University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Cargo Handling and Stability							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
CRG202	II	Spring	3	5	2	2	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				20	30	30	20
Course Venue and Time				Tuesday / 10:30 – 13:20			
Instructor information				**Cpt. Mehmet Emin Debeş** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4060 mehmetemin.debes@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides students with a comprehensive understanding of cargo handling operations and ship stability principles. It covers the structural arrangements of cargo spaces, the use and maintenance of cargo handling equipment, and the preparation of holds for safe loading and discharging. Emphasis is placed on the effects of different cargo types—such as containers, bulk cargo, grain, and hazardous goods—on a ship's seaworthiness, stability, and safety. Students will learn methods of stowage, securing, and protection of cargo, as well as procedures for inspection, damage detection, and corrosion prevention. The course also introduces stability calculations, including displacement, draft surveys, trim, GM, stress analysis, and the impact of density variations. Practical applications focus on solving stability and trim problems after cargo operations, with special attention to safety requirements, international regulations, and best practices in cargo management.
Course Aims and Objectives	The primary aim of this course is to provide students with the fundamental knowledge and skills required to manage cargo operations safely and to ensure ship stability under various loading conditions. The course also aims to develop a strong understanding of the relationship between cargo handling, ship structure, and overall seaworthiness. • Understand the design and functions of cargo spaces and cargo handling equipment. • Acquire knowledge of different cargo types (general cargo, container, bulk cargo, grain, and hazardous cargo) and their impact on ship operations and safety. • Learn safe practices of cargo stowage, securing, and protection to minimize risks during voyages. • Identify structural elements critical to ship safety and develop the ability to recognize, inspect, and report damage or corrosion. • Apply international safety regulations and survey procedures in cargo handling and ship maintenance. • Perform essential stability calculations, including displacement, draft surveys, trim, GM, and stress analysis. • Solve practical problems related to stability, trim, and stress before and after cargo operations.

	• Develop a professional awareness of the importance of cargo safety, stability management, and compliance with international maritime standards.
Course Learning Outcomes	**CLO1:** Identify and describe the main cargo spaces, cargo handling equipment, and structural arrangements used on different types of ships. **CLO2:** Explain the principles of safe cargo handling, stowage, securing, and preservation of cargo under various operational and environmental conditions. **CLO3:** Analyze the effects of different cargo types (e.g., bulk, containers, deck cargo, dangerous goods) on ship stability, seaworthiness, and safety. **CLO4:** Apply appropriate inspection and monitoring techniques to detect damage, corrosion, or structural failures in cargo holds, hatches, and ballast tanks. **CLO5:** Demonstrate knowledge of international regulations and survey programs related to cargo safety and ship structural integrity. **CLO6:** Perform displacement, draft survey, trim, stability, and stress calculations using theoretical and practical methods. **CLO7:** Evaluate the impact of cargo distribution and environmental factors on the ship's trim, stability, and longitudinal balance. **CLO8:** Develop cargo plans and calculate loading/unloading operations with consideration for safety, efficiency, and regulatory compliance. **CLO9:** Communicate effectively during cargo operations to ensure coordination, safety, and proper record-keeping. **CLO10:** Integrate theoretical and practical knowledge to optimize cargo handling and ship stability in real-world operational scenarios.

Content of the Course

Week	*Subject*
1	Introduction to Cargo Handling and Ship Stability • Overview of cargo operations and stability concepts • Types of cargo ships
2	Cargo Spaces and Equipment I • Cargo compartments and arrangements • Cargo handling gears: winches, derricks, cranes
3	Cargo Spaces and Equipment II • Hatch covers and their maintenance • Preparation of dry cargo holds for loading • Cargo stowage and securing
4	Cargo Operations • Preparations for loading and discharging • Supervision and safety measures during cargo operations
5	Effect of Cargo on Seaworthiness I • Draft, trim, and stability in relation to cargo distribution • Cargo protection methods
6	Effect of Cargo on Seaworthiness II • Deck cargo considerations • Containerized cargo handling • Bulk cargo operations
7	Special Cargo Types • Carriage of bulk grain • Hazards and precautions with dangerous, hazardous, and harmful cargoes
8	Safe Cargo Handling and Supervision I • Supervision of cargo operations • Effective communication during loading and discharging • Identification of damage due to corrosion and heavy weather
9	Safe Cargo Handling and Supervision I • Supervision of cargo operations

	• Effective communication during loading and discharging • Identification of damage due to corrosion and heavy weather
10	Inspection Procedures and Damage Assessment • Reliable methods for damage detection and assessment • Objectives of the Enhanced Survey Program (ESP)
11	Cargo Handling Equipment and Safety • Maintenance and safety of cargo gears • Tanker cargo systems: piping arrangements and pumping systems • Safe entry into enclosed spaces
12	Cargo Planning • General cargo calculations and planning for different ship types
13	Ship Trim, Stability, and Stress Calculations I • Displacement and draft survey methods • Trim calculation • GM (metacentric height) determination
14	Ship Trim, Stability, and Stress Calculations II • Stress calculations • Longitudinal stability and the effect of density changes • Transfer problems
15	Ship Trim, Stability, and Stress Calculations II • Stress calculations • Longitudinal stability and the effect of density changes • Transfer problems

Methods and Techniques used in the Course

Lectures and Presentations: Core theoretical concepts are delivered through instructor-led lectures supported by multimedia presentations.

Classroom Discussions: Interactive discussions are encouraged to enhance critical thinking and problem-solving related to cargo handling and stability cases.

Case Studies and Problem-Solving: Real-life scenarios and problem sets are analyzed to apply theoretical knowledge to practical situations, particularly in cargo damage, survey programs, and stability challenges.

Mathematical and Simulation-Based Exercises: Stability, stress, draft survey, and trim calculations are practiced through structured exercises and software-supported simulations.

Demonstrations: Cargo handling equipment, safety procedures, and inspection methods are introduced via demonstrations, videos, and technical manuals.

Collaborative Group Work: Students work in teams to develop cargo plans, conduct inspections, and present findings, promoting teamwork and professional communication.

Assignments and Reports: Students prepare written reports and assignments to deepen their understanding of cargo operations and vessel stability.

Examinations and Quizzes: Regular assessments are used to evaluate students' mastery of theoretical knowledge and practical applications.

Sample Questions

- **Define and compare** the main types of cargo ships, giving examples of their cargo arrangements and operational uses.
- **Explain** the procedures for preparing a cargo hold before loading dry bulk cargo.
- A vessel has a **displacement of 22,000 tons** at a draft of 9.2 m. If 1,500 tons of cargo is loaded uniformly, calculate the new draft using the given TPC.
- **Discuss** the main causes of cargo damage during loading and discharging operations and propose preventive measures.
- **Illustrate** the effects of loading containers on deck with respect to ship stability and seaworthiness.
- A ship trims by the stern after loading. **Explain** the factors causing this condition and describe how it can be corrected.
- **Calculate** the metacentric height (GM) given displacement, KB, BM, and KG values. Comment on the ship's stability.
- **Describe** the safety precautions that must be taken before entering an enclosed space such as a cargo hold or ballast tank.
- **Evaluate** the role of the Enhanced Survey Program in maintaining cargo hold integrity and preventing structural failure.
- **Prepare** a cargo plan for loading a combination of bulk and container cargo, ensuring compliance with stability requirements.

Materials Used in the Course

Core Textbooks

- Eyres, D.J., & Bruce, G.J. *Ship Construction*. Elsevier.
- Rawson, K.J., & Tupper, E.C. *Basic Ship Theory*. Butterworth-Heinemann.
- Branch, A.E. *Elements of Shipping*. Routledge.

International Conventions and Guidelines

- *International Convention for the Safety of Life at Sea (SOLAS)*.
- *International Maritime Solid Bulk Cargoes (IMSBC) Code*.
- *International Maritime Dangerous Goods (IMDG) Code*.
- *Code of Safe Practice for Cargo Stowage and Securing (CSS Code)*.
- *Enhanced Survey Program (ESP) Guidelines*.

Supplementary Materials

- Cargo handling manuals, stability booklets, and trim & stability tables of various ship types.
- Hydrostatic curves and cross curves of stability for practice exercises.
- IMO circulars and technical reports on cargo safety.

Digital and Simulation Tools

- Ship stability and cargo planning software.
- Onboard cargo management and loading computer systems.
- Multimedia presentations and video materials demonstrating cargo operations and accident case studies.

Practical Training Resources

- Shipboard visits and field observations where applicable.
- Laboratory models for stability experiments.
- Case studies of real cargo handling incidents and stability failures.

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	3	3	3	2	3	2	2	2	2	3
PO2	1	2	2	2	2	3	2	2	2	2
PO3	2	2	3	2	3	3	2	3	2	3
PO4	1	2	2	2	2	3	2	2	2	2
PO5	3	3	3	2	3	3	3	3	2	3
PO6	2	2	2	2	2	2	2	2	2	2
PO7	1	1	1	1	1	1	2	1	1	2
PO8	1	1	1	1	1	1	1	1	1	1
PO9	1	1	1	1	1	1	1	1	0	1
PO10	1	2	2	2	2	2	2	2	2	2
PO11	1	1	1	1	1	1	1	1	1	2
PO12	1	1	1	1	1	1	1	1	1	2
PO13	1	1	2	3	3	2	1	1	1	3
PO14	1	1	2	3	3	2	1	1	1	3
PO15	1	1	2	3	3	2	1	1	1	3

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
CLO1 – Cargo Spaces & Equipment	Lecture, Multimedia Presentation, Ship Model Demonstrations	Quizzes, Assignments, Lab/Practical Exercises
CLO2 – Safe Cargo Handling Principles	Lecture, Case Studies, Hands-on Exercises	Assignments, Practical Exams, Observation
CLO3 – Cargo Effects on Stability & Safety	Problem-Solving Sessions, Simulation Exercises	Assignments, Quizzes, Practical Exercises
CLO4 – Inspection & Monitoring Techniques	Lab Exercises, Hands-on Demonstrations	Lab Reports, Observation, Practical Exams
CLO5 – Cargo Regulations & Survey Programs	Lecture, Tutorials, Discussions	Quizzes, Assignments, Participation
CLO6 – Displacement, Draft, Trim & Stress Calculations	Lecture, Problem-Solving Sessions, Simulation Exercises	Assignments, Midterm Exam, Practical Exercises
CLO7 – Cargo Distribution & Environmental Effects	Case Studies, Simulation Exercises	Assignments, Practical Exams, Quizzes
CLO8 – Cargo Planning & Operations	Scenario-Based Exercises, Group Projects	Project Reports, Lab Exercises, Assignments
CLO9 – Communication during Cargo Operations	Role-Playing, Bridge/Deck Simulations	Observation, Assignments, Practical Exams
CLO10 – Applied Cargo & Stability Integration	Integrated Simulations, Case Studies, Problem-Based Learning	Project Reports, Practical Exams, Assignments

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**3**	**45**
Midterm Exam	**1**	**3**	**3**
Preparation for Midterm Exam	**1**	**6**	**6**
Final Exam	**1**	**3**	**3**
Preparation for Final Exam	**1**	**6**	**6**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	**1**	**15**	**15**
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**2**	**10**	**20**
Individual Reading / Research	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**128**
ECTS Credit			**5**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	2	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	1	10
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	40
Total	**5**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Emergency Procedures							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
EMR202	II	Spring	3	3	2	2	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				30	-	-	70
Course Venue and Time				Friday / 09:30 – 13:20			
Instructor information				**Cpt. Çağrı Deliceırmak** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4040 cagri.deliceırmak@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course offers a comprehensive overview of emergency procedures on board ships, with a focus on the safety and security of the crew, passengers, cargo, and the vessel. It covers the practical and theoretical aspects of emergencies, including collision, grounding, and damage control, as well as precautionary measures, emergency response, and post-incident mitigation. The course also addresses the operation and maintenance of lifesaving and firefighting systems, emergency steering and backup arrangements, coordination of rescue operations, and effective communication during emergencies. Additionally, the course introduces medical care management on board, including the use of international medical guides, first aid for hazardous cargo incidents, and medical emergency communication in English. Students will acquire the knowledge and skills necessary to respond efficiently to maritime emergencies, ensuring compliance with international regulations and safety standards.
Course Aims and Objectives	The course aims to equip students with the theoretical knowledge and practical skills required to effectively manage emergencies aboard ships, ensuring the safety of crew, passengers, and the vessel. It aims to develop an understanding of international maritime safety regulations, emergency procedures, and damage-control strategies. • Gain an understanding of how to prevent, respond to, and report emergencies such as collisions, grounding, stranding, beaching, structural damage, fire, explosion, pollution, blackout, steering, and engine failures. • Provide skills for effective emergency steering and backup arrangements. • Understand methods of emergency towing and towing arrangements. • Develop contingency and damage control planning, as well as enhance decision-making, leadership, coordination, and situational awareness skills for managing emergencies. • Familiarize with international maritime safety standards, regulations, and emergency preparedness best practices. • Develop the capability to operate and maintain lifesaving, firefighting, and other emergency systems to ensure safety on board. • Learn the coordination of search and rescue operations at sea.

	• Acquire knowledge in medical care management aboard ships, encompassing first aid, utilization of medical guides, and emergency communication protocols.
Course Learning Outcomes	**LO1**: Demonstrate knowledge and proficiency in emergency procedures and apply appropriate measures to mitigate risks. **LO2**: Demonstrate knowledge and proficiency in emergency steering and towing. **LO3**: Develop, execute, and assess contingency and damage control strategies to maintain vessel integrity during emergencies. **LO4**: Demonstrate leadership, decision-making, and situational awareness skills essential for managing onboard emergencies. **LO5**: Demonstrate awareness of international maritime safety standards and regulations and apply them during emergencies. **LO6**: Ensure the safety and security of the vessel, crew, and environment through the effective utilization of lifesaving, firefighting, and other emergency response systems. **LO7**: Coordinate search, rescue, and assistance operations in compliance with international maritime regulations. **LO8**: Adhere to international medical guidelines and deliver medical care within maritime environments, encompassing effective medical communication.

Content of the Course

Week	*Subject*
1	**Introduction to Emergency Procedures** Terminology and related maritime English terms Overview of shipboard emergencies Roles and responsibilities during emergencies
2	**Collision, Grounding, and Damage Control – Part 1** Terminology and related maritime English terms Precautions when beaching and grounding a vessel Actions immediately before and after beaching and grounding
3	**Collision, Grounding, and Damage Control – Part 2** Terminology and related maritime English terms Refloating grounded ships with or without assistance Emergency actions following loss of watertight integrity
4	**Damage Control Procedures** Terminology and related maritime English terms Implementation of shipboard damage control measures Organization and responsibilities of damage control teams
5	**Steering and Manoeuvring in Emergencies** Terminology and related maritime English terms Emergency steering systems, Contingency procedures for steering failure
6	**Backup Arrangements and Emergency Towing** Terminology and related maritime English terms Alternative propulsion and steering systems Emergency towing procedures and techniques
7	**Coordination of Rescue and Assistance Operations** Terminology and related maritime English terms Ship-to-ship, ship-to-shore and ship-to-air coordination in SAR operations Coordination and collaboration with search and rescue authorities
8	**Safety and Security of Crew and Passengers** Terminology and related maritime English terms Maintaining safety during evacuation and emergencies Duties and responsibilities in life-saving and firefighting operations
9	**Lifesaving Appliances and Firefighting Systems – Part 1**

	Terminology and related maritime English terms Regulations for life-saving appliances Organization of fire and abandon-ship drills
10	**Lifesaving Appliances and Firefighting Systems – Part 2** Terminology and related maritime English terms Operational maintenance of lifesaving, firefighting, and safety systems Measures to protect all personnel during emergencies
11	**Post-Incident Damage Mitigation** Terminology and related maritime English terms Actions to reduce damage after fire, explosion, collision, or grounding Restoration of ship stability and integrity
12	**Development of Emergency and Damage Control Plans** Terminology and related maritime English terms Preparation of contingency plans for various emergencies Integration of fire prevention and firefighting systems
13	**Report on Pollution** Terminology and related maritime English terms External Communication and Reporting of Pollution Legal aspects and responsibilities
14	**Medical Care on Board** Terminology and related maritime English terms International medical publications and guides Shipboard medical responsibilities Use of the International Code of Signals for medical emergencies First aid procedures for hazardous cargo incidents Sending and receiving medical emergency messages
15	**Review and Final Evaluation** Recap of emergency procedures Practical assessment and scenario-based exercises Evaluation of student competence in shipboard emergency procedures

Methods and Techniques used in the Course

Lectures and Presentations: In-depth explanations of emergency procedures, safety protocols, and maritime regulations.

Case Studies: Analysis of past maritime emergencies to identify best practices and lessons learned.

Simulation Exercises: Practical exercises using ship simulators to practice collision, grounding, and emergency response scenarios.

Demonstrations: Hands-on demonstrations of lifesaving equipment, firefighting systems, and damage control techniques.

Workshops: Interactive sessions for planning and coordinating emergency operations, including crew and passenger safety.

Role-Playing: Simulated onboard emergencies to develop decision-making, leadership, and communication skills.

Group Discussions: Collaborative analysis of safety protocols, emergency plans, and international regulations.

Practical Drills: Conducting lifeboat, firefighting, and medical emergency drills to reinforce operational readiness.

Multimedia Tools: Use of videos, diagrams, and online resources to visualize emergency procedures and safety equipment.

Assessment and Feedback: Continuous evaluation through quizzes, practical exercises, and scenario-based assessments to reinforce learning.

Sample Questions

- Describe the steps to be taken immediately before and after a ship runs aground to ensure safety and minimize damage.
- Explain the procedures for controlling flooding and structural damage after a collision at sea.
- How would you organize and coordinate a search and rescue operation following a man-overboard incident?
- Discuss the proper use and maintenance of lifesaving appliances and firefighting systems on board.
- Explain how to develop and implement an emergency response plan for fire or explosion on a ship.
- Describe the procedures for emergency steering and backup arrangements in case of steering failure.
- How is medical care provided on board, and what international medical guides and communication protocols are used?

Materials Used in the Course

Textbooks and Reference Books

- Lecturer Notes, Related IMO Model Courses and STCW (Standards of Training, Certification, and Watchkeeping) manuals.
- SOLAS Consolidated Edition, MARPOL Practical Guide, LSA Code, Marine Emergencies: For Masters and Mates, International Medical Guide for Ships
- Related IMO Model Courses and STCW (Standards of Training, Certification, and Watchkeeping) manuals.
- Maritime Safety textbooks covering onboard emergencies, shipboard emergency procedures, including collision, grounding, flooding, fire, explosion, pollution, and injuries
    - SOLAS Consolidated Edition
    - LSA Code
    - FSS Code
    - The Fire Fighting System Guidance
    - Fire Prevention and Fire Fighting
    - Emergency Procedures and General Check Lists at Sea
    - Guidelines for Contingency Plans
    - International Medical Guide for Ships

Supplementary Resources

- Instructional videos demonstrate emergency response techniques, personal safety, and the use of protective equipment.
- Interactive simulations of onboard emergency scenarios, including collision, flooding, fire, and piracy attacks.
- Online resources from the International Maritime Organization (IMO) and maritime safety training platforms.
- Mannequin and CPR training devices for first aid and life-saving practice.
- Personal Safety Equipment, including Life Jacket, Life Buoy, Immersion Suits, and TPAs.
- Personal protective equipment (PPE) such as helmets, gloves, and goggles.

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	3	3	3	3	3	3	3	2	x	x
PO2	3	3	3	2	2	2	2	3	x	x
PO3	3	3	3	3	3	3	3	3	x	x
PO4	3	3	2	2	2	2	2	1	x	x
PO5	3	3	3	3	3	3	3	3	x	x
PO6	3	3	3	3	3	3	2	2	x	x
PO7	3	3	3	3	3	3	2	2	x	x
PO8	3	3	3	3	3	3	2	2	x	x
PO9	3	2	2	1	1	1	1	1	x	x
PO10	3	3	3	3	3	3	3	3	x	x
PO11	3	3	3	3	3	3	3	3	x	x
PO12	3	3	3	3	3	3	2	3	x	x
PO13	3	2	2	1	1	1	1	1	x	x
PO14	3	2	2	1	1	1	1	1	x	x
PO15	3	2	2	1	1	1	1	1	x	x

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
LO1	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO2	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO3	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO4	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO5	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO6	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO7	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Final Exam, Assignment
LO8	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Final Exam, Assignment

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**3**	**45**
Midterm Exam	**1**	**1**	**1**
Preparation for Midterm Exam	**1**	**5**	**5**
Final Exam	**1**	**1**	**1**
Preparation for Final Exam	**1**	**5**	**5**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**2**	**5**	**10**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**97**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	1	10
Laboratory	-	-
Application	1	20
Field Work (Class Work)	-	-
Special Course Internship (Work Placement)	-	-
Assignment(s)/Homework/Class Works	1	20
Providing reliability and motivation for the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	20
Final/Oral Exams	1	30
Total	**5**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check the instructor's web page frequently for the course announcements. • The University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: First Aid and Medical Care							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
FMC202	II	Spring	3	3	2	2	0
Course type: Compulsory Elective				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				30	-	-	70
Course Venue and Time				Tuesday / 08:30 – 12:20			
Instructor information				**Uz.Dr. Kasım Bozgeyik** Faculty of Maritime Studies Wednesday / 09:00 – 12:00 +90 (392) 650 26 00 / 4060 kasim.bozgeyik@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides comprehensive knowledge and practical skills in maritime first aid and medical care. It covers the fundamentals of human anatomy, common illnesses, and the use of medicines in a maritime context, with a focus on effective communication in medical emergencies. Students will learn to apply first aid techniques in cases of injury, illness, poisoning, burns, fractures, and environmental effects, as well as to provide extended medical care on board until professional assistance becomes available. The course also introduces international medical references such as the International Medical Guide for Ships (IMGS), the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), and the medical pages of the International Code of Signals. Emphasis is placed on the prevention of diseases, maintaining hygiene on board, record-keeping, and compliance with international maritime medical regulations. Practical skills, including patient examination, wound treatment, suturing, bandaging, pharmacology, sterilization, and radio-medical communication, are developed to prepare students for real-life medical emergencies at sea. The course will be conducted in accordance with the IMO Model Courses 1.14, and 1.15, as well as the national regulation “Egitim Sinav Yonergesi 2025” of the Turkish Republic. Successful students will obtain mandatory STCW certificates of (1); Medical First Aid, (2); Medical Care.
Course Aims and Objectives	The primary aim of this course is to equip students with the essential knowledge, skills, and competencies necessary to deliver effective first aid and medical care on board ships, in accordance with international maritime standards and guidelines. The course prepares students to respond appropriately to medical emergencies, manage injuries and illnesses, and apply preventive healthcare measures in maritime environments. • Comprehend the fundamental framework and roles of the human body concerning first aid and medical treatment. • Communicate effectively in English during medical emergencies, utilizing international codes, guides, and telemedical support. • Identify and respond to common injuries, such as fractures, burns, wounds, and spinal trauma, with proper first aid techniques. • Ensure the application of appropriate procedures during life-threatening emergencies, including cardiopulmonary resuscitation (CPR), drowning incidents, and asphyxia cases. • Utilize the Medical First Aid Guide (MFAG) and other international medical references for handling hazardous materials and poisoning cases. • Provide medical care for both acute and chronic medical conditions, including infectious and tropical diseases. • Deliver specialized care for patients with gynecological, obstetric, dental, and mental health conditions on board. • Implement preventive health measures, including hygiene, vaccination, disinfection, and environmental control on ships. • Maintain precise medical records in accordance with international and national maritime regulations.

	• Cooperate effectively with external medical services, including radio medical advice, medical evacuation, and port health authorities.
Course Learning Outcomes	**LO1**: Describe the structure and functions of the human body that are important for first aid and medical care. **LO2**: Demonstrate effective communication in English during medical emergencies by employing standard medical terminology, adhering to the International Code of Signals, and utilizing telemedical procedures. **LO3**: Identify and assess symptoms associated with common injuries and illnesses, such as burns, fractures, spinal injuries, bleeding, and shock. **LO4**: Carry out fundamental first aid procedures, such as cardiopulmonary resuscitation (CPR), wound management through dressing and bandaging, immobilization of fractures, and patient transportation methodologies. **LO5**: Implement suitable medical interventions in instances of poisoning, hazardous material exposure, and other onboard health hazards in accordance with the Medical First Aid Guide (MFAG). **LO6**: Oversee patient care onboard for both acute and chronic medical conditions, including tropical, infectious, and sexually transmitted diseases. **LO7**: Provide emergency medical assistance for exceptional cases, including pregnancy, childbirth, dental emergencies, and psychological conditions. **LO8**: Implement preventive health and hygiene measures, including vaccination, disinfection, pest control, and environmental monitoring on board. **LO9**: Maintain accurate medical records and documentation in compliance with international and national maritime medical regulations. **LO10**: Collaborate with external medical services for radio medical advice, medical evacuation, and coordination with port health authorities.

Content of the Course

Week	*Subject*
1	**Introduction to Maritime First Aid and Medical Communication** Terminology and related maritime English terms Overview of medical communication in English Anatomy of the human body and basic terminology
2	**Diseases, Medicines, and Medical Communication at Sea** Terminology and related maritime English terms Common illnesses and medications Communication procedures in medical emergencies
3	**International Medical Documentation and Guides** Terminology and related maritime English terms International Code of Signals (Medical Pages) International Medical Guide for Ships (IMGS) and related publications
4	**Fundamentals of First Aid on Board** Terminology and related maritime English terms Immediate first aid in case of accident or illness Shipboard first aid kit: content and usage
5	**Anatomy, Physiology, and Toxic Hazards** Terminology and related maritime English terms Structure and functions of the human body Use of MFAG (Medical First Aid Guide for Accidents Involving Dangerous Goods) Toxic hazards on board
6	**Patient Examination and Emergency Scenarios** Terminology and related maritime English terms Examination of casualties Spinal injuries, burns, scalds, effects of heat and cold
7	**Musculoskeletal and Respiratory Emergencies** Terminology and related maritime English terms Fractures, dislocations, muscle injuries Heart attack, drowning, asphyxia
8	**Pharmacology and Sterilization in Shipboard Medical Care** Terminology and related maritime English terms Principles of pharmacology Sterilization and infection control
9	**Medical Care on Board – Trauma and Injuries** Terminology and related maritime English terms Head and spinal injuries ENT and eye injuries External and internal bleeding Wound management and infection prevention
10	**Medical Care on Board – Trauma and Injuries** Terminology and related maritime English terms Head and spinal injuries ENT and eye injuries External and internal bleeding Wound management and infection prevention
11	**Medical Care on Board – Clinical Cases**

	Terminology and related maritime English terms Burns, cold injuries, fractures, and acute abdominal diseases Pain management, suturing, and bandaging techniques Minor surgical treatments
12	**Hygiene, Sanitation, and Preventive Medicine** Terminology and related maritime English terms Hygiene practices on board Disinfection, fumigation, rat control Vaccination and disease prevention
13	**Records, Regulations, and External Assistance** Terminology and related maritime English terms Medical record-keeping International and national maritime medical regulations External medical assistance and coordination Radio medical advice and its application
14	**Records, Regulations, and External Assistance** Terminology and related maritime English terms Medical record-keeping International and national maritime medical regulations External medical assistance and coordination Emergency evacuation and transportation of the patient with helicopters or any other vehicles
15	**Review, Case Studies, and Final Assessment** Integrated medical scenarios Case study discussions (injuries, diseases, evacuations) Course wrap-up and final evaluation

Methods and Techniques used in the Course

Lectures & Multimedia Presentations – Theoretical concepts related to anatomy, medical conditions, and first aid procedures are taught with visual aids, slides, and videos.

Classroom Discussions & Case Studies – Students analyze real-life maritime medical incidents to enhance problem-solving and decision-making skills.

Demonstrations & Practical Exercises – First aid techniques such as CPR, bandaging, fracture immobilization, and patient transport are demonstrated and practiced in a controlled environment.

Simulation-Based Training – Use of medical manikins, emergency kits, and shipboard scenarios to simulate accidents, hazardous material exposure, and medical emergencies at sea.

Role-Playing & Communication Drills – Students practice radio medical advice, use of International Code of Signals, and medical communication in English.

Group Work & Peer Learning – Collaborative activities to foster teamwork in providing first aid and patient care on board.

Use of Training Manuals & Guidelines – Application of the *Medical First Aid Guide (MFAG)*, *International Medical Guide for Ships (IMGS)*, and national maritime health publications.

Laboratory & Hands-on Training – Practice of sterilization, suturing, wound dressing, and use of medical equipment.

Assessment-Oriented Activities – Quizzes, oral questioning, and scenario-based evaluations to reinforce learning outcomes.

Sample Questions

Multiple Choice Questions (MCQs)

- Which of the following is the primary purpose of the *Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG)*?

  a) To provide guidelines for patient nutrition at sea

  b) To assist in treating illnesses caused by poor hygiene

  c) To provide first aid instructions in cases of hazardous material exposure

  d) To guide the communication protocol with port authorities

- Which of the following is NOT a recommended step when treating a spinal injury on board?

  a) Keep the patient still and immobilize the spine

  b) Move the patient quickly to avoid further injury

  c) Use a rigid stretcher if available

  d) Avoid unnecessary movement of the head and neck

- What is the main purpose of sterilization in medical care on ships?

  a) Pain reduction

  b) Prevention of infection

  c) Faster wound healing

  d) Relief of stress for the patient

Short-Answer Questions

- List three essential items that should be found in a ship's first aid kit.
- Explain the difference between *first aid* and *medical care* on board.
- Identify two common tropical diseases that seafarers should be aware of and describe one method of prevention for each.

Materials Used in the Course

Textbooks and Official Guides

- Lecturer Notes, Related IMO Model Courses and STCW (Standards of Training, Certification, and Watchkeeping) manuals.
- International Medical Guide for Ships (IMGS), the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG), and the medical pages of the International Code of Signals.

Supplementary Resources

- Instructional videos
- Interactive simulations
- Standard shipboard first aid kits and medical chests.
- Mannequins for CPR and first aid practice.
- Splints, stretchers, bandages, dressings, sterilization, and immobilization devices.
- Simulation equipment for burns, fractures, and trauma care.

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	1	1	1	1	1	1	1	1	1	1
PO2	1	1	1	1	1	1	1	1	1	1
PO3	3	3	3	3	3	3	3	3	3	3
PO4	0	0	0	0	0	0	0	0	0	0
PO5	2	2	2	2	2	2	2	2	2	2
PO6	2	2	2	2	2	2	2	2	2	2
PO7	1	1	1	1	1	1	1	1	1	1
PO8	1	1	1	1	1	1	1	1	1	1
PO9	1	1	1	1	1	1	1	1	1	1
PO10	3	3	3	3	3	3	3	3	3	3
PO11	2	2	2	2	2	2	2	2	2	2
PO12	2	2	2	2	2	2	2	2	2	2
PO13	1	1	2	3	3	2	1	1	1	3
PO14	1	1	2	3	3	2	1	1	1	3
PO15	1	1	2	3	3	2	1	1	1	3

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
LO1	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO2	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO3	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO4	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO5	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO6	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO7	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO8	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO9	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO10	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**2**	**30**
Midterm Exam	**1**	**1**	**1**
Preparation for Midterm Exam	**1**	**5**	**5**
Final Exam	**1**	**1**	**1**
Preparation for Final Exam	**1**	**5**	**5**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	**15**	**1**	**15**
Assignment(s)/Homework/Class Works	-	-	-
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**87**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	1	10
Laboratory	-	-
Application	1	40
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Assignment(s)/Homework/Class Works	-	-
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	20
Final/Oral Exams	1	30
Total	**4**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check the instructor's web page frequently for the course announcements. • The University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Maritime Law and Conventions							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
LAW202	II	Spring	4	4	4	0	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Fundamental Legal Knowledge (Core)**	**Legal Method & Reasoning**	**Legal Skills (Research & Writing)**	**General Education**
				60%	20%	10%	10%
Course Venue and Time				E-6016 (14.30 - 17.20)			
Instructor information				**Lect. Halil Emre Gürler** Faculty of Law halilemre.gurler@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides a comprehensive introduction to maritime law, international conventions, and regulations governing the safety, operation, and management of ships at sea. It covers fundamental legal principles, the structure of national and international maritime legislation, and the legal responsibilities of shipowners, captains, and crew members. Students will gain knowledge of essential maritime conventions, including SOLAS, MARPOL, STCW, COLREG, UNCLOS, and related IMO codes, as well as conventions governing liability, compensation, search and rescue, and the transport of passengers and cargo. The course also emphasizes practical applications of maritime law, English terminology for ship documentation, and compliance with national and international regulations, providing students with the legal framework necessary for safe and effective maritime operations.
Course Aims and Objectives	The course aims to provide students with a thorough understanding of the legal framework governing maritime activities, including national and international maritime law, conventions, and regulations. It seeks to equip students with the knowledge and skills necessary to interpret, apply, and comply with maritime legal requirements, ensuring safe, lawful, and efficient ship operations. • Explain the fundamental principles, sources, and types of law, including international and national legal systems. • Define and classify maritime law, including its scope, purpose, and key components. • Understand the legal responsibilities and authorities of shipowners, captains, crew, and port authorities. • Identify and interpret essential international maritime conventions and regulations (e.g., SOLAS, MARPOL, STCW, COLREG, UNCLOS). • Apply maritime legal knowledge to practical situations, including ship documentation, safety compliance, and cargo operations. • Understand maritime English terminology for legal documents, vessel operations, and cargo management.

	• Recognize legal procedures related to maritime accidents, salvage, liability, and environmental protection. • Demonstrate awareness of national and international regulatory organizations, their roles, and enforcement mechanisms.
Course Learning Outcomes	**CLO1:** Define and explain the fundamental principles, sources, and types of law relevant to maritime operations. **CLO2:** Describe the scope and classification of maritime law, including national and international regulations. **CLO3:** Identify the legal responsibilities, authorities, and obligations of shipowners, captains, crew members, and port authorities. **CLO4:** Interpret and apply major international maritime conventions and protocols, such as SOLAS, MARPOL, STCW, COLREG, UNCLOS, and ILO Maritime Labour Convention. **CLO5:** Demonstrate the ability to read, understand, and use maritime English terminology in legal, operational, and cargo documentation. **CLO6:** Analyze maritime incidents, including collisions, salvage operations, and pollution events, and determine the legal implications and applicable conventions. **CLO7:** Evaluate compliance requirements for ship certification, documentation, and inspection processes under national and international law. **CLO8:** Apply knowledge of maritime law to practical scenarios, including cargo handling, vessel operations, and environmental protection measures. **CLO9:** Communicate effectively with stakeholders using internationally recognized maritime legal terminology.

Content of the Course

Week	*Subject*
1	**Introduction to Law** • Definition, sources, and types of law • Fundamental principles of law • Basic legal terminology • International law vs. national law: applications and sanctions
2	**Introduction to Maritime Law** • Definition and classification of maritime law • Key principles of international maritime law • Structure and sources of national maritime legislation
3	**Maritime Safety and Legal Requirements** • Laws on the protection of life and property at sea • Seafarers' employment rights and obligations (Maritime Labour Law) • Role, authority, and responsibilities of the ship captain
4	**Ship Documentation and Records** • Definition and types of ships and seaworthiness requirements • Mandatory onboard documents and records • Maritime accidents, collisions, and general average
5	**Maritime Administration and English Terminology** • National maritime organizations and regulations • International maritime organizations and conventions • Ship inspection and certification procedures • Insurance terminology and claims
6	**English for Ship and Cargo Documentation** • Deck documents and port documents • Cargo-related documentation in English
7	**Introduction to International Maritime Organization (IMO)** • IMO structure, committees, and functions • General Assembly, Council, Committees, and Secretariat
8	**SOLAS and Related Codes** • SOLAS 1974 and Protocols (1978, 1988) overview • Related codes: IBC, IMSBC, LSA, FSS, ISM, ISPS, IMDG, FTP, HSC, IGC, INF, BCH • IAMSAR Volume III and International Code of Signals
9	**MARPOL and Pollution Prevention Conventions** • MARPOL 1973 and Protocol 1997 • Annexes and record books: Oil Record, Garbage Record, Sulphur Content Monitoring, Ballast Water • Introduction to environmental protection at sea

10	**Key International Conventions** • UNCLOS 1982 (United Nations Convention on the Law of the Sea) • STCW 1978 and its amendments • COLREG 1972 (Collision Regulations) • Load Line Conventions (LL 1966, LL Protocol 1988) • Tonnage Measurement 1969
11	**Maritime Labour and Safety Codes** • ILO Maritime Labour Convention 2006 • IMO Codes of Safe Practice: CSS, BLU, TDC, OSV • FAL 1965: ship and port declarations, crew and passenger lists, dangerous goods
12	**Maritime Labour and Safety Codes** • ILO Maritime Labour Convention 2006 • IMO Codes of Safe Practice: CSS, BLU, TDC, OSV • FAL 1965: ship and port declarations, crew and passenger lists, dangerous goods
13	**Liability and Compensation Conventions** • CLC 1969 and CLC Protocol 1992 • FUND 1971 and FUND Protocol 2003 • HNS 1996 (Hazardous and Noxious Substances) • OPRC-HNS 2000 Protocol
14	**Liability and Compensation Conventions** • CLC 1969 and CLC Protocol 1992 • FUND 1971 and FUND Protocol 2003 • HNS 1996 (Hazardous and Noxious Substances) • OPRC-HNS 2000 Protocol
15	**Suppression of Unlawful Acts and Final Review** • SUA 1988 and Protocol 2005 (Suppression of Unlawful Acts Against Maritime Navigation) • Summary and integration of maritime conventions • Case studies and discussion of practical implications

Methods and Techniques used in the Course

Lectures and Presentations: Instructor-led theoretical sessions supported with visual materials and case examples.

Classroom Discussions: Interactive discussions to encourage critical thinking and deeper understanding of maritime legal issues.

Case Study Analysis: Examination of real-life maritime incidents, accidents, and disputes to apply relevant conventions and legal principles.

Document and Convention Review: Practical exercises on reading, interpreting, and analyzing international conventions, ship documents, and legal texts.

Problem-Solving Exercises: Scenario-based activities requiring application of maritime law to operational and legal problems.

Group Work and Presentations: Collaborative tasks where students prepare and present analyses of selected maritime law topics.

Simulation and Role-Play: Mock legal or operational exercises (e.g., collision responsibility, salvage agreement, or port authority inspection) to practice real-world applications.

Use of Maritime English Terminology: Emphasis on practicing and applying specialized English vocabulary in written and oral form.

Independent Study and Research: Assignments and projects requiring students to explore maritime legal resources, conventions, and academic literature.

Sample Questions

Short Answer / Definition Questions:

- Define the term *avarya (general average)* and explain its significance in maritime law.
- What are the main sources of maritime law at both national and international levels?
- Briefly describe the duties and responsibilities of a shipmaster under international maritime law.
- What is the primary purpose of the *International Convention on Load Lines (1966)*?
- List the essential ship certificates required to be carried on board under SOLAS.

Essay / Long Answer Questions:

- Discuss the role and structure of the **International Maritime Organization (IMO)** and explain how its conventions influence national maritime legislation.
- Explain the legal consequences of a collision at sea under the **COLREG 1972** Convention, including the allocation of liability.
- Analyze the scope and application of **MARPOL 73/78** with specific reference to oil pollution prevention measures.
- Evaluate the impact of the **STCW 1978 Convention** on the training and certification of seafarers.
- Compare and contrast the concepts of *salvage* and *towage* in maritime law.

Problem-Solving / Case Study Questions:

- A cargo ship suffers a fire at sea and jettisons part of its cargo to save the vessel. Discuss the legal implications for the shipowner and cargo owners under the principle of general average.
- A tanker collides with another vessel in international waters, causing oil pollution. Apply the relevant conventions (COLREG, CLC, MARPOL) to determine liability and possible compensation mechanisms.
- During a port inspection, authorities discover that a vessel's *Garbage Record Book* has not been properly maintained. Identify the applicable convention and discuss potential consequences for the ship and the master.
- A seafarer claims his employment contract has been violated under the Maritime Labour Convention (MLC 2006). Discuss the rights and remedies available to the seafarer.
- A ship is detained at a foreign port due to deficiencies in its safety equipment. Explain which international conventions and codes may apply to this case.

Materials Used in the Course

Primary References:

- International Maritime Organization (IMO) Conventions and Protocols:
  - SOLAS 1974 (International Convention for the Safety of Life at Sea)
  - MARPOL 73/78 (International Convention for the Prevention of Pollution from Ships)
  - COLREG 1972 (Convention on the International Regulations for Preventing Collisions at Sea)
  - STCW 1978 (International Convention on Standards of Training, Certification and Watchkeeping for Seafarers)
  - UNCLOS 1982 (United Nations Convention on the Law of the Sea)
  - LL 1966 (Load Line Convention) and 1988 Protocol
  - ILO Maritime Labour Convention, 2006 (MLC 2006)
  - Other relevant IMO codes (ISM, ISPS, IMDG, LSA, FSS, CSS, BLU, TDC, OSV Codes, etc.)

Secondary References:

- Özdemir, H. (Latest Edition). *Maritime Law: National and International Perspectives.*
- Berlingieri, F. *International Maritime Conventions.*
- Mukherjee, P.K., & Brownrigg, M. *Farthing on International Shipping.*
- Churchill, R.R., & Lowe, A.V. *The Law of the Sea.*
- Tetley, W. *Marine Cargo Claims.*

IMO Publications:

- International Code of Signals (INTERCO)
- IAMSAR Manual (Vol. III)
- Oil Record Book, Garbage Record Book, Ballast Water Record Book
- IMO Safety and Environmental Circulars

Legislation and Regulations:

- National Maritime Legislation (relevant laws, regulations, and decrees)
- Port State Control guidelines and procedures
- Case law and judicial precedents in maritime law

Supplementary Materials:

- Lecture slides and course notes prepared by the instructor
- Case studies and practical scenarios from real maritime incidents
- Legal documents such as bills of lading, charter parties, crew contracts, insurance policies
- Access to IMO's online databases and digital libraries

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	
PO1	2	2	1	1	2	1	3	3	1	
PO2	2	2	1	2	2	1	2	2	2	
PO3	2	3	2	1	2	1	1	3	3	
PO4	2	2	3	3	3	2	2	2	2	
PO5	1	2	2	2	3	3	2	2	1	
PO6	3	3	3	3	3	2	3	3	2	
PO7	2	2	2	2	1	2	3	3	2	
PO8	1	2	2	2	2	1	1	3	3	
PO9	2	2	2	3	2	2	2	3	3	
PO10	3	3	3	3	3	3	3	3	3	
PO11	2	2	2	2	3	3	3	2	2	
PO12	2	3	3	3	3	3	3	2	2	
PO13	2	2	2	2	1	2	3	3	2	
PO14	2	2	2	2	1	2	3	3	2	
PO15	2	2	2	2	1	2	3	3	2	

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
CLO1 – Fundamental Principles of Maritime Law	Lecture, Multimedia Presentation, Case Studies	Quizzes, Assignments, Participation
CLO2 – Scope & Classification of Maritime Law	Lecture, Group Discussions, Tutorials	Quizzes, Written Assignments, Midterm Exam
CLO3 – Legal Responsibilities of Stakeholders	Case Studies, Role-Playing, Problem-Based Learning	Assignments, Observation, Practical Exercises
CLO4 – International Maritime Conventions	Lecture, Workshops, Simulation Exercises	Assignments, Midterm Exam, Practical Case Analysis
CLO5 – Maritime English Terminology in Legal Contexts	Lecture, Guided Practice, Document Analysis	Written Exercises, Quizzes, Assignments
CLO6 – Analysis of Maritime Incidents	Case Studies, Scenario-Based Learning, Group Work	Practical Case Reports, Assignments, Participation
CLO7 – Compliance & Certification Requirements	Lecture, Tutorials, Simulation	Assignments, Quizzes, Practical Exercises
CLO8 – Application of Maritime Law in Operations	Problem-Based Learning, Simulation, Workshops	Case Study Reports, Practical Exams, Assignments
CLO9 – Communication Using Maritime Legal Terminology	Role-Playing, Group Exercises, Presentations	Oral Presentations, Assignments, Observation

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**4**	**60**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**15**	**15**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**20**	**20**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**10**	**10**
Individual Reading / Research	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**139**
ECTS Credit			**4**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	1	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	50
Total	**4**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Port Agency							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD200	II	Spring	3	5	3	0	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				-	-	-	100
Course Venue and Time				Wednesday / 13:30 – 16:20			
Instructor information				**Assist. Prof. Dr. Pınar Sharghi** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4120 pinar.sharghi@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	*Port Agency* provides a comprehensive study of the role, responsibilities, and operational functions of port agents within the maritime industry. The course examines the duties of agents before, during, and after a vessel's call at port, including coordination with port authorities, shipping companies, and other stakeholders. Students will learn about ship types, certificates, charter parties, and shipping documentation, including the preparation of Statements of Facts (SOF) and laytime calculations. The course also covers the legal and regulatory framework governing port operations, including international conventions such as UNCLOS and IMO regulations. Through case studies, practical exercises, and real-world examples, students will gain the knowledge and skills needed to perform port agency functions efficiently and professionally, ensuring smooth maritime operations and compliance with international standards.
Course Aims and Objectives	The primary aim of *Port Agency* is to equip students with the theoretical knowledge and practical skills necessary to perform the duties of a port agent effectively, ensuring smooth and compliant maritime operations. The course emphasizes the integration of operational, legal, and commercial aspects of port agency within the global shipping industry. • Introduce the role, functions, and responsibilities of port agents in maritime operations. • Explain the different types of ships, their certificates, and their operational requirements. • Examine the appointment process and types of port agents, including liner and tramp agents. • Explore the interaction between agents, port authorities, and other stakeholders. • Teach students to manage pre-arrival, in-port, and post-departure duties effectively. • Provide practical knowledge in preparing and interpreting shipping documents, Statements of Facts (SOF), and laytime calculations. • Analyze the agent's responsibilities concerning charter parties, including voyage and time charters. • Familiarize students with international conventions and regulations relevant to port agency, including UNCLOS and IMO conventions. • Develop practical skills in handling cargo operations, Incoterms, and passenger shipping documentation. • Enhance students' ability to apply theoretical knowledge to real-world scenarios through case studies and simulations.
	LO1. Explain the role and functions of port agents within the maritime industry.

Course Learning Outcomes	**LO2.** Identify different ship types, their certificates, and operational requirements. **LO3.** Describe the appointment process, types of agents, and their contractual relationships. **LO4.** Analyze the interaction between agents, port authorities, and other stakeholders. **LO5.** Perform pre-arrival, in-port, and post-departure agent duties effectively. **LO6.** Prepare, interpret, and manage key shipping documents, including Statements of Facts (SOF) and laytime calculations. **LO7.** Apply knowledge of charter parties (voyage and time charters) to agent responsibilities. **LO8.** Explain the role of Incoterms and cargo handling terms in port agency operations. **LO9.** Evaluate the impact of international conventions, such as UNCLOS and IMO regulations, on port agency activities. **LO10.** Apply practical skills to real-world port agency scenarios, ensuring compliance, efficiency, and professional operations.

Content of the Course

Week	*Subject*
1	**Introduction to Port Agency** • Definition and role of port agents • Overview of the shipping industry and vessel types • Introduction to ship certificates and documentation
2	**Ship Types and Characteristics** • Cargo ships, tankers, container ships, bulk carriers, Ro-Ro, passenger ships • Specific operational and commercial characteristics of each ship type • Certification requirements and class societies
3	**Port Agency Functions** • Definition of a port agent • Appointment process of agents • Types of port agents: liner agents, tramp agents, and specialized agents
4	**Agents and Port Authorities** • Role of port authorities in operations • Interaction and coordination between agents and port authorities • Legal and regulatory framework of port operations
5	**Duties of the Agent: Pre-Arrival** • Pre-arrival notifications and documentation • Arrangements for pilotage, tug assistance, berth allocation • Crew and cargo requirements
6	**Duties of the Agent: Arrival and In-Port Operations** • Vessel reception and berthing • Coordination of cargo operations and safety compliance • Crew services, customs, and immigration formalities
7	**Statement of Facts (SOF) and Laytime Calculation (LT)** • Preparing the Statement of Facts • Understanding laytime and demurrage • Time calculations and documentation standards
8	**Charter Parties and Agent Responsibilities** • Overview of voyage and time charter agreements • The agent's duties regarding charter party obligations • Coordination between owners, charterers, and agents
9	**Agent and Shipping Documentation** • Key documents: Bill of Lading, Mate's Receipt, Manifest, Loading Orders • Incoterms and cargo handling terms • Document verification and reporting
10	**Liner Agents and Employment Contracts** • Liner shipping operations and service contracts

	• Duties and responsibilities under liner agency agreements • Employment and contractual relations in liner agency
11	**The Agent's Role in Cargo Operations** • Cargo handling supervision • Coordination with stevedores and terminal operators • Managing hazardous cargo and specialized shipments
12	**International Maritime Conventions I** • UNCLOS, 1982: provisions relevant to port agency • IMO conventions affecting port and ship operations • Compliance requirements for port agents
13	**International Maritime Conventions II** • Conventions on the carriage of passengers by sea • Ship registration, ownership, and certificates • Legal implications for agents handling passenger vessels
14	**Case Studies and Practical Applications** • Real-world scenarios involving pre-arrival, in-port, and post-departure agent duties • SOF and laytime calculation exercises • Documentation review and compliance exercises
15	**Course Review and Final Exam** • Comprehensive review of all topics • Discussion of practical issues and best practices in port agency • **FINAL EXAM**

Methods and Techniques used in the Course

Lectures and Theoretical Instruction

- Presentation of core concepts including port agency roles, ship types, charter parties, and international regulations.
- Use of visual aids, diagrams, and real-world examples.

Case Studies and Scenario Analysis

- Real-world port agency operations, including pre-arrival, in-port, and post-departure duties.
- Analysis of actual shipping documents, SOF, and laytime calculations.

Practical Exercises

- Preparation and verification of shipping documents (e.g., SOF, Manifest, Loading Orders).
- Laytime calculations and voyage-related exercises.
- Cargo handling coordination simulations.

Class Discussions and Interactive Sessions

- Debates on operational, commercial, and legal challenges in port agency.
- Problem-solving exercises in small groups.

Industry Reports and Reference Materials

- Use of port authority manuals, IMO publications, and shipping company guidelines.
- Analysis of international conventions and their applications.

Group Projects and Presentations

- Collaborative projects simulating agent responsibilities for a vessel call.
- Presentation of solutions and discussion of best practices.

Simulation-Based Learning (if available)

- Digital platforms to simulate vessel arrival, cargo handling, and coordination with port authorities.

Assignments and Independent Study

- Weekly exercises to reinforce lecture content.
- Research tasks on port operations, charter parties, and regulatory compliance.

Sample Questions

- **Define the role of a port agent.**

  Explain the key responsibilities before, during, and after a vessel's call at port.
- **List and describe the main types of ships.**

  Explain the differences in operational requirements and certifications for each type.
- **Explain how a port agent is appointed.**

  Discuss the types of port agents and their contractual relationships with shipowners and charterers.
- **Describe the interaction between a port agent and port authorities.**

  What are the legal and operational considerations during vessel arrival and departure?
- **What is a Statement of Facts (SOF)?**

  How is laytime calculated, and why is it important for voyage and time charters?
- **Discuss the responsibilities of a port agent regarding voyage and time charters.**

  How do charter party terms affect agent duties?
- **Explain the role of shipping documents in port agency operations.**

  Include Bills of Lading, Manifests, Loading Orders, and their relationship with Incoterms.
- **What are the duties of a liner agent compared to a tramp agent?**

  How do their employment contracts differ?
- **Outline key international conventions relevant to port agency operations.**

  Include UNCLOS, IMO conventions, and conventions on passenger carriage.
- **Describe the process of ship registration and certification.**

  Explain the implications for port agency responsibilities and legal compliance.

Materials Used in the Course

Primary Textbooks

- **BIMCO & International Chamber of Shipping** – *Shipping Agency: Principles and Practices*, 3rd Edition, Routledge, 2018.
- **Stopford, Martin** – *Maritime Economics*, 2nd Edition, Routledge, 2009.
- **Branch, Alan E.** – *Elements of Shipping*, 9th Edition, Routledge, 2021.

Recommended References

- **Grammenos, Costas (Ed.)** – *The Handbook of Maritime Economics and Business*, 2nd Edition, Routledge, 2010.
- **UNCTAD** – *Review of Maritime Transport*, Annual Reports.
- **Clarksons Research Reports**
- **IMO Publications and Conventions**

Supplementary Learning Materials

- **Case Studies**
- **Shipping Documentation Samples**
- **Simulation and Practical Exercises**
- **Academic Articles and Journals**

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
	LO1	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**	**LO8**	**LO9**	**L10**
PO1	3	3	2	2	2	1	3	2	2	2
PO2	3	3	3	2	2	1	2	1	2	1
PO3	2	3	1	3	3	2	1	3	1	1
PO4	2	2	1	2	3	3	2	2	2	2
PO5	1	2	2	1	1	2	2	2	3	3
PO6	1	2	1	2	1	1	2	3	2	2
PO7	1	1	1	1	1	3	2	2	3	3
PO8	1	1	3	1	1	1	2	1	2	1
PO9	1	1	2	1	1	1	1	1	2	2
PO10	2	2	1	2	3	3	2	2	2	2
PO11	1	2	2	1	1	2	2	2	3	3
PO12	1	2	1	2	1	1	2	3	2	2
PO13	3	3	3	2	2	1	2	1	2	1
PO14	2	3	1	3	3	2	1	3	2	2
PO15	1	2	1	2	2	3	2	2	3	3

Course Learning Outcomes/ Evaluation Method		
Course Learning Outcomes (CLOs)	**Teaching Method**	**Assessment Method**
LO1. Explain the role and functions of port agents in maritime operations.	Lectures, Case Studies	Midterm Exam, Participation
LO2. Identify different ship types, their certificates, and operational requirements.	Lectures, Visual Aids	Quizzes, Assignments
LO3. Describe the appointment process, types of agents, and contractual relationships.	Lectures, Discussions	Written Assignment, Quizzes
LO4. Analyze interactions between agents, port authorities, and stakeholders.	Case Studies, Role Play	Group Project, Participation
LO5. Perform pre-arrival, in-port, and post-departure agent duties effectively.	Practical Exercises, Simulation	Assignments, Case Study Reports
LO6. Prepare, interpret, and manage shipping documents including SOF and laytime calculations.	Practical Exercises, Lectures	Assignments, Midterm Exam
LO7. Apply knowledge of voyage and time charter parties to agent responsibilities.	Lectures, Case Studies	Quizzes, Assignments
LO8. Explain the role of Incoterms and cargo handling terms in port agency operations.	Lectures, Discussions	Quizzes, Written Assignments
LO9. Evaluate the impact of international conventions (UNCLOS, IMO) on port agency activities.	Lectures, Case Studies	Midterm Exam, Participation
LO10. Apply practical skills to real-world port agency scenarios ensuring compliance and professional operations.	Simulation, Group Projects	Final Exam, Project Presentation

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**2**	**30**
Lectures	**15**	**3**	**45**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**15**	**15**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**15**	**15**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**2**	**30**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**15**	**15**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**154**
ECTS Credit			**5**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	1	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	50
Total	**4**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Port and Shipping Logistics							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD202	II	Spring	3	4	3	0	0
Department: Maritime Management							
Course type: Compulsory Elective				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				-	-	-	100
Course Venue and Time				Monday / 08:30 – 11:20			
Instructor information				**Dr. Gökhan Tarı** Faculty of Maritime Studies Wednesday / 09:00 – 12:00 +90 (392) 650 26 00 / 4040 gokhan.tari@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	*Port and Shipping Logistics* provides a comprehensive study of the principles, operations, and management of ports within global maritime supply chains. The course explores the evolution of ports, their role in logistics, and the integration of ports with supply chain systems. Students will examine types and functions of ports and terminals, terminal layout and infrastructure planning, container terminal operations, and bulk and liquid terminal management. The course also covers intermodal and multimodal transport systems, ICT and digitalization in port logistics, warehousing and distribution, customs procedures, documentation, and green logistics practices. Through case studies, practical examples, and digital tools, students will gain the knowledge and skills needed to manage port and shipping logistics efficiently, ensuring operational effectiveness, regulatory compliance, and sustainability.
Course Aims and Objectives	The primary aim of *Port and Shipping Logistics* is to provide students with a thorough understanding of port operations, shipping logistics, and their integration within global supply chains. The course emphasizes both theoretical knowledge and practical skills to prepare students for careers in port management, shipping operations, and logistics. • Introduce the evolution of ports and the concept of port logistics within maritime supply chains. • Explain the roles, functions, and types of ports and terminals. • Examine port infrastructure, terminal layout, and planning principles. • Explore container terminal operations, cargo handling systems, and terminal equipment. • Analyze bulk and liquid terminal operations, including safety and environmental considerations. • Study intermodal and multimodal transport systems and their integration with ports. • Examine ICT, digitalization, and automation in port logistics management.

	• Explain warehousing, inventory management, and distribution processes in ports. • Understand customs procedures, documentation, and regulatory compliance in port logistics. • Promote sustainable and environmentally responsible practices in port and shipping logistics.
Course Learning Outcomes	**LO1.** Explain the evolution of ports and their role within maritime supply chains. **LO2.** Identify different types of ports and terminals and describe their functions. **LO3.** Analyze terminal layout, infrastructure requirements, and planning principles. **LO4.** Describe container terminal operations, cargo handling systems, and terminal equipment. **LO5.** Explain bulk and liquid terminal operations, including operational and safety considerations. **LO6.** Apply concepts of intermodal and multimodal transport systems in port logistics. **LO7.** Evaluate the role of ICT, digitalization, and automation in port management. **LO8.** Plan and manage warehousing, storage, and distribution processes in ports. **LO9.** Understand customs procedures, documentation, and compliance requirements in port logistics. **LO10.** Implement green logistics and environmentally sustainable practices in port and shipping operations.

Content of the Course

Week	*Subject*
1	**Introduction to Ports and Shipping Logistics** • Definitions of logistics, supply chain, and port logistics • Evolution of ports and maritime logistics systems
2	**The Role of Ports in Maritime Supply Chains** • Integration of ports within global and regional supply chains • Port functions in cargo handling, storage, and distribution
3	**Types and Functions of Ports** • Seaports, dry ports, inland ports • Functional roles: cargo handling, passenger services, industrial ports
4	**Port Equipment and Terminal Types** • Port handling equipment: cranes, reach stackers, forklifts, conveyors • Terminal classification: container, bulk, liquid, Ro-Ro, multipurpose
5	**Terminal Layout and Infrastructure Planning** • Terminal design principles and yard layout • Infrastructure requirements for different cargo types • Efficiency and safety considerations
6	**Managing Container Terminals** • Container terminal planning and operations management • Key performance indicators for terminal management • Labor management and resource allocation
7	**Container Terminal Operations I** • Container handling systems and operational procedures • Loading, discharging, and yard operations • Coordination with shipping lines and transport providers
8	**Container Terminal Operations II** • Advanced container operations: stacking, storage, and retrieval • Handling of hazardous and special cargo containers
9	**Bulk and Liquid Terminal Operations** • Bulk cargo handling: dry bulk, grain, ores • Liquid bulk handling: petroleum, chemicals, LNG • Safety, environmental, and operational considerations
10	**Intermodal and Multimodal Transport Systems** • Concepts of intermodal and multimodal transport • Integration of port logistics with road, rail, and inland waterways

	• Container transport and coordination with terminals
11	**ICT and Digitalization in Port Logistics** • Port Community Systems (PCS) and terminal operating systems • Automation, tracking, and digital workflow management
12	**Warehousing and Distribution in Ports** • Warehousing types, storage solutions, and inventory management • Distribution processes within ports and hinterland connectivity
13	**Customs Procedures and Documentation** • Import/export procedures, cargo inspection, and clearance • Key shipping and port documents (Bill of Lading, manifest, customs declarations)
14	**Green Logistics and Environmental Management in Ports** • Sustainable port operations and environmental regulations • Carbon footprint reduction, energy efficiency, and pollution control • Green initiatives in cargo handling and terminal management
15	**Course Review and Final Exam** • Comprehensive review of all topics • Case studies and discussion of practical port and logistics scenarios • FINAL EXAM

Methods and Techniques used in the Course

Lectures and Theoretical Instruction

- Presentation of core concepts such as port evolution, logistics, terminal operations, and supply chain integration.
- Use of slides, diagrams, and visual aids to illustrate port and terminal layouts and cargo handling systems.

Case Studies and Scenario Analysis

- Real-world examples of port operations, terminal management, and logistics challenges.
- Analysis of operational decisions, efficiency improvements, and sustainability initiatives.

Practical Exercises and Simulations

- Container and cargo handling exercises, terminal planning, and layout optimization.
- Digital simulations of port operations and intermodal transport systems.

Class Discussions and Interactive Sessions

- Discussions on operational challenges, regulatory compliance, and environmental considerations.
- Group problem-solving exercises and scenario-based learning.

Industry Reports and Reference Materials

- Analysis of port authority reports, logistics statistics, and ICT solutions for port operations.
- Review of international conventions, customs regulations, and environmental standards.

Group Projects and Presentations

- Collaborative projects simulating terminal operations, warehousing, and supply chain integration.
- Presentation of solutions and discussion of best practices in port logistics management.

Assignments and Independent Study

- Weekly exercises, research assignments, and analysis of logistics an

Sample Questions

- Define port logistics and explain the evolution of ports within maritime supply chains.
- Identify and describe the main types of ports and terminals. How do their functions differ?
- Explain the principles of terminal layout and infrastructure planning. What factors influence terminal design?
- Describe container terminal operations and the key cargo handling systems used in container handling.
- Compare bulk and liquid terminal operations. What are the operational and safety considerations for each?
- Explain the concept of intermodal and multimodal transport systems and their integration with port operations.
- Discuss the role of ICT and digitalization in improving port efficiency and management.
- Explain warehousing, storage, and distribution processes in ports. How do these processes support supply chains?
- Describe customs procedures and the key documentation required for cargo clearance at ports.
- Discuss the principles of green logistics and environmental management in port operations. Provide examples of sustainable practices.

Materials Used in the Course

Primary Textbooks

- **Rodrigue, Jean-Paul, Notteboom, Theo, and Slack, Brian** – *The Geography of Transport Systems*, 5th Edition, Routledge, 2020.
- **Notteboom, Theo & Rodrigue, Jean-Paul** – *Port Management and Operations*, Routledge, 2017.
- **Branch, Alan E.** – *Elements of Shipping*, 9th Edition, Routledge, 2021.

Recommended References

- **UNCTAD** – *Review of Maritime Transport*, Annual Reports.
- **Notteboom, Theo & Winkelmans, Wouter** – *Port Regionalization: Towards a New Phase in Port Development*, 2001.
- **IMO Publications** – Conventions and guidelines affecting port logistics and operations.
- **Clarksons Research Reports** – Industry reports on port performance, terminal operations, and container throughput.

Supplementary Learning Materials

- **Case Studies**
- **Practical Exercises**
- **Industry Reports and Guidelines**
- **Academic Journals**

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes / Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
	LO1	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**	**LO8**	**LO9**	**L10**
PO1	3	3	2	2	2	1	3	2	2	2
PO2	3	3	3	2	2	1	2	1	2	1
PO3	2	3	1	3	3	2	1	3	1	1
PO4	2	2	1	2	3	3	2	2	2	2
PO5	1	2	2	1	1	2	2	2	3	3
PO6	1	2	1	2	1	1	2	3	2	2
PO7	1	1	1	1	1	3	2	2	3	3
PO8	1	1	3	1	1	1	2	1	2	1
PO9	1	1	2	1	1	1	1	1	2	2
PO10	2	2	1	2	3	3	2	2	2	2
PO11	1	2	2	1	1	2	2	2	3	3
PO12	1	2	1	2	1	1	2	3	2	2
PO13	3	3	3	2	2	1	2	1	2	1
PO14	2	3	1	3	3	2	1	3	2	2
PO15	1	2	1	2	2	3	2	2	3	3

Course Learning Outcomes/ Evaluation Method		
Course Learning Outcomes (CLOs)	**Teaching Method**	**Assessment Method**
LO1. Explain the evolution of ports and their role within maritime supply chains.	Lectures, Case Studies	Quizzes, Assignments
LO2. Identify different types of ports and terminals and describe their functions.	Lectures, Visual Aids	Quizzes, Assignments
LO3. Analyze terminal layout, infrastructure requirements, and planning principles.	Lectures, Practical Exercises	Assignments, Group Project
LO4. Describe container terminal operations, cargo handling systems, and terminal equipment.	Practical Exercises, Demonstrations	Practical Reports, Assignments
LO5. Explain bulk and liquid terminal operations, including operational and safety considerations.	Lectures, Case Studies	Quizzes, Assignments
LO6. Apply concepts of intermodal and multimodal transport systems in port logistics.	Lectures, Group Discussions	Case Study Reports, Assignments
LO7. Evaluate the role of ICT, digitalization, and automation in port management.	Lectures, Demonstrations	Assignments, Quizzes
LO8. Plan and manage warehousing, storage, and distribution processes in ports.	Practical Exercises, Case Studies	Assignments, Group Project
LO9. Understand customs procedures, documentation, and compliance requirements in port logistics.	Lectures, Demonstrations	Quizzes, Assignments
LO10. Implement green logistics and environmentally sustainable practices in port and shipping operations.	Lectures, Case Studies	Assignments, Participation

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**3**	**45**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**10**	**10**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**20**	**20**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	-	-	-
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**20**	**20**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**114**
ECTS Credit			**4**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	1	20
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	40
Total	**2**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Port and Terminal Operations							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD204	II	Spring	3	3	3	0	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				-	-	-	100
Course Venue and Time				Wednesday / 13:30 – 16:20			
Instructor information				**Assist. Prof. Dr. Pınar Sharghi** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4120 pinar.sharghi@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides a comprehensive introduction to the operations, management, and functional roles of ports and terminals within the global maritime transport system. Students will explore the concepts of ports, terminals, and hinterlands, including their infrastructure, administration, and key stakeholders. The course covers the types of ports and terminals, components of terminal facilities, and daily operational processes, with particular emphasis on cargo handling techniques and equipment for containers, bulk, liquid, and Ro-Ro cargoes. Safety, efficiency, and environmental considerations in terminal operations are also addressed. In addition, students will gain an understanding of maritime markets, including liner and tramp shipping services, freight and chartering practices, and the preparation and use of shipping documentation. Topics such as charter party contracts, Incoterms, shipping agents, shipbrokers, and flags of convenience are integrated to provide a complete overview of the operational and commercial aspects of maritime logistics. Through lectures, case studies, practical exercises, and a term project, students will develop the theoretical knowledge and practical skills required for effective management and operations of ports and terminals, preparing them for professional careers in maritime transport, logistics, and port management.
Course Aims and Objectives	The primary aim of this course is to provide students with a thorough understanding of port and terminal operations within the global maritime transport system. The course focuses on developing both theoretical knowledge and practical skills related to port infrastructure, terminal management, cargo handling, and maritime markets, preparing students for professional roles in port operations, shipping logistics, and maritime management. • **Define ports and terminals** and explain their roles and functions within the maritime transport system. • **Differentiate between types of ports and terminals** and describe their key components. • **Explain port ownership and administration models**, and identify the main stakeholders in port operations. • **Describe port and terminal services**, including cargo handling, storage, and operational support.

	• **Understand hinterlands and their relationship with ports**, including types of hinterlands. • **Demonstrate knowledge of terminal operations** and cargo handling equipment for containers, bulk, liquid, and Ro-Ro cargoes. • **Explain the characteristics of maritime markets**, including liner and tramp shipping operations. • **Understand freight markets and chartering practices**, including voyage, time, and bareboat charters. • **Interpret and apply shipping documentation**, including charter party contracts, Bills of Lading, and Incoterms. • **Analyze port and terminal case studies**, integrating operational, commercial, and logistical aspects to propose practical solutions.
Course Learning Outcomes	**LO1:** Define and describe ports and terminals and explain their functions within maritime transport. **LO2:** Differentiate between types of ports and terminals and identify key components and infrastructure. **LO3:** Explain port ownership and administration models and identify key stakeholders. **LO4:** Describe port and terminal services, including cargo handling and operational processes. **LO5:** Analyze the concept of hinterlands and their impact on port operations. **LO6:** Demonstrate knowledge of terminal operations and cargo handling equipment for container, bulk, liquid, and Ro-Ro cargo. **LO7:** Explain maritime markets, including the characteristics and operational differences of liner and tramp shipping. **LO8:** Understand freight markets and chartering practices, including voyage, time, and bareboat charters. **LO9:** Interpret and apply shipping documentation, including Bills of Lading, Incoterms, and charter party contracts. **LO10:** Integrate theoretical knowledge with practical scenarios through case studies and project work.

Content of the Course

Week	*Subject*
1	**Introduction to Ports and Terminals** • What is a port? • Port system and port types (natural, artificial, deep-sea, coastal) • Roles and functions of ports
2	**Port Ownership and Administration** • Port ownership models: public, private, and public-private partnerships • Port administration and governance • Key stakeholders in port operations
3	**Port and Terminal Services** • Definition and classification of port services • Terminal services and operations overview • Key port users: shipping lines, cargo owners, agents
4	**Hinterland and Terminal Concepts** • Definition of hinterland and types (local, regional, global) • Relationship between ports and hinterlands • Terminal vs. port: definitions and distinctions
5	**Types of Terminals and Components** • Types of terminals: container, bulk, Ro-Ro, general cargo, tanker, multipurpose • Components of terminals according to type • Introduction to cargo handling equipment
6	**Port and Terminal Operations I** • Daily port and terminal operations • Vessel arrival, berthing, and departure procedures • Coordination with pilots, tugs, and port authorities
7	**Port and Terminal Operations II** • Terminal operations planning • Cargo handling processes • Safety, security, and environmental considerations
8	**Terminal Operations and Cargo Handling Equipment I** • Container handling operations: quay cranes, yard cranes, forklifts • Bulk cargo handling: grab cranes, conveyor systems, hoppers • General cargo operations
9	**Terminal Operations and Cargo Handling Equipment II** • Liquid cargo and tanker operations • Ro-Ro operations and specialized handling • Maintenance, safety, and efficiency in cargo handling **Introduction to Maritime Markets** • Overview of maritime trade markets

	• Liner service: characteristics, schedules, and route planning • Tramp shipping: operational differences from liner service
10	**Introduction to Maritime Markets** • Overview of maritime trade markets • Liner service: characteristics, schedules, and route planning • Tramp shipping: operational differences from liner service
11	**Freight and Chartering Overview** • Freight markets and price determination • Chartering concepts and types: voyage, time, and bareboat charters • Elements of charter party contracts
12	**Chartering Negotiations and Shipping Documents** • Offer and counter-offer methods • Common abbreviations and terminology in freight • Shipping documents: NOR, SOF, Time Sheet, Mate's Receipt, Manifest, Loading Order
13	**Trade Terms, Agents, and Brokers** • International trade terms: Incoterms 2020 • Roles and types of shipping agents • Shipbrokers and Flags of Convenience (FOC)
14	**Freight Conferences and Maritime Organizations** • Freight conferences: purpose, operation, and regulation • Overview of international maritime organizations (IMO, UNCTAD, ICS) • Case studies and application exercises
15	**Course Review and Final Exam** • Review of all key concepts: ports, terminals, cargo handling, chartering, and maritime markets • Discussion of case studies • Final examination

Methods and Techniques used in the Course

Lectures and Theoretical Instruction

- Instructor-led presentations introducing port and terminal concepts, types, infrastructure, and operations.
- Explanation of maritime markets, liner and tramp shipping, and chartering principles.
- Integration of real-world examples from ports and shipping companies.

Interactive Classroom Discussions

- Guided discussions on port ownership models, stakeholder roles, and operational challenges.
- Analysis of port and terminal services, cargo handling, and hinterland connectivity.
- Q&A sessions to reinforce learning and clarify complex concepts.

Case Studies and Scenario-Based Learning

- Examination of real-world port and terminal operations, including cargo handling, berthing, and storage.
- Analysis of maritime markets, liner and tramp operations, and freight contracts.
- Problem-solving exercises simulating operational, logistical, or commercial challenges.

Practical Demonstrations

- Use of diagrams, charts, and models to illustrate terminal components and cargo handling equipment.
- Demonstrations of container, bulk, liquid, and Ro-Ro cargo handling processes.
- Visualization of port layouts, terminal operations, and equipment deployment.

Multimedia and Digital Learning

- Instructional videos of port and terminal operations, cargo handling, and vessel movements.
- Interactive maps and virtual tours of major ports, terminals, and global shipping routes.
- Online resources for shipping documentation, chartering, and freight markets.

Group Activities and Collaborative Learning

- Team-based assignments analyzing terminal operations, port efficiency, or maritime trade scenarios.
- Peer discussions on freight markets, charter party contracts, and operational decisions.
- Collaborative problem-solving exercises simulating real-world port and terminal challenges.

Independent Learning

- Reading assignments from textbooks, industry reports, and online sources.
- Research tasks on port operations, shipping documentation, and maritime markets.
- Preparation for term projects and presentations.

Term Project and Presentations

- Individual or group projects analyzing a specific port, terminal, or shipping operation.
- Oral presentations to develop communication skills and practical understanding.
- Integration of theoretical knowledge with applied operational analysis.

Sample Questions

Multiple-Choice Questions (MCQs)

- Which of the following best describes a terminal in a port?

  a) A storage facility located inland only

  b) A dedicated area within a port where cargo handling and vessel operations take place

  c) A passenger cruise facility only

  d) A shipping company's administrative office

- Which type of terminal is primarily used for containerized cargo?

  a) Bulk terminal

  b) Ro-Ro terminal

  c) Container terminal

  d) Liquid terminal

- The hinterland of a port refers to:

  a) The navigable waters surrounding the port

  b) The inland area served by the port for cargo distribution

  c) The docks and berths within the port

  d) The passenger facilities at the port

- Which of the following is a key difference between liner and tramp shipping?

  a) Liner shipping operates on fixed schedules and routes, tramp shipping does not

  b) Tramp shipping always carries containers

  c) Liner shipping is exclusively for bulk cargo

  d) Tramp shipping follows pre-determined schedules

- A Bill of Lading serves as:

  a) A contract of carriage, receipt of goods, and document of title

  b) Only a cargo receipt

  c) Only a financial document

  d) Only a shipping schedule

Short Answer Questions

- Define a port and explain its main functions within maritime transport.
- List three types of terminals and describe their main characteristics.
- Explain the concept of hinterland and its importance for port operations.

- What are the main services provided by ports and terminals?
- Differentiate between liner and tramp shipping operations.

Long-Form / Essay Questions

- Discuss the roles of ports and terminals in global trade, emphasizing their infrastructure and operational functions.
- Explain the different port ownership and administration models and how they affect port efficiency.
- Analyze the operational differences between container, bulk, and Ro-Ro terminals.
- Describe the components and key equipment used in cargo handling operations at terminals.
- Evaluate the impact of chartering, freight markets, and maritime documentation on port operations and shipping efficiency.

Scenario-Based / Practical Questions

- You are assigned to plan operations at a new container terminal. Describe the key infrastructure, equipment, and workflow considerations.
- A bulk carrier arrives at a port with limited berthing capacity. How would terminal operations and cargo handling be managed efficiently?
- A port is located near a major industrial hinterland. Explain how this affects port throughput and service planning.
- Analyze a scenario where a shipping company switches from tramp service to liner service. What operational adjustments are needed at the port and terminal level?
- You are reviewing the shipping documentation for a vessel's cargo. Identify the key documents to verify and their purposes.

True/False Questions

- **T/F:** All ports and terminals are publicly owned.
- **T/F:** Ro-Ro terminals are designed to handle wheeled cargo such as vehicles.
- **T/F:** Liner shipping follows fixed schedules and designated routes.
- **T/F:** The hinterland of a port only includes the immediate waterfront area.
- **T/F:** Cargo handling equipment varies depending on the type of terminal and cargo.

Materials Used in the Course

Primary Textbooks

- **Notteboom, T. & Rodrigue, J.-P.** *Port Management and Operations*, 2nd Edition. Routledge, 2020.
- **Lam, J. S. L. & Yap, W. Y.** *Maritime Logistics: A Guide to Contemporary Shipping and Port Management*. Springer, 2019.
- **Brooks, M. R.** *The Shipping and Port Management Handbook*. Kogan Page, 2018.

Recommended References

- **UNCTAD (United Nations Conference on Trade and Development)** – *Review of Maritime Transport*, Annual Reports.
- **Stopford, M.** *Maritime Economics*, 4th Edition. Routledge, 2020.
- **Notteboom, T.** *Container Terminals and Port Operations*. Routledge, 2016.
- **International Maritime Organization (IMO)** – Port and Terminal Safety Guidelines, ISPS Code.
- **Port Authorities Publications** – Operational manuals, annual reports, and port statistics from major global ports (e.g., Rotterdam, Singapore, Hamburg).

Supplementary Learning Materials

- Online shipping and port databases (e.g., MarineTraffic, IHS Markit)
- Instructional videos on terminal operations and cargo handling equipment
- Case studies on container, bulk, liquid, and Ro-Ro terminal operations

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
	LO1	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**	**LO8**	**LO9**	**L10**
PO1	3	3	2	2	2	1	3	2	2	2
PO2	3	3	3	2	2	1	2	1	2	1
PO3	2	3	1	3	3	2	1	3	1	1
PO4	2	2	1	2	3	3	2	2	2	2
PO5	1	2	2	1	1	2	2	2	3	3
PO6	1	2	1	2	1	1	2	3	2	2
PO7	1	1	1	1	1	3	2	2	3	3
PO8	1	1	3	1	1	1	2	1	2	1
PO9	1	1	2	1	1	1	1	1	2	2
PO10	2	2	1	2	3	3	2	2	2	2
PO11	1	2	2	1	1	2	2	2	3	3
PO12	1	2	1	2	1	1	2	3	2	2
PO13	3	3	3	2	2	1	2	1	2	1
PO14	2	3	1	3	3	2	1	3	2	2
PO15	1	2	1	2	2	3	2	2	3	3

Course Learning Outcomes/ Evaluation Method		
Course Learning Outcomes (CLOs)	**Teaching Method**	**Assessment Method**
LO1 Define and describe ports and terminals and explain their functions within maritime transport.	Lectures, diagrams, case studies	Quizzes, short-answer questions, class participation
LO2 Differentiate between types of ports and terminals and identify key components and infrastructure.	Lectures, multimedia presentations, practical demonstrations	Written assignments, quizzes, practical exercises
LO3 Explain port ownership and administration models and identify key stakeholders.	Lectures, group discussions, case studies	Short essays, class participation, quizzes
LO4 Describe port and terminal services, including cargo handling and operational processes.	Lectures, case studies, demonstrations	Practical assignments, written exams, scenario-based exercises
LO5 Analyze the concept of hinterlands and their impact on port operations.	Lectures, interactive maps, discussions	Short-answer questions, assignments, quizzes
LO6 Demonstrate knowledge of terminal operations and cargo handling equipment for containers, bulk, liquid, and Ro-Ro cargo.	Demonstrations, videos, practical exercises	Practical evaluation, observation, project work
LO7 Explain maritime markets, including the characteristics and operational differences of liner and tramp shipping.	Lectures, case studies, group discussions	Quizzes, written assignments, scenario analysis
LO8 Understand freight markets and chartering practices, including voyage, time, and bareboat charters.	Lectures, case studies, simulations	Written assignments, short essays, practical exercises
LO9 Interpret and apply shipping documentation, including Bills of Lading, Incoterms, and charter party contracts.	Lectures, demonstrations, document analysis	Written exams, practical exercises, scenario-based assessments
LO10 Integrate theoretical knowledge with practical scenarios through case studies and project work.	Term project, case studies, group work	Project reports, oral presentations, performance evaluation

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	-	-	-
Lectures	**15**	**3**	**45**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**15**	**15**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**15**	**15**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**15**	**15**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**109**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	1	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	50
Total	**4**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Electronic Aids to Navigation							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
NAV204	II	Spring	3	5	2	2	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				60	-	-	40
Course Venue and Time				Wednesday 12.30-16.20			
Instructor information				**Cpt. Caner Özbilgiç** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4040 caner.ozbilgic@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides students with a comprehensive understanding of modern electronic navigation systems. It covers the fundamental principles of electromagnetic wave propagation and their application in maritime navigation. Students will gain practical knowledge of various systems, including GPS and DGPS, as well as the structure, operation, and plotting techniques for Radar and ARPA. A significant portion of the course is dedicated to the ECDIS, focusing on its capabilities, limitations, and its role in safe navigation and situational awareness. The curriculum also includes an overview of bridge equipment, navigation records and logbooks, and essential voyage planning procedures, ensuring students are well-prepared to use these tools effectively and responsibly in a maritime environment.
Course Aims and Objectives	• **Comprehend Fundamental Principles:** Understand the principles of electromagnetic waves and their application in electronic navigation. • **Operate and Interpret Key Systems:** Effectively use and interpret data from essential electronic aids, including **GPS**, **DGPS**, **Radar**, and **ARPA**. • **Utilize ECDIS Proficiently:** Operate **ECDIS** (Electronic Chart Display and Information System) to ensure safe navigation, understanding its capabilities, limitations, and how to maintain situational awareness. • **Manage Bridge Equipment and Records:** Understand the function of various bridge control systems and manage navigation records and logbooks accurately. • **Plan Voyages Effectively:** Apply fundamental principles of **voyage planning** and navigate within **VTS (Vessel Traffic Services)** areas and procedures.
Course Learning Outcomes	**CLO1 – Fundamental Principles of Electromagnetic Waves** Understand and explain the basic principles of electromagnetic waves and their applications in modern electronic navigation systems. **CLO2 – Radar Operation** Demonstrate the ability to operate shipboard radar systems and interpret radar data accurately for safe navigation. **CLO3 – ARPA and Automatic Tracking** Operate Automatic Radar Plotting Aids (ARPA) and interpret tracking data to enhance situational awareness. **CLO4 – Satellite Navigation Systems** Utilize GPS, DGPS, and other satellite-based systems for accurate position fixing and navigation. **CLO5 – ECDIS Operation** Apply the Electronic Chart Display and Information System (ECDIS) to plan and execute voyages, understanding both its capabilities and limitations. **CLO6 – Data Analysis and Interpretation** Analyze and interpret navigation data, including radar plots, ECDIS alarms, and other electronic signals to ensure safe operations. **CLO7 – Bridge Equipment Management** Identify and operate standard bridge equipment while understanding their functions in navigation and ship handling.

	CLO8 – Voyage Planning and Execution Apply fundamental principles of voyage planning, considering route optimization, hazards, and VTS requirements. **CLO9 – Navigation Records and Documentation** Maintain accurate navigation records and logbooks, ensuring compliance with regulatory requirements. **CLO10 – Integrated Bridge Operations** Coordinate multiple bridge systems and tools to manage safe navigation and enhance situational awareness during watchkeeping.

Content of the Course

Week	*Subject*
1	**Introduction to Electronic Navigation** • Fundamentals of electromagnetic waves and their application to navigation • Overview of electronic position-finding systems
2	**Hyperbolic Navigation Systems** • Principles and applications of hyperbolic navigation • Transition to satellite-based navigation
3	**Satellite Navigation Systems** • Global Positioning System (GPS) and Differential GPS (DGPS) • Accuracy, errors, and correction methods
4	**Marine Radar Systems** • Structure, operation, and settings of radar • Basic principles of radar observation
5	**ARPA (Automatic Radar Plotting Aid)** • ARPA functionality and operational adjustments • Limitations and advantages of ARPA systems
6	**Radar Observation and Plotting Techniques** • Manual radar plotting methods (American and British approaches) • Maneuvering board applications for collision avoidance
7	**Automatic Radar Plotting and Tracking** • Automatic plotting techniques • Integration of radar and ARPA for enhanced safety
8	**Mid-Term Exam / Practical Assessment**
9	**ECDIS (Electronic Chart Display and Information System) Fundamentals** • Capabilities and limitations of ECDIS • Electronic chart data, accuracy, and display preferences
10	**ECDIS Operations and Safety Functions** • Safe monitoring and adjustment of navigational information • Alarm parameters, backup arrangements, and compliance with standards
11	**Integrated Navigation Systems** • Linking ECDIS with radar, AIS, and other sensors • Situational awareness, sensor integrity, and risk management
12	**Bridge Control and Steering Systems** • Bridge control systems overview • Steering gear and rudder equipment • Autopilot and emergency steering arrangements
13	**Bridge Record Keeping and Logbooks** • Types of navigational records and logbooks • Bridge logbook and other mandatory record-keeping practices • Automatic recording devices and digital systems
14	**Voyage Planning and VTS Procedures** • Principles of voyage planning • Vessel Traffic Service (VTS) areas and operational procedures • Application of electronic navigation tools in passage planning
15	**Final Exam / Project Presentation** • Comprehensive assessment covering electronic navigation systems, bridge equipment, and voyage planning

Methods and Techniques used in the Course

Theoretical Instruction

Lectures will introduce fundamental concepts, principles, and the operational theory behind various electronic navigation systems. Key topics, such as the physics of electromagnetic waves and the working principles of Radar, GPS, and ECDIS, will be delivered through presentations and in-class discussions.

Practical Application and Hands-on Training

A significant portion of the course is dedicated to practical skills development. Students will engage in:

- **Manual Plotting:** Using a maneuvering board to plot radar contacts and predict collision risks.
- **System Simulation:** Operating computer-based simulators to practice with **Radar**, **ARPA**, and **ECDIS**, enabling students to navigate in a controlled virtual environment.
- **Problem-Solving Exercises:** Applying theoretical knowledge to solve real-world navigation scenarios, including position fixing and voyage planning.

Assessment and Evaluation

Student learning will be evaluated through a combination of methods designed to test both theoretical knowledge and practical proficiency:

- **Midterm and Final Exams:** Comprehensive exams will assess the understanding of core concepts and theories.
- **Assignments and Exercises:** Regular homework and in-class assignments will reinforce learning and apply problem-solving techniques.
- **Performance-Based Assessments:** Practical tasks on simulators or during plotting exercises will be used to evaluate hands-on skills.

Sample Questions

- Explain the difference between *GPS* and *DGPS* in terms of accuracy, operational principles, and common applications in maritime navigation. Provide at least one real-life example where DGPS is preferred over GPS.
- A target vessel is detected by ARPA at a range of **8 NM** and bearing **045° relative** to own ship. After **12 minutes**, the target is at a range of **6 NM** and bearing **040° relative**.
- Determine the target's relative motion vector and assess if a risk of collision exists, using the radar plotting method.
- Suggest an appropriate avoiding action according to COLREGs.
- Describe three potential hazards of over-reliance on ECDIS and explain how each can be mitigated by proper bridge watchkeeping practices and integration with other navigational aids.
- List the essential entries that must be recorded in the *navigation logbook* during a voyage. Discuss why accurate and timely logkeeping is critical for both operational safety and legal compliance.
- You are assigned to prepare a voyage plan for a tanker passing through a VTS-controlled area. Identify the **four main stages of voyage planning** according to IMO guidelines, and explain what specific information related to VTS operations should be included in each stage.

Materials Used in the Course

- **Primary Textbooks and References**

  Bowditch, *American Practical Navigator*.

  IMO Model Course 1.07 – Radar, ARPA, Bridge Teamwork, and Search and Rescue.

  IMO Model Course 1.32 – ECDIS.

  Admiralty Manual of Navigation, Volume 1–2.

  IALA Guidelines on Vessel Traffic Services.

- **Electronic Navigation Equipment**

  GPS and DGPS receivers.

  ARPA-equipped radar systems.

  ECDIS (Electronic Chart Display and Information System) simulators.

  AIS (Automatic Identification System) interfaces.

  GMDSS communication equipment (for position verification and data input).

- **Charts and Publications**

  Official electronic navigational charts (ENCs).

  Raster navigational charts (RNCs).

  Admiralty List of Radio Signals (ALRS).

  Nautical Almanac (for celestial position verification).

- **Software and Simulation Tools**

  Radar and ARPA simulation software.

  ECDIS training modules with interactive route planning and monitoring functions.

  Maneuvering board plotting sheets.

- **Practical Training Materials**

  Sextant (for alternative position fixing demonstrations).

  Parallel rulers, dividers, and compasses for manual chart work.

  Sample logbooks and bridge record books.

- **Multimedia and Learning Resources**

  IMO and IALA training videos.

  Case studies of navigation incidents related to electronic systems.

  Manufacturer operation manuals for bridge equipment.

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	3	3	3	3	3	3	2	3	2	2
PO2	2	2	2	3	2	2	2	2	3	2
PO3	3	2	2	3	3	3	2	3	2	3
PO4	2	2	2	2	3	2	3	2	2	2
PO5	3	3	3	3	3	3	2	3	3	3
PO6	2	2	2	2	2	2	2	2	2	2
PO7	1	1	1	1	2	1	2	2	1	2
PO8	1	1	1	1	1	1	1	1	1	1
PO9	1	1	1	2	1	1	1	2	1	2
PO10	2	2	2	2	2	2	2	2	2	3
PO11	1	1	1	1	2	1	1	1	1	2
PO12	1	1	1	1	1	1	1	1	1	2
PO13	1	1	2	3	3	2	1	1	1	3
PO14	1	1	2	3	3	2	1	1	1	3
PO15	1	1	2	3	3	2	1	1	1	3

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
CLO1 – Fundamental Principles	Lecture, Multimedia Presentation, Case Studies	Quizzes, Assignments, Midterm Exam
CLO2 – Operate Navigation Systems	Hands-on Lab, Simulation, Demonstration	Practical Exams, Lab Reports, Assignments
CLO3 – Apply ECDIS for Safe Navigation	Simulation Exercises, Group Projects, Practical Demonstration	Practical Exams, Project Reports, Assignments
CLO4 – Analyze and Interpret Data	Problem-Solving Sessions, Simulation, Case Studies	Assignments, Quizzes, Practical Exercises
CLO5 – Manage Bridge Operations	Role-Playing, Simulation, Scenario-Based Exercises	Observation, Practical Exams, Project Reports
CLO6 – Radar & ARPA Interpretation	Lab Exercises, Simulation, Demonstration	Practical Exams, Assignments, Lab Reports
CLO7 – GPS/DGPS & Satellite Systems	Hands-on Lab, Tutorials, Simulation	Lab Reports, Practical Exams, Quizzes
CLO8 – Navigation Decision-Making	Case Studies, Scenario-Based Learning, Group Exercises	Assignments, Practical Exams, Participation
CLO9 – VTS & Reporting Systems	Lecture, Simulation, Demonstration	Quizzes, Assignments, Practical Exercises
CLO10 – Integration of Navigation Skills	Scenario-Based Exercises, Bridge Simulation, Group Projects	Project Reports, Practical Exams, Assignments

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**4**	**60**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**10**	**10**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**10**	**10**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**20**	**20**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**134**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	1	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	50
Total	**4**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Maritime Safety IV							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
SAF202	II	Spring	3	3	2	2	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				30	-	-	70
Course Venue and Time				Wednesday 14.30-17.20			
Instructor information				**Cpt. Çağrı Deliceırmak** Faculty of Maritime Studies Wednesday / 09:00 – 12:00 +90 (392) 650 26 00 / 4060 cagri.deliceirmak@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	Maritime Safety IV provides advanced training in shipboard safety, emergency response, and crisis management for both crew and passengers. The course focuses on protective measures on passenger ships during maritime emergencies, fast rescue boat (FRB) operations, passenger and cargo safety, vessel stability, and effective use of safety equipment. Additionally, this course provides comprehensive training in collision, grounding, and evacuation procedures. Students will gain practical and theoretical knowledge to respond efficiently to emergencies on passenger ships, manage passengers in critical situations, operate lifesaving appliances, and uphold international maritime safety standards. The course will be conducted in accordance with the IMO Model Courses 1.24, 1.28, and 1.29, as well as the national regulation "Egitim Sinav Yonergesi 2025" of the Turkish Republic. Successful students will obtain mandatory STCW certificates of (1); Proficiency in Fast Rescue Boats, (2); Crowd Management, Passenger Safety, and Safety Training for Personnel Providing Direct Services to Passengers In Passenger Spaces, (3); Proficiency in Crisis Management and Human Behaviour Training, Including Passenger Safety, Cargo Safety, and Hull Integrity Training. The course emphasizes leadership, communication, and human behaviour management to ensure preparedness and safety in diverse maritime scenarios.
Course Aims and Objectives	The course aims to equip students with the advanced knowledge and practical skills necessary to ensure the safety of passengers, crew, and vessels in emergencies. It focuses on enhancing maritime safety awareness, improving emergency response capabilities, and fostering effective management of life-saving operations and safety equipment on board. • Comprehend and execute protocols for safeguarding passengers and crew members during maritime emergencies. • Acquire proficiency in the operation, launching, recovery, and management of fast rescue boats (FRBs) across diverse sea and weather conditions. • Oversee passenger evacuation procedures, manage crowd control, and ensure safety in accordance with international regulations. • Develop skills for effective communication, leadership, and human behavior management during crises.

	• Ensure proper handling and securing of cargo, maintenance of vessel stability, and management of hazardous materials. • Comprehend and implement protocols during emergencies, including collisions, groundings, beaching, and emergency evacuations. Conduct safety drills, risk assessments, and inspections to uphold shipboard safety and readiness.
Course Learning Outcomes	**LO1**: Demonstrate knowledge of maritime emergency response procedures for the protection of passengers and crew. **LO2**: Ensure the safe operation, launching, and recovery of Fast Rescue Boats (FRBs) across diverse sea and weather conditions. **LO3**: Implement crowd management, evacuation protocols, and passenger safety procedures, including aiding individuals with special needs. **LO4**: Utilize effective situational awareness, communication, and leadership skills to manage human behavior during onboard emergencies. **LO5**: Implement safe cargo handling, securing, stowage, and transfer techniques to maintain the stability of a passenger ship. **LO6**: Identify and mitigate risks associated with hazardous materials, dangerous goods, and other safety threats on passenger ships.

Content of the Course

Week	*Subject*
1	**Passenger Ship Safety – Crowd Management** Terminology and related maritime English terms Muster stations, assembly lists, and emergency instructions Role allocation and muster procedures Control in corridors, stairways, and escape routes Evacuation of disabled or special-needs passengers
2	**Passenger Ship Safety – Crowd Management** Terminology and related maritime English terms Instructions and management of passengers Panic prevention strategies Organizing evacuation, checks, and counting of evacuated people Safety checks on life jackets and passenger readiness
3	**Passenger Safety Training – Direct Service Personnel** Terminology and related maritime English terms Effective communication with passengers, the importance of English, and a common language Multilingual and non-verbal communication during emergencies Importance of multilingual emergency instructions Instructing and training passengers on the use of personal life-saving appliances Embarkation and disembarkation of disabled or special-needs passengers
4	**Crisis Management and Human Behaviour** Terminology and related maritime English terms Ship design, safety rules, and emergency plans Emergency organization, resource management, and leadership Behavioural responses in emergencies Controlling and managing stress and panic in emergencies Common passenger behaviour and responses in emergencies
5	**Passenger and Cargo Safety, Vessel Integrity** Terminology and related maritime English terms Loading, unloading, lifting, shifting, and securing cargo Handling of hazardous materials on Ro-Ro vessels Applying proper lashing methods to the vehicles Use of lashing equipment and compliance with safety regulations
6	**Passenger and Cargo Safety, Vessel Integrity** Terminology and related maritime English terms Stability, trim, and stress calculations on passenger and RORO ships Effects of ballast and fuel transfers Opening, closing, and securing vessel hatches, ramps, and doors Ventilation and monitoring the atmosphere in RORO vehicle decks Safe operations on RORO vessels during loading, unloading, and emergencies
7	**Fast Rescue Boats (FRBs)** Terminology and related maritime English terms

	Construction and types of FRBs Specifications and accessories of the FRBs Launching Appliances for the FRBs
8	**Fast Rescue Boats (FRBs)** Terminology and related maritime English terms Preparation and launching of the FRBs Safety measures and precautions during the launching and recovery of the FRBs Launching and operating the FRB in heavy seas
9	**Fast Rescue Boats (FRBs)** Terminology and related maritime English terms Navigational and operational characteristics of the FRBs Up-righting of a capsized FRB, self-righting FRBs Navigation and operation of the FRB in heavy seas
10	**Fast Rescue Boats (FRBs)** Terminology and related maritime English terms Equipment and accessories of the FRB Engine of the FRBs, starting and operating methods Search and rescue methods with the FRBs, and natural limitations
11	**Collision, Grounding, and Emergency Evacuation** Terminology and related maritime English terms Definitions and differences between grounding, stranding, and beaching Preparations for beaching Measures to be taken after grounding, stranding, and beaching
12	**Collision, Grounding, and Emergency Evacuation** Terminology and related maritime English terms Collision and collision management Measures to be taken after a collision Measures to be taken after a fire or explosion
13	**Collision, Grounding, and Emergency Evacuation** Terminology and related maritime English terms Damage control and ship rescue operations Steering failures and emergency steering Towing operations
14	**Collision, Grounding, and Emergency Evacuation** Terminology and related maritime English terms Emergency evacuation, abandoning ship Evacuation methods and techniques
15	**Course Review and Practical Exercises** FRB drills and emergency scenarios Passenger evacuation simulations Integration of shipboard safety, cargo security, and crisis management

Methods and Techniques used in the Course

Lectures and Presentations: Delivery of theoretical knowledge on maritime safety regulations, emergency response, and passenger/cargo safety.

Case Studies and Scenario Analysis: Examination of real-life maritime incidents to develop problem-solving and decision-making skills.

Practical Training and Simulations: Hands-on practice with Fast Rescue Boats (FRBs), lifesaving appliances, and safety equipment under controlled conditions.

Drills and Exercises: Organization of crowd management, evacuation, and firefighting drills to reinforce emergency preparedness.

Group Discussions and Role-Playing: Collaborative activities to enhance communication, leadership, and crisis management abilities.

Workshops and Demonstrations: Guided practice on cargo securing, ship stability calculations, and use of emergency equipment.

Multimedia Tools: Use of videos, simulation software, and visual aids to illustrate complex safety operations.

Assessment and Feedback Sessions: Continuous evaluation through quizzes, practical performance tests, and instructor feedback.

Sample Questions

- Explain the main responsibilities of crew members during a passenger ship emergency evacuation.
- What are the critical differences between crowd management and crisis management on board passenger ships?
- List the essential steps to be followed when operating a Fast Rescue Boat (FRB) in heavy weather conditions.
- A Ro-Ro passenger ship is preparing to load dangerous cargo. What kind of safety measures and precautions must be implemented before, during, and after loading a dangerous cargo onto a RORO vessel?
- What is the correct method of launching and recovering a Fast Rescue Boat using appropriate equipment?
- Name and explain the function of at least five of the safety and emergency equipment used on passenger ships.

Materials Used in the Course

Textbooks and Reference Books

- Lecturer Notes, Related IMO Model Courses and STCW (Standards of Training, Certification, and Watchkeeping) manuals.
- SOLAS Consolidated Edition, LSA Code, FSS Code, The Fire Fighting System Guidance, Fire Prevention and Fire Fighting, Master Guide for Fire and Safety on Ferries, Safety of RORO Passenger and Cruise Ships, Guidelines for Contingency Plans on Passenger Ships, Emergency Procedures and Check Lists at Sea
- Related IMO Model Courses and STCW (Standards of Training, Certification, and Watchkeeping) manuals.
- Maritime Safety textbooks covering Passenger Ship Safety, Safety on RORO vessels, Fast Rescue Boats and Emergency Procedures, including SOLAS, STCW, ISPS Code, LSA Code, and FSS Code
    - SOLAS Consolidated Edition
    - LSA Code
    - FSS Code
    - The Fire Fighting System Guidance
    - Fire Prevention and Fire Fighting
    - Master Guide for Fire and Safety on Ferries
    - Safety of RORO Passenger and Cruise Ships
    - Guidelines for Contingency Plans on Passenger Ships
    - Emergency Procedures and Check Lists at Sea

Supplementary Resources

- Instructional videos
- Interactive simulations
- Real-life accident investigation reports for analysis and discussion
- Safety posters, diagrams, and procedural flowcharts
- Fast Rescue Boat (FRB) and associated launching/recovery equipment
- Personal Life-Saving Appliances (lifejackets, immersion suits, lifebuoys, etc.)
- Firefighting equipment (extinguishers, breathing apparatus, hoses, fixed systems)
- Passenger evacuation plans, crowd management drill scenarios, and muster lists
- Communication tools (radios, public address systems, emergency alarms)

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	3	3	3	3	3	3	3	3	x	x
PO2	3	3	3	3	3	3	3	3	x	x
PO3	3	3	3	3	3	3	3	3	x	x
PO4	2	2	2	2	2	2	2	2	x	x
PO5	3	3	3	3	3	3	3	3	x	x
PO6	3	3	3	3	3	3	3	3	x	x
PO7	3	3	3	3	3	3	3	3	x	x
PO8	2	2	2	2	2	2	2	2	x	x
PO9	2	2	2	1	1	1	1	1	x	x
PO10	3	3	3	3	3	3	3	3	x	x
PO11	3	3	3	3	3	3	3	3	x	x
PO12	3	3	3	3	3	3	3	3	x	x
PO13	2	2	2	1	1	1	1	1	x	x
PO14	2	2	2	1	1	1	1	1	x	x
PO15	2	2	2	1	1	1	1	1	x	x

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
LO1	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO2	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO3	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO4	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO5	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO6	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO7	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment
LO8	Lectures, Practical Applications, Case Studies, and Discussions	Midterm Exam, Practical Exam, Final Exam, Assignment

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**3**	**45**
Midterm Exam	**1**	**1**	**1**
Preparation for Midterm Exam	**1**	**5**	**5**
Final Exam	**1**	**1**	**1**
Preparation for Final Exam	**1**	**5**	**5**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**5**	**5**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**92**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	1	10
Laboratory	-	-
Application	1	25
Field Work (Class Work)	-	-
Special Course Internship (Work Placement)	-	-
Assignment(s)/Homework/Class Works	1	10
Providing reliability and motivation for the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	20
Final/Oral Exams	1	35
Total	**5**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check the instructor's web page frequently for the course announcements. • The University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		

University of Kyrenia

Maritime Vocational School

Maritime Management and Operations

Syllabus

Course name: Technical Ship Management I							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
TSM202	II	Spring	3	3	2	2	0
Course type: Compulsory				**Prerequisite: x**		**Language:** English	
% Contribution to the Professional Fundamental Component				**Basic Sciences**	**Engineering Science**	**Engineering Design**	**General Education**
				-	-	-	100
Course Venue and Time				Tuesday / 10:30 – 13:20			
Instructor information				**Cpt. Caner Özbilgiç** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4060 mehmetemin.debes@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides an in-depth exploration of the fundamental principles and practices of maritime commercial and technical ship management. It covers the operational, legal, and financial aspects of maritime trade, including liner and tramp markets, chartering practices, freight markets, and key shipping documentation. Students will learn the technical management requirements of ships, including maintenance, classification, surveys, compliance with international regulations, and safety audits. The course also emphasizes safety, environmental protection, and quality management systems in accordance with international conventions such as the ISM Code and MARPOL. In addition, students will develop leadership, decision-making, and teamwork skills essential for effective crew and resource management. A significant focus is placed on maritime English terminology used in commercial and technical documentation, enhancing students' ability to operate in an international maritime environment. Through theoretical lectures, case studies, and practical applications, students gain a comprehensive understanding of how modern shipping companies manage vessels efficiently while meeting safety, environmental, and commercial obligations.
Course Aims and Objectives	**Aim:** The primary aim of this course is to equip students with the theoretical knowledge and practical skills required to effectively manage commercial and technical aspects of maritime operations while ensuring compliance with international safety, environmental, and quality standards. **Objectives:** By the end of the course, students will be able to: 1. **Understand and analyze** the structure and dynamics of maritime markets, including liner and tramp shipping, chartering practices, and freight contracts. 2. **Interpret and apply** international maritime laws, conventions, and regulations related to ship operations, safety management, and environmental protection. 3. **Develop and implement** safety and quality management systems (SMS & QMS) in compliance with ISM Code and other relevant standards. 4. **Manage technical operations** of ships, including maintenance planning, classification surveys, and regulatory inspections. 5. **Apply leadership and decision-making skills** for effective crew management, workload planning, and resource allocation onboard and ashore. 6. **Use professional maritime English terminology** accurately in commercial, technical, and regulatory documentation, including INCOTERMS, charter parties, statements of facts, and time sheets. 7. **Evaluate and improve operational performance** of shipping companies while balancing safety, environmental, and commercial considerations.

Course Learning Outcomes	**CLO1: Explain** the fundamental principles of maritime commercial operations, including liner and tramp shipping, chartering types, and freight markets. *(Knowledge/Understanding)* **CLO2: Interpret and apply** international maritime conventions, safety and environmental regulations, and quality management standards (e.g., ISM Code, classification society requirements). *(Application)* **CLO3: Analyze** various types of charter parties and shipping documentation (e.g., bills of lading, statements of facts, time sheets) and their legal and commercial implications. *(Analysis)* **CLO4: Develop** maintenance, inspection, and technical operation plans for ships in accordance with regulatory requirements and industry best practices. *(Synthesis/Design)* **CLO5: Assess and manage** risks related to maritime safety, environmental protection, and cargo operations, including pollution prevention measures. *(Evaluation)* **CLO6: Communicate effectively** in professional maritime English using correct terminology for technical, operational, and commercial contexts (e.g., INCOTERMS, ship management reports). *(Communication)* **CLO7: Demonstrate** leadership, teamwork, and decision-making skills in managing shipboard personnel, workload planning, and emergency situations. *(Professional/Soft Skills)* **CLO8: Evaluate and propose improvements** to safety, quality, and technical management systems to enhance overall operational efficiency and compliance. *(Evaluation/Problem-Solving)*

Content of the Course

Week	*Subject*
1	**Introduction to Technical Ship Management** • Overview of ship technical management • Tracking regulations and compliance requirements • Ship documentation and inspection procedures
2	**Maintenance and Record Keeping** • Maintenance management and record-keeping systems • Correspondence and reporting in technical management • Planning for repairs and preventive maintenance
3	**Personnel and Training Management** • Crew management principles • Training programs and competency tracking • Safety and supply management related to personnel
4	**Material and Inventory Management** • Materials tracking and record keeping • Planning for equipment and supply needs • Stock management and logistic coordination
5	**Concepts of Safety, Environment, and Quality** • Introduction to safety management • Environmental protection principles • Quality concepts in maritime operations
6	**Marine Environmental Protection and Pollution Prevention** • Measures to prevent marine pollution • Pollution prevention procedures and equipment • Importance of proactive environmental protection
7	**Legal and Commercial Requirements for Safety and Quality Management** • ISM Code overview • International and national quality standards • Regulatory compliance for safety and environmental protection
8	**Safety and Quality Management Systems (Preparation and Implementation)** • Establishing a Safety Management System (SMS) • Implementing a Quality Management System (QMS) • Internal and external audits: techniques and application
9	**Leadership and Teamwork in Maritime Operations** • Crew management and education strategies • Effective team communication and coordination • Motivational and leadership skills development
10	**Maritime Legislation and Regulations** • International conventions and national maritime legislation

	• Compliance and enforcement mechanisms • Legal obligations related to ship operations
11	**Task and Workload Management** • Planning and task allocation • Prioritization under time and resource constraints • Delegation and monitoring of tasks onboard
12	**Resource Management in Maritime Operations** • Allocation and prioritization of resources • Effective ship-to-shore communication • Lessons from team experience and decision-making reflection
13	**Decision-Making Techniques I** • Situation and risk assessment • Evaluating alternatives and selecting actions • Decision-making frameworks and approaches
14	**Decision-Making Techniques II** • Implementing decisions in real operational scenarios • Monitoring and adjusting actions • Evaluating effectiveness of decisions
15	**Integration and Practical Application** • Case studies of technical ship management • Simulation of safety, quality, and operational decision-making • Review and consolidation of leadership, management, and technical skills

Methods and Techniques used in the Course

- **Interactive Lectures** – Instructor-led sessions to explain core concepts of technical management, safety, quality, and environmental regulations.
- **Case Studies** – Analysis of real-world scenarios to illustrate challenges in ship management, maintenance, and compliance.
- **Group Discussions** – Collaborative discussions to develop problem-solving skills and exchange ideas on operational and safety topics.
- **Problem-Solving Exercises** – Practical exercises focusing on planning, decision-making, and prioritization in ship operations.
- **Document Analysis and Simulation** – Reviewing ship documents, audits, and reports to practice regulatory compliance and management procedures.
- **Role-Playing and Scenario-Based Learning** – Simulating onboard situations such as emergencies, resource allocation, and crew management to develop leadership and decision-making skills.

Sample Questions

- Explain the key principles of technical ship management and their importance for safe and efficient vessel operation.
- Describe the main components of a Safety Management System (SMS) according to the ISM Code.
- How would you plan preventive maintenance for a ship's machinery and equipment?
- Discuss the steps involved in preparing a ship for dry-docking.
- Explain how crew training and resource management contribute to the effective operation of a ship.
- What are the legal and regulatory requirements for environmental protection on ships?
- Describe the process of conducting internal and external audits for technical management and quality systems.
- How can decision-making and prioritization techniques be applied in case of multiple technical issues on board?
- Identify the main challenges in technical ship management and propose solutions to mitigate them.
- Discuss the role of documentation and record-keeping in ensuring compliance with international maritime standards.

Materials Used in the Course

Textbooks & Reference Books

- IMO **International Safety Management (ISM) Code** documentation
- Manuals on **ship maintenance and machinery operation**
- Books on **maritime technical management and leadership**
- Industry standards on **environmental protection and quality management**

International and National Regulations

- SOLAS (Safety of Life at Sea)
- MARPOL (Marine Pollution)
- Flag state regulations
- Port state control guidelines

Guidelines & Reports

- Shipboard **Safety Management System (SMS)** manuals
- Technical and operational checklists
- Dry-docking and survey reports

Online Resources & Industry Databases

- IMO and ILO websites for updates on maritime regulations
- Industry publications and case studies on **ship management best practices**

Practical Materials

- Sample **maintenance logs, inspection checklists, and vessel records**
- Crew management and training materials
- Templates for **risk assessment, decision-making, and reporting**

All the above listed books are available at UoK's Grand Library

Program Outcomes Matrix

	Program Outcomes	*Level of Contribution				Targeted Competence Areas
		0	1	2	3	
1	Demonstrate fundamental knowledge of maritime business, shipping operations, port management, and international logistics.				✓	Maritime Business & Operations
2	Apply principles of management, economics, and finance to ship operations, chartering, brokerage, and maritime organizational decision-making.				✓	Maritime Economics & Management
3	Understand and interpret international maritime law, conventions, and trade regulations including SOLAS, MARPOL, UNCLOS, and INCOTERMS.				✓	Maritime Law & Policy
4	Plan and manage port and terminal operations efficiently, considering cargo handling systems, port logistics, and intermodal transport networks.				✓	Port & Terminal Operations Management
5	Employ digital tools and data-driven approaches in ship management, fleet performance monitoring, and maritime logistics systems.				✓	Digital Maritime Operations
6	Integrate sustainability, environmental protection, and decarbonization principles into maritime and logistics operations in line with IMO GHG strategy.			✓		Sustainability & Green Shipping
7	Demonstrate competence in maritime risk assessment, safety management systems (ISM Code), and crisis response in ship and shore-based contexts.			✓		Safety & Risk Management
8	Exhibit leadership, teamwork, and communication skills necessary for multicultural and interdisciplinary maritime organizations.				✓	Leadership & Intercultural Communication
9	Apply marketing, logistics, and supply chain strategies to global shipping and maritime transport sectors.				✓	Global Logistics & Supply Chain Management
10	Prepare and analyze charter parties, bills of lading, and other shipping documents while managing cargo claims and marine insurance issues.				✓	Maritime Documentation & Insurance
11	Utilize effective business English and Maritime English for negotiation, correspondence, and documentation within international maritime contexts.			✓		Maritime Communication & Professional English
12	Demonstrate ethical awareness, corporate responsibility, and adherence to international professional standards in maritime and logistics management.			✓		Ethics & Corporate Responsibility
13	Develop research skills and analytical thinking to identify, evaluate, and solve complex problems in maritime transport and logistics systems.			✓		Analytical Thinking & Research Skills
14	Adapt to innovations such as digitalization, automation, and smart shipping technologies through continuous professional development.				✓	Innovation & Lifelong Learning
15	Apply entrepreneurship and strategic management principles to establish or develop maritime-related enterprises in a competitive global environment.			✓		Entrepreneurship & Strategic Management

***0:** No Contribution **1:** Little Contribution **2:** Partial Contribution **3:** Full Contribution

Program Outcomes /Course Learning Outcomes Matrix **Level of Contribution**:**0**-No Contribution **1**-Little Contribution **2**-Partial Contribution **3**-Full Contribution										
PO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	3	3	2	3	3	2	2	2	0	0
PO2	2	3	2	3	2	3	2	2	0	0
PO3	3	2	3	2	3	2	3	2	0	0
PO4	2	3	2	3	2	3	2	2	0	0
PO5	3	2	3	2	3	2	3	2	0	0
PO6	2	2	2	3	2	2	2	3	0	0
PO7	2	2	2	2	2	2	2	2	0	0
PO8	1	1	1	2	2	1	1	2	0	0
PO9	1	1	1	1	2	1	1	2	0	0
PO10	1	1	2	1	2	2	2	2	0	0
PO11	1	1	1	2	1	1	2	1	0	0
PO12	1	1	1	2	1	1	2	1	0	0
PO13	1	1	1	1	2	1	1	2	0	0
PO14	1	1	1	1	2	1	1	2	0	0
PO15	1	1	1	1	2	1	1	2	0	0

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
CLO1 – Maritime Commercial Principles	Lecture, Case Studies, Group Discussion	Quizzes, Written Assignments, Midterm Exam
CLO2 – International Regulations & Standards	Lecture, Tutorials, Problem-Solving Sessions	Assignments, Case Study Reports, Midterm Exam
CLO3 – Charter Parties & Documentation Analysis	Lecture, Practical Exercises, Document Review	Assignments, Written Case Studies, Project Work
CLO4 – Maintenance & Technical Operations Planning	Workshops, Simulations, Group Projects	Project Reports, Practical Exercises, Presentations
CLO5 – Risk Assessment & Management	Case Studies, Problem-Based Learning, Simulations	Risk Assessment Reports, Quizzes, Practical Exercises
CLO6 – Professional Maritime English	Role-Playing, Communication Exercises, Presentations	Oral Presentations, Written Assignments, Participation
CLO7 – Leadership & Teamwork	Group Exercises, Simulations, Scenario-Based Learning	Peer Evaluation, Practical Exercises, Observation
CLO8 – Safety, Quality & Technical Management Evaluation	Case Studies, Workshops, Problem-Solving Exercises	Project Reports, Assignments, Presentations

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**1**	**15**
Lectures	**15**	**4**	**60**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**10**	**10**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**10**	**10**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	-	-	-
Group Work	-	-	-
In-class Discussion(s)	**15**	**1**	**15**
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	-	-	-
Assignment(s)/Homework/Class Works	**1**	**20**	**20**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**134**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	15	10
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship (Work Placement)	-	-
Homework/Assignments	1	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	-	-
Quiz	-	-
Midterms/Oral Exams	1	30
Final/Oral Exams	1	50
Total	**4**	**100**

	Percentage	**Course Grade**	**Coefficient**
Grading Policy	90-100	AA	4.0
	85-89	BA	3.5
	80-84	BB	3.0
	75-79	CB	2.5
	70-74	CC	2.0
	60-69	DC	1.5
	50-59	DD	1.0
	49 and below	FF	0.0
	Less than 70% attendance	NA	-
Course Requirements and Policies	• Alerted attendance at the lectures is essential! • Students are expected to check frequently the instructor's web page for the course announcements. • University of Kyrenia honor code will be strictly enforced regarding any issues concerning cheating.		