University of Kyrenia

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: International Business Management							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
EAS401	IV	Fall	3	6	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				Monday / 09:30 – 12:20			
Instructor information				**Assist. Prof. Emete Toros** Faculty of Administrative Sciences and Economics Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4060 emete.toros@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides an in-depth understanding of business management in an international context. Students explore regional and global strategies and examine the structure and operations of multinational enterprises. The course covers the triad of international business—North America, Europe, and Asia—and analyzes the impact of international politics, culture, and trade on business operations. Emphasis is placed on developing multinational strategies and organizing approaches to production, marketing, and human resource management across borders. Through case studies, discussions, and practical applications, students learn to evaluate strategic decisions in a global environment and develop the skills necessary to manage organizations effectively in diverse international settings.
Course Aims and Objectives	The aim of this course is to provide students with a comprehensive understanding of managing business operations in an international environment. The course focuses on strategic, organizational, and functional aspects of multinational enterprises and equips students with the knowledge and skills to operate effectively across borders. • Understand the regional and global business environment and formulate appropriate strategies. • Analyze the structure and operations of multinational enterprises. • Examine the impact of international politics, culture, and trade on business decisions. • Develop multinational strategies for production, marketing, and human resource management. • Organize and manage international business operations efficiently. • Evaluate strategic decisions in global contexts using case studies and real-world examples. • Understand the triad of international business (North America, Europe, Asia) and its implications for strategy. • Apply theoretical concepts to practical international business scenarios. • Develop skills for cross-cultural communication and management. • Integrate strategic, operational, and functional knowledge to enhance international business performance.
Course Learning Outcomes	**CLO1:** Explain the fundamentals of regional and global business strategy. **CLO2:** Describe the structure and functions of multinational enterprises. **CLO3:** Analyze the triad of international business—North America, Europe, and Asia—and its strategic implications. **CLO4:** Evaluate the impact of international politics on business operations. **CLO5:** Understand and apply concepts of international culture to organizational management.

	CLO6: Analyze international trade principles and their influence on business strategy. **CLO7:** Develop multinational strategies for production, marketing, and human resource management. **CLO8:** Organize and manage business operations effectively across international borders. **CLO9:** Apply theoretical frameworks to practical case studies in international business. **CLO10:** Integrate strategic, operational, and cultural considerations to make informed international business decisions.

Content of the Course

Week	*Subject*
1	Introduction to International Business Management: Scope and Importance
2	Regional and Global Business Strategy: Concepts and Frameworks
3	The Multinational Enterprise: Structure and Functions
4	The Triad of International Business: North America, Europe, and Asia
5	International Politics and its Impact on Business Operations
6	International Culture: Cross-cultural Communication and Management
7	International Trade: Principles and Strategic Implications
8	Midterm Exam Week
9	Multinational Strategy: Formulation and Implementation
10	Organizing Strategy: Structure, Governance, and Coordination
11	Production Strategy in International Operations
12	Marketing Strategy for Global Markets
13	Human Resource Management Strategy in Multinational Enterprises
14	Case Studies and Practical Applications of International Business Management
15	Final Exam Week

Methods and Techniques used in the Course

Lectures: Presentation of key concepts in international business, strategy, and multinational enterprise management.

Case Studies: Analysis of real-world multinational corporations to understand strategic, operational, and cultural challenges.

Group Discussions: Interactive discussions to explore international politics, culture, and trade impacts on business.

Problem-Solving Exercises: Application of theoretical frameworks to practical international business scenarios.

In-Class Activities: Simulations and role-playing to enhance cross-cultural management skills.

Homework Assignments: Exercises focusing on multinational strategy, production, marketing, and human resource management.

Quizzes and Exams: Periodic assessments to evaluate comprehension of international business principles and decision-making skills.

Guest Lectures (if applicable): Insights from professionals experienced in international business operations.

Sample Questions

1. Regional and Global Strategy

- Explain the difference between regional and global business strategies and give examples of each.
- How does the triad of international business (North America, Europe, Asia) influence strategic decision-making?

2. Multinational Enterprises

- Define a multinational enterprise (MNE) and describe its key organizational structures.
- Discuss the advantages and challenges of operating as a multinational enterprise.

3. International Politics and Culture

- Analyze how international political factors can impact business operations.
- Explain the role of culture in international business and provide examples of cross-cultural challenges.

4. International Trade

- Describe the principles of international trade and how they influence multinational strategy.
- Discuss the effects of trade barriers and agreements on global business operations.

5. Multinational Strategy

- Outline the steps involved in formulating a multinational strategy for a company entering a new market.
- How can firms adapt their production, marketing, and HR strategies for different international markets?

6. Organizing and Functional Strategies

- Explain how multinational companies organize their operations to ensure efficiency and coordination.
- Provide examples of marketing strategies used by MNEs to address diverse international markets.
- Discuss human resource management strategies for managing a culturally diverse workforce.

7. Case Study Application

- Analyze a case study of a multinational corporation, identifying its strategic approach, challenges, and solutions.
- Propose strategic recommendations for a company expanding its operations internationally.

Materials Used in the Course

Primary Textbooks

- **Cavusgil, S. T., Knight, G., Riesenberger, J. R., Rammal, H. G., & Rose, E. L. (2021).** ***International Business: The New Realities*** **(5th Edition).** Pearson.
- **Hill, C. W. L., & Hult, G. T. M. (2021).** ***International Business: Competing in the Global Marketplace*** **(13th Edition).** McGraw-Hill.
- **Deresky, H. (2020).** ***International Management: Managing Across Borders and Cultures*** **(9th Edition).** Pearson.

Recommended References

- **Peng, M. W. (2020).** ***Global Business*** **(4th Edition).** Cengage Learning.
- **Johnson, G., Scholes, K., & Whittington, R. (2020).** ***Exploring Strategy: Text and Cases*** **(12th Edition).** Pearson.
- **Morrison, J. (2020).** ***The Global Business Environment: Meeting the Challenges*** **(6th Edition).** Palgrave Macmillan.
- **Bartlett, C. A., Beamish, P. W., & Ghoshal, S. (2021).** ***Transnational Management: Text and Cases in Cross-Border Management*** **(8th Edition).** McGraw-Hill.

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 / CLO	**CLO1**	**CLO2**	**CLO3**	**CLO4**	**CLO5**	**CLO6**	**CLO7**	**CLO8**	**CLO9**	**CLO10**
PO1	3	3	3	3	2	2	2	2	2	2
PO2	3	3	3	3	2	2	3	3	2	3
PO3	2	2	2	3	3	2	2	2	2	2
PO4	2	2	2	2	2	2	2	2	2	2
PO5	1	1	2	2	2	2	2	2	2	2
PO6	1	1	1	2	2	1	2	2	2	2
PO7	1	1	1	2	2	2	2	2	2	2
PO8	1	1	2	1	1	1	2	2	2	2
PO9	1	1	2	1	1	1	2	2	2	2
PO10	2	2	1	2	2	2	2	2	2	3
PO11	1	2	2	1	1	2	2	2	3	3
PO12	1	2	1	2	1	1	2	2	2	2
PO13	2	3	3	2	2	2	2	1	2	2
PO14	2	2	1	2	2	2	1	2	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**
CLO1: Explain the fundamentals of regional and global business strategy.	Lectures, in-class discussions	Quizzes, assignments, midterm exam
CLO2: Describe the structure and functions of multinational enterprises.	Lectures, case studies	Assignments, quizzes, midterm exam
CLO3: Analyze the triad of international business—North America, Europe, and Asia—and its strategic implications.	Lectures, group work, board exercises	Quizzes, assignments, midterm exam
CLO4: Evaluate the impact of international politics on business operations.	Lectures, discussions, case studies	Assignments, midterm exam, final exam
CLO5: Understand and apply concepts of international culture to organizational management.	Lectures, in-class exercises, role play	Quizzes, assignments, midterm exam
CLO6: Analyze international trade principles and their influence on business strategy.	Lectures, problem-solving sessions	Assignments, quizzes, midterm exam
CLO7: Develop multinational strategies for production, marketing, and human resource management.	Lectures, case studies, group projects	Assignments, midterm exam, final exam
CLO8: Organize and manage business operations effectively across international borders.	Lectures, simulations, discussions	Assignments, quizzes, final exam
CLO9: Apply theoretical frameworks to practical case studies in international business.	Case studies, group work, in-class problem solving	Assignments, project, final exam
CLO10: Integrate strategic, operational, and cultural considerations to make informed international business decisions.	Lectures, interactive discussions, applied exercises	Assignments, midterm exam, final exam

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**	**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**	**3**	**45**
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			**6**

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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Maritime Law and Conventions II							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
LAW401	IV	Fall	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 - 6007 (15:30 – 18:20)			
Instructor information				**Lect. Halil Emre Gürler** Faculty of Law halilemre.gurler@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides an in-depth study of **Maritime Law and International Conventions**, with a particular focus on both **public and private maritime law**. It examines the legal status of ships, ship registration, seaworthiness, and the roles, rights, and responsibilities of masters and shipowners. The course further explores charter parties, freight contracts, and liabilities arising from maritime accidents such as collisions, salvage, and general average. In addition, students will analyze **national maritime legislation**, including cabotage, labor, port, customs, and health regulations, and their impact on maritime operations. A substantial part of the course is dedicated to the study of **major international maritime conventions** such as SOLAS, MARPOL, Load Lines, MLC 2006, and related IMO instruments, focusing on their legal requirements, implementation, and enforcement. Through a comparative and practical approach, this course aims to equip students with a comprehensive understanding of the **legal framework governing maritime activities**, preparing them to address contemporary challenges in both national and international contexts.
Course Aims and Objectives	The primary aim of this course is to provide students with a comprehensive understanding of the fundamental principles, rules, and practices of **maritime law** within both national and international frameworks. It seeks to develop students' ability to analyze legal concepts related to ships, masters, shipowners, cargo, charter parties, and maritime accidents, while also familiarizing them with the implementation of **international maritime conventions**. • Understand the scope, sources, and branches of maritime law, including both public and private maritime law. • Examine the legal status, registration, and seaworthiness requirements of ships, as well as the documents and records required onboard. • Analyze the authority, rights, and responsibilities of shipmasters and shipowners under national and international law. • Explore different types of charter parties, freight contracts, bills of lading, and their legal implications. • Evaluate liabilities and procedures concerning maritime accidents, including collisions, salvage, and general and particular average. • Gain knowledge of national maritime legislation, including cabotage, port regulations, customs, and health-related requirements. • Study the structure, content, and enforcement of major international maritime conventions such as SOLAS, MARPOL, Load Lines, UNCLOS, and MLC 2006.

	• Develop the ability to apply international maritime conventions and national regulations to practical case scenarios. • Strengthening their legal reasoning and problem-solving skills in matters related to maritime law and compliance.
Course Learning Outcomes	**CLO1: Define and explain** the scope, sources, and fundamental principles of maritime law, including its public and private branches. **CLO2: Identify and evaluate** the legal status, registration, and seaworthiness of ships, as well as the documents and certificates required onboard. **CLO3: Analyze** the authority, duties, and responsibilities of shipmasters and shipowners under both public and private maritime law. **CLO4: Interpret and apply** the legal framework of charter parties, bills of lading, and freight contracts, including their types, termination, and liabilities. **CLO5: Assess** the causes, consequences, and legal procedures of maritime accidents, including collisions, salvage, general average, and particular average. **CLO6: Discuss** the key elements of national maritime legislation, including cabotage, port regulations, customs law, health regulations, and seafarers' rights. **CLO7: Explain** the structure, objectives, and enforcement mechanisms of major international maritime conventions such as SOLAS, MARPOL, Load Lines, UNCLOS, STCW, and MLC 2006. **CLO8: Demonstrate** an understanding of the legal responsibilities for ensuring safety of life at sea and prevention of marine pollution. **CLO9: Apply** maritime law principles and international conventions to practical case studies and problem-solving exercises. **CLO10: Develop** legal reasoning, analytical thinking, and communication skills necessary for handling maritime legal issues in professional practice.

Content of the Course

Week	*Subject*
1	**Introduction to Maritime Law** Definition, Scope, and Branches
2	**Public Maritime Law** Definition, Scope, and Subdivisions
3	**Private Maritime Law** Definition, Scope, and Subdivisions
4	**The Ship in Maritime Law:** • Definition and Legal Status of Ships • Ship Registration and Flag State Rights
5	**Seaworthiness and Ship Requirements:** • Fitness for Voyage, Cargo, and Safety • Ship Surveys and Measurements • Safety Regulations for Life and Property at Sea
6	**Ship Documentation and Legal Instruments:** • Ship Certificates and Records (Logbooks, Tonnage Certificates, Ship's Papers) • Bills of Lading and Sea Protest
7	**The Master of the Ship:** • Legal Definition and Authority of the Master • Public and Private Law Responsibilities • Disciplinary Powers and Duties in Case of Offenses
8	**The Shipowner (Donatan):** • Definition, Rights, and Liabilities of the Shipowner
9	**Charter Parties and Freight Contracts:** • Types and Legal Nature of Charter Parties • Responsibilities of Parties • Laytime and Demurrage • Bills of Lading • Termination of Freight Contracts
10	**Maritime Accidents:** • Collisions at Sea • Sea Protest Procedures • General and Particular Average • Salvage and Assistance
11	**National Maritime Legislation:** • Cabotage Law • Maritime Labor Law • Laws on Seizure and Confiscation at Sea • Penal Codes and Criminal Procedures Related to Maritime Matters

12	**National Maritime Legislation:** • Cabotage Law • Maritime Labor Law • Laws on Seizure and Confiscation at Sea • Penal Codes and Criminal Procedures Related to Maritime Matters
13	**International Maritime Conventions:** • Ship Certification and Documentation under IMO Conventions • Load Line Convention (LL 1966/1988) • SOLAS (Safety of Life at Sea) Convention
14	**International Maritime Conventions:** • Ship Certification and Documentation under IMO Conventions • Load Line Convention (LL 1966/1988) • SOLAS (Safety of Life at Sea) Convention
15	**Contemporary Issues in Maritime Law and Conventions:** • National Implementation of International Conventions • Responsibilities of Ship, Crew, Cargo, and Passenger Safety under International Law • Methods and Practices for Preventing Marine Pollution

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 Questions

- Define the distinction between public maritime law and private maritime law, giving one example of each.
- What is meant by the “seaworthiness” of a ship, and why is it a critical legal requirement?
- Explain the legal authority and responsibilities of a shipmaster in the event of a maritime accident.
- What are the main differences between a charter party and a bill of lading?
- Briefly explain the concept of *general average* and provide one example.

Essay Questions

- Discuss the role and responsibilities of shipowners (donatans) under maritime law. How are their rights and liabilities defined in national and international frameworks?
- Analyze the importance of SOLAS and MARPOL conventions in ensuring maritime safety and environmental protection. Provide real-world examples of their implementation.
- Evaluate the legal implications of a collision at sea. How are liability and compensation determined under international conventions and national legislation?
- Examine the significance of the Maritime Labour Convention (MLC 2006) in protecting seafarers’ rights. How does it complement other maritime conventions?

Problem-Solving / Case Study Questions

- A vessel carrying bulk grain cargo suffers damage during a storm. The cargo is partially lost, and emergency repairs are conducted at sea. Discuss the legal implications of *general average* and how costs would be distributed among stakeholders.
- A ship registered under a flag state fails to comply with MARPOL Annex V requirements and is found discharging garbage into the sea. What are the possible legal consequences under both international conventions and national law?
- During a voyage, a shipmaster refuses to take a compulsory pilot in a restricted area, leading to grounding. Analyze the legal responsibilities of the shipmaster and the shipowner.

- A bill of lading is issued for containerized goods, but upon arrival, the cargo is found damaged. Explain the liabilities of the carrier and the legal remedies available to the cargo owner.

Multiple Choice Questions (MCQ)

- Which international convention primarily regulates the prevention of pollution from ships?

  a) SOLAS

  b) MARPOL

  c) STCW

  d) UNCLOS

- Which document is considered proof of the contract of carriage and the receipt of goods?

  a) Charter Party

  b) Bill of Lading

  c) Tonnage Certificate

  d) Load Line Certificate

- The principle of *general average* requires that:

  a) Only the shipowner bears the loss

  b) The loss is shared proportionally among ship, cargo, and freight interests

  c) The insurer pays the full cost

  d) The master decides who pays without legal basis

Materials Used in the Course

Primary Textbooks and References

- **Özman, M.** *Introduction to Maritime Law*.
- **Aydoğdu, M.** *Maritime Law and Conventions: National and International Perspectives*.
- **Rodrigue, J-P.** *The Geography of Transport Systems* (selected chapters related to maritime law and shipping).
- **Gaskell, N., Asariotis, R., & Baatz, Y.** *Bills of Lading: Law and Contracts*.
- **Tetley, W.** *Marine Cargo Claims*.

International Conventions and Legal Documents

- **SOLAS (International Convention for the Safety of Life at Sea, 1974 and Protocols)**
- **MARPOL (International Convention for the Prevention of Pollution from Ships, 1973/78)**
- **STCW (Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended)**
- **UNCLOS (United Nations Convention on the Law of the Sea, 1982)**
- **COLREG (Convention on the International Regulations for Preventing Collisions at Sea, 1972)**
- **MLC (Maritime Labour Convention, 2006)**
- **Other IMO instruments and codes**: ISM, ISPS, IMDG, IAMSAR, Load Line Convention, etc.

Supplementary Materials

- IMO official publications and codes.
- National maritime legislation and case law documents.
- Ship documents (Bill of Lading, Charter Party, Tonnage Certificate, Load Line Certificate, Oil Record Book, etc.) as examples.
- Lecture notes and instructor-prepared handouts.
- Case studies from recent maritime accidents and legal disputes.

Digital and Online Resources

- IMO Document Repository (official website).
- International Maritime Organization (IMO) e-learning resources.
- Online databases of maritime law (e.g., HeinOnline, LexisNexis, Westlaw).
- Maritime court decisions and arbitration cases databases.

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	2	2	1	3	3	1	2
PO2	1	1	2	2	2	1	2	2	2	2
PO3	2	2	1	1	1	2	2	3	3	3
PO4	1	1	1	1	1	2	2	2	2	1
PO5	2	2	2	1	2	3	3	2	1	3
PO6	3	3	3	3	3	2	2	2	2	2
PO7	2	2	2	2	1	2	3	3	2	1
PO8	1	1	1	1	1	2	2	2	3	2
PO9	3	3	3	3	2	2	2	3	3	2
PO10	3	3	3	3	3	3	3	3	3	3
PO11	2	3	3	3	3	2	2	2	3	3
PO12	2	3	3	3	3	2	2	3	3	3
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 – Scope, Sources & Principles of Maritime Law	Lecture, Multimedia Presentation, Case Studies	Quizzes, Assignments, Participation
CLO2 – Legal Status, Registration & Ship Documentation	Lecture, Tutorials, Group Discussions	Quizzes, Written Assignments, Midterm Exam
CLO3 – Authority & Responsibilities of Shipmasters/Owners	Case Studies, Role-Playing, Problem-Based Learning	Assignments, Observation, Practical Exercises
CLO4 – Charter Parties, Bills of Lading & Freight Contracts	Lecture, Workshops, Scenario-Based Exercises	Assignments, Case Study Reports, Midterm Exam
CLO5 – Maritime Accidents & Legal Procedures	Case Studies, Simulation Exercises, Group Work	Practical Case Reports, Assignments, Participation
CLO6 – National Maritime Legislation & Regulations	Lecture, Tutorials, Guided Practice	Quizzes, Written Assignments, Participation
CLO7 – International Maritime Conventions	Lecture, Workshops, Case Analysis	Assignments, Quizzes, Practical Exercises
CLO8 – Safety & Marine Pollution Responsibilities	Problem-Based Learning, Group Discussions	Assignments, Case Study Reports, Participation
CLO9 – Application of Maritime Law to Case Studies	Scenario-Based Learning, Workshops, Group Exercises	Case Study Reports, Practical Exercises, Assignments
CLO10 – Legal Reasoning & Professional Skills	Role-Playing, Debates, Group Presentations	Oral Presentations, Assignments, Participation

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**	**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**	**20**
Individual Reading / Research	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**144**
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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Maritime English II							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MEN401	IV	Fall	3	4	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 09.30-12.20			
Instructor information				**Cpt. Caner Özbilgiç** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4040 mehmetemin.debes@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides comprehensive training in maritime English for practical and professional use onboard vessels and in maritime operations. It covers ship structure, cargo handling, navigation and meteorology terminology, documentation, correspondence, maintenance, surveys, inspections, communication, and medical emergency procedures in English.
Course Aims and Objectives	• Develop students' proficiency in English for all aspects of shipboard operations. • Enable effective communication in navigation, meteorology, cargo handling, and ship maintenance contexts. • Train students to use correct English terminology in surveys, inspections, and maritime safety operations. • Prepare students for international maritime communication standards and emergency reporting in English.
Course Learning Outcomes	**CLO1:** Understand and correctly use English terminology related to ship structure, sections, and cargo handling. **CLO2:** Communicate effectively in navigation and meteorology operations using maritime English. **CLO3:** Prepare, manage, and interpret ship, port, and cargo documentation in English. **CLO4:** Apply English terminology in maintenance, repair, and survey procedures onboard ships. **CLO5:** Conduct effective ship-to-ship, ship-to-shore, and internal communication using IMO Standard Marine Communication Phrases (SMCP) and emergency phrases. **CLO6:** Respond accurately to medical emergencies onboard using proper English terminology and procedures. **CLO7:** Demonstrate the ability to explain operational procedures and safety instructions in English to multinational crew members. **CLO8:** Apply English terminology in reporting and documenting incidents, accidents, and safety drills onboard. **CLO9:** Interpret and respond to maritime regulations, guidelines, and notices in English. **CLO10:** Collaborate and coordinate effectively in international maritime operations using professional English communication skills.

Content of the Course

Week	*Subject*
1	**Introduction to Maritime English** • Course overview and objectives • Importance of English in maritime operations • Basic ship terminology and structure
2	**Ship Structure and Equipment** • Ship parts and compartments • Cargo handling equipment • Anchors, winches, ropes, and mooring commands
3	**Crew and Onboard Organization** • Ship crew roles and responsibilities • Work organization on board • Basic operational commands in English
4	**Navigation English I** • Voyage planning and ship management • Reporting systems on board • Common navigation terminology in meteorological reports
5	**Navigation English II** • Reading and interpreting meteorological reports • Communication of ship positions and movements • Weather-related English phrases
6	**Documentation and Correspondence I** • Onboard documentation (logbooks, journals, certificates) • Port documents • Cargo documents
7	**Documentation and Correspondence II** • Charter party contracts and voyage orders • Pre-arrival letters and cargo operation records • Official ship correspondence and protests
8	**Ship Maintenance and Repair English**

	• Maintenance planning and terminology • Principles of Planned Maintenance System • Dry docking procedures and repair documentation
9	**Surveys and Inspections English** • SOLAS, MARPOL, and other international conventions • Types of surveys and inspections • Flag state, port state, and classification society inspections
10	**Surveys and Inspections English II** • Inspection checklists • Writing survey reports in English • Practical exercises on survey documentation
11	**Communication English I** • Use of International Code of Signals • Ship-to-ship, ship-to-shore, and internal communications • IMO Standard Marine Communication Phrases (SMCP)
12	**Communication English II** • Emergency and safety communication • Sending and receiving distress messages • Practical exercises on radio communication
13	**Medical Emergency English** • Human anatomy and medical terminology • Common onboard illnesses and medications • Medical emergency communication on board
14	**Medical Emergency English II** • Shipboard medical care procedures • International medical guides and publications • Case studies on medical emergencies at sea
15	**Review and Assessment** • Recap of all topics • Practical exercises and role-playing scenarios • Final exam preparation

Methods and Techniques used in the Course

Lectures

- Presentation of maritime terminology, international conventions, and onboard procedures.
- Explanation of documentation, reports, and communication protocols.

Interactive Discussions

- Classroom discussions on real-life scenarios and maritime operations.
- Encouraging students to practice English terminology and communication.

Role-Playing and Simulations

- Shipboard situations, emergency communications, and cargo operations.
- Medical emergencies and distress reporting exercises.

Case Studies

- Analysis of ship operations, surveys, and inspection reports.
- Review of international regulations such as SOLAS, MARPOL, and SMCP.

Practical Exercises

- Writing logbook entries, voyage reports, and official correspondence.
- Reading and interpreting meteorological and navigational reports.

Audio-Visual Materials

- Use of multimedia, videos, and online resources to demonstrate maritime communication scenarios.

Assignments and Projects

- Preparation of documents, reports, and operational plans in English.
- Group projects simulating real-life shipboard communication and procedures.

Quizzes and Short Assessments

- Regular formative assessments to reinforce vocabulary and comprehension.
- Oral and written evaluations of communication proficiency.

Sample Questions

Ship Structure and Equipment

- Describe the functions of different ship deck equipment and their English terminology.
- Write a short report on a ship's mooring operation using appropriate maritime English terms.

Navigation and Meteorology

- Translate a given meteorological report into plain English for the crew.
- Explain how to report a navigational hazard to the bridge in English.

Documentation and Correspondence

- Draft a sample ship log entry for a cargo loading operation.
- Prepare a letter of protest or a voyage instruction in proper maritime English.

Maintenance and Repair

- Write a brief report on equipment failure and repair using standard maritime phrases.
- Explain planned maintenance procedures in English for a shipboard system.

Surveys and Inspections

- List the steps of a SOLAS or MARPOL inspection and describe them in English.
- Prepare a short briefing for port state control officers in English.

Communication and Emergencies

- Compose a distress message following IMO Standard Marine Communication Phrases (SMCP).
- Role-play a medical emergency on board and describe symptoms and treatment in English.

General Comprehension

- Match maritime English terms with their Turkish or technical equivalents.
- Identify correct phrases to use in various shipboard operational scenarios.

Materials Used in the Course

Textbooks and Reference Books:

- Maritime English textbooks tailored for deck and engine officers.
- IMO Standard Marine Communication Phrases (SMCP).
- Nautical publications, including navigation, meteorology, and cargo handling manuals.
- Maritime dictionaries and glossaries (English–Turkish and English–English).

Supplementary Materials:

- Sample ship logs, correspondence templates, and voyage instructions.
- Case studies and real-life maritime communication examples.
- Audio-visual materials for shipboard operations and emergency drills.
- Online resources, e-learning modules, and IMO educational guidelines.

Practical Tools:

- Simulation exercises for bridge and cargo operations.
- Role-playing for emergency communications, medical reporting, and inspection briefings.
- Written exercises for documentation, reports, and professional correspondence.

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	2	2	2	2	2
PO2	2	3	3	2	3	2	2	2	2	2
PO3	2	3	3	2	3	2	2	2	2	2
PO4	2	2	2	2	2	2	2	2	2	2
PO5	3	3	3	2	3	2	3	2	2	2
PO6	2	2	2	2	2	3	2	2	2	2
PO7	2	2	2	2	2	2	3	2	2	3
PO8	2	2	2	2	2	2	2	2	2	2
PO9	1	2	2	1	2	2	2	2	2	2
PO10	2	3	3	2	3	2	3	2	2	3
PO11	2	2	2	2	2	2	2	2	2	2
PO12	1	2	2	1	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**
CLO1	Lecture, Multimedia Presentation, Demonstration	Quizzes, Assignments, Participation
CLO2	Lecture, Role-Playing, Simulation Exercises	Quizzes, Practical Exercises, Assignments
CLO3	Hands-on Practice, Lab Sessions, Group Exercises	Practical Exams, Lab Reports, Assignments
CLO4	Lecture, Tutorials, Case Studies	Quizzes, Assignments, Midterm Exam
CLO5	Lecture, Demonstration, Scenario-Based Exercises	Assignments, Practical Exams, Project Reports
CLO6	Lecture, Workshops, Role-Playing	Quizzes, Presentations, Assignments
CLO7	Group Exercises, Simulation, Problem-Based Learning	Observation, Practical Exams, Participation
CLO8	Case Studies, Problem-Solving Sessions, Simulations	Assignments, Midterm Exam, Practical Exercises
CLO9	Lecture, Discussions, Role-Playing	Quizzes, Participation, Assignments
CLO10	Project-Based Learning, Simulation, Group Exercises	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**	**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)	**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			**129**
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	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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Maritime Economics							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD403	IV	Fall	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				**Hüseyin Meray** Faculty of Maritime Studies Wednesday / 09:00 – 12:00 +90 (392) 650 26 00 / 4040 huseyin.meray@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	*Maritime Economics* provides a comprehensive examination of the economic principles and market forces that shape the global maritime transport industry. The course analyzes how shipping markets operate, how freight rates are determined, and how demand and supply interact within various maritime sectors. Special emphasis is placed on the structure and behavior of competitive and non-competitive markets, the economics of ports and waterways, and the financial and operational decision-making processes involved in vessel management. Students will develop an understanding of voyage estimation, cost analysis, investment cycles, and the dynamics of newbuilding, secondhand, scrapping, and chartering markets. By integrating theory with real-world applications, the course equips students with the analytical tools needed to evaluate economic performance and strategic decisions within the maritime industry.
Course Aims and Objectives	The primary aim of *Maritime Economics* is to provide students with a solid theoretical and practical understanding of the economic principles governing the global maritime industry. The course seeks to develop the analytical skills necessary to interpret market behavior, evaluate financial performance, and make informed decisions within various shipping sectors. • **Introduce fundamental economic concepts** as they apply to maritime transport and global trade. • **Explain the structure and functioning of shipping markets**, including competitive and non-competitive market environments. • **Analyze demand and supply dynamics** specific to maritime transportation services. • **Examine freight rate formation** and price mechanisms in different shipping sectors. • **Develop an understanding of port, canal, and waterway economics** and their role within maritime logistics. • **Assess the contribution of the shipping industry to a country's economy**, focusing on balance of payments and national competitiveness. • **Provide tools for vessel financial analysis**, including cost accounting, cash flow management, and budget estimation. • **Teach students to perform voyage estimations** and compare profitability across different voyage scenarios. • **Explore investment cycles and market behavior** in the newbuilding, secondhand (S&P), scrapping, and chartering markets.

	• **Enhance decision-making skills** by connecting theoretical knowledge with real-world maritime economic challenges and trends.
Course Learning Outcomes	**LO1.** Explain fundamental economic principles and apply them to maritime transport and global trade. **LO2.** Analyze the derived demand for shipping and identify the factors influencing demand fluctuations. **LO3.** Evaluate the supply of shipping services, including short-run and long-run market responses. **LO4.** Interpret freight rate formation and assess how price mechanisms operate within maritime markets. **LO5.** Distinguish between competitive and non-competitive market structures in the shipping industry and explain their economic implications. **LO6.** Assess the economic functions of ports, canals, and waterways and their impact on maritime logistics and transport costs. **LO7.** Evaluate the role of the shipping industry in the national economy and its effect on a country's balance of payments. **LO8.** Perform vessel cost analysis, budgeting, and cash flow estimation for maritime operations. **LO9.** Conduct voyage estimation and compare alternative voyages based on economic criteria and profitability analysis. **LO10.** Analyze the dynamics of newbuilding, secondhand (S&P), scrapping, and chartering markets and interpret their interaction within maritime cycles.

Content of the Course

Week	*Subject*
1	**Introduction to Maritime Economics** • Definition, scope, and importance of maritime economics • The role of maritime transport in global trade • Economic characteristics of maritime services
2	**Factors of Production in Maritime Transportation** • Capital, labor, entrepreneurship, and technology in shipping • Fleet, ports, and infrastructure as economic inputs • The unique nature of maritime production functions
3	**Derived Demand for Shipping Services** • Demand as a function of international trade • Elasticity of demand in shipping • Factors influencing fluctuations in shipping demand
4	**Supply of Shipping Services** • Short-run vs. long-run supply • Fleet size, vessel availability, and lay-up decisions • Productivity and supply elasticity in shipping markets
5	**Price Mechanism in the Shipping Industry** • Freight rate formation • Market equilibrium: interaction of supply and demand • Price volatility and market adjustment mechanisms
6	**Competitive Markets in Shipping** • Perfect competition in maritime transport • Cost structure under competitive market conditions • Characteristics of highly competitive shipping segments
7	**Non-Competitive Markets in Shipping** • Oligopoly, monopoly, and monopolistic competition • Liner shipping conferences and alliances • Market power and pricing strategies
8	**Economics of Ports, Sea Canals, and Waterways** • Ports as economic nodes in maritime logistics • Canal transit economics (Suez, Panama, Turkish Straits, etc.) • Waterways and their impact on shipping costs and routing
9	**Shipping Industry and Balance of Payments of a Country** • Freight earnings as invisible exports • National fleet contribution to economic stability • Maritime transport and national competitiveness
10	**Vessel Cost Structure and Accounting Principles** • Fixed and variable costs (capital costs, operating costs, voyage costs) • Depreciation, financing, and interest costs • Ship budget estimation and financial planning
11	**Cash Flow Estimation and Financial Management of a Vessel** • Revenue forecasting • Cash flow cycles in shipping • Liquidity management and financial risk in maritime operations
12	**Voyage Estimation and Economic Comparison of Voyages** • Time–distance calculations • Port time vs. sea time • Freight calculations and profitability ranking between voyage options
13	**Newbuilding Market Economics** • Factors affecting newbuilding orders • Shipyard capacity and price dynamics

	• Investment evaluation and timing cycles
14	**Sale & Purchase (S&P), Scrapping, and Chartering Markets** • Secondhand vessel pricing and market determinants • Scrapping economics and demolition markets • Interaction between S&P, newbuilding, and chartering markets
15	**Course Review and Final Exam** • Comprehensive review of key topics • Preparation for final assessment • FINAL EXAM

Methods and Techniques used in the Course

Lectures and Theoretical Instruction

- Presentation of core concepts, economic models, and market structures.
- Use of visual aids, diagrams, and real-world industry data.

Case Studies and Applied Problem-Solving

- Analysis of real shipping markets, freight rate behaviors, port economics, and vessel operations.
- Examination of historical and contemporary maritime economic scenarios.

Practical Exercises and Calculations

- Voyage estimation calculations
- Cost analysis and budgeting exercises
- Market comparison and economic evaluation tasks

Class Discussions and Interactive Sessions

- Debates on maritime market developments
- Collaborative interpretation of supply–demand dynamics
- Critical assessment of industry trends

Industry Reports and Research-Based Learning

- Use of market reports (Clarksons, BIMCO, UNCTAD, OECD, etc.)
- Student engagement with current economic indicators and market forecasts

Group Projects and Presentations

- Team-based studies on shipping markets, port economics, or vessel financial performance
- Development of analytical and communication skills

Simulation-Based Learning (If available)

- Freight market simulations
- Chartering scenario simulations
- Supply–demand modeling exercises**Assignments and Independent Study**
- Weekly readings to reinforce lecture topics
- Individual problem-solving and data analysis tasks

Sample Questions

- **Define derived demand in the context of maritime transport.**
  Explain how fluctuations in global trade affect the demand for shipping services.
- **Discuss the main factors influencing the supply of shipping services.**
  Compare short-run and long-run supply responsiveness in the shipping industry.
- **Explain how freight rates are determined.**
  Illustrate the interaction of supply and demand in setting freight prices in competitive markets.
- **Identify and compare the characteristics of competitive and non-competitive market structures** within the maritime industry. Provide examples for each.
- **Analyze the economic role of ports and canals** in international shipping and describe how they influence transport costs and route selection.
- **Evaluate the impact of the shipping industry on a country's balance of payments.**
  Why are freight earnings referred to as "invisible exports"?
- **List and explain the major cost components involved in vessel operations.**
  How do fixed and variable costs influence the economic performance of a ship?
- **Perform a basic voyage estimation.**
  Given freight rate, bunker cost, port charges, and voyage duration, determine whether a specific voyage is economically viable.
- **Discuss the main factors affecting the newbuilding market.**
  Explain how shipyard capacity and global economic cycles influence newbuilding prices.
- **Explain the relationship between the newbuilding, secondhand, scrapping, and chartering markets.**
  How do changes in one market affect the others?

Materials Used in the Course

Primary Textbooks

- **Stopford, Martin** — *Maritime Economics*, 2nd Edition, Routledge, 2009.
- **Grammenos, Costas (Ed.)** — *The Handbook of Maritime Economics and Business*, 2nd Edition, Routledge, 2010.
- **Branch, Alan E.** — *Economics of Shipping Practice and Management*, 2nd Edition, Springer, 2007.

Recommended References

- **Karakitsos, Elias & Varnavides, Lambros** — *Maritime Economics: A Macroeconomic Approach*, Springer, 2015.
- **Ma, Shuo** — *Economics of Maritime Business*, Routledge, 2019.
- **UNCTAD** — *Review of Maritime Transport*, Annual Reports.
- **Clarksons Research Reports**

Supplementary Learning Materials

- **Academic Journals**
- **Industry Data Sources**
- **Case Studies & Real-World Examples**
- **Simulation Tools (if available)**
- **Online Resources**

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**
Course Learning Outcomes (CLOs)	**Teaching Method**	**Assessment Method**
LO1. Explain fundamental economic principles and their application to maritime transport.	Lectures, Case Studies	Midterm Exam, Final Exam
LO2. Analyze the derived demand for shipping and identify factors influencing demand fluctuations.	Lectures, Market Data Analysis	Quizzes, Assignments
LO3. Evaluate the supply of shipping services, including short-run and long-run responses.	Lectures, Scenario Analysis	Midterm Exam, Assignments
LO4. Interpret freight rate formation and assess price mechanisms in maritime markets.	Lectures, Problem-Solving Exercises	Quizzes, Final Exam
LO5. Distinguish between competitive and non-competitive market structures and their implications.	Lectures, Case Studies	Midterm Exam, Participation
LO6. Assess the economic functions of ports, canals, and waterways and their impact on transport costs.	Lectures, Case Studies	Assignments, Final Exam
LO7. Evaluate the role of the shipping industry in a country's balance of payments.	Lectures, Discussions	Quizzes, Written Assignments
LO8. Perform vessel cost analysis, budgeting, and cash flow estimation.	Practical Exercises, Spreadsheets	Assignments, Midterm Exam
LO9. Conduct voyage estimation and compare alternative voyages based on economic criteria.	Practical Exercises, Case Studies	Assignments, Quizzes

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	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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Marina and Yacht Management							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD405	IV	Fall	3	3	3	0	0
Course type: 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	**Marina and Yacht Management** is designed to provide students with a comprehensive understanding of the operational, technical, commercial, and strategic aspects of managing marinas and yachts. The course covers the full spectrum of the yacht industry, including private and commercial yachts, charter operations, yacht types and equipment, and maintenance standards. Students will gain insight into marina infrastructure, operations, and management practices, including financial planning, customer service, regulatory compliance, and sustainable practices. Emphasis is placed on practical skills for effective yacht and marina management, addressing both industry-specific challenges and opportunities in the rapidly evolving global maritime sector. Through case studies, simulations, and interactive learning, students will develop the knowledge and competencies required to manage marinas efficiently, oversee yacht operations, ensure compliance with maritime regulations, and deliver high-quality services to clients.
Course Aims and Objectives	The course aims to equip students with a comprehensive understanding of marina and yacht management, combining operational, technical, regulatory, and commercial perspectives. It prepares students to manage marinas and yachts efficiently, ensuring compliance with international maritime standards while optimizing customer satisfaction and business performance. • Understand the structure, roles, and functions of marinas and the yacht industry. • Identify and classify different types of yachts and their equipment, maintenance needs, and operational standards. • Explain the organization, hierarchy, and employment standards of yacht crews in both private and charter operations. • Analyze marina infrastructure, services, and operational procedures, including safety, security, and environmental management. • Apply regulatory and legal frameworks relevant to marinas and yachts, including flag states, classification societies, and insurance requirements. • Develop financial and strategic management plans for marina operations and yacht services. • Implement sustainable practices in marina and yacht management, including waste reduction, energy efficiency, and eco-friendly operations.

	• Evaluate customer service and hospitality standards, ensuring high-quality client experiences in marina and yacht environments. • Examine marketing strategies, business development, and networking opportunities in the yacht and marina sector. • Solve practical management problems and develop professional recommendations using case studies and applied scenarios.
Course Learning Outcomes	**LO1:** Describe the structure, roles, and functions of marinas and the yacht industry. **LO2:** Identify different types of yachts, their equipment, and operational standards. **LO3:** Explain the hierarchy, roles, and responsibilities of yacht crews in private and charter operations. **LO4:** Analyze marina infrastructure, operations, and management procedures including safety, security, and environmental considerations. **LO5:** Apply relevant legal and regulatory frameworks, including flag states, classification societies, and insurance requirements, to marina and yacht management. **LO6:** Develop financial plans and operational strategies for efficient marina management and yacht operations. **LO7:** Implement sustainable and environmentally friendly practices in marina and yacht management. **LO8:** Evaluate customer service standards and apply best practices to enhance client experience in marinas and on yachts. **LO9:** Design marketing strategies and business development plans for marinas and yacht services. **LO10:** Solve practical management challenges using case studies, simulations, and professional problem-solving techniques.

Content of the Course

Week	*Subject*
1	**Introduction to Marina and Yacht Management** • Definition and scope of marina and yacht management • Roles and importance in the maritime industry • Overview of private and commercial yachting sectors
2	**Types of Yachts and Marina Infrastructure** • Motor yachts, sailing yachts, catamarans, superyachts • Yacht equipment and onboard systems • Marina infrastructure: berths, docks, and mooring systems
3	**Marina Ownership and Administration** • Public, private, and mixed ownership models • Marina governance and management structures • Stakeholders: operators, authorities, and service providers
4	**Yacht Sector Overview** • Global, Mediterranean, and Turkish yacht markets • Charter vs. private yachts • Yacht production and maintenance materials
5	**Yacht Crew and Organizational Hierarchy** • Crew roles and command structure • Employment standards in charter and private yachts • Yacht operations and onboard etiquette
6	**Marina Operations I** • Port and marina management principles • Operational procedures, berthing, and safety standards • Common challenges in marina operations
7	**Marina Operations II** • Maintenance and security of marina infrastructure • Waste management and environmental considerations • Emergency procedures and risk management
8	**Yacht Maintenance and Technical Management** • Hull, machinery, and equipment maintenance • Routine inspections and preventive maintenance • Technical management under ISM and classification standards
9	**Yacht Charter and Commercial Operations** • Charter types: seasonal, annual, and bareboat • Charter agreements and regulatory compliance • Client management and service standards
10	**Marina Services and Customer Experience** • Guest reception, hospitality, and service standards

	• Marina ancillary services: fueling, provisioning, and logistics • Health, safety, and hygiene in marinas and yachts
11	**Legal and Regulatory Frameworks** • Flag states, registration, and classification societies • Marine regulations and local maritime laws • Insurance, liability, and risk management for marinas and yachts
12	**Financial and Strategic Management of Marinas** • Budgeting, revenue streams, and financial planning • Pricing strategies for berths and yacht services • Strategic planning and market analysis
13	**Sustainable Practices in Marina and Yacht Management** • Environmental management and green marina certifications • Waste reduction, energy efficiency, and eco-friendly operations • Blue economy principles applied to marina management
14	**Marketing and Business Development** • Yacht and marina marketing strategies • Client relationship management and loyalty programs • Networking and partnerships in the yachting sector
15	**Case Studies, Review, and Final Exam** • Review of marina and yacht management principles • Analysis of real-world marina and yacht management case studies • Final exam preparation and discussion

Methods and Techniques used in the Course

Lectures and Interactive Discussions:

Introduce foundational concepts of marina and yacht management, including industry structures, yacht types, and operational principles.

Case Studies Analysis:

Examination of real-world marina and yacht management scenarios to develop problem-solving and decision-making skills.

Workshops and Practical Exercises:

Hands-on activities covering marina operations, yacht maintenance procedures, and customer service practices.

Group Projects and Teamwork:

Collaborative development of business plans, operational strategies, and marketing proposals for marina and yacht management.

Simulations and Role-Playing:

Mock charter management, client handling, and emergency response exercises to improve practical skills.

Guest Lectures / Industry Experts:

Presentations from marina managers, yacht operators, and maritime authorities sharing practical insights and industry best practices.

Site Visits (if possible):

Visits to marinas, yacht clubs, and port facilities to observe operational procedures and infrastructure management.

Digital Tools and Software:

Use of marina management software, scheduling tools, and maintenance tracking systems for operational planning.

Research and Report Writing:

Preparation of analytical reports and operational manuals based on case studies and applied research.

Student Presentations:

Present findings from projects, case studies, or practical exercises to enhance communication and professional reporting skills.

Sample Questions

Short Answer Questions

- Define marina management and explain its importance in the maritime industry.
- List the main types of yachts and briefly describe their differences.
- What are the key responsibilities of a marina manager?
- Explain the role of flag states and classification societies in yacht operations.
- Identify three sustainability practices applicable to marina management.

Essay / Long-Form Questions

- Discuss the operational challenges faced by marinas in managing private and charter yachts.
- Evaluate the impact of customer service standards on the commercial success of a marina.
- Analyze the importance of environmental management and green initiatives in marina and yacht operations.

Case Study / Applied Questions

- You are assigned to manage a marina experiencing congestion during peak season. Outline a strategy to optimize berth usage, maintenance, and customer satisfaction.
- A superyacht is scheduled to dock at your marina with a full crew and high-profile guests. Explain how you would plan operations, security, and client services for this visit.
- A marina plans to expand its services to include refueling, provisioning, and repair facilities. Identify the operational, financial, and regulatory considerations for this expansion.

Multiple Choice Questions (MCQs)

- Which of the following is NOT a typical function of a marina?
  a) Berth allocation
  b) Yacht maintenance
  c) Maritime law enforcement
  d) Waste management
- Superyachts are defined as yachts exceeding:
  a) 24 meters
  b) 30 meters
  c) 40 meters
  d) 50 meters
- Which document verifies a yacht's compliance with safety and class requirements?
  a) Bill of Lading
  b) Certificate of Classification
  c) Time Charter Party
  d) Letter of Indemnity

Critical Thinking / Policy Questions

- Propose a marketing strategy for a new marina aiming to attract international charter yachts.
- How can technology and digital tools improve operational efficiency and customer experience in marina management?

Materials Used in the Course

Primary Textbooks

- **Mills, R. (2018).** ***Marina Management: A Practical Guide*****.** Taylor & Francis.
- **Mitchell, R. (2020).** ***Yacht Management: Principles and Practices*****.** Routledge.
- **Cudahy, B. J. (2019).** ***Marinas and Yacht Clubs: Management, Operations, and Planning*****.** Elsevier.

Recommended References

- **International Council of Marine Industry Associations (ICOMIA) –** ***Yacht Industry Guidelines*****.**
- **Marine Industries Association Publications – Marina Management Guidelines.**
- **ISPS Code & IMO Guidelines for Port and Yacht Security.**
- **Blue Economy and Sustainability Reports (UN & OECD).**

Supplementary Learning Materials

- **Academic Journals:**
  Journal of Marine Science and Engineering
  Marine Policy
  International Journal of Maritime and Coastal Law
- **Online Platforms & Tools:**
  Marina management software tutorials (DockMaster, MarinaOffice)
  AIS tracking platforms and yacht monitoring tools
- **Case Studies and Industry Reports:**
  Superyacht charter market analyses
  Marina expansion feasibility studies
- **Documentaries & Media:**
  National Geographic: *Yachting & Marine Operations*
  BBC Earth: *Maritime Infrastructure and Management*
- **Site Visits / Virtual Tours:**
  Local and international marinas
  Yacht service facilities and repair yards

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**
CLO1: Describe the structure, roles, and functions of marinas and the yacht industry.	Lectures, interactive discussions	Quizzes, short-answer assignments
CLO2: Identify different types of yachts, their equipment, and operational standards.	Lectures, practical demonstrations, case studies	Written assignments, quizzes
CLO3: Explain the hierarchy, roles, and responsibilities of yacht crews in private and charter operations.	Lectures, role-playing exercises	Case study reports, participation
CLO4: Analyze marina infrastructure, operations, and management procedures including safety, security, and environmental considerations.	Workshops, site visits, case studies	Group project, written report
CLO5: Apply relevant legal and regulatory frameworks, including flag states, classification societies, and insurance requirements, to marina and yacht management.	Lectures, case study analysis	Written assignments, midterm exam
CLO6: Develop financial plans and operational strategies for efficient marina management and yacht operations.	Workshops, group projects	Group presentation, term paper
CLO7: Implement sustainable and environmentally friendly practices in marina and yacht management.	Seminars, case studies, interactive discussions	Written report, project evaluation
CLO8: Evaluate customer service standards and apply best practices to enhance client experience in marinas and on yachts.	Role-playing, simulations, workshops	Practical exercises, participation
CLO9: Design marketing strategies and business development plans for marinas and yacht services.	Group work, seminars	Group project, presentation
CLO10: Solve practical management challenges using case studies, simulations, and professional problem-solving techniques.	Case studies, workshops, simulations	Final exam, project report

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**	**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**	**15**	**15**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**99**
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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Maritime Data Analytics and Decision Making							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD407	IV	Fall	3	3	3	0	0
Course type: 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	**Maritime Data Analytics and Decision Making** is designed to equip students with the knowledge and skills required to collect, analyse, and interpret maritime data to support informed managerial and operational decisions. The course covers the use of quantitative and qualitative data from shipping operations, ports, and maritime logistics to optimize performance, reduce risks, and improve strategic planning. Students will explore statistical analysis, predictive modelling, risk assessment, and decision support systems specifically applied to maritime contexts. Emphasis is placed on practical applications, including port performance monitoring, voyage planning, cargo demand forecasting, and financial analytics. Through hands-on exercises, case studies, and data visualization tools, students will develop the ability to transform raw maritime data into actionable insights, supporting efficient, data-driven decision-making across the shipping, port, and logistics sectors.
Course Aims and Objectives	The course aims to provide students with the theoretical knowledge and practical skills necessary to analyze maritime data effectively and make informed decisions in shipping, port, and logistics operations. It focuses on using data-driven approaches to optimize operational efficiency, improve financial performance, manage risk, and support strategic planning in the maritime industry. • Understand the role and importance of data analytics in maritime management. • Identify and collect relevant maritime data from ships, ports, and logistics operations. • Apply data preprocessing and management techniques to ensure data quality and usability. • Use statistical and predictive analysis to interpret maritime data. • Implement decision support systems for operational, financial, and strategic management. • Evaluate key performance indicators (KPIs) to monitor and improve maritime operations. • Apply risk assessment and mitigation strategies using quantitative and qualitative data. • Utilize optimization techniques for route planning, berth allocation, and resource management. • Employ data visualization tools to communicate insights effectively to stakeholders.

	• Integrate analytics into strategic decision-making processes to enhance performance and competitiveness.
Course Learning Outcomes	**LO1:** Describe the role and significance of data analytics in maritime management and decision-making. **LO2:** Identify, collect, and organize relevant maritime data from ships, ports, and logistics operations. **LO3:** Preprocess and manage maritime datasets to ensure quality, consistency, and usability. **LO4:** Apply descriptive and inferential statistical techniques to analyze maritime data. **LO5:** Use predictive modeling and forecasting methods for shipping demand, cargo flows, and port operations. **LO6:** Implement decision support systems (DSS) for operational and strategic maritime management. **LO7:** Evaluate key performance indicators (KPIs) to monitor operational efficiency and performance. **LO8:** Conduct risk assessment and develop mitigation strategies based on quantitative and qualitative data. **LO9:** Apply optimization techniques for voyage planning, resource allocation, and berth management. **LO10:** Visualize data and communicate insights effectively to support informed decision-making in the maritime industry.

Content of the Course

Week	*Subject*
1	**Introduction to Maritime Data Analytics** • Overview of maritime data analytics and its importance • Types of maritime data: operational, financial, environmental, and port-related • Decision-making in maritime management
2	**Data Collection and Sources in Maritime Operations** • AIS, VTS, and satellite data • Port and shipping company operational data • Data reliability and quality
3	**Data Management and Preprocessing** • Data cleaning, normalization, and transformation • Handling missing and inconsistent data • Database management systems in maritime applications
4	**Introduction to Statistical Analysis** • Descriptive statistics for maritime datasets • Probability distributions and maritime risk assessment • Visualizing maritime data using charts and graphs
5	**Predictive Analytics and Forecasting** • Trend analysis in shipping markets • Demand forecasting for cargo and yacht operations • Forecasting port traffic and berth utilization
6	**Maritime Decision Support Systems (DSS)** • Components and architecture of DSS • Applications for ports, shipping companies, and logistics operators • Case studies of DSS implementation
7	**Operational Performance Analytics** • Key performance indicators (KPIs) for ships, ports, and terminals • Efficiency and productivity analysis • Benchmarking and performance monitoring
8	**Financial and Economic Analytics** • Cost analysis, budgeting, and cash flow evaluation • Profitability and revenue optimization for shipping and marinas • Scenario-based financial decision-making
9	**Risk Analysis and Management** • Identifying operational, financial, and environmental risks • Quantitative risk assessment models • Mitigation strategies using analytics
10	**Optimization Techniques**

	• Resource allocation and scheduling • Route optimization and voyage planning • Port operations and berth assignment optimization
11	**Big Data in Maritime Logistics** • Introduction to big data concepts and tools • IoT, sensors, and real-time maritime data collection • Applications in port and shipping operations
12	**Machine Learning Applications in Maritime Management** • Supervised and unsupervised learning techniques • Predictive modeling for shipping and port operations • Case studies: cargo demand prediction, vessel performance optimization
13	**Visualization and Reporting Tools** • Dashboards and data visualization software (Power BI, Tableau, Excel) • Interactive reporting for maritime stakeholders • Decision-making support through visual insights
14	**Maritime Analytics for Strategic Decision Making** • Data-driven decision-making in shipping, ports, and logistics • Scenario analysis and strategic planning • Integrating analytics into managerial decisions
15	**Case Studies, Review, and Final Exam** • Comprehensive review of maritime analytics applications • Case study analysis and problem-solving exercises • Preparation for final exam

Methods and Techniques used in the Course

- **Lectures and Interactive Discussions:**

  Present key concepts of maritime data analytics, decision-making frameworks, and real-world applications in shipping, ports, and logistics.
- **Hands-On Data Exercises:**

  Practical exercises using maritime datasets for cleaning, preprocessing, and analysis.
- **Statistical and Predictive Modeling Workshops:**

  Application of statistical techniques, forecasting, and predictive models to maritime operations.
- **Decision Support System (DSS) Simulations:**

  Interactive exercises to simulate operational and strategic decision-making in shipping and port management.
- **Case Studies Analysis:**

  Examination of real-world maritime scenarios to develop analytical thinking and problem-solving skills.
- **Group Projects:**

  Collaborative analysis of datasets to solve operational, financial, and strategic challenges in maritime management.
- **Data Visualization Exercises:**

  Use of software tools (e.g., Excel, Tableau, Power BI) to create dashboards and visual reports for stakeholders.
- **Guest Lectures / Industry Insights:**

  Presentations by maritime data analysts and managers sharing practical experience and industry applications.
- **Research Assignments:**

  Exploration of emerging trends, technologies, and applications of data analytics in maritime management.
- **Presentations:**

  Students present findings from analyses and projects, enhancing communication and decision-making skills.

Sample Questions

Short Answer Questions

- Define maritime data analytics and explain its importance in decision-making.
- What are the main sources of maritime data in shipping and port operations?
- Explain the role of decision support systems (DSS) in maritime management.
- List three key performance indicators (KPIs) used to measure port efficiency.
- Describe one method of predictive analysis applicable to shipping demand forecasting.

Essay / Long-Form Questions

- Discuss how data-driven decision-making can improve operational efficiency in ports and shipping companies.
- Analyze the impact of inaccurate or incomplete maritime data on strategic decisions.
- Explain the role of data visualization in supporting managerial decisions in maritime operations.

Case Study / Applied Questions

- A shipping company wants to optimize its voyage schedules using historical cargo and route data. Outline a step-by-step approach for analyzing the data and making informed decisions.
- A port is experiencing congestion during peak season. Using available operational data, describe how you would recommend changes to improve berth allocation and cargo handling efficiency.
- You are given financial and operational data of a fleet of yachts. How would you use data analytics to assess profitability and optimize resource allocation?

Multiple Choice Questions (MCQs)

- Which of the following is a common source of maritime operational data?
  a) AIS tracking
  b) Hotel booking systems
  c) Airline passenger manifests
  d) Social media analytics
- What is the main purpose of predictive analytics in maritime management?
  a) To visualize data only
  b) To forecast future trends and demand
  c) To create financial reports
  d) To conduct legal compliance checks
- Which software tool is commonly used for data visualization in maritime analytics?
  a) AutoCAD
  b) Tableau
  c) MATLAB (only for engineering)
  d) Word

Critical Thinking / Problem-Solving Questions

- How can maritime data analytics be applied to reduce environmental impact and improve sustainability in shipping operations?
- Propose a strategy for integrating real-time AIS and port data to optimize fleet management decisions.

Materials Used in the Course

Primary Textbooks

- **Stopford, M. (2020). *Maritime Economics* (3rd Edition).** Routledge. *Covers economic principles, market analysis, and decision-making in maritime operations.*
- **Tsou, M., & Cuthbert, M. (2019). *Data Analytics for Maritime Operations*.** Springer. *Focuses on maritime data collection, analysis, and decision support systems.*
- **Brynolf, S., Andersson, K., & Fridell, E. (2018). *Maritime Logistics and Analytics*.** Elsevier. *Provides practical case studies and applications of analytics in shipping and port operations.*

Recommended References

- **IMO (International Maritime Organization) Publications – Maritime Safety and Performance Data Reports.**
  Standards and statistical data for maritime operations and safety.
- **UNCTAD (United Nations Conference on Trade and Development) – Review of Maritime Transport.**
  Global maritime trade statistics and operational insights.
- **Coyle, J., Langley, C., Novack, R., & Gibson, B. (2017). *Supply Chain Management: A Logistics Perspective* (10th Edition).** Cengage Learning. *Provides concepts relevant to port logistics and supply chain analytics.*
- **Journal Articles:**
  Maritime Policy & Management
  Journal of Shipping and Trade
  International Journal of Maritime Engineering

Supplementary Learning Materials

- **Software Tools:**
  Excel for data analysis
  Tableau / Power BI for visualization
  R or Python for predictive modeling
- **Case Studies and Industry Reports:**
  Port congestion management
  Fleet optimization and routing analysis
  Maritime sustainability and emissions data
- **Web Resources:**
  AIS tracking platforms (MarineTraffic, VesselFinder)
  Port authority operational dashboards
  Online tutorials for maritime analytics tools
- **Guest Lectures / Webinars:**
  Presentations from maritime data analysts, port managers, and shipping companies

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**
CLO1: Describe the role and significance of data analytics in maritime management and decision-making.	Lectures, interactive discussions	Quizzes, short-answer assignments
CLO2: Identify, collect, and organize relevant maritime data from ships, ports, and logistics operations.	Lectures, practical exercises	Written assignments, participation
CLO3: Preprocess and manage maritime datasets to ensure quality, consistency, and usability.	Workshops, hands-on exercises	Practical assignments, lab exercises
CLO4: Apply descriptive and inferential statistical techniques to analyze maritime data.	Lectures, workshops	Assignments, midterm exam
CLO5: Use predictive modeling and forecasting methods for shipping demand, cargo flows, and port operations.	Lectures, software tutorials, case studies	Project reports, quizzes
CLO6: Implement decision support systems (DSS) for operational and strategic maritime management.	Simulations, case studies	Group project, presentations
CLO7: Evaluate key performance indicators (KPIs) to monitor operational efficiency and performance.	Workshops, interactive discussions	Lab exercises, written assignments
CLO8: Conduct risk assessment and develop mitigation strategies based on quantitative and qualitative data.	Case studies, workshops	Case study reports, midterm exam
CLO9: Apply optimization techniques for voyage planning, resource allocation, and berth management.	Practical exercises, simulations	Group project, problem-solving assignments
CLO10: Visualize data and communicate insights effectively to support informed decision-making in the maritime industry.	Workshops, software tutorials	Presentations, final project report

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**	**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**	**15**	**15**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**99**
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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Environmental Impact Assessment in Shipping							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MMD409	IV	Fall	3	3	3	0	0
Course type: 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	**Environmental Impact Assessment in Shipping** provides students with a comprehensive understanding of how maritime operations affect the environment and the methods used to assess, manage, and mitigate these impacts. The course covers international regulations, environmental management systems, pollution prevention, and sustainable practices in shipping and port operations. Students will explore environmental risk assessment, monitoring, and reporting techniques, focusing on both operational and strategic decision-making. Through case studies, practical exercises, and analysis of real-world incidents, students will develop the skills to evaluate environmental impacts, implement mitigation strategies, and ensure compliance with international and national environmental standards. The course emphasizes the integration of environmental considerations into maritime management, ship design, and operational planning, preparing students to promote sustainability and reduce the ecological footprint of shipping activities.
Course Aims and Objectives	The course aims to equip students with the knowledge and skills necessary to evaluate and manage the environmental impacts of shipping operations. It emphasizes the application of international regulations, risk assessment methods, and sustainable practices to promote environmentally responsible maritime management. • Understand the environmental challenges and impacts associated with shipping operations. • Explain international conventions, regulations, and standards governing environmental protection in shipping. • Identify, assess, and prioritize environmental risks in maritime activities. • Apply environmental impact assessment (EIA) methodologies to shipping and port operations. • Analyze the effectiveness of pollution prevention and mitigation measures. • Evaluate environmental management systems (EMS) and compliance procedures for shipping companies. • Incorporate sustainability considerations into ship design, operation, and port management. • Use monitoring, reporting, and auditing tools to ensure environmental compliance.

	• Examine case studies of environmental incidents in shipping to extract lessons learned. • Develop practical strategies for minimizing the ecological footprint of maritime operations.
Course Learning Outcomes	**LO1:** Explain the key environmental challenges and impacts associated with shipping operations. **LO2:** Identify and interpret international conventions, regulations, and standards related to maritime environmental protection. **LO3:** Conduct environmental risk assessments for ships, ports, and maritime activities. **LO4:** Apply Environmental Impact Assessment (EIA) methodologies to evaluate maritime projects and operations. **LO5:** Analyze and recommend pollution prevention and mitigation strategies for shipping operations. **LO6:** Evaluate Environmental Management Systems (EMS) and compliance measures in shipping companies. **LO7:** Integrate sustainability principles into ship design, operation, and port management. **LO8:** Utilize monitoring, reporting, and auditing tools to ensure adherence to environmental regulations. **LO9:** Critically assess real-world maritime environmental incidents and extract lessons for future practice. **LO10:** Develop practical strategies to minimize the ecological footprint of maritime operations while maintaining operational efficiency.

Content of the Course

Week	*Subject*
1	**Introduction to Environmental Impact Assessment (EIA)** • Definition, purpose, and importance of EIA in maritime operations • Overview of environmental regulations in shipping
2	**Environmental Challenges in Maritime Industry** • Air pollution, greenhouse gas emissions, and climate change • Marine pollution: oil spills, ballast water, and waste management
3	**International Conventions and Regulatory Frameworks** • MARPOL, IMO regulations, and other international agreements • Flag state and port state responsibilities
4	**Environmental Impact Assessment Process** • Stages of EIA: screening, scoping, assessment, and monitoring • Integration of EIA into shipping project planning
5	**Identification and Evaluation of Environmental Risks** • Risk assessment methods in shipping • Tools for evaluating environmental impacts of ship operations
6	**Pollution Prevention Measures** • Emission control technologies for ships • Waste management and ballast water treatment systems
7	**Ports and Terminal Environmental Management** • Environmental assessment for port operations • Noise, water, and air quality management
8	**Green Shipping and Sustainable Practices** • Low-emission fuels, LNG, hybrid, and electric propulsion • Energy efficiency measures (EEDI, SEEMP)
9	**Ship Design and Environmental Considerations** • Hull design, energy-efficient machinery, and ship retrofitting • Life cycle assessment (LCA) of ships
10	**Environmental Monitoring and Reporting** • Environmental audits and compliance reporting • Environmental management systems (EMS) in shipping companies
11	**Economic and Legal Aspects of EIA** • Cost-benefit analysis of environmental measures • Liability, penalties, and insurance implications
12	**Emerging Technologies and Innovations** • Digitalization for environmental monitoring • Big data, sensors, and AI for maritime environmental management
13	**Case Studies in Environmental Impact** • Analysis of past environmental incidents in shipping

	• Lessons learned and best practices
14	**Risk Mitigation Strategies** • Scenario planning for environmental crises • Contingency planning and emergency response
15	**Review and Final Assessment** • Comprehensive review of EIA concepts in maritime operations • Case study presentations and final exam preparation

Methods and Techniques used in the Course

Lectures and Interactive Discussions:

Explanation of environmental regulations, EIA methodologies, and sustainability principles in shipping.

Case Studies Analysis:

Examination of real-world shipping incidents, pollution events, and port environmental management examples.

Workshops and Practical Exercises:

Hands-on activities for conducting environmental risk assessments and applying EIA techniques.

Simulations and Scenario Planning:

Exercises simulating environmental crises, emergency response, and mitigation strategies.

Guest Lectures / Industry Insights:

Presentations by environmental officers, maritime consultants, and port authorities sharing practical experience.

Research Assignments:

Investigation of emerging technologies, sustainable solutions, and regulatory compliance in maritime operations.

Group Projects:

Collaborative projects analyzing environmental impacts of maritime activities and proposing mitigation measures.

Data Analysis and Reporting:

Use of software tools and templates to monitor, report, and communicate environmental performance.

Field Visits (Optional / Virtual):

Visits to ports, shipyards, or maritime facilities to observe environmental practices and compliance procedures.

Presentations:

Students present project findings, EIA reports, or sustainability improvement plans to enhance analytical and communication skills.

Sample Questions

Short Answer Questions

- Define Environmental Impact Assessment (EIA) and explain its importance in maritime operations.
- List three major environmental challenges associated with shipping activities.
- Name two international conventions that regulate pollution from ships.
- Explain the difference between Environmental Management Systems (EMS) and EIA.
- Identify key indicators used to monitor environmental performance in ports.

Essay / Long-Form Questions

- Discuss how environmental regulations have changed the operational practices of shipping companies.
- Analyze the role of sustainable ship design in reducing environmental impacts.
- Explain how ports can integrate EIA into their operational planning to improve sustainability.

Case Study / Applied Questions

- A container ship discharges ballast water in a sensitive marine area. Outline the steps you would take to assess and mitigate the environmental impact.
- A port faces recurring air pollution problems from vessel emissions. Propose a strategy using EIA and monitoring tools to reduce emissions.
- Evaluate the environmental risks of adopting LNG-powered ships and suggest mitigation measures.

Multiple Choice Questions (MCQs)

- Which of the following is a key international regulation for preventing ship pollution?
  a) SOLAS
  b) MARPOL
  c) STCW
  d) ISM Code
- Which activity is part of the EIA process?
  a) Scoping and screening
  b) Ship registration
  c) Crew training
  d) Cargo loading
- Which of the following is a component of Environmental Management Systems (EMS)?
  a) Operational procedures for pollution prevention
  b) Financial accounting only
  c) Crew personal records
  d) Liner trade pricing

Critical Thinking / Problem-Solving Questions

- Propose a method to assess the environmental impact of cruise ships visiting a coastal city.
- How can digital monitoring technologies be integrated into EIA to improve compliance and sustainability in shipping operations?

Materials Used in the Course

Primary Textbooks

- **Stopford, M. (2020). *Maritime Economics* (3rd Edition).** Routledge.
- **Klein, D., & Sadeghian, S. (2019). *Maritime Environmental Management*.** Springer.
- **Ballou, R. H. (2017). *Green Logistics and Sustainability in Maritime Transport*.** Palgrave Macmillan.

Recommended References

- **IMO Publications – MARPOL, MEPC Guidelines, and Environmental Compliance Reports.**
- **UNCTAD Review of Maritime Transport – Environmental Sections.**
- **Journal Articles:**

  Marine Policy

  Journal of Cleaner Production

  Ocean & Coastal Management

- **Academic Reports and Case Studies:**

  Ballast water management studies

  Cruise ship environmental impact assessments

  Port air quality and emission reduction reports

Supplementary Learning Materials

- **Software and Tools:**

  Excel for environmental data analysis

  GIS tools for environmental mapping

- **Web Resources:**

  IMO environmental guidelines online

  Port authority environmental monitoring dashboards

- **Industry Reports / Guidelines:**

  Environmental impact assessment frameworks

  Sustainable shipping practices

- **Guest Lectures / Webinars:**

  Environmental officers from shipping companies and ports

  Experts in maritime sustainability and regulatory compliance

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**
CLO1: Describe the environmental challenges and impacts of shipping operations.	Lectures, interactive discussions	Quizzes, short-answer assignments
CLO2: Explain international regulations and conventions governing maritime environmental protection.	Lectures, case studies	Written assignments, midterm exam
CLO3: Conduct environmental risk assessments for ships, ports, and maritime activities.	Workshops, practical exercises	Lab exercises, project assignments
CLO4: Apply Environmental Impact Assessment (EIA) methodologies in maritime operations.	Case studies, simulations	Project reports, practical exercises
CLO5: Analyze and recommend pollution prevention and mitigation strategies for shipping operations.	Group projects, interactive discussions	Group project reports, presentations
CLO6: Evaluate Environmental Management Systems (EMS) and compliance procedures in shipping companies.	Lectures, workshops	Written assignments, case study analysis
CLO7: Integrate sustainability principles into ship design, operations, and port management.	Lectures, software tutorials	Assignments, project presentations
CLO8: Monitor and report environmental performance using appropriate tools and techniques.	Practical exercises, workshops	Lab exercises, reporting assignments
CLO9: Critically assess real-world environmental incidents in shipping to extract lessons learned.	Case studies, interactive discussions	Case study reports, class participation
CLO10: Develop strategies to minimize the ecological footprint of maritime operations while maintaining efficiency.	Group projects, simulations	Final project, presentations, and exam

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**	**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**	**15**	**15**
Micro-Teaching Sessions	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**99**
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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: General Aspects of Marine Engineering							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
MRE401	IV	Fall	2	3	2	0	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				Wednesday 12.30-16.20			
Instructor information				**Chf. Eng. Volkan Varışlı** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4095 volkan.varisli@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides an introductory understanding of marine engineering, focusing on the basic principles, machinery, and systems used on board ships. It familiarizes students with the main and auxiliary engines, propulsion systems, heat exchangers, boilers, pumps, compressors, and other essential shipboard equipment. The course also introduces students to the safe and efficient operation of marine machinery, emphasizing the importance of shipboard safety culture, planned maintenance, and environmental awareness. Students will learn the fundamentals of diesel engine operation, power generation, steam and gas systems, and auxiliary machinery, as well as their roles in the overall performance of a vessel. By combining theoretical knowledge with practical case studies, the course aims to develop a solid foundation in marine engineering principles, preparing students for more advanced studies and professional responsibilities in the maritime industry.
Course Aims and Objectives	**Course Aims:** The aim of this course is to provide students with a solid foundation in marine engineering principles, shipboard machinery, and operational systems, while emphasizing a culture of safety and efficiency. The course seeks to equip students with the knowledge and skills required to understand, operate, maintain, and optimize ship machinery systems, both in routine and critical scenarios. **Course Objectives:** By the end of the course, students will be able to: • Comprehend the fundamental principles of internal combustion engines, diesel engines, and prime movers used in ship propulsion. • Understand the operation of main and auxiliary machinery, including electrical power systems, boilers, heat exchangers, and turbines. • Apply principles of heat transfer, steam, and gas turbine operations in practical shipboard scenarios. • Identify and operate auxiliary machinery and systems, including pumps, compressors, and fuel management equipment. • Implement safe operational procedures and cultivate a safety culture onboard. • Analyze and perform maintenance, repair, and surveying tasks for ship machinery. • Develop problem-solving skills through case studies and alternative operational scenarios. • Optimize shipboard machinery operations considering efficiency, safety, and regulatory compliance, including EEXI considerations. • Integrate theoretical knowledge with practical skills to manage complex engineering systems in real-life maritime contexts.

Course Learning Outcomes	**LO1:** Explain the principles and operational characteristics of internal combustion engines, diesel engines, and other prime movers used in ship propulsion systems, integrating fundamental concepts of steam, gas, and heat transfer. **LO2:** Describe the operation and functional interaction of main and auxiliary shipboard machinery, including electrical power generation systems, heat exchangers, boilers, turbines, pumps, compressors, and fuel management equipment. **LO3:** Apply engineering principles and problem-solving skills to analyze shipboard systems, evaluate operational efficiency, and optimize machinery performance in compliance with industry regulations, including EEXI requirements. **LO4:** Operate and monitor auxiliary machinery and related ship systems safely and effectively, demonstrating adherence to safety procedures and fostering a strong onboard safety culture. **LO5:** Plan, conduct, and document maintenance activities, inspections, troubleshooting processes, and temporary or permanent repairs on ship machinery, ensuring reliability and operational readiness. **LO6:** Evaluate alternative operational scenarios through case studies, integrate theoretical and practical knowledge to manage complex machinery systems, and communicate engineering concepts and technical findings clearly in written and oral formats.

Content of the Course

Week	*Subject*
1	Principle of Marine Engineering and shipboard safety culture
2	Internal Combustion principle and Main and Auxiliary Machineries
3	Diesel Engines & Prime-moving Propulsion, Operating local & remote-control stationaries
4	Diesel Engine Types and stationary power: Electrical energy as main and emergency
5	Principle of heat exchanging Heat machinery, Exchangers, Boilers steam and thermal oil
6	Principles of Steam and Gas theory, Steam and Gas Turbines
7	Auxiliary machinery theory and auxiliary systems of machineries
8	Mid-Term Exam Case studies (Alternative Operations)
9	Liquid transfer and displacement pumps, types with their functions
10	Compressed air/Gas Transfer and Compressors, types with their functions
11	Other ship auxiliaries, ship maneuvering facilities and consumables (Fuels, oils & FW)
12	Fuel types, consumption and efficient ship operations considerations - EEXI
13	Sources of Planned maintenance (PMS) Temporary and permanent repairs with surveying
14	Investigation, reinforcement and different approaches of maintenance
15	Final exam Case studies (Critical thinking)

Methods and Techniques used in the Course

Lectures

- Theoretical presentations of marine engineering principles, machinery systems, and shipboard safety culture.
- Use of diagrams, animations, and real-life ship schematics to illustrate engine operations, heat exchangers, and auxiliary systems.

Practical Applications / Laboratory Sessions

- Hands-on exercises with engine simulators or model systems.
- Demonstration of operating main and auxiliary machinery, propulsion, and control stations.
- Liquid transfer, pumps, compressors, and fuel system handling.

Case Studies and Problem-Solving

- Analysis of real-life scenarios, e.g., engine failure, fuel consumption optimization, maintenance scheduling.
- Group discussion of alternative operations and critical decision-making exercises.

Assignments / Reports

- Written exercises to consolidate understanding of engine types, auxiliary systems, and safety procedures.
- Research on EEXI compliance, fuel efficiency, or maintenance planning.

Group Work / Collaborative Projects

- Team-based exercises to analyze system performance, propose improvements, or simulate operational scenarios.

Exams (Mid-Term and Final)

- Evaluation of both theoretical knowledge and practical understanding.
- Case-based questions to test application of concepts in real marine engineering contexts.

Supplementary Tools

- Technical manuals, simulation software, maritime engineering publications.
- Visual aids such as schematics, charts, and videos for complex machinery systems.

Sample Questions

Theoretical Questions

- Explain the working principle of a two-stroke and a four-stroke diesel engine. Compare their advantages and disadvantages in marine applications.
- Describe the main components and functions of a steam turbine system on board. How does it differ from a gas turbine system?
- Discuss the principles of heat exchange in marine boilers and the importance of maintaining proper thermal efficiency.
- What are the key elements of a shipboard safety culture, and how do they impact daily operations and emergency preparedness?
- Define EEXI (Energy Efficiency Existing Ship Index) and explain its significance in modern ship operations.

Application / Problem-Solving Questions

- Given a scenario where a main engine shows abnormal fuel consumption, outline the steps you would take to investigate, diagnose, and rectify the issue.
- A ship's auxiliary system fails during voyage. Describe the immediate actions and long-term maintenance measures to ensure continued safe operation.
- Calculate the required pump capacity for transferring 500 m^3 of fuel within 4 hours, given the system constraints.

Case Study / Critical Thinking Questions

- Analyze a shipboard incident involving a fuel leak in the machinery space. What procedures should be followed to minimize risk to the crew, environment, and vessel?
- Evaluate two alternative propulsion options for a medium-sized vessel: diesel-electric vs. conventional diesel. Discuss performance, efficiency, and maintenance considerations.

Materials Used in the Course

Textbooks and References

- "Marine Engineering" – D.A. Taylor, Butterworth-Heinemann
- "Principles of Naval Engineering" – United States Naval Institute
- "Marine Auxiliary Machinery" – H.D. McGeorge
- "Shipboard Safety Management and Culture" – I. C. Thomas, Routledge
- "Marine Engineering Knowledge Guide" – L. G. Skipper
- Relevant International Conventions and Codes: SOLAS, MARPOL, ISM Code, STCW

Journals and Articles

- *Journal of Marine Engineering & Technology*
- *International Journal of Maritime Engineering*
- Selected papers on EEXI, fuel efficiency, and safety culture in marine vessels

Software and Tools

- Marine engine simulation software (e.g., MAN Diesel simulation tools, Wärtsilä Engine Simulators)
- Fuel consumption and efficiency calculators
- Shipboard PMS (Planned Maintenance System) software

Practical Materials

- Engine room models or cutaway diagrams of main and auxiliary machinery
- Pumps, compressors, and heat exchanger mock-ups for demonstration
- Safety equipment and emergency drills guides

Additional Resources

- IMO and classification society guidelines for machinery operation and safety
- Case studies and practical examples from shipboard 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

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	**15**	**2**	**30**
Lectures	**15**	**2**	**30**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**6**	**6**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**6**	**6**
Presentation(s)	**-**	**-**	**-**
Preparation for Presentation(s)	**-**	**-**	**-**
Case Studies / Critical Thinking	**2**	**3**	**6**
Project Writing	**-**	**-**	**-**
Group Work	**1**	**4**	**4**
In-class Discussion(s)	**-**	**-**	**-**
Quiz(es)	**-**	**-**	**-**
Preparation for Quiz(es)	**-**	**-**	**-**
Laboratory / Practical Applications	**2**	**2**	**4**
Assignment(s)/Homework/Class Works	**4**	**3**	**12**
Micro-Teaching Sessions	**-**	**-**	**-**
Lesson Planning	**-**	**-**	**-**
Materials Adaptation	**-**	**-**	**-**
Material Development	**-**	**-**	**-**
Draft Preparation	**-**	**-**	**-**
Drawing	**-**	**-**	**-**
Essay Writing	**-**	**-**	**-**
Tutorial(s)	**-**	**-**	**-**
Portfolio Preparation	**-**	**-**	**-**
Portfolio Presentation	**-**	**-**	**-**
Total Workload			**102**
ECTS Credit			**3**

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**
PO1	3	3	3	2	2	1
PO2	2	3	2	3	3	2
PO3	1	2	2	3	2	2
PO4	2	2	3	2	2	3
PO5	1	2	3	2	2	3
PO6	1	1	2	1	3	3
PO7	1	1	1	2	2	3
PO8	1	1	2	2	2	3
PO9	1	1	2	1	2	2
PO10	1	1	2	2	3	3
PO11	1	2	2	1	3	3
PO12	1	1	2	1	2	3
PO13	1	1	2	3	3	2
PO14	1	1	2	3	3	2
PO15	1	1	2	3	3	2

Course Learning Outcomes/ Evaluation Method		
CLO	**Teaching Method**	**Assessment Method**
CLO1	Lectures, visual presentations, technical demonstrations	Midterm exam, quizzes
CLO2	Lectures, problem-solving sessions, case-based learning	Midterm exam, assignments
CLO3	Lectures, guided practice, technical document analysis	Assignments, quizzes
CLO4	Practical demonstrations, laboratory sessions, simulator-based exercises	Lab performance, practical exam
CLO5	Safety drills, scenario-based training, interactive discussions	Practical exam, participation, reports
CLO6	Workshops, maintenance practice, case studies, group activities	Final exam, project/report, performance assessment

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	-	-
Laboratory	-	-
Application	2	10
Field Work	1	10
Special Course Internship (Work Placement)	-	-
Homework/Assignments	4	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	30
Total	**9**	**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

Faculty of Maritime Studies

Maritime Management

Syllabus

Course name: Technical Ship Management II							
Code	**Year**	**Semester**	**Credit**	**ECTS**	**Course application, Hour/Week**		
					Theoretical	**Application**	**Laboratory**
TSM401	IV	Fall	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**
				-	-	-	100
Course Venue and Time				Tuesday / 10:30 – 12:20			
Instructor information				**Chf. Eng. Volkan Varışlı** Faculty of Maritime Studies Wednesday / 09:00 - 12:00 +90 (392) 650 26 00 / 4095 volkan.varisli@kyrenia.edu.tr www.kyrenia.edu.tr			

Course Description	This course provides an in-depth study of modern ship management practices with a particular focus on survey procedures, regulatory compliance, and safety management standards. It introduces students to the theoretical foundations of the International Safety Management (ISM) Code, ship structural integrity, and the concept of fitness for service. The course covers the principles and applications of internal and external surveys, including regular and irregular inspections, as well as the roles of flag states, port states, classification societies, and third-party organizations in ensuring maritime safety and operational standards. Students will explore documentation and certification requirements, such as initial, annual, intermediate, renewal, and additional surveys, alongside practical methods for physical inspections of hulls, machinery, cargo spaces, and other ship compartments. Emphasis is placed on identifying and addressing non-conformities, deficiencies, detentions, and legal implications related to unfitness. Through real-world case studies and applications, students will develop the ability to prepare vessels for Port State Control (PSC), third-party vetting (OCIMF, CDI, SIRE, RightShip), and harmonized surveys (HSSC). The course also includes reporting strategies, performance evaluations, and continuous self-assessment techniques to maintain compliance with major international conventions and industry requirements (MARPOL, BWM, IBC, IMDG, ICS, ILO, MLC). Practical exercises and case studies guide students in applying survey principles, developing improvement strategies, and ensuring vessels are prepared for inspections by various regulatory and commercial bodies.
Course Aims and Objectives	The course aims to provide students with a comprehensive understanding of ship management, focusing on safety, operational efficiency, and regulatory compliance. It emphasizes the theoretical foundations and practical applications of the International Safety Management (ISM) Code, ship surveys, and inspection procedures. Students will gain knowledge of vessel documentation, classification, and certification requirements, as well as the roles of flag states, port states, classification societies, and third-party inspectors. Additionally, the course aims to develop students' ability to plan, conduct, and evaluate surveys, assess vessel fitness, and implement corrective actions to maintain operational standards. Through case studies and practical exercises, students will acquire the skills necessary for continuous monitoring, self-assessment, and improvement of shipboard operations in alignment with international conventions and industry standards. **Course Objectives** By the end of the course, students should be able to: • Understand the theoretical principles behind ship management, ISM Code implementation, and vessel fitness concepts.

	• Identify and explain the types of surveys (initial, annual, intermediate, periodical, renewal, and additional) and their purposes. • Demonstrate knowledge of the roles and responsibilities of flag states, port states, classification societies, and third-party inspection bodies. • Apply methods for inspecting hulls, machinery, cargo spaces, and other ship compartments, and evaluate the results. • Recognize non-conformities, deficiencies, detentions, and legal implications of unfitness, and propose corrective measures. • Prepare vessels for Port State Control (PSC), third-party vetting inspections, and harmonized surveys. • Develop reporting strategies, maintain documentation, and ensure compliance with international maritime conventions and industry requirements (e.g., MARPOL, BWM, IBC, IMDG, ICS, ILO, MLC). • Perform self-assessment and continuous improvement of shipboard operations using practical case studies and matrix evaluations.
Course Learning Outcomes	**CLO1:** Explain the principles of ship management and ISM Code implementation in relation to safety, quality, and environmental protection. **CLO2:** Identify and distinguish different types of surveys (initial, annual, intermediate, periodical, renewal, and additional) and their regulatory requirements. **CLO3:** Recognize the roles and responsibilities of maritime authorities including flag states, port states, classification societies, and third-party inspection bodies. **CLO4:** Conduct inspections and evaluate ship conditions, including hull, machinery, cargo spaces, and other compartments, applying appropriate measurement and testing methods. **CLO5:** Detect and analyze non-conformities and deficiencies, determine their legal and operational implications, and propose corrective actions. **CLO6:** Prepare and manage ships for inspections and audits, including Port State Control (PSC), third-party vetting, and harmonized surveys. **CLO7:** Develop and implement reporting strategies and documentation that ensure compliance with international conventions and industry standards (e.g., MARPOL, BWM, IBC, IMDG, ICS, ILO, MLC). **CLO8:** Apply self-assessment techniques and continuous monitoring to maintain vessel fitness and operational readiness. **CLO9:** Integrate theoretical knowledge with practical case studies, demonstrating problem-solving and decision-making skills in real-world ship management scenarios. **CLO10:** Communicate technical findings effectively to stakeholders, including ship crew, management, and inspection authorities.

Content of the Course

Week	*Subject*
1	**General Aspects of Ship Management** Theory behind the ISM-Code, Overall reminder of ship's structure and equipment, concept of fitness.
2	Principles of the internal and external surveys, regular/irregular surveys. Understanding of authorities: Flag state/port state, classification societies/class surveyor, insurance survey, 3'rd parties/3'rd party inspections and self-assessment
3	Registered documentational requirements and ship certificates, Initial survey, Annual Survey, Intermediate survey, periodical survey, renewal survey, additional surveys
4	Control methods of a physical survey of the hull and machinery, docking, tank inspections, test methods, inspection of: Machinery spaces, cargo area, other compartments, engines, running parts, measurement control methods, and reporting
5	Non-conformities, deficiencies, detention and arrest: Legal aspects of un-fitness and limitations, reporting, rectifications and clearance
6	**Case study 1** Preparation/keeping a ship "fit" for a Port State Control (PSC)
7	**Case Study 2** Self-assessment of the ship crew and continuous survey onboard
8	**Mid-term** Application (Principles of survey and requirements)
9	Performance evaluation of the ships by 3'rd parties & vetting's: Oil majors (OCIMF/CDI, SIRE), Right Ship, SIGTTO, port, harbor and terminal inspections
10	Reporting strategies, rectifications & certifications
11	**Case study 1** Preparation/keeping a ship "fit" for a 3'rd party inspections
12	**Case Study 2** Continuous survey and harmonized survey (HSSC) & certifications
13	**Case study 3** Conventional industrial requirements, MoU's, Flag state, Recognized parties and matching standards (MARPOL, BWM, IBC, IMDG, ICS, ILO, MLC etc)
14	Keeping ready and strategies for improvement / advanced applications
15	**Final Exam** Application (Self-assessment and preparation of matrixes)

Methods and Techniques used in the Course

Lectures – Interactive lectures to present the theoretical background of ship management, ISM Code, surveys, and inspections.

Case Studies – Analysis of real-life and hypothetical scenarios to understand survey preparation, vetting, and self-assessment procedures.

Practical Exercises / Applications – Hands-on exercises simulating inspection checklists, hull/machinery surveys, and certificate tracking.

Group Work – Collaborative tasks for problem-solving, such as developing ship compliance matrices or survey preparation plans.

Assignments – Written assignments to reinforce theoretical concepts and apply them to practical ship management scenarios.

Projects – Extended project work to develop comprehensive strategies for maintaining ship fitness, safety, and regulatory compliance.

Mid-term and Final Evaluations – Combination of written and practical exams to assess theoretical understanding and application skills.

Presentations – Student presentations on case studies, survey procedures, or improvements in ship management practices to foster communication skills.

Sample Questions

Theoretical Questions

- Explain the main objectives of the ISM Code and how it ensures safety and environmental protection on board.
- Describe the roles and responsibilities of flag states, port states, and classification societies in ship management.
- Compare initial, annual, intermediate, and renewal surveys of a vessel. What are the key differences in scope and procedures?
- Discuss the types of non-conformities that may be identified during a survey and the legal implications of un-fitness for a ship.
- Explain the concept of self-assessment on board and its importance in continuous survey practices.

Practical / Application Questions

- Given a sample ship's machinery and hull inspection checklist, identify potential deficiencies and propose corrective actions.
- Prepare a survey preparation plan for a Port State Control inspection, including necessary documents, crew training, and reporting strategies.
- Evaluate a mock vetting report from a 3rd party inspection (e.g., OCIMF SIRE) and identify the areas that require improvement for compliance.
- Create a matrix to track all statutory and class certificates of a vessel, indicating the next inspection and renewal dates.
- Using a case study, perform a self-assessment of the ship crew and onboard continuous survey practices, highlighting key areas for improvement.

Materials Used in the Course

Textbooks and References

- International Safety Management (ISM) Code – IMO publication
- Ship Surveying and Certification – P. Jackson, Nautical Institute
- Port State Control Guide – IACS / Paris MoU
- Marine Surveying: Principles and Practice – D.J. House
- Maritime Legislation & Regulations – IMO, national maritime authorities

Journals and Articles

- *The Nautical Institute Journal*
- *Marine Policy*
- Case studies from recent Port State Control inspections
- Industry vetting reports (OCIMF, RightShip, SIGTTO)

Software and Tools

- Ship inspection checklist templates (digital / Excel)
- Survey reporting tools (e.g., Vetting forms, PSC checklists)
- Simulation software for hull, machinery, and cargo inspections

Additional Materials

- IMO conventions and codes: SOLAS, MARPOL, IBC, IMDG, ISM, MLC
- Sample survey reports
- Ship certificates and document examples (registration, class, statutory certificates)
- Guidelines from classification societies and recognized organizations

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	2	2
PO2	2	2	2	2	3	3	2	2	2	2
PO3	3	2	2	3	2	2	3	2	3	3
PO4	2	2	2	2	3	3	2	3	2	2
PO5	3	3	2	3	2	3	3	2	3	3
PO6	2	2	2	2	2	2	2	3	2	2
PO7	1	1	2	1	2	1	2	2	2	2
PO8	1	1	1	2	1	2	2	2	1	2
PO9	2	2	2	2	2	2	2	2	2	2
PO10	2	2	2	2	2	2	2	2	2	2
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**
CLO1	Lecture, Case Studies, Multimedia Presentation	Quizzes, Assignments, Written Exam
CLO2	Lecture, Demonstration, Hands-on Practice	Practical Exercises, Assignments, Quizzes
CLO3	Lecture, Group Discussion, Case Study Analysis	Written Reports, Problem-Solving Exercises, Midterm Exam
CLO4	Lecture, Simulation Exercises, Problem-Based Learning	Practical Exams, Assignments, Simulation Reports
CLO5	Lecture, Tutorials, Group Projects	Assignments, Case Study Analysis, Midterm Exam
CLO6	Lecture, Workshops, Role-Playing, Multimedia Presentations	Assignments, Observation, Practical Exercises
CLO7	Lecture, Case Studies, Hands-on Practical Exercises	Reports, Practical Exams, Assignments
CLO8	Scenario-Based Exercises, Simulation, Group Projects	Project Reports, Practical Exams, Case Study Analysis
CLO9	Lecture, Discussion, Role-Playing, Case Studies	Quizzes, Assignments, Participation Evaluation
CLO10	Simulation Exercises, Case Studies, Group Projects	Project Reports, Practical Exams, Assignments

ECTS / Workload Table			
Activities	**Number**	**Duration (Hours)**	**Total Workload**
Preparation for lectures	-	-	-
Lectures	**15**	**4**	**60**
Midterm Exam	**1**	**2**	**2**
Preparation for Midterm Exam	**1**	**6**	**6**
Final Exam	**1**	**2**	**2**
Preparation for Final Exam	**1**	**6**	**6**
Presentation(s)	-	-	-
Preparation for Presentation(s)	-	-	-
Research for Project(s)/Essay(s)	-	-	-
Project Writing	**2**	**5**	**10**
Group Work	**1**	**4**	**4**
In-class Discussion(s)	-	-	-
Quiz(es)	-	-	-
Preparation for Quiz(es)	-	-	-
Laboratory	**3**	**2**	**6**
Assignment(s)/Homework/Class Works	**2**	**3**	**6**
Individual Reading / Research	-	-	-
Lesson Planning	-	-	-
Materials Adaptation	-	-	-
Material Development	-	-	-
Draft Preparation	-	-	-
Drawing	-	-	-
Essay Writing	-	-	-
Tutorial(s)	-	-	-
Portfolio Preparation	-	-	-
Portfolio Presentation	-	-	-
Total Workload			**102**
ECTS Credit			**3**

Evaluation System		
Semester Requirements	**Number**	**Percentage of Grade**
Attendance/Participation	-	-
Laboratory	-	-
Application	3	15
Field Work	1	5
Special Course Internship (Work Placement)	-	-
Homework/Assignments	2	10
Providing reliability and motivation of the individual homework completion and Submission	-	-
Presentation/Jury	-	-
Project	2	10
Quiz	-	-
Midterms/Oral Exams	1	20
Final/Oral Exams	1	40
Total	**10**	**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.		