentations, and/or academic publications in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Identify activities of port entities, classify the characteristics of different types of port services and details of the operations of individual ports.
- Understand the difference between roles and contribution of different stakeholders in the port industry.
- Critically evaluate managing bodies in port governance and the impact of shipping on port competitiveness.
- Identify and elaborate on the most recent trends in shaping the contemporary ports.
- Distinguish the port performance indicators and their application on real-time events.
- To argue opinion on the importance and impact of particular activities on the development and competitiveness of ports (HRM, concessions, customs, information systems, risk management, marketing, etc.).

2. **Skills** (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- Develop creative and systematic thinking skills and apply strategic and operational management principles and methods in port operations and services domain.
- Conduct the validation of various aspects of port operations.
- Prepare the internal report based on the generated dataset considering the specific requirements of individual port organisational units.
- Prepare the report on evaluation of concession agreements.
- Address the impact of digitalization and sustainable development on port transition.

3. **Autonomy & Responsibility**: Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Review the basic economic settings for individual cases from port practice (calculation costs, concessions, etc.) and create the ability to connect, communicate and transfer knowledge with experts in the field.
- Using practical and theoretical knowledge for developing a research proposal.
- Writing an internal report on concession evaluation of diverse port services.
- Apply the economic and financial analysis of different fields in port operations.

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, field trips, etc.)

Method	Number of sessions	Duration
Lectures	15	2h (Total 30h)
Practical Study-Units:	5	1h (total 5h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	
Assessment Methods		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Examination	2h	40%
Written Exercises	during the course	30%
Classwork	during the course	30%
<p>Assessment Criteria: In the Examination (2 hours), the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the provision of Written Exercises, the student must demonstrate the ability to put into practice and to execute, with critical awareness, the most important aspects of ports discussed in the course (numerical and analytical exercises). The classwork will be provided during the provision of the course, and comprise written and oral exercises, where the student must demonstrate his/her dedication to continuous learning in the selected field.</p>		
<p>Study materials/Course literature:</p> <p>Notteboom, T., Pallis, A., & Rodrigue, J.-P. (2022). <i>Port Economics, Management and Policy</i> (1st ed.). Routledge.</p> <p>Yap, W.Y. (2020). <i>Business and Economics of Port Management: An Insider's Perspective</i> (1st ed.). Routledge.</p> <p>Wayne K. Talley. (2018). <i>Port Economics</i>, Routledge – Taylor and Francis Group. London and New York.</p> <p>de Langen, P.W. (2020). <i>Towards a Better Port Industry: Port Development, Management and Policy</i> (1st ed.). Routledge.</p> <p>UNCTAD: <i>Review of Maritime Transport. 2023 United Nations Publications.</i></p> <p>Lloyd's practical shipping guides: <i>Port Management and Operations third edition</i>, Informa law. (2012). Talyor and Francis Group.</p>		

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP1.3. Terminal Design & Construction

Course name: Terminal Design and Construction			
Course Code: MIP1.3			
Field/area of study: Port engineering			
University coordinating the course: UNIST			
Participating universities: UALG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description: Present a systematic approach to technological processes in the planning and design of ports and terminals, the importance of planning and development, technical requirements for the design of ports and terminals. The course aims to apply specific knowledge in the area of planning and organisation of the port waterway and surface space, with the special focus on the forces, requirements, structures, and material used in the construction phase of terminal building.</p>			
<p>Course Content:</p> <p>Lectures:</p> <ol style="list-style-type: none"> 1. Port planning. 2. Environmental forces. 3. Channels and harbour basins. 4. Berthing requirements. Impact from ships. 5. Design considerations. 			

6. Safety considerations. Types of berth structures.
7. Gravity-wall structures. Sheet pile wall structures.
8. Open berth structures. Berth details.
9. Port terminal equipment. Fenders.
10. Erosion protection and steel corrosion.
11. Underwater concreting and concrete deterioration. Concrete repair.
12. Port maintenance

Practical Study-Units:

1. Calculation of maritime transport elements.
2. Evaluation of important factors of fairways, waterway and ports.
3. Evaluation of safety of navigation, ship management, ship's hotelling in port.
4. Calculation of mooring: calculation of draught correction and required depth; resistance of hull through the water; air pressure, wind and waves for different conditions of ship.
5. Calculation of mooring: calculation of kinetic energy; calculation of needed traction power and number of tugs.
6. Processing of meteorological data, calculation of waves.
7. Forces of winds, waves, sea currents.
8. Evaluation of maritime risk.
9. Port of Split model – city port. Port of Split model – northern port.
10. Model of nautical tourism port - marina. Fish Farm model, anchoring.
11. St Anthony's Channel (Šibenik, Croatia). Water airfield – (Kaštela, Croatia).

Keywords: terminal planning and design; technical requirements; environmental forces; port maintenance

Programme Learning Outcomes (PLOs)

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Analyse needs, goals and requirements of planning ports, terminals, marinas, anchorages and waterways.*
- *Predict and assess impact of meteorological and oceanographic parameters in nautical engineering.*
- *Critically evaluate the knowledge in the field of planning and organisation of ports and terminals according to the needs of the transport market.*

- Assess the manoeuvring area of ships and analyse maritime traffic in the selected port area.

2. **Skills** (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- Apply knowledge of port and terminal planning in the design process.
- Conduct the evaluation of the specifics of the selected port basin and ships operating in the area.
- Apply an appropriate method for calculation of forces needed for berthing, mooring, manoeuvring and other related ship conditions in port.

3. **Autonomy & Responsibility:** Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Using the calculation methodology and theoretical knowledge for port terminal construction.
- Applying the data analysis in different ports and related fields.
- Writing a final report.

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, fieldtrips, etc.)

Method	Number of sessions	Duration
Lectures	12	2h (Total 24h)
Practical Study-Units:	11	1h (total 11h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Examination	2h	100%

Assessment Criteria: In the Examination (2 hour), which can be conducted through a digital platform, the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). Also, the student must demonstrate the ability to put into practice and to execute, with

critical awareness the most important aspects of port construction and design discussed in the course (include primarily the calculation of specific aspects of port construction).

Study materials/Course literature:

C.A.Thoresen. *Port Designer's Handbook, Fourth edition. ICE Publishing, 2018.*

J.W. Gaythwaite. *Design of Marine Facilities: Engineering for Port and Harbor Structures, Third edition. ASCE Press, 2016.*

G.P. Tsinker. *Port Engineering: Planning, Construction, Maintenance, and Security 1st Edition. Wiley, 2004.*

PIANC: *Harbour Approach Channels - Design Guidelines, PIANC (The World Association for Waterborne Transport Infrastructure), www.pianc.org, 2014.*

BSI, *British Standard: Maritime structures - Part 4: Code of practice for design of fendering and mooring systems, Technical Sector Board for Building and Civil Engineering, London, 1994.*

Mooring Analysis Task Committee of the Technical Committee on Ports and Harbors of the Coasts, Oceans, Ports, and Rivers Institute of the American Society of Civil Engineers: Mooring of Ships to Piers and Wharves, American Society of Civil Engineers, Reston, Virginia USA, 2014.

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Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP1.4. Cargo-handling Equipment Technology

Course name: Cargo-handling Equipment Technology			
Course Code: MIP1.4			
Field/area of study: Port engineering			
University coordinating the course: UNIST			
Participating universities: UCA			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description: Fundamentals of technical and technological characteristics and criteria for application of particular types of transshipment means. Particular attention is paid to the capacities and exploitation characteristics of the intermodal facilities, depending on the type of cargo, the way it is handled and the transport technology used.			
Course Content:			
Lectures:			
<ol style="list-style-type: none"> 1. The role and meaning of transshipment in the transport process. 2. Basic features of transshipment. Types of intermodal transport. 3. Technical characteristics of goods as transshipment items. 4. Overview of general characteristics and types of transshipment. Cranes and elevators. Analysis of the basic elements and specifics of the cranes (mechanism, load capacity, operating speed). 			

5. Technical and technological characteristics of port cranes, coastal cranes, specialised plants.
6. Technical and technological characteristics of transport and handling equipment (forklifts, trailers, loaders, conveyors, elevators, conveyors). Division of transshipment assets on ships and their transshipment effects.
7. Bulk Cargo Systems - General.
8. Equipment for Ro-Ro Ships - General. Lifts and platforms.
9. Liquid cargo handling equipment - General. Crude oil tanker handling equipment.
10. LPG Liquid Handling Equipment. LNG Liquid Handling Equipment. LNG re-liquefaction and storage equipment
11. Equipment for handling bulk cargo cranes.
12. Tank handling equipment. General and heavy cargo handling equipment. Cargo handling equipment.

Practical Study-Units:

1. Types of transshipment, ships and cargo.
2. Calculation of the productivity of transshipment facilities.
3. Evaluation of the structural elements of the transshipment means.
4. Analysis and productiveness of elements and mechanisation.
5. Impact of various factors (climatic, physical) on the efficiency of cranes.
6. Review of crane documentation, maintenance, and inspection. Determining the required number of transshipments.
7. Examination and analysis of port transshipment by example - processes in the port of Split
8. Hatch covers. Bulk cargo handling equipment.
9. Equipment for transshipment of barges.
10. Equipment for Ro - Ro ships. General cargo handling equipment.
11. Liquid cargo handling equipment. Tank handling equipment. Liquid cargo storage and equipment in port.

Keywords: Transshipment process; cargo-handling equipment types; capacities and exploitation features; cargo-handling performance indicators

Programme Learning Outcomes (PLOs)

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Analyse each transshipment facility by type of cargo.
- Outline the technical and technological features of each transshipment facility and the system of operation.
- Analyse freight systems and pneumatic and hydraulic equipment.
- Apply comparative analysis of the application of different transshipment agents.
- Analyse Laycan calculation and the effect of intermodal transport.

2. **Skills** (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- Apply the techno-economic evaluation of selected cargo-handling equipment and perform data analysis.
- Conduct the optimal process of handling specific cargo types.
- Propose appropriate solutions to problems based on the outputs of the calculation process.
- Address the limitations of the selected handling equipment.

3. **Autonomy & Responsibility:** Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Using the outputs of analytical processes for choosing the optimal cargo-handling equipment in ports.
- Ability to communicate generated results to the port managing body and other related stakeholders.
- Writing a final report based on the survey results.

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, field trips, etc.)

Method	Number of sessions	Duration
Lectures	12	2h (Total 24h)
Practical Study-Units:	11	1h (total 11h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	
Assessment Methods		

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Examination	1h	30%
Analysis Task	2h	70%
<p>Assessment Criteria: In the Examination (1 hour), which can be conducted through the digital platform, the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the Analysis Task (2h) the student must demonstrate the ability to put into practice and to execute, with critical awareness the most important aspects of port construction and design discussed in the course (include primarily the calculation of specific aspects of port construction).</p>		
<p>Study materials/Course literature:</p> <p><i>G. Belamarić: Cargo Handling II – Authorised lessons, script x 13 volumes. Split: Faculty of Maritime Studies in Split (Croatia), November 2018</i></p> <p><i>D. Vranić, P. Komadina et al: Chemical cargo transportation: safety and environmental protection. Rijeka: Faculty of Maritime Studies (Croatia), 1997.</i></p> <p><i>P. Komadina, D. Vranić, Crude oil cargo transportation, Rijeka: Faculty of Maritime Studies (Croatia)</i></p> <p><i>P. Komadina: Ships in the Multimodal transportation system. Rijeka (Croatia), 1998</i></p> <p><i>IMBSC Code 2022</i></p> <p><i>IMDG Code, 2022 Edition (inc. Amdt 41-22) 2 volumes</i></p>		

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP1.5. Energy Transition

Course name: Energy Transition			
Course Code: MIP1.5			
Field(s)/area(s) of study: Port economics and logistics			
University coordinating the course: UNIST			
Participating universities: UG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description: Acquiring the necessary knowledge to provide students with an advanced understanding of the role and function of shipping, and especially ports involved in technical, logistical, commercial, environmental, regulatory, and other related activities associated with the energy transition. Examine the existing and future energy and fuel use in ports (and shipping in general), as well as infrastructure, for the major sources in use globally, while also addressing the implementation challenges of evolving technologies. Provide the students with a holistic view of the opportunities and challenges involved in ensuring energy accessibility, reliability, security, and sustainability.</p>			
<p>Course Content:</p> <p>Lectures:</p> <ol style="list-style-type: none"> 1. Drivers and regulations for decarbonization in shipping 2. Decarbonizing shipping – overview of the world fleet, fuel consumption and emissions 			

3. Ship technologies and fuels for decarbonization
4. Alternative fuel production and demand
5. Green shipping corridors as mechanisms for accelerating the transition
6. Green supply chain management
7. Port industry drivers and trends – the changing role of the port authority
8. Green governance in ports
9. The role of ports in the energy transition
10. Green transitions for decarbonization of ports
11. Ports of the future (green, sustainable)
12. Green transition effects on the power sector and policy recommendations
13. Impact of the energy transition on ports and port authorities

Seminar

1. Case study: feasibility of selected technologies and propulsion in shipping
2. Scenarios for decarbonization of shipping
3. Case study: Port of Rotterdam and Hamburg
4. Case study: Port of Antwerp-Bruges and Barcelona
5. Case study: Port of Bremerhaven and Wilhelmshaven
6. Case study: Port of Gothenburg and Amsterdam
7. Case study: APM Terminals, TIL, Terminal link, COSCO Ports
8. Case study: Green shipping corridors
9. Case study: North America, Asia, and the Rest of the World

Keywords: energy transition in ports; implementation challenges; infrastructural prerequisites; energy supply and demand; technological framework

Programme Learning Outcomes (PLOs)

PLO1: Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics.

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Critically evaluate global energy demand and supply in shipping, and review the current regulative environment.*
- *Identify the main technological and logistical challenges of individual fuel production, storage, and distribution.*

- Argue the justification for implementing the mechanism of green corridors and apply the knowledge of sustainability in supply chain management, shipping, and ports.
- Critically appraise the role of ports in energy transition and review the basic trends of port energy transition in a changing environment.
- Understand the main sustainable transitions for decarbonization of ports, and acquire the necessary knowledge for implementation of main development factors of ports of the future.
- Review the policy recommendations and make aware of the impact of the energy transition on port authorities, the power sector, and other relevant stakeholders.

2. **Skills** (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- Apply the theoretical and empirical data to assess the potential energy solutions in shipping and ports.
- Conduct the analysis of technological, operational, regulative, environmental, and other relevant processes in determining the optimal green fuel solutions.
- Propose appropriate solutions to problems of energy transition in ports based on the in-depth review of the literature.
- Address the limitations of proposed technological concepts.

3. **Autonomy & Responsibility:** Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Use the acquired dataset to engage in academic work creation.
- Ability to communicate generated results to the relevant bodies.
- Applying the generated data in different fields of interest.

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, field trips, etc.)

Method	Number of sessions	Duration
Lectures	13	2h (Total 26h)
Seminars	9	1h (total 9h)
Total teaching contact hours:	35h	
Self-study time	90h	
Total Learning hours	125h	

Assessment Methods		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Assignment	min 10 pages, max 25 pages	50%
Examination	1h	40%
Presentation	15 minutes	10%
<p>Assessment Criteria:</p> <p>The student must pass the exam and the assignment to receive the final grade.</p> <p>Exam (40%) – Written or computer-assisted through digital platform</p> <p>Presentation (10%) - Based on the outputs of the Assignment</p> <p>Assignment (50%) - Minimum 10 pages, maximum 25 pages. Lecturer will provide feedback on draft versions of the assignment.</p>		
<p>Study materials/Course literature:</p> <p><i>DNV. Maritime forecasts to 2050 – Energy Transition Outlook. Høvik, Norway, 2023.</i></p> <p><i>Delloite. Europe's ports at the crossroads of transitions, 2021.</i></p> <p><i>ARUP. Port energy supply for green shipping corridors, 2022.</i></p> <p><i>DNV. Ports – Green gateways to Europe: 10 Transitions to turn ports into decarbonization hubs. AR Arnhem, the Netherlands, 2020.</i></p> <p><i>UNCTAD. Review of Maritime Transport 2023. United Nations Publications. New York, USA, 2023.</i></p> <p><i>Royal Haskoning DHV. The new energy landscape Impact on and implications for European ports. Amersfoort, The Netherlands, 2022.</i></p> <p>*Additional literature:</p> <p><i>EIT InnoEnergy. A practical guide to decarbonising ports Catalogue of innovative solutions. AB Eindhoven, The Netherlands, 2022.</i></p> <p><i>Energy Transitions Commission. Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century: Sectoral focus Shipping, 2020.</i></p> <p><i>IRENA. A pathway to decarbonise the shipping sector by 2050, 2021.</i></p> <p><i>Nordic West Office. Practical Playbook for Maritime Decarbonisation – Value chain-based pathways towards zero-emission shipping. Helsinki, Finland, 2022.</i></p> <p><i>ARUP.</i></p> <p><i>Global Maritime Forum. The Next Wave: Green Corridors, 2021.</i></p>		

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP1.6. Sustainable Port Cities

Course name: Sustainable Port Cities			
Course Code: MIP1.6			
Field/area of study: Sustainability sciences			
University coordinating the course: UALG			
Participating universities: UNIST, UG, UM			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students (e.g., those following micro credentials) to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description:</p> <p>The course provides knowledge and understanding of the goals and principles of sustainability and resilience, the ports and cities' interactions, the problems facing the sustainable development of the port cities and measures, and the techniques to promote the sustainability of port cities and the happiness and well-being of port workers and other citizens.</p> <p>The syllabus provides a foundation for understanding local and global sustainability challenges as well as interaction between ecological and human systems, understanding the systemic character between environmental, economic, social and cultural dimensions of sustainability.</p> <p>The main objective of this curricular unit is to present the science of sustainability and its specific connection with port cities, urban space and modal interfaces.</p>			

It is intended that the student, based on real cases of cities and neighbourhoods, learns the port cities' problems and the sustainable solutions in a complex context.

Course Content:

1. Sustainability and Resilience

Complexity and transdisciplinary;
The concept, principles and dimensions of sustainability;
Conceptual approach of urban resilience;
Mitigation and adaptation to climate change. The contribution of ecosystem services;
Strategies for biodiversity conservation;
Governance Processes;
The 2030 Agenda for Sustainable Development of the United Nations; the Sustainable Development Goals (SDGs).

2. Port Cities and Ports Profiles

The evolution of port cities and their components;
Aspects of urban planning and architecture;
Typology of port cities considering ports as part of urban systems;
Typology of ports in terms of geographical location: engineered coastline, estuary, river and embayment, protected coast or marine inlet;
Typology of ports in terms of size: annual tonnage of commodities handled;
Cities as maritime and logistic hubs;
Port cities interactions. Ports and urban land use: port growth, industrial growth, land use competition, water use competition;

3. Port Cities: Problems and Challenges

Problems facing the sustainable development of port cities: air and acoustic pollution; contaminated land; fossil energy consumption; port and industrial wastes and effluents; loss of water quality; loss of habitats and biodiversity; traffic congestion; loss of public health and well-being; migrant dynamics; social exclusion of vulnerable groups; relationships between port authorities and local communities; hazardous cargo; local impacts of climate change: flooding, erosion and storms. Happiness and well-being of port workers and other citizens. The metabolism of the circular cities. Material flow analysis; Hydric matrix; energy matrix; Case studies.

4. Sustainable Port Cities

Paradigm shifts in planning theory with time and context. Urban planning in response to political ideologies; approaches in planning - advocacy planning, pluralism and equity planning; collaborative approaches;

Urban resilience. Natural and technological disasters. Risk assessment. Multilevel urban topography. Redundant systems. Diversity of energy sources; Diversity of water sources; bioclimatic urbanism.

Urban regeneration. Proximity to urbanism. Integration of Land use and Transport systems; Transit Oriented Development; Principles of Compact City; Place making concept. Public spaces: sustainable and inclusive design. Social equity for a fair society: equal access to goods, services and information;

Mobility and accessibility. Sustainable and inclusive mobility. Traffic calming. Rail infrastructures. Pedestrian and cycling infrastructures. Modal Interfaces. Universal and Inclusive Design. Case studies;

Green and blue Infrastructures. Urban Ecological Structure. Water Sensitive Cities. Decentralised water retention solutions. Sustainable buildings: Green roofs and walls. Case studies;

Port heritage facilities. Tangible and intangible cultural values of port cities. Ports in literature. The citizen and the shared management of cultural sustainability. Approaches for waterfront regeneration. Case studies of contemporary waterfronts;

Building capacity and governance. Engage the groups of port city stakeholders.

5. Sustainable Performance of Port Cities

Key performance indicators. Indicators related with city development;

Indicators related with port development;

6. Institutional Initiatives for Sustainable Port Cities

The international Association of Cities and Ports (AIVP – Association Internationale des Villes et Ports) and the AIVP Agenda 2030;

World Ports Sustainability Program (WPSP) by the international Association of Cities and Ports (AIVP), the American Association of Port Authorities (AAPA), the European Sea Ports Organisation (ESPO), and the World Association for Waterborne Transport Infrastructure (PIANC);

ESPO Green Guide;

World Port Climate Initiative projects;

ESPO Code of Practice on Societal Integration Ports;

ESPO Code of Practice on birds and habitats directive;

The European Green Capital award (the specific examples of port cities);

the ESPO Award of Practice on Societal Integration Ports;

The Waterfront Awards

Keywords: Sustainability; Resilience; Climate change; Mitigation and adaptation; Port Cities; Key performance indicators; Governance.

Programme Learning Outcomes (PLOs):

PLO1: Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics.

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- To comprehend and analyse sustainability challenges and problems of port cities, from different perspectives, in an integrated and holistic approach.
- To apply appropriate tools and techniques to achieve sustainable port cities.
- To identify the different actors and stakeholder groups in port cities.
- To analyse policies and mechanisms that facilitate sustainable use of the port cities and maximise benefits and value creation for current and future generations.
- To develop sensitivity towards environmental and socio-economic problems in the port cities based on ethical commitment and sustainability.
- To have a general knowledge of the fundamental principles of sustainable sciences and the fundamental principles that influence economics.
- To know the socio-economic activities of entities in port cities linked to the marine environment, from a sustainability perspective.

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- work in cross-cultural and interdisciplinary teams. This course unit will contribute for the development of skills for sustainability, e. g. normative, strategic, collaborative and integrated problem-solving, which allow collaboration in urban and port management.

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- collaborate in urban and port management according to the sustainable approaches.

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, fieldtrips, etc.*)

The teaching methodologies combine an expository approach, in which teachers present and discuss the syllabus, with an approach that invites students to actively participate in classes. It is important to add tutorials, which are aimed to follow/guide students in the learning process and the process of undertaking individual work assignments, as well as to clarify doubts about the topics addressed in classes. A

wide range of teaching resources are used with the purpose of stimulating discussion and interest by the syllabus.

The methodologies to be used include expository and participatory methods, discussion spaces, group learning, investigation and research work, class presentations (by students), case studies and problem solving.

Method	Number of sessions	Duration
Lectures	8	2h (Total 16h)
Seminar	2	2h (Total 4h)
Practical Study-unit	5	2h (Total 10h)
Performance	1,5	2h + 3h (Total 5h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods:

The final evaluation is done through theoretical/practical work.

The 5EModel (Engage, Explore, Explain, Elaborate, Evaluate) is a learning model based on the constructivist theory that promotes collaborative, active learning where students work together to solve problems and investigate new concepts by asking questions, observing, analysing and drawing conclusions.

The following tools are used:

→ Theoretical Classes: classes consist of lectures, discussions and case study analyses. Throughout the lectures, students develop knowledge and understanding related to the subject content.

→ Practical Classes: students explore port cities around the world using Google-Earth, and other web contents, then develop sheets related to the subject content of the class, useful for the final work for the assessment. After that there is a period of discussions that reinforce students' cognitive and key transferable skills, as well as communication skills.

→ Office hours: students may contact the professor via e-mail or through online zoom for any questions relevant to the lectures.

→ Use Moodle Platform: The professor will post teaching material and readings, as well as assignments, instructions and announcements.

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Report	4500 words	50%
Practical Presentation	20 minutes presentation	25%
Classwork	10 h	25%
<p>Assessment Criteria:</p> <p><i>During the classes, development of problem sheets about port cities sustainability (25%) which will be presented in a class in an information sharing process with peer evaluation and reflection (25%). In Self - study time, students must develop a case study - report about one sustainable port city (4,000-4,500 words). Each of these need a grade superior or equal to 9.5 values (out of 20).</i></p>		
<p>Study materials/Course literature: (hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...)</p> <p>AIVP (2018). <i>Agenda 2030: 10 goals for sustainable port cities</i>. Association Internationale des Villes et Ports. Accessed on www.aipv.org</p> <p>Sifakis, N., Tsoutsos, T. (2021) <i>Planning zero-emissions ports through the nearly zero energy port concept</i>. <i>Journal of Cleaner Production</i>, 286, art. no. 125448.</p> <p>Puig, M., Raptis, S., Wooldridge, C., Darbra, R.M. (2020) <i>Performance trends of environmental management in European ports</i>. <i>Marine Pollution Bulletin</i>, 160, art. no. 111686.</p> <p>Hossain, T., Adams, M., Walker, T.R. (2019). <i>Sustainability initiatives in Canadian ports</i>. <i>Marine Policy</i>, 106, art. no. 103519.</p> <p>O'Keefe, J.M., Cummins, V., Devoy, R.J.N., Lyons, D., Gault, J. (2020). <i>Stakeholder awareness of climate adaptation in the commercial seaport sector: A case study from Ireland</i>. <i>Marine Policy</i>, 111, art. no. 102404.</p> <p>Valente, S., Veloso-Gomes, F. (2020). <i>Coastal climate adaptation in port cities: adaptation deficits, barriers, and challenges ahead</i>. <i>Journal of Environmental Planning and Management</i>, 63 (3), 389- 414.</p> <p>Rosa, M. P. (2022). <i>Experimental Education of Collaborative Design. The Case of an Inclusive Bus Stop for a Tourist Transportation Hub</i>. <i>Special Issue Ethics, Social Responsibility and Sustainability in Engineering Education, International Journal of Engineering Education</i>, 38(3), pp. 589–599.</p>		

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MODULE 2. PORT ECONOMICS & LOGISTICS

MIP2.1. Port Governance

Course name: Port Governance			
Course Code: MIP2.1			
Field/area of study: Applied Economics			
University coordinating the course: UCA			
Participating universities: UNIST, UALG, UM			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description*: The main objective is the analysis of port governance at international level and its evolution, paying special attention to that developed by the main European ports. The participation of the private sector in port governance will be a clear element of analysis as well as the different port governance models catalogued by the World Bank and their application and evolution in the European framework. In addition, the Spanish port governance is going to be analysed and the case of the Strait of Gibraltar, with different jurisdictions in a key area for international navigation.			
Lectures			
1. Concept of Port and classification			
2. Port, Port Authority and Port Community			
3. From public provision to private participation. Case study: port/rail intermodality			

4. Changes in port governance
5. Main port management models
6. Analysis of Spanish port governance. The Spanish case

Seminars: 4

Keywords: Ports, Port Governance Models.

Programme Learning Outcomes (PLOs)

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Assess the importance of private participation in the port sector and its application depending on the port environment.*
- *Evaluate the different port management models depending on the economic and social development of the country.*
- *Know in depth how the Spanish port systems works, as well as its differences and similarities with other international port systems.*

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- *Differentiate the concept of port, port authority and port community and know their synergies and interactions.*
- *Analyse the results of the implementation of the models in different port environments.*

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- *Work independently in applying specialised theoretical and practical knowledge in the creation of academic papers and other relevant research.*
- *Manage specialised tasks and activities in the area of port business, and develop new ideas*

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lectures	8	2h (Total 16h)
Seminar	4	2h (Total 8h)
Visit	2	11h
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods:

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Final written exam	2h	70%
Final oral exam	1h	30%

Assessment Criteria: In the written exam (2 hours), the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the oral exam (1h) the student must demonstrate the ability to put into practice and to execute, with critical awareness, the most important aspects of ports discussed in the course.

Study materials/Course literature:

1. Baltazar, R., Brooks, M. (2007). «Port governance, devolution and the matching framework: a configuration theory approach». *Research in Transportation Economics*, 17, 379-403.
2. Bamber, P. et al. (2014), «Connecting Local Producers in Developing Countries to Regional and Global Value Chains: Update», *OECD Trade Policy Papers*, No. 160, OECD Publishing, Paris.

3. Cerbán, M., Ortí, J., (2015). «Infraestructuras portuarias. Análisis del sistema portuario español: contexto internacional y propuestas de mejora». Fundación de Estudios de Economía Aplicada (FEDEA) <https://documentos.fedea.net/pubs/eee/eee2015-20.pdf>
4. Chen, S., Everett, S. (2014). «The dynamics of port reform: different contexts, similar strategies». *Maritime Policy & Management*, 41 (3), 288-301.
5. Comisión Europea (2011). Libro Blanco de transportes de la Comisión Europea. Año 2011: «Hoja de ruta hacia un espacio único europeo de transporte: por una política de transportes competitiva y sostenible» [COM (2011) 144 final].
6. Sánchez, R. (2014). «Los puertos requieren un cambio de gobernanza para su futuro». *Boletín Marítimo y Logístico* 55. CEPAL.
7. Silos, J.M.; Piniella, F.; Monedero, J.; Walliser, J. (2012). «Trends in the global market for crews: A case study». *Marine Policy* 36: 845–858.
8. UNCTAD (2020). «Review of Maritime Transport 2019». Ginebra. <https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2563>

Inclusiveness: The course will foster an open, welcoming atmosphere where diversity is recognized, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating a safe and inclusive but stimulating and challenging teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP2.2. Strategic and Port Master Plans

Course name: Strategic and Port Master Plans			
Course Code: MIP2.2			
Field/area of study: Applied Economics			
University coordinating the course: UCA			
Participating universities: UALG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description: The objectives of this teaching unit are: on the one hand, to analyse strategic planning in the port system, framing it within the framework of the different modes of transport and the logistics chain as a whole and, on the other hand, to determine the stages and the general outline of the infrastructure master plan of a port.</p>			
<p>Lectures</p> <p>1. Strategic Planning in the Port system (4h)</p> <p>1.1.1. Transport planning in Europe (TEN-T)</p> <p>1.1.2. European Port Strategy</p> <p>1.2. Planning and development of the different modes of transport in the whole port system. (6h)</p>			

1.3. Basis for the Strategic plans of port authorities: functions of the Port and network ports. (4h)

- 1.3.1.The generations of ports
- 1.3.2.Port functions
- 1.3.3.Network ports
- 1.3.4.Competition in the port environment
- 1.3.5.The competitiveness of ports
- 1.3.6.The strategic plans of the ports
- 1.3.7.PORT PERFORMANCE (INDICATORS)

1.4. Seminars 2. (4h)

2. The Port Master Plan (plan director) (4h)

2.1. General Outline of planning (4h)

2.2. Basic contents of a Master plan (4h)

- 2.2.1.2.Analysis of the initial situation
- 2.2.2.2.Demand forecasts
- 2.2.3.Approach and characterization of alternatives
- 2.2.4.Choice of development scheme
- 2.2.5.Phased development.
- 2.2.6.Valuation and financial economic analysis
- 2.2.7.Land accessibility

2.3 Seminars 2 (5h)

Keywords: Port Master Plan, Strategic Planning

Programme Learning Outcomes (PLOs).

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Know in depth strategic planning and master plan development for ports within the European context.*
- *Evaluate the different global and regional landscape of strategic planning and master plan, analysing port performance.*

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- *Analyse the results of the strategic goals and develop actionable plans for port development raised in the strategic planning and master plan.*

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- *Work independently in applying specialised theoretical and practical knowledge in the creation of academic papers and other relevant research.*
- *Manage specialised tasks and activities in the area of port business, and develop new ideas.*

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, field trips, etc.).

Method	Number of sessions	Duration
Lectures	13	2h (Total 26h)
Seminar	2	(Total 9h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	
Assessment Methods:		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Final written exam	2h	70%

Final oral exam	1h	30%
<p>Assessment Criteria: In the written exam (2 hours), the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the oral exam (1h) the student must demonstrate the ability to put into practice and to execute, with critical awareness, the most important aspects of ports discussed in the course.</p>		
<p>Study materials/Course literature:</p> <p>Agerschou, H. (2004) Planning and design of ports and marine terminals Thomas Telfors Services LTD.</p> <p>Baird, A. (2005) Eu Motorways of the sea policy. European Conference on Sustainable Goods and Passengers Transport, Kristiansand.</p> <p>Psaraffis, H. N. (2005) EU ports policy. Where do we go from here? Maritime Economics & Logistics, 7 (1) 73-82.</p> <p>Rodriguez, J. P., Comtois, c., & slack, B. (2009) The Geography of transport systems Taylor & Francis.</p> <p>Notteboom, T. Pallis, A. & Rodrigue J. P. (2022), Port Economics, Management and Policy.</p> <p>TRLPEMM, arts. 52 y ss.</p>		

<p>Inclusiveness: The course will foster throughout an open, welcoming atmosphere where diversity is recognized, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating a safe and inclusive but stimulating and challenging teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.</p> <p>Ethics: Ethical considerations need to be part of the transdisciplinary research methodology.</p> <p>Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.</p>

MIP2.3. Economic Evaluation of Port Infrastructure

Course name: Economic Evaluation of Port Infrastructure			
Course Code: MIP2.3			
Field(s)/area(s) of study: Applied Economics			
University coordinating the course: UCA			
Participating universities: UG, UALG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites:			
<p>Short course description: The main objective is the economic assessment of port investment and policies using the cost-benefit analysis framework applied to the transport sector with reference to the CBA guidelines of the European Commission and the European Investment Bank. The aim of the course is to learn the techniques of the social appraisal of transport projects with a solid theoretical background and with a close look to the practical guidelines of the supranational agencies. The importance of the design of concession contracts for private participation and the pricing principles will also be covered given the strong link with the appraisals of investment projects. It will also analyse the economic impact of the ports.</p>			
<p>Lectures</p> <ol style="list-style-type: none"> 1. Principles for the economic evaluation of port investment projects 2. The economic evaluation of direct and indirect effects 3. Opportunity costs, market and shadow prices 			

4. Economic valuation of non-marketed goods
5. Risk Analysis in port investment
6. Private participation in public projects: ex ante and ex post benefits and costs
7. Economic impact of ports on their area of influence

Seminars: 2

Keywords: Economic Evaluation, CBA Models

Programme Learning Outcomes (PLOs)

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Analyse the economic assessment of port investment and policies using the cost-benefit analysis framework applied to the transport sector.*
- *Understand the economic impact of the ports on their economic environment, distinguishing between direct, indirect and induced impacts.*

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- *Analyse the techniques of the social appraisal of transport projects with a solid theoretical background and with a close look to the practical guidelines of the supranational agencies.*
- *Differentiate the existing methodologies to analyse the economic impact of ports and determine the appropriate one for each analysis.*

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

<ul style="list-style-type: none"> • Work independently in applying specialized theoretical and practical knowledge in the creation of academic papers and other relevant research. • Manage specialized tasks and activities in the area of port business, and develop new ideas. 		
Teaching and Learning Methods. Course activities/Study Loads (<i>workshops, lectures, seminars, field trips, etc.</i>)		
Method	Number of sessions	Duration
Lectures	13	2h (Total 26h)
Seminar	2	Total 9h
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	
Assessment Methods:		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Final written exam	2h	70%
Final oral exam	1h	30%
Assessment Criteria: In the written exam (2 hours), the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the oral exam (1h) the student must demonstrate the ability to put into practice and to execute, with critical awareness, the most important aspects of ports discussed in the course.		
Study materials/Course literature: <ol style="list-style-type: none"> 1. de Rus, G. (2021): Introduction to Cost-Benefit Analysis: Looking for Reasonable Shortcuts. Edward Elgar, 2nd edition. 2. de Rus, G., P. Socorro, J. Valido and J.Campos (2022): "Cost-benefit analysis of transport projects: Theoretical framework and practical rules". Transport Policy, 123: 25–39. 		
Guides to Cost-Benefit Analysis: European Union: Economic Appraisal Vademecum 2021-2027 - General Principles and Sector Applications		

https://ec.europa.eu/regional_policy/en/information/publications/guides/2021/economic-appraisal-vademecum-2021-2027-general-principles-and-sector-applications

European Investment Bank

<https://www.eib.org/en/publications/20220169-the-economic-appraisal-of-investment-projects-at-the-eib>

Asian Development Bank

<https://www.adb.org/documents/guidelines-economic-analysis-projects>

Optional Literature:

1. Boardman, A., D. Greenberg, A. Vining and D. Weimer (2005): Cost-Benefit Analysis: Concepts and Practice. 3rd edition. Prentice Hall.
2. Johansson, P-O (1991), An Introduction to Modern Welfare Economics, Cambridge UK: Cambridge University Press.
3. Cass R. Sunstein (2019): The Cost-Benefit Revolution. The MIT Press

Inclusiveness: The course will foster throughout an open, welcoming atmosphere where diversity is recognized, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating a safe and inclusive but stimulating and challenging teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP2.4. Port Competition & Competitiveness

Course name: Port Competition and Competitiveness			
Course Code: MIP2.4			
Field/area of study: Applied Economics			
University coordinating the course: UCA			
Participating universities: UALG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description: The objective of this unit is to understand and apply the concepts of port competition and competitiveness, determining the key factors of port competitiveness and their application to specific traffics, and focus on the importance of innovation. It will also analyse the economic impact of the ports, the stakeholders and the human resources in the port community.			
Lectures			
<ol style="list-style-type: none"> 1. Port competition and competitiveness. Concept and differences 2. Key factors of port competitiveness. Case study: Container and Liquid Bulk. 3. Innovation as key factor of port competitiveness 4. Economic and environmental competitiveness of container shipping on the alternative routes 			

5. Stakeholders and human resources in port ecosystems

Seminars: 4

Keywords: Port competition, Port competitiveness

Programme Learning Outcomes (PLOs)

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- *Assess the key factors of competitiveness in different port environments and types of traffic.*
- *Value the importance of human resources and innovation in ports.*

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- *Determine the direct economic impacts on ports using the main macroeconomic variables used with the methodology of Leontief's input-output table.*
- *Understand the key factors of port competitiveness that apply for different traffic and determine the range of competitive ports.*

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

- *Work independently in applying specialised theoretical and practical knowledge in the creation of academic papers and other relevant research.*
- *Manage specialised tasks and activities in the area of port business, and develop new ideas*

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lectures	13	2h (Total 26h)
Seminar	4	Total 9h
Total teaching contact hours:	35h	
Self - study time	85h	
Total Learning hours	125h	
Assessment Methods:		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Final written exam	2h	70%
Final oral exam	1h	30%
<p>Assessment Criteria: In the written exam (2 hours), the student must demonstrate his/her capability to deploy the basic concepts to find correct answers to a typical series of questions related (multiple-choice questions, essays, fill in the blank, matching, completion etc.). During the oral exam (1h) the student must demonstrate the ability to put into practice and to execute, with critical awareness, the most important aspects of ports discussed in the course.</p>		
<p>Study materials/Course literature:</p> <ol style="list-style-type: none"> 1. Acciaro, M., Sys, C. (2020). «Innovation in the maritime sector: aligning strategy with outcomes». Maritime Policy & Management. https://doi.org/10.1080/03088839.2020.1737335 2. Acosta, M., Cerbán, M., Coronado, D., (2007). «Port Competitiveness in Container Traffic from an Internal Point of View: The Experience of the Port of Algeciras Bay», Maritime Policy and Management 34, 499-518. 3. Acosta, M., Cerbán, M., Coronado, D., (2011). «Competitividad portuaria», Papeles de economía española, diciembre 2011. 4. Hoffmann, J.; Rubiato, J. (2012). «Transporte Marítimo Internacional: tendencias a largo plazo». Papeles de Economía Española nº 131 «La economía del transporte marítimo y de los puertos». Ed. Fundación de las Cajas de Ahorro, Madrid. 5. Jiménez, Y., y Sierra, Y. (2017). «La inserción internacional en cadenas globales de valor». Economía y Desarrollo, vol.158 (Nº2), pp 189-205. 		

6. Ministerio de Fomento (2020). Memorias de las Autoridades Portuarias y Anuario Estadístico de Puertos del Estado. <http://www.puertos.es/es>
7. Notteboom, T., (2008), «The relationship between seaports and the intermodal hinterland in light of global supply chains», Discussion Paper N° 2008-10. Joint Transport Research Center. OECD.
8. Vukic, L., Cerbán, M (2022), «Economic and environmental competitiveness of container shipping on alternative maritime routes in the Asia-Europe trade flow».

Inclusiveness: The course will foster an open, welcoming atmosphere where diversity is recognized, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating a safe and inclusive but stimulating and challenging teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature. **Quality Assurance:** This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP2.5. Supply Chain Management

Course name: Supply Chain Management			
Course Code: MIP2.5			
Field/area of study: Management			
University coordinating the course: UG			
Participating universities: UCA			
Total ECTS:	5 ECTS	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description:			
<p>The goal of the course is to acquaint students with basic knowledge and terminology concerning supply chain management, as well as the methods and tools that can be used in supply chain management.</p> <p>At the end of this course, the students should have the understanding of the differences between supply chain management and logistics, the importance of supply chain integration, the significance of global challenges to supply chains, as well as the capability to solve business problems in supply chain management</p>			
Course Content:			
1. Introduction to supply chain management			

definitions including: supply chain and supply chain management vs. logistics/logistics management/value chain, elements of supply chain, links and flows, evolution of supply chains, extended enterprise

2. Supply chain in a strategic context
3. Lean and agile supply chain, creating the responsive supply chain
4. Putting the end customer first

Demand planning and forecasting

5. Supply management
6. Integrating the supply chain

Beer game - coordination problem in supply chain; integration, cooperation, collaboration, ECR, CFPR, VMI, QR, supply relationships, 3PL, 4PL, demand forecasting, matching supply and demand

7. Outsourcing and global design, facility location and network design
8. Supply chain information technology
9. Supply chain finance
10. Supply chain vulnerability, risk, robustness and resilience
11. Challenges to supply chains

sustainable/green supply chains, trends in supply chain management

12. Lean game - principles of lean supply chain
13. Supply chain in automotive industry - case study
14. Supply chain in fashion industry - case study
15. Supply chain in retail industry - case study

Keywords: supply chain management, lean management, logistics, green supply chain.

Programme Learning Outcomes (PLOs)

PLO1: Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics.

PLO2: Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

Student has an in-depth knowledge of relations between entities and organisations in supply chains

Students has an in-depth knowledge of economic and financial ties between enterprises operating in the supply chains

Student has an in-depth knowledge of economic and financial principles governing the supply chains, both in the national and international spheres

Student has an in-depth knowledge of processes occurring along the supply chain, in enterprises and economic organisations and between them, and knows methods of research on the regularities governing these changes

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

Student can use acquired knowledge to describe and analyse the causes and course of processes in the supply chains, and can formulate his/her own opinions and critically select data and analysis methods based on the achievements of economic and social sciences

Student can practically apply various forms and range of acquired knowledge in economics, finance and management, supplementing it with an independent critical analysis of its efficiency and usefulness to analyse issues and solve problems related to supply chain management

Student can independently propose solutions to complex problems concerning supply chain management

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

Student inspires and organises preparation of projects and solutions concerning supply chain management, following the idea of sustainable development, reconciling economic, ecological, political and social requirements

Student is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions regarding supply chain management issues; undertakes challenges of creative thinking to find solutions to problems; can assess risks and threats and find ways of counteracting their effects

Student correctly identifies, diagnoses and solves dilemmas and alternative solutions related to supply chain management

Student is ready to observe and develop in his/her professional life principles of business ethics and corporate social responsibility, especially with regard to sustainable supply chain management

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lecture	7	14h
Performance	2	5h
Practical Study-Unit	5	10h
Seminar	3	6h
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Examination	90 minutes	70
Competencies	20 minutes presentation	15
Case Study (Take Home)	Not applicable	15

Assessment Criteria:

The student will be assessed according to the joint criteria for this programme of studies.

The sum of points obtained will be calculated into percent value and decide about the final grade.

The written exam will constitute 70% of the overall grade, while a group presentation prepared in groups of 2-4 students will account for 15%. Participation in the discussion of case studies will also represent 15% of the total grade. The points earned on the exam will depend on the correctness and quality of the answers (both multiple-choice and open-ended questions). The presentation will be graded based on the level of merit and the fulfilment of its objectives. Case studies will be graded

based on the student's activity in discussion, including the quality of presented conclusions and solutions, as well as the level of engagement in the discussion.

Study materials/Course literature: (*hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...*)

A. Harrison, R. van Hoek, *Logistics management and strategy - competing through the supply chain*, Prentice Hall, Harlow 2008

James B. Ayers, *Handbook of Supply Chain Management*, Auerbach Publications, Boca Raton 2006.

M. Christopher, *Logistics & Supply Chain Management*, Prentice Hall, 2011.

Additional literature:

C. Scott, H. Lundgren, P. Thompson, *Guide to Supply Chain Management: An End to End Perspective*, Springer, 2018.

R. Crandall, W Crandall, C. Chen, *Principles of Supply Chain Management*, CRC Press, 2015

H. Min, *The Essentials of Supply Chain Management*, Pearson Education, 2015

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP2.6. Port Logistics

Course name: Port Logistics			
Course Code: MIP2.6			
Field/area of study: Economics, Management			
University coordinating the course: UG			
Participating universities: UNIST, UM			
Total ECTS:	5 ECTS	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description:			
<p>The course aims to present knowledge about the basics of logistics, to present the importance of logistics processes and systems in the functioning of economic processes, and to present the chosen methods of logistics management as well as the ability to use them in practice.</p> <p>Furthermore, the course will present the seaport as an important component of logistics infrastructure and the importance of logistics in seaport operations</p>			
Course Content:			
<ol style="list-style-type: none"> 1. The fundamentals of logistics <ul style="list-style-type: none"> o definition of logistics, o logistics support system's components, o macro- and microeconomics aspects of logistics 2. Logistics infrastructure <ul style="list-style-type: none"> o logistics infrastructure classifications 			

- o replacement and development investments in logistics infrastructure
 - o risk identification and assessment in investment projects
 - o seaport as a component of the logistics infrastructure
3. Demand in logistics
 - o primary and secondary demand in logistics,
 - o the role of primary demand forecasts in logistics,
 - o material requirements planning
 - o evolution of MRP systems,
 - o Zeparde Gozinto's graph
 4. Inventory management
 - o Wilson's model,
 - o reorder point and reorder cycle models
 - o ABC / XYZ classification,
 5. Evaluation and choice of the supplier
 - o identification of potential suppliers,
 - o determination of main criteria and parameters,
 - o principles of grading for criteria and parameters,
 - o introduction of possible wages for criteria and parameters,
 - o calculating of score for each supplier,
 - o taking a decision about choice of the supplier
 6. Logistic costs
 - o total logistic costs calculation,
 - o activity based costing as a method of logistic processes management,
 - o the idea of life cycle logistic support system
 7. Technical equipment of seaports
 - o elements of technical equipment of a seaport,
 - o seaport infrastructure
 - o seaport suprastructure,
 - o spatial development of seaports,
 - o port transshipment and storage bases
 - o transshipment and storage,
 - o use of technical potential of seaports
 8. The subject of seaport operations
 - o cargo - concept and classification of cargo,
 - o transportability of cargo,
 - o unitized cargo;
 - o sea vessel - interdependencies in the ship-seaport system,
 - o time of stay of the ship in the port,
 - o methods for determining the speed of ship service in the port;
 - o back-end transportation means - interdependencies in the land transport-seaport system,
 - o organisation of back-end transportation service in the port

Keywords: Port logistics; Logistics infrastructure; Logistics support system; Logistics process; Logistics costs

Programme Learning Outcomes (PLOs)

PLO1: Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

PLO5: Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Students gain the knowledge of logistic support for an organisation.
- Student knows tools and methods used in logistics
- Students understand the importance of logistics in the operation of the seaport
- Students understand the importance of the seaport as part of the logistics infrastructure

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- Students are able to implement presented logistic tools and methods in practice.
- Students are able to cooperate and work in a team, taking various roles in it, including a leading role.

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- Students inspire and organise the preparation of economic projects.
- Students aim to gain the knowledge permanently

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lectures	4	8h
Practical Study-Unit	10	20h
Project	1	3h

Case study	2	4h
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	
Assessment Methods:		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Examination/Classwork	20 minutes	70%
Oral Presentation	20 minutes	30%
Assessment Criteria:		
Students will be assessed according to the rules for the whole programme. The points obtained by students for presentation and exam will be summed up.		
Study materials/Course literature: (hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...)		
A. Required literature:		
B. S. Blanchard, <i>Logistics Engineering & Management</i> , Pearson New International Edition 2013		
D. Simchi-Levi, <i>Designing and Managing the Supply Chain</i> . McGraw - Hill Education Europe, 2007		
J.V. Jones, <i>Integrated Logistics Support Handbook</i> , McGRAW-HILL, New York 2006		
Guide to Cost-Benefit Analysis of Investment Projects, European Commission, Brussels 2014		
B. Additional literature:		
P. Borkowski, A framework for risk analysis in infrastructure projects, <i>Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu</i> , Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, nr 401, 2015, s. 69-82, DOI:10.15611/pn.2015.401.0		
P. Borkowski, Practice of cost benefit analysis in transport infrastructure projects in the European Union, <i>Zeszyty Naukowe Uniwersytetu Szczecińskiego Problemy Transportu i Logistyki</i> , Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, nr 27, 2014, s. 49-63.		
H. Klimek, J. Dąbrowski, Corporate social responsibility of the Port of Gdynia, <i>SHS Web of Conferences</i> , 2018, Vol. 57, art. No. 01017		

A. Kaliszewski, A. Kozłowski, J. Dąbrowski, H. Klimek, *Container terminals competitive factors - results of an international survey*, SHS Web of Conferences, 2018, Vol. 58, art. No. 01014
L. Reszka: *Decision Making Process in the Management of Logistics Support System* [in:] C. Mańkowski, L. Reszka (red.): *Modelowanie procesów i systemów logistycznych*, cz. XXII Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2021, p. 167-176

L. Reszka: *Multicriteria optimization methods in logistics on the example of warehouse location*, "Journal of Positive Management", vol. 9, nr 3/2018, Toruń 2018, ISSN: 2083-103X, p. 3-16

M. Chaberek, C. Mańkowski, L. Reszka (ed.): *Modelling of Logistics Processes and Systems, part XXI Transport Economics and Logistics* vol.68, 71, 78 82. Gdańsk University Press, Gdańsk 2017 - 2019

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MODULE 3. PORT LAW & DIGITALISATION

MIP3.1. Logistics Modelling

Course name: Logistics Modelling			
Course Code: MIP3.1			
Field/area of study: Economics, Management			
University coordinating the course: UG			
Participating universities: UCA			
Total ECTS:	5 ECTS	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description:			
<p>This course aims to achieve selected education objectives in terms of knowledge, skills, and social competence. In relation to logistics modelling, the aims include knowledge on the structure of logistics systems, their processes, activities, events, resources, relations, modelling methods and tools; skills on modelling selected logistics system according to world-class standards, including professional English vocabulary and practical application; and finally, social competencies to take responsibility for the task of logistics modelling</p>			
Course Content:			
<ol style="list-style-type: none"> 1. Logistics as object of modelling <ul style="list-style-type: none"> o Main ontologies (processualism, eventism, reism, relationism, systemism) 			

- o Structure of logistics (logistics systems, logistics processes, logistics activities, logistics events, logistics resources, logistics relations)
 - o Logistics parameters (qualitative, quantitative)
 - o Logistics stakeholders (customers, sale, production, services)
2. Architectures, methods, and tools of logistics modelling
 - o Architectures (IDEF, Zachman Framework, ARIS, SCOR)
 - o Methods/Standards (UML, BPMN, EPC, BPEL, WSDL)
 - o Tools (Sankey diagram, Function tree, Organisational chart, Entity Relationship Model, Product tree, ARIS based software)
 3. Designing a model of selected logistics system
 - o Selection of logistics system for modelling purposes
 - o Drawing logistics processes, activities, events, resources, and relations, with related parameters, according to EPC standard of modelling supported by ARIS based software
 4. Analysis of the model of selected logistics system
 - o Heuristics, Benchmarking, Simulation, Time/cost/quality analysis
 - o Re-designing
 5. Evaluation of the model of selected logistics system
 - o Presentation and discussion
 - o Practical applications (logistics process mining, logistics procedures, certifications, engineering, re-engineering, restructuration, dedicated software development)
 - o Assessment (possibility to take exam and get a certificate issued by Software AG - University Relations)

Keywords: Logistics; Business Process Management; Logistics stakeholders; Logistics parameters; Process-oriented approach

Programme Learning Outcomes (PLOs)

PLO1: Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics.

PLO5: Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Students gain knowledge on the structure of the logistics system.
- Students know ontology, architectures, methods, and tools for logistics modelling.
- Students identify practical applications for his/her model.

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- Students can model complex logistics systems using quantitative and qualitative methods and tools.
- Students can use computer software as well as non-computer tools to acquire and analyse data necessary in his/her professional work to diagnose and model logistics systems to make adequate decisions.

3. Autonomy & Responsibility: Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Students take responsibility for the task of logistics modelling
- Students present creativity during modelling, and discussion
- Students understand the need for continuous learning

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lecture	3	6h
Project	2	4h
Practical Study-Unit	12	25h
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods:

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Classwork	35h	100%

Assessment Criteria:

Development of graphical model of selected logistics system supported by written description of the model according to EPC terminology. The main assessment criteria include: 1) methodological correctness of the graphical model and its written description; 2) complexity of the model.

Study materials/Course literature: (*hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...*)

A. Required literature:

1. C. Mańkowski, J. Chałampowicz: Managing maritime container ports' sustainability: a reference model. "Sustainability", MDPI, vol. 13, nr 18, 2021, p. 1-15. Available [HERE](#)
2. C. Mańkowski: Architectures of logistics processes and systems. "Transport Economics and Logistics", Gdańsk University Press, vol. 68, 2017, p. 25-38. Available [HERE](#)
3. C. Mańkowski: Ontological Foundations for Business Logistic Process Modelling. "Railway Transport and Logistics" 2007, no. 2, p. 30-38. Available [HERE](#)
4. M. Rosing, A-W. Scheer, H. Scheel: *The Complete Business Process Modelling Handbook. Body of Knowledge from Process Modelling to BPM (Volume 1)*. Morgan Kaufmann, Waltham 2015. Available [HERE](#)

B. Additional literature:

1. A.-W. Scheer: ARIS-Business Process Modelling. Springer Verlag, Berlin 2000
2. J. Mendling: Metrics for process models. Springer Verlag, Berlin 2008
3. <https://scor.ascm.org>
4. <https://www.ariscommunity.com>
5. <https://www.softwareag.com>
6. <https://www.idef.com>

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP3.2. Digitalisation and IT Tools

Course name: Digitalisation and IT Tools			
Course Code: MIP3.2			
Field/area of study: Economics, Management			
University coordinating the course: UG			
Participating universities: UALG			
Total ECTS:	5 ECTS	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description:</p> <p>This course has the following aims:</p> <ul style="list-style-type: none"> • To acquaint students with the ecosystem of different IT tools used in the logistics management, including logistics management in ports, and their functionalities and aims • To teach students how to predict a company's performance • To introduce students to data analytics with different digital solutions, including SAP solutions <p>Students will use different types of software with test datasets and databases to support logistics processes in ports. The course will supplement its contents with the previous logistics-oriented courses within the teaching programme (Port Logistics, Supply Chain Management, Logistics Modelling) and, to a smaller extent, with other courses.</p>			

Course Content:

1. Short overview of logistics management approaches, rehearsal of basics of logistics
2. Integrated information systems in logistics
3. Types of digital tools used by different actors in logistics operations (3PLs, 4PLs, warehousing companies, transportation companies, etc.)
4. Overview of the digital tools used specifically in port logistics (ERP, CRM, SCM systems, supply chain control tower, Business Intelligence, etc.)
5. Introduction to SAP (and related) solutions
6. SAP ERP layouts (graphical user interface, web interface - GUI and Fiori) and navigation, basics of integrated information systems in practice
7. Basic transactions in SAP ERP in logistics execution, sales forecasting, capacity planning, launching new offers, managing suppliers and customers (modules in SAP S/4HANA: Sales and Distribution, Logistics Execution, Materials Management, Production Planning and Execution)
8. Case study – SAP Analytics Cloud
9. Case study – SAP S/4HANA Public Cloud
10. Case study – process mining (integration with ARIS tools)
11. Case study – yard logistics (capacity planning, capacity management)
12. Lean Six Sigma in ports – DMAIC cycle, data analysis – qualitative and quantitative methods
13. Case study - Business Process Automation
14. Case study – Sustainability Footprint Management and Sustainability Control Tower

Keywords: digitalisation, information technologies, logistics operations

Programme Learning Outcomes (PLOs)

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO5: Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- The student knows the basic concepts of logistics management, including specifics of their use in ports.
- The student knows the tools supporting the implementation of logistics concepts in ports.
- The student knows the business process scenarios which are carried out in logistics processes in ports.
- The student understands the importance of data analysis and predictive analytics in planning KPI for companies' business operations.

2. **Skills** (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- The students are able to use the digital solutions to analyse the processes and to plan the resources in logistics, including logistics processes in ports.
- The student is able to choose the right tool to carry out the resource planning or data analysis for solving the problem.
- The student is able to use different types of solutions, including the process mining tools, ERP and CRM.

3. **Autonomy & Responsibility**: Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- The student understands the need of constantly updating the knowledge about the tools in logistics management and is active in teaching new tools.
- Student works independently, expanding his skills and knowledge.
- Students are open to new methods for forecasting business processes.

Teaching and Learning Methods. Course activities/Study Loads (workshops, lectures, seminars, field trips, etc.)

See pdf with definitions of teaching and learning methods (separate document).

Method	Number of sessions	Duration
Lecture	4	8 h
Practical Study-Unit	10	21 h
Performance	3	6 h
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods:

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Examination	30 minutes	50
Competencies	10 h	50

Assessment Criteria:

Practical and theoretical parts have equal shares in final grade. Both these parts have to be passed by the student.

In the case of examination, the number of points will be calculated and the grade will be set according to the rules of the program grading.

In the case of competencies, finalising the case studies by students will be assessed.

Study materials/Course literature: (*hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...*)

A. Required literature:

A.1. used during the classes:

1. curricula from SAP University Alliances provided by the lecturer.
2. additional SAP UA materials provided by the lecturer.

A.2. studied by the student:

1. Barkhi R., Kozłowski S. ERP in the Classroom: Three SAP Exercises Focused on Internal Controls. *Journal of Emerging Technologies in Accounting*. 2017, Vol. 14 Issue 1, p. 77-83.
2. Szmelter A., Communication in global supply chains in automotive industry, *Information Systems in Management*. - 2015, Vol. 4, nr 3, p. 205-218.
3. Nozari H., Szmelter-Jarosz A., Ghahremani-Nahr J., Analysis of the challenges of Artificial Intelligence of Things (AIoT) for the smart supply chain (case study: FMCG industries), *Sensors*, 2022, vol. 22, nr 8, s.1-18, Numer artykułu:2931. DOI:10.3390/s22082931.

B. Additional literature:

1. R. Junnarkar, A. Verma, Study on system application product (SAP) -an important enterprise resource planning tool for achievement of organisational vision, mission and operational performance, *International Research Journal of Engineering and Technology (IRJET)*, 2017, 4(2), s. 2063-2068.
2. Permal. S., Norsyihan J., Mohd K. H., Port governance and management: post-pandemic recovery, *MIMA*, 2020.

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP3.3. Introduction to the International Law of the Sea

Course name: Introduction to the International Law of the Sea			
Course Code: MIP3.3			
Field(s)/area(s) of study: International Law/Law of the Sea			
University coordinating the course: UM			
Participating universities: UG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students (e.g those following micro-credentials) to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description: A foundational course which gives the participant an understanding of basic principles within the law of the sea, with particular reference to port regimes. A basic outline of such study unit would consist in the following:</p> <ol style="list-style-type: none"> 1. Introduction to International Law: Nature and Sources of International Law 2. The Concept of Jurisdiction and Sovereignty 3. Maritime Zones 4. Ports (Definition (including baselines); Nature; Legal Regime existing within the port). <p>The study unit closes with a series of interactive seminars. These will focus on material covered in the lectures and will offer a more practical perspective.</p>			

Course Content:

1. Introduction to International Law: Nature and Sources
2. The Concept of Jurisdiction and Sovereignty
3. Historical Overview and the Structure of the Law of the Sea
4. Baselines
5. Internal Waters
6. Territorial Sea
7. Contiguous Zone
8. High Seas
9. Exclusive Economic Zone
10. Nature and Legal Regime of Ports
11. Practical Perspectives of Port Security
12. Interactive Seminar I
13. Interactive Seminar II
14. Interactive Seminar III
15. Interactive Seminar IV
16. Interactive Seminar V
17. Final Seminar VI

Keywords: Law of the Sea, Maritime Zones, Jurisdiction, Port Regime

Programme Learning Outcomes (PLOs):

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Understand the basic jurisdictional concepts in the law of the sea.
- Have a critical understanding of the central role ports play within the law of the sea regime and in commercial matters

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- Be conversant with the legal regime regulating the law of the sea.
- Have a working knowledge of the main principles and provisions of the UN Convention on the Law of the Sea.
- Apply knowledge gained to the status of ports in international law.

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- Be able to conduct an independent advanced level study in the field.
- Be able to manage and develop the context of study.

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lectures	9 Lectures	2 hours (total 9 x 2h = 18h)
Seminars	5 seminars	3 hours (total 5 x 3h = 15h)
	1 seminar	2 hours
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods:

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Presentation	Presentation 15' approx.	100%

Assessment Criteria: The assessment process will take the form of a seminar led by Professor Patricia Vella de Fremeaux and Dr Felicity Attard. Students will deliver a 10-minute presentation based on a PowerPoint presentation they would have prepared. Following this, there will be a 5-minute Q&A session. Marks will be awarded on the basis of the quality of the presentation, the delivery and ability to answer the questions posed.

Study materials/Course literature: (*hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...*)

Legal Instruments

Convention on Fishing and Conservation of the Living Resources of the High Seas (adopted 29 April 1958, entered into force 20 March 1966) 559 UNTS 285.

Convention on the Continental Shelf (adopted 29 April 1958, entered into force 10 June 1964) 499 UNTS 311.

Convention on the High Seas (adopted 29 April 1958, entered into force 30 September 1962) 450 UNTS 11.

Convention on the Territorial Sea and the Contiguous Zone (adopted 29 April 1958, entered into force 10 September 1964) 516 UNTS 205.

United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3.

Lecture Topics and Readings

1. Introduction to International Law: Nature and Sources

David Harris and Sandesh Sivakumaran, *Cases and Materials on International Law* (9th edn, Oxford University Press 2020) Chapters 1 and 2.

James Crawford (ed), *Brownlie's Principles of Public International Law* (9th edn, Oxford University Press 2019) Part I, Chapters 1 and 2.

Malcolm N. Shaw, *International Law* (9th edn, Cambridge University Press 2021) Chapters 1-3.

2. The Concept of Jurisdiction and Sovereignty

James Crawford (ed), *Brownlie's Principles of Public International Law* (9th edn, Oxford University Press 2019) Part I, Chapters 20 and 21.

Malcolm N. Shaw, *International Law* (9th edn, Cambridge University Press 2021) Chapter 11.

3. Historical Overview and the Structure of the Law of the Sea

Donald Rothwell and Tim Stephens, *The International Law of the Sea* (2nd edn, Hart Publishing 2016) Chapter 1.

Robin Churchill, Alan Vaughn Lowe and Amy Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) Chapter 1.

Yoshifumi Tanaka, *The International Law of the Sea* (4th edn, Cambridge University Press 2023) Part I, Chapters 5-7.

4. Baselines

Robin Churchill, Alan Vaughn Lowe and Amy Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) Chapter 2.

5. Internal Waters

Donald Rothwell and Tim Stephens, *The International Law of the Sea* (2nd edn, Hart Publishing 2016) Chapter 2, point V.

Robin Churchill, Alan Vaughn Lowe and Amy Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) Chapter 3.

Yoshifumi Tanaka, *The International Law of the Sea* (4th edn, Cambridge University Press 2023) Part 3, Chapter 2.

6. Territorial Sea

Robin Churchill, Alan Vaughn Lowe and Amy Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) Chapter 4.

Kevin Aquilina, 'Territorial Sea and Contiguous Zone' in David J. Attard (ed), *The IMLI Manual on International Maritime Law: Volume I: The Law of the Sea* (OUP 2014) Chapter 2.

7. Contiguous Zone

Robin Churchill, Alan Vaughn Lowe and Amy Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) Chapter 7.

Kevin Aquilina, 'Territorial Sea and Contiguous Zone' in David J. Attard (ed), *The IMLI Manual on International Maritime Law: Volume I: The Law of the Sea* (OUP 2014) Chapter 2.

8. High Seas

Robin Churchill, Alan Vaughn Lowe and Amy Sander, *The Law of the Sea* (4th edn, Manchester University Press 2022) Chapter 11.

David J. Attard and Patricia Mallia, 'The High Seas' in David J. Attard (ed), *The IMLI Manual on International Maritime Law: Volume I: The Law of the Sea* (OUP 2014) Chapter 11.

9. Exclusive Economic Zone

Umberto Leanza and Maria Cristina Caracciolo, 'The Exclusive Economic Zone' in *The IMLI Manual on International Maritime Law: Volume I: The Law of the Sea* (Oxford University Press 2014) Chapter 7.

David Attard, *The Exclusive Economic Zone in International Law* (Oxford University Press) Chapters 3, 7 and 8.

10. Nature and Legal Regime of Ports

Alan Vaughn Lowe, 'The Right of Entry into Maritime Ports in International Law' (1977) 14 San Diego Law Review 597.

11. Practical Perspectives of Port Security

Natalie Klein, *Maritime Security and the Law of the Sea* (Oxford University Press 2011) Chapter 3, Section B.

Interactive Seminars 12-16

*The suggested readings for the interactive seminars are all of the above. Case studies and questions will be given to participants during the course and the content is based on an understanding of the legal regimes laid out in these materials.

Reference Works

Alexander Prölss (ed), *The United Nations Convention on the Law of the Sea: A Commentary* (CH Beck, Hart, Nomos 2017).

David Joseph Attard and others (eds), *The IMLI Manual on International Maritime Law: Volume I Law of the Sea* (Oxford University Press 2014).

Donald Rothwell and others (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015).

Felicity Grace Attard, *The Duty of the Shipmaster to Render Assistance at Sea under International Law* (Brill 2020).

James Harrison, *Making the Law of the Sea: A Study in the Development of International Law* (Cambridge University Press 2011).

Patricia Mallia, *Migrant Smuggling by Sea: Combating a Current Threat to Maritime Security through the Creation of a Cooperative Framework* (Martinus Nijhoff 2010).

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Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP3.4. Core Issues and Development of Maritime Shipping Law

Course name: Core Issues and Developments of Maritime Shipping Law			
Course Code: MIP3.4			
Field/area of study: Shipping Law			
University coordinating the course: UM			
Participating universities: UALG			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description: The purpose of the study unit is to provide an overview of core issues of shipping law. It will include an overview of the various trade terms adopted in international contracts for the sale of goods and consider their relationship with other international contracts. Other key aspects to be discussed include: the registration of vessels; liability and claims and salvage, towage and pilotage.</p>			
<p>Course Content:</p> <ol style="list-style-type: none"> 1. The Carriage of Good by Sea; 2. Registration of Vessels; 3. Salvage, Towage and Pilotage; 4. The Role and Duties of Crew Members. 			

Keywords: Carriage of Goods by Sea, Registration of Vessels, Crew and Salvage, Towage and Pilotage

Programme Learning Outcomes (PLOs):

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- identify the various laws that regulate Shipping Law
- recognise the importance of the various members of crew

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

1. Be conversant with the legal regime regulating maritime shipping affairs.
2. Become aware of the roles and different persons that manage these vessels.
3. Apply acquired knowledge to particular activities carried out in the functioning of these vessels.

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

1. Be able to conduct an independent advanced level study in the field.
2. Be able to manage and develop the context of study.

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lectures	9 Lectures	2 hours (Total= 18h)
Seminars	5 Seminars 1 Seminar	3 hours (Total= 15h) 2 hours
Total teaching contact hours:	35h	
Self - study time	90h	

Total Learning hours	125h	
Assessment Methods:		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Presentation	15 minutes presentation by each student	100%
Assessment Criteria:		
<p>During the presentation the student must demonstrate a thorough critical understanding of established shipping legal principles and their purpose in the context of international, regional and IMO Conventions.</p>		
Study materials/Course literature: <i>(hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...)</i>		
<p>Main Readings:</p> <ol style="list-style-type: none"> 1. Simone Baughen, Shipping Law (8th ed., Routledge, 2023). 2. Stephen Girvin, Carriage of Goods (3rd ed., OUP, 2022). 3. Charles Mitchell (ed.), The World of Maritime and Commercial Law (Hart Publishing, 2020). 4. Harry Newson, The Law of Salvage, Towage and Pilotage (Legare Street Press, 2022). 5. Charles Debattista and Francis Hornyold-Strickland, Debattista on Bills of Lading in Commodities Trade (4th edn., Bloomsbury Publishing, 2021). 6. Hardinge Stanley Giffard, Halsbury's Laws of England: Shipping and Maritime Law: Vol. 93 (LexisNexis, 2017). 		

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP3.5. Port Activities and the Environment

Course name: Port Activities and the Environment			
Course Code: MIP3.5			
Field/area of study: Environmental Law			
University coordinating the course: UM			
Participating universities: UNIST			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 60% Online 40%	Is it possible for students to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18h (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
Short course description:			
<p>The course is designed to enable students to understand the initiatives taken, at an international and EU-wide level, to reduce the impact on the environment resulting from port operations and shipping activities.</p> <p>The course commences by identifying the International and European legislative framework regulating the various sources of pollution emanating from land-based port activities and ships. This includes initiatives specifically targeting the sources of greenhouse gas emissions with special reference to the EU and IMO Strategy on Maritime Transport Emissions. It will look into the issue of the introduction of alien invasive species which, if left unaddressed, also poses a risk to the marine environment. The impact of sea level rise on ports and to what extent it may be a growing threat to sustainable trade and development will be examined.</p> <p>The Erika and Prestige disasters left a significant mark in the area of environmental protection. In this regard, the course will also look into the devastating</p>			

consequences of these incidents, the awareness raised and the measures taken by the international community to increase safety standards in maritime transport. Particular reference would be made to the various EU packages that were adopted in this regard.

Course Content:

Lectures:

1. Port activities and the environment
2. The Goals of a Sustainable Global Maritime Transportation System.
3. What is Environmental Regulation?
4. The Context: International Environmental Law concerning maritime emissions (I)
5. The Context: International Environmental Law concerning maritime emissions (II)
6. The Regulation of Emissions and other forms of pollution I (emissions from ships)
7. The Regulation of Emissions and other forms of pollution II (emissions from port activities.)
8. Climate Change Law.
9. Mitigation and Adaptation measures of Port Activities to address Climate Change concerns.
10. Legal issues related to Sea Level Rise.
11. Human Rights aspects relevant to environmental law and law relating to sustainable development and sustainable resource management.

Field Trip:

1. Field trip to maritime port regulatory authorities
2. Field trip to a suitable location in Malta/Gdansk illustrating various port activities.

Keywords: environmental law; impact of port activities; sustainable development

Programme Learning Outcomes (PLOs):

PLO3: Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4: Interpret the basic regulatory framework governing the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. **Knowledge:** *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Identify the various sources of pollution caused by activities carried out within and adjacent to harbour areas;
- Recognise the importance of international and regional regulation directed to protect the environment and its effectiveness;
- Assess the adverse impacts on port activities brought about by climate change such as sea level rise;
- Appreciate the contribution of new technologies to address these challenges in this area of environmental law.

2. **Skills** (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- be conversant applicable environmental regulation in this area of maritime law;
- become aware of new threats which may adversely affect port activities;
- apply acquired knowledge to particular activities carried out in ports and on ships.

3. **Autonomy & Responsibility:** *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

Understand concepts and understand the applicable law relevant to port activities and collaborate with the pertinent regulatory port authorities.

Teaching and Learning Methods. Course activities/Study Loads (*workshops, lectures, seminars, field trips, etc.*)

Method	Number of sessions	Duration
Lectures	14	2h (Total 28h)
Site Visit	2	3.5h (Total 7h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	
Assessment Methods		
Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Seminar/Presentation	20-minute presentation	25%

Seminar/Presentation	20-minute presentation	25%
Seminar/Presentation	20-minute presentation	25%
Seminar/Presentation	20-minute presentation	25%
<p>Assessment Criteria: During the four presentations (20 minutes each) the students must demonstrate a thorough understanding of established environmental legal principles and their purpose in the context of international, regional (EU) and IMO Conventions.</p>		
<p>Study materials/Course literature:</p> <p>Turcanu Marcu, Andra Luciana, Gasperotti, Carmen; (Galati University Press, 2019), Port management – challenges in adapting their activities to new environment regulations.</p> <p>Elio Canestrelli, Marco Corazza, Giuseppe De Nadai, Raffaele Pesenti, Managing the Ship Movements in the Port of Venice, Networks and Spatial Economics, 17, 861-887 (2017)</p> <p>The IMLI manual on international maritime law. Volume III, Marine environmental law and maritime security law. (David Joseph Attard editor; IMO International Maritime Law Institute, 2016</p> <p>EU Law</p> <p>Directive 2001/105/EC of the European Parliament and of the Council of 19 December 2001 amending Council Directive 94/57/EC on common rules and standards for ship inspection and survey organisations and for the relevant activities of maritime administrations.</p> <p>Directive 2001/106/EC of the European Parliament and of the Council of 19 December 2001 amending Council Directive 95/21/EC concerning the enforcement, in respect of shipping using Community ports and sailing in the waters under the jurisdiction of the Member States, of international standards for ship safety, pollution prevention and shipboard living and working conditions.</p> <p>Directive 2002/59/EC of the European Parliament and of the Council of 27 June 2002 establishing a Community vessel traffic monitoring and information system and repealing Council Directive 93/75/EEC.</p> <p>Directive 2009/16/EC of the European Parliament and of the Council of 23 April 2009 on port State control (Text with EEA relevance).</p> <p>Directive 2009/21/EC of the European Parliament and of the Council of 23 April 2009 on compliance with flag State requirements (Text with EEA relevance).</p> <p>Directive 2009/20/EC of the European Parliament and of the Council of 23 April 2009 on the insurance of shipowners for maritime claims (Text with EEA relevance).</p>		

Directive 2010/65/EU of the European Parliament and of the Council of 20 October 2010 on reporting formalities for ships arriving in and/or departing from ports of the Member States and repealing Directive 2002/6/EC Text with EEA relevance.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

Regulation (EC) No 417/2002 of the European Parliament and of the Council of 18 February 2002 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) No 2978/94.

Regulation (EC) No 1726/2003 of the European Parliament and of the Council of 22 July 2003 amending Regulation (EC) No 417/2002 on the accelerated phasing-in of double-hull or equivalent design requirements for single-hull oil tankers.

Regulation (EU) No 530/2012 of the European Parliament and of the Council of 13 June 2012 on the accelerated phasing-in of double-hull or equivalent design requirements for single-hull oil tankers.

Regulation (EC) No 417/2002 of the European Parliament and of the Council of 18 February 2002 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) No 2978/94.

Regulation (EC) No 1406/2002 of the European Parliament and of the Council of 27 June 2002 establishing a European Maritime Safety Agency (Text with EEA relevance).

Regulation (EU) No 100/2013 of the European Parliament and of the Council of 15 January 2013 amending Regulation (EC) No 1406/2002 establishing a European Maritime Safety Agency Text with EEA relevance.

Regulation (EU) 2019/1239 of the European Parliament and of the Council of 20 June 2019 establishing a European Maritime Single Window environment and repealing Directive 2010/65/EU.

International Conventions

United Nations Convention on the Law of the Sea. (adopted 10 December 1982, entered into force 16 November 1994). 1833 UNTS 3

International Convention for the Prevention of Pollution from Ships and Protocol (MARPOL). (adopted 2 November 1973, entered into force 2 October 1983), 2057 UNTS 68

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (and the London Protocol). (adopted 29 December 1972, entered into force 30 August 1975). 1046 UNTS 120

International Convention for the Control and Management of Ships' Ballast water and sediments. (adopted 13 February 2004, entered into force 8 September 2017). 3282 UNTS

International Convention on the Control of Harmful Anti-fouling Systems on Ships. (adopted 5 October 2001, entered into force 17 September 2008), 3356 UNTS

International Convention for the Safe and Environmentally Sound Recycling of Ships. (adopted 15 May 2009, entry into force 16 June 2025),

International Maritime Organisation Conventions

Guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species. Resolution MEPC.378(80) adopted 7 July 2023

European Convention on Human Rights (adopted 4 November 1950, entry into force 3 September 1953) ETS 5

Inclusiveness: The course will foster throughout an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating a safe and inclusive but stimulating and challenging teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP3.6. Research Methods

Course name: Research Methods			
Course Code: MIP3.6			
Field/area of study: Quantitative Methods			
University coordinating the course: UALG			
Participating universities: UM			
Total ECTS:	5	Language of instruction:	English
Mode of Delivery:	Onsite 70% Online 30%	Is it possible for students (e.g., those following microcredentials) to follow the online sessions remotely?	Yes
Course type:	Compulsory		
Total workload per ECTS Credit (25 hours)	1 ECTS = 7h (teaching contact hours) + 18 (self - study time)		
Name of Coordinating Lecturer:			
Co-lecturer/s (if any):			
Estimated Student Numbers:			
Pre-requisites			
<p>Short course description: This course unit intends to address the main methodological strategies used in Port Management & Logistics research, and the associated processes, techniques and tools.</p> <p>On completion of this course, a student should be able to: 1) Identify a research topic; 2) Identify and critically assess relevant literature; 3) Identify the objectives/research questions to be addressed; 4) Select and implement the most appropriate research strategy to address the objectives/research questions; 5) Identify the most appropriate methods for data collection, and the most suitable techniques for data analysis, either using NVivo or SPSS; 6) Write a proposal of a dissertation/project/internship report</p>			
Course Content:			
1. Research planning and design in Port Management & Logistics			

1.1 Models and steps in research design: quantitative, qualitative and mixed method approaches

1.2 Data collection techniques: survey, case study, interview, focus group, Delphi (expert) panel, nominal group technique; participant observation

1.3 Review of literature

2. Qualitative Methodologies

2.1 The multiplicity of analytical approaches

2.2 The typical phases of qualitative data analysis

2.3 Thematic Analysis of Contents

2.4. The use of the software NVivo in the analytical process

3. Quantitative Methodologies

3.1 Types of variables and measurement scales

3.2 Descriptive Analysis in Port Management and Logistic and Applications in SPSS or in R.

3.3 Inferential Analysis in Port Management and Logistic in SPSS or in R.

3.4 Multivariate analysis in Port Management and Logistic: Objectives and applications

4. Examples

Keywords: Quantitative and Qualitative methods; Research Design; Data processing.

Programme Learning Outcomes (PLOs):

The students will be able to:

PLO1. Interpret and to apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics.

PLO2. Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics.

PLO3. Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics.

PLO4. Know how to interpret the basic regulatory framework governing the field of Port Management and Logistics.

PLO5: Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.

Course Learning Outcomes (CLOs):

1. Knowledge: *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Select and implement the most appropriate research strategy to address the objectives/research questions;
- Identify the most appropriate methods for data collection, and the most suitable techniques for data analysis, either using NVivo or SPSS;
- Write a proposal of a dissertation/project/internship report

2. Skills (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- Identify a research topic;
- Identify and critically assess relevant literature;
- Identify the objectives/research questions to be addressed;

3. Autonomy & Responsibility: *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- Understand the main methodological strategies used in Port Management & Logistics research;
- Distinguish the different modalities of a Master project;
- Recognize relevant themes for a Master project in Port Management & Logistics;
- Undertake literature searches in electronic databases;
- Assess the quality of searched literature;
- Design a work plan for the Master project/dissertation.

Teaching and Learning Methods. Course activities/Study Loads *(workshops, lectures, seminars, field trips, etc.*

The teaching methodologies combine an expository approach, in which teachers present and discuss the syllabus, with an approach that invites students to actively participate in classes. It is important to add tutorials, which are aimed to follow/guide students in the learning process and the process of undertaking individual work assignments, as well as to clarify doubts about the topics addressed in classes. A wide range of teaching resources are used with the purpose of stimulating discussion and interest by the syllabus.

The methodologies to be used include expository and participatory methods, discussion spaces, group learning, investigation and research work, class presentations (by students), case studies and problem solving.

Method	Number of sessions	Duration
Lectures	10	2h (Total 20h)
Seminar	5	1h (Total 5h)
Performance	5	2h (Total 10h)
Total teaching contact hours:	35h	
Self - study time	90h	
Total Learning hours	125h	

Assessment Methods:

Elaboration, by each student, of a report with a literature revision of the chosen thematic area to develop in the Master's Dissertation, including the analysis of the methodologies to be developed in that specific scientific area of knowledge.

The students' assessment is individual and is focused on the Master project. In order to be approved in the Course, students should obtain, at least, a grade of 9,5 out of 20. The norms for writing the project will be made available by the teaching team

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Written Report	4000 - 4500 words	50%
Oral Examination	20 minutes presentation and 40 minutes questions	50%

Assessment Criteria:

Elaboration, by each student, of a report with a literature revision of the chosen thematic area to develop in the Master's Dissertation, including the analysis of the methodologies to be developed in that specific scientific area of knowledge.

During the oral presentation (1h) the student must demonstrate the ability to identify and critically assess relevant literature and identify the objectives/research questions to be addressed in the master's dissertation.

Study materials/Course literature: (hand-outs and reader; obligatory literature; links to self-study sources; literature database; links to relevant websites; short video clips; recommended (optional) literature, ...)

Aspers, P., Corte, U. What is Qualitative in Qualitative Research. *Qual Sociol* 42, 139–160 (2019). <https://doi.org/10.1007/s11133-019-9413-7>

Bryman, A. (2016). *Social Research Methods* (5th Edition). Oxford. Oxford University Press.

Caelli, K., Ray, L., Mill, J. (2003). 'Clear as Mud': Toward Greater Clarity in Generic Qualitative Research. *International Journal of Qualitative Methods*, 2(2), 1-13.

Creswell, J. W. (2009). *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: SAGE Publications.

Hair, J., Anderson, R., Tatham, R. and W. Black (2010), *Multivariate Data Analysis*, 7th edition. Prentice Hall.

Howell, D. (2018). *Fundamental Statistics for the Behavioural Sciences* (9th Edition), London: Cengage Press.

Page, M. J. et al. (2021) The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Systematic Reviews*, 10(1), 89.

Pickering, C., & Byrne, J. (2014) The benefits of publishing systematic quantitative literature reviews for PhD candidates and other early-career researchers. *Higher Education Research & Development*, 33 (3), 534-548.

Ritchie, J., Lewis, J., Nicholls, C. M. and Ormston, R. (2014), *Qualitative Research Practice. A Guide for Social Science Students & Researchers*, 2nd edition, Los Angeles: Sage.

Inclusiveness: Throughout the course, it is believed in fostering an open, welcoming atmosphere where diversity is recognised, respected, and seen as a source of strength and benefit to the SEA-EU community and beyond. We are committed to creating an inclusive teaching and learning environment where barriers to success are removed, and individuals' access and participation needs are addressed and catered to.

Ethics: Ethical considerations need to be part of the transdisciplinary research methodology

Quality Assurance: This course is subject to quality procedures applicable at the programme level as defined in the joint programme literature.

MIP4.1. OPTION A. INDUSTRIAL MASTER'S DISSERTATION

Course name: Industrial Master's Dissertation	
Course Code: MIP4.1	
Total ECTS	30 (20 Internships + 10 Dissertation)
Language of instruction	English
Course type	Elective
Name of supervisor:	
Name of co-supervisor or mentor:	
Pre-requisites	Completion of Y1 (60 ECTS)
Short course description: This course unit intends to address the main methodological strategies used in Port Management & Logistics research, and the associated processes, techniques and tools.	
Programme Learning Outcomes (PLOs): The students will be able to: PLO 1. Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics. PLO 2. Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics. PLO 3. Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics. PLO 4. Know how to interpret the basic regulatory framework governing the field of Port Management and Logistics. PLO 5. Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.	

Course Learning Outcomes (CLOs):

1. Knowledge: knowledge is described as theoretical and/or factual.

By the end of the course the student will be able to:

- Produce a document with a minimum of 25 pages;
- The scope of the work is linked to the student's internship (minimum 3 months).

2. Skills (know-how): Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).

By the end of the course the student will be able to:

- Identify a research topic;
- Identify and critically assess relevant literature;
- Identify the objectives/research questions to be addressed;

3. Autonomy & Responsibility: Ability to utilise knowledge and skills in an independent manner in different situations.

By the end of the course the student will be able to:

- Understand the main methodological strategies used in Port Management & Logistics research;
- Distinguish the different modalities of a Master project;
- Recognize relevant themes for a Master project in Port Management & Logistics;
- Undertake literature searches in electronic databases.

Assessment Methods:

Elaboration, by each student, of a report with a literature revision of the chosen thematic area to develop in the Master's Dissertation, including the analysis of the methodologies to be developed in that specific scientific area of knowledge, following the Guidelines for Master's Dissertation

The students' assessment is individual and is focused on the Master Internship.

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Report	Length and font size: the text, excluding appendices and bibliography or references, should have a minimum of 25 pages — in an A4 format and Times New Roman 12 point or an equivalent font and size.	100%

Oral Examination	20 minutes presentation and 40 minutes questions (maximum)	
Assessment Criteria: Elaboration, by each student, of a document following the Guidelines for Master's Dissertation, c a thematic area to be developed. Oral defence: presentation (maximum 20 minutes) and public discussion (maximum 40 minutes) with the intervention of all jury members.		

MIP4.2. OPTION B. RESEARCH TRACK

Course name: Research track. Master's Dissertation	
Course Code: MIP4.2	
Total ECTS:	30
Language of instruction:	English
Course type:	Elective
Name of supervisor:	
Name of co-supervisor:	
Pre-requisites	Completion of Y1 (60 ECTS)
Short course description*: This course unit intends to address the main methodological strategies used in Port Management & Logistics research, and the associated processes, techniques and tools. N/A	
Programme Learning Outcomes (PLOs): The students will be able to: PLO 1. Interpret and be able to properly apply the scientific method to analyse and formulate judgements, either experimental and/or theoretical, in the field of Port Management and Logistics. PLO 2. Demonstrate proficiency in the use of scientific bibliography, databases and relevant information, and in the analysis of scientific and technical documents in the field of Port Management and Logistics. PLO 3. Compare, review and develop reports, presentations and/or academic publications in the field of Port Management and Logistics. PLO 4. Know how to interpret the basic regulatory framework governing the field of Port Management and Logistics. PLO5: Determine and apply Information and Communication Technologies, both for general and specific use, in the field of Port Management and Logistics.	

Course Learning Outcomes (CLOs):

1. **Knowledge:** *knowledge is described as theoretical and/or factual.*

By the end of the course the student will be able to:

- Produce a document with a minimum of 75 pages;
- The scope of the work is to develop knowledge and competences acquired during the master degree and include research competences and scientific knowledge to organisational problems.

2. **Skills** (know-how): *Ability to utilise knowledge to solve problems or tasks (cognitive, practical, creative and communication skills).*

By the end of the course the student will be able to:

- Identify a research topic;
- Identify and critically assess relevant literature;
- Identify the objectives/research questions to be addressed;

3. **Autonomy & Responsibility:** *Ability to utilise knowledge and skills in an independent manner in different situations.*

By the end of the course the student will be able to:

- Understand the main methodological strategies used in Port Management & Logistics research;
- Distinguish the different modalities of a Master project;
- Recognize relevant themes for a Master project in Port Management & Logistics;
- Undertake literature searches in electronic databases.

Assessment Methods:

Elaboration, by each student, of a document with a literature revision of the chosen thematic area to develop in the Master's Dissertation, including the analysis of the methodologies to be developed in that specific scientific area of knowledge, following the **Guidelines for Master's Dissertation**

The students' assessment is individual and is focused on the Master's dissertation.

Method	Duration in hours or length in words (as applicable)	Percentage Weighting
Report	Length and font size: the text, excluding appendices and bibliography or references, should have a minimum of 75 pages.	100%

Oral Examination	20 minutes presentation and 40 minutes questions (maximum)	
Assessment Criteria: Elaboration, by each student, of a document following the Guidelines for Master's Dissertation, choosing a thematic area to be developed. Oral defence: presentation (maximum 20 minutes) and a public discussion maximum 40 minutes, with the intervention of all jury members.		