



Sveučilište u Rijeci, Pomorski fakultet
University of Rijeka, Faculty of Maritime Studies

CURRICULUM AND STUDY PROGRAM

Logistics and Management in Maritime Industry and Transport

UNDERGRADUATE DEGREE PROGRAMME
GRADUATE DEGREE PROGRAMME



UNIVERSITY OF RIJEKA

Faculty of Maritime Studies, Rijeka

Undergraduate and Graduate Degree Program

**LOGISTICS AND MANAGEMENT IN
MARITIME INDUSTRY AND
TRANSPORT**

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1. Introduction

1.1. Rationale for launching the program

1.1.1. Purpose

The study program Logistics and Management in Maritime Industry and Transport commenced in 2005 by aligning its curriculum with the Bologna Declaration. The establishment of this program represents a logical continuation of the long-standing education in Maritime Transport Technology conducted at the Faculty of Maritime Studies, University of Rijeka.

This study program is designed to address the ongoing and increasing demands of the labor market for highly qualified professionals capable of managing the entire transport and logistics processes from the point of origin to the final destination, utilizing contemporary economic, organizational, and technological knowledge. Incorporating knowledge from the fields of logistics and maritime management and continuous incorporation of new technological advancements into the educational process and innovative teaching methods aimed at developing professional competencies as well as transversal skills, makes the Logistics and Management in Maritime Industry and Transport program unique in the Republic of Croatia.

The study program graduates will acquire competencies necessary for the advancement of the transport system by contributing to the efficient organization of transport, balanced economic development, stabilization of costs and service prices, and optimization of both cargo and passenger flows. This will increase the sustainability of the transport system, aligning it with the needs of modern society and the economy.

The program is applicable in all branches of the economy and various scientific fields, and it also forms the foundation for the successful operation and development of maritime and transport companies as well as relevant social and state institutions. Upon completion of the study, students will be able to find employment in maritime, transport, and economic companies responsible for managing transport and logistics structures.

1.1.2. Link to contemporary scientific knowledge

The primary objective of the scientific education of current and prospective professionals lies in the integration of innovative business models and the implementation of advanced technologies within the fields of maritime affairs and transport, in the enhancement of individual competencies, and in the establishment of a sustainable framework capable of responding to the

challenges of future transport, maritime, and economic development of the Republic of Croatia.

1.1.3. Comparability

Comparative analyses with cognate study programs offered at the universities, higher education institutions, and colleges listed below—several of which have already engaged in multiple forms of cooperation with the Faculty of Maritime Studies, University of Rijeka—provide firm guarantee of achieving several strategic objectives of the Bologna Declaration, namely the compatibility and mobility of study programs, academic staff, and students.

An in-depth examination of comparability with other relevant programs within the European Union has established a high degree of alignment of the study program with the following institutions:

- University of Ljubljana, School of Economics and Business, Ljubljana, Slovenia, Supply Chain and Logistics
- Technical University of Applied Sciences Wildau, Wildau, Germany, Logistics and Supply Chain Management
- University of Applied Sciences BFI Vienna, Vienna, Austria, Logistics and Strategic Management
- University of Gothenburg, School of Business, Economics and Law, Gothenburg, Sweden, Master in Logistics and Transport Management
- Jönköping University, Jönköping, Sweden, Master in International Logistics and Supply Chain Management
- Arden University, Berlin, Germany, M.Sc. Supply Chain Management and Logistics.

1.2. Experience in implementing equivalent or similar programs

The study program Logistics and Management in Maritime Industry and Transport represents a continuation of the study program Maritime Transport Technology, which had been delivered for many years at the Faculty of Maritime Studies, University of Rijeka. In response to the labor market's demand for qualified professionals and in line with prevailing trends in the education of experts in the fields of maritime affairs and transport within European countries, the existing Maritime Transport Technology program at the Faculty of Maritime Studies in Rijeka has been restructured into two mutually complementary study programs:

- 1) Transport and Mobility
- 2) Logistics and Management in Maritime Industry and Transport.

1.3. Potential partners outside the higher education system

For the purpose of ensuring the quality of the study program Logistics and Management in Maritime Industry and Transport, as well as its alignment with the needs of the labor market and contemporary economic trends, collaboration is established with relevant stakeholders from both the economic and public sectors.

Potential partners outside the higher education system include maritime and transport enterprises, such as ports, port operators, port authorities, shipping companies, road and rail carriers, agencies, freight forwarders, customs services, national, regional, and local government bodies in the field of maritime affairs and transport, public institutions and regulatory bodies, enterprises operating in the sectors of transport and maritime industries, as well as compatible educational institutions.

1.4. Openness of the program towards student mobility

Student mobility will primarily be directed towards related educational programs at maritime, transport, and economics faculties in the Republic of Croatia, Europe, and worldwide. A list of courses that students may select from other faculties will be provided subsequently, together with the detailed curricula for each individual course.

1.5. Other elements and required information

Need for the Program

The program is applicable across all sectors of the economy and various scientific disciplines, while also forming the foundation for the successful operation and development of maritime and transport enterprises, as well as the relevant social and state institutions. Upon completion of the program, students are enabled to gain employment in maritime, transport, and economic enterprises responsible for the management of transport management and logistics structures.

2. General section

2.1. Study program title

Study program title: Logistics and Management in Maritime Industry and Transport

2.2. Study program holder and provider

Study program holder and provider: University of Rijeka, Faculty of Maritime Studies

2.3. Duration of the study program

The duration of the undergraduate study program is three years. Instruction is delivered over six semesters, each assessed with 30 ECTS credits. Upon completion of the three-year undergraduate program, students may choose to continue their studies in a graduate program. The duration of the graduate program is two years, corresponding to four semesters.

The forms of instruction include lectures, seminars, exercises, professional practice, workshops, individual consultations, mentorship, and the resolution of case studies drawn from practice and literature.

2.4. Enrolment requirements

Applications for admission to undergraduate study programmes shall be submitted through the National Information System for Applications to Higher Education Institutions (NISpVU) and the website www.postani-student.hr. Eligibility for application is granted to candidates who have completed a four-year secondary school programme.

The procedure for applying to study programmes at the University of Rijeka via the National Information System for Applications to Higher Education Institutions (NISpVU) is explained in detail on the website www.postani-student.hr.

Following the publication of the final ranking lists, the candidate shall appear only on the ranking list of the study programme placed highest on their priority list, provided that they are entitled to enrolment therein. The candidate shall be removed from all other ranking lists.

After the final ranking lists have been published, the candidate may only enrol in the study programme for which they have acquired the right of admission and

have been assigned an enrolment number. Allocation of an enrolment number for a particular study programme establishes the candidate's obligation to enrol in that programme.

Eligibility for application to graduate study programmes is granted to candidates who have completed an appropriate undergraduate university study, as well as to those who have completed an undergraduate university study at a related maritime, transport, or technical faculty. The admission procedure shall be conducted without an entrance examination, based on academic performance in the undergraduate university study programme (grade point average).

Enrolment in the study programme shall be carried out in accordance with the results of the admission procedure, as determined by the official ranking list.

Detailed information concerning the enrolment procedure for the study programme to which the candidate has gained admission shall be published in the Call for Applications for admission to the first year of undergraduate university programmes, integrated (undergraduate and graduate) university programmes, and professional undergraduate programmes in the forthcoming academic year, as well as on the website of the higher education institution.

2.5. Undergraduate degree program

Competencies acquired upon completion of the undergraduate degree program

The study programme is designed to prepare students for professional work within the broad field of logistics and management in maritime and transport sectors. The curriculum provides knowledge from the fields of economics, law, technology, engineering, as well as process rationalisation and optimisation in maritime and land transport. The competencies acquired enable graduates to gain employment and successfully organise transport processes in various maritime and transport companies, both in the public and private sectors.

Graduate study programmes available for continuation at the proposing institution or at other higher education institutions in the Republic of Croatia

No.	Institution	Graduate Study Programme
1.	Faculty of Maritime Studies, Rijeka	<ul style="list-style-type: none"> – Logistics and Management in Maritime Industry and Transport – Transport and Mobility
2.	Faculty of Maritime Studies, Split	<ul style="list-style-type: none"> – Maritime Management – Maritime Systems and Processes
3.	Faculty of Economics, Rijeka	<p>Since the study programmes of compatible higher education institutions are subject to change, it is not possible to provide a clear framework of student mobility. As a rule, student mobility is determined on an annual basis.</p>
4.	Maritime Department, University of Dubrovnik	
5.	Maritime Department, University of Zadar	
6.	Faculty of Transport and Traffic Sciences, Zagreb	
7.	Faculty of Engineering, Rijeka	

2.6. Graduate degree program

Competencies acquired upon completion of the graduate degree program

The study programme is designed as an extension of the undergraduate programme content, aiming to prepare students for managerial roles and successful professional work in various maritime and transport institutions and companies whose activities are related to maritime and transport sectors (such as ports, port authorities, shipping companies, agencies, freight forwarders, customs, transport companies, maritime administrations, the ministry responsible for maritime affairs and transport, etc.).

Prijediplomski studijski programi ustanove predlagачa ili drugih ustanova u RH koji su dovoljni za njegovo praćenje

The undergraduate study programmes of the proposing institution or other institutions in the Republic of Croatia that are considered sufficient prerequisites for following this graduate programme

No.	Institution	Undergraduate Study Programme
1.	Faculty of Maritime Studies, Rijeka	<ul style="list-style-type: none"> – Logistics and Management in Maritime Industry and Transport – Transport and Mobility – Nautical Studies and Maritime Transport Technology – Marine Electronic Engineering and Information Technology – Maritime Systems and Processes – Maritime Management
2.	Faculty of Maritime Studies, Spli	
3.	Faculty of Economics, Rijeka	
4.	Maritime Department, University of Dubrovnik	
5.	Maritime Department, University of Zadar	Since the study programmes of compatible higher education institutions are subject to change, it is not possible to provide a clear framework of student mobility. As a rule, student mobility is determined on an annual basis.
6.	Faculty of Transport and Traffic Sciences, Zagreb	
7.	Faculty of Engineering, Rijeka	

2.7. Launching a study program in which the undergraduate and graduate components are combined into one

The undergraduate and graduate study programmes are designed as separate, yet complementary, entities, whereby the undergraduate programme lasts three years and the graduate programme an additional two years. This structure ensures a modular approach to education in accordance with the Bologna process.

2.8. Professional or academic title upon completion

Upon completion of the three-year undergraduate university study programme, the student shall be awarded the academic title of Baccalaureus or Baccalaurea with a specification of the field of study (in international transport and on the diploma in English, also Baccalaureus or Baccalaurea).

The academic title awarded is:

sveučilišni/a prvostupnik/prvostupnica (baccalaureus/baccalaurea) inženjer/inženjerka logistike i menadžmenta u pomorstvu (univ. bacc. ing. logist.)

In international transport and diploma in English:

University Bachelor of Science in Logistics and Management in Maritime Industry (BSc)

Upon successful completion of the two-year university graduate program, students are awarded the academic title of Magister or Magistra with a specification of the field.

The academic title awarded is:

sveučilišni magistar/magistra inženjer/inženjerka logistike i menadžmenta u pomorstvu (univ. mag. ing. logist.)

In international transport and diploma in English:

University Master of Science in Logistics and Management in Maritime Industry (MSc)

Tabular overview of general information for the undergraduate degree program

Type of Study	Undergraduate Study	
Title	Logistics and Management in Maritime Industry and Transport	
Holder	Proposer	Faculty of Maritime Studies, University of Rijeka
	Implementer	Faculty of Maritime Studies, University of Rijeka
Duration	3 years	
ECTS	180	
Enrolment requirements	Completed four-year secondary school	
Competencies acquired upon completion	The acquired knowledge enables employment and successful organisation of the transport process in various maritime and transport companies in both the public and private sectors.	
Opportunities for the continuation of study	Graduate study programme	
Professional academic title or degree awarded upon completion	University Bachelor of Science in Logistics and Management in Maritime Industry (BSc)	

Learning outcomes for the undergraduate degree program

- 1) Explain the elements of a logistics system, recognize logistics operational problems, understand logistics processes and costs, identify elements of transport infrastructure and superstructure, understand technical and technological characteristics of transport means according to types and cargo characteristics, understand logistics system management methods, and identify stakeholders in the logistics process (IU1. Logistics).
- 2) Understand the types and functions of management, analyze basic cost categories, explain fundamental principles of financial operations in transport - logistics companies and the entire logistics system (IU2. Transport Management).

- 3) Explain the functioning of the port system, the relationships among port stakeholders, link port system functionality with technical limitations, describe types and structure of port tariffs and fees, interpret the port operational plan, and recognize technical - technological features of port handling equipment and port warehouses (IU3. Port Operations).
- 4) Apply knowledge of the specificities of individual maritime shipping markets, assess supply and demand for maritime transport, understand freight rate calculations, and differentiate contracts for the use of vessels (IU4. Maritime Shipping).
- 5) Understand information and communication systems in logistics, port information platforms, and maritime navigation monitoring systems, apply computer methods for data processing and software tools in logistics (IU5. Information and Communication Technologies in Logistics).
- 6) Understand national and international legal regulations, legal sources, legal frameworks, and their significance for international trade and maritime business (IU6. Legal Regulations in the Profession).
- 7) Use language knowledge and skills for independent performance of professional tasks in maritime, transport, and logistics (IU7. English Language).
- 8) Apply quantitative methods to solve practical problems related to business decision-making in logistics (IU8. Quantitative Methods in Logistics).
- 9) Understand the organisation and activities of maritime agencies, recognize and use INCOTERMS in international trade, describe and apply procedures for ship arrival, reception, and dispatch, and demonstrate the process of preparing cargo transport documents (IU9. Agency Operations in Maritime).
- 10) Apply theoretical and practical knowledge to independently develop a topic, correctly apply research methodology and writing technology, and present conclusions and insights (IU10. Bachelor of Science Thesis).

	IU1. Logistics	IU2. Transport Management	IU3. Port Operations	IU4. Maritime Shipping	IU5. Information and Communication	IU6. Legal Regulations in the Profession	IU7. English Language	IU8. Quantitative Methods in Logistics	IU9. Agency Operations in Maritime	IU10. Bachelor of Science Thesis
1st SEMESTER										

Mathematics								+		
Maritime Transport Vessels				+						
Basics of Economics		+	+	+						
Basics of Logistics	+		+	+	+					
Cargo Flows	+		+	+						+
English Language	+						+			
Physical and Health Education 1	+					+				
2nd SEMESTER										
Financial Mathematics								+		
Statistics								+		
Application of Electronic Computers					+					
Transport Economics	+	+	+	+					+	
Business Logistics	+	+								
English Language 2	+		+				+			
Physical and Health Education 2	+					+				
3rd SEMESTER										
Operations Research	+		+					+		+
Management	+	+	+	+					+	
Commercial and Transport Law	+			+		+			+	
Transport Economics	+	+	+	+					+	
Cargo in Transport	+					+				+
English Language 3	+		+				+			
4th SEMESTER										
Transport Systems		+		+						
Information Technologies in Logistics	+	+	+	+	+				+	+
Financial Management		+	+	+						
Engineering Logistics	+				+			+		
Port Economics	+	+	+	+	+	+			+	+

English Language 4	+			+		+	+		+	
5th SEMESTER										
Maritime Agencies	+		+		+	+	+		+	
Port Logistics	+			+						
Electronic Business					+					+
International Freight Forwarding	+					+			+	+
English Language 5						+	+			
Maritime Transport Technology										
Port and Terminal Technology	+		+							
Internal Transport and Warehousing	+	+								
Cloud Computing					+					+
Marketing		+								
Land Transport Technology	+					+				
German Language 1						+				
6th SEMESTER										
Sustainable Logistics	+			+	+					
Entrepreneurship		+	+	+						
Strategic Management	+	+	+	+					+	
Bachelor of Science Thesis										+
Practical Student Training	+	+	+	+	+		+			
Student Internship	+		+	+		+			+	
Public Maritime Law			+	+		+				
Material Handling Equipment	+		+	+		+				
Traffic Safety	+		+		+	+				
Transport Insurance										
Maritime Transport Law				+		+				
Passage Planning	+							+		
English Language 6						+	+			+

German Language 2							+			
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Tabular overview of general information for the graduate degree program

Type of Study	Graduate Study	
Title	Logistics and Management in Maritime Industry and Transport	
Holder	Proposer	Faculty of Maritime Studies, University of Rijeka
	Implementer	Faculty of Maritime Studies, University of Rijeka
Duration	2 years	
ECTS	120	
Enrolment requirements	Completed undergraduate study programme Logistics and Management in Maritime Industry and Transport. Completed undergraduate study programme from related maritime, transport, and economics faculties.	
Competencies acquired upon completion	Preparation for management positions in maritime and transport institutions and companies.	
Opportunities for the continuation of study	Postgraduate University Study "Maritime Studies" at the Faculty of Maritime Studies, University of Rijeka. Postgraduate studies at related maritime, transport, and economics faculties.	
Professional academic title or degree awarded upon completion	University Master of Science in Logistics and Management in Maritime Industry (MSc)	

Learning outcomes for the undergraduate degree program

1) Demonstrate knowledge and understanding of logistics concepts and functions, and analyze and evaluate physical, informational, and monetary flows in the supply chain (IU1. Supply Chain).

- 2) Interpret fundamental concepts of maritime passenger transport and argue the significance and impact of management on the operation of maritime passenger services (IU2. Maritime Passenger Transport).
- 3) Classify carriers, principles, goals, instruments, and measures of transport policy, distinguish specificities of maritime and transport policy, and understand guidelines of transport development strategy (IU3. Transport Policy).
- 4) Investigate the role of economic methods and project approach, and understand the application of information systems in business processes (IU4. Transport System Management).
- 5) Develop models for identified business problems, use software tools supporting simulation modeling methods and techniques, and interpret solutions after conducted simulation experiments (IU5. Transport Modeling).
- 6) Apply theoretical and practical knowledge in independent processing of a topic, correctly apply scientific and professional writing methodology and technology, and clearly present conclusions in the writing of the Master Thesis (IU6. Master of Science Thesis).

	IU1. Supply Chain	IU2. Maritime Passenger Transport	IU3. Transport Policy	IU4. Transport System Management	IU5. Transport Modeling	IU6. Master of Science Thesis
1st SEMESTER						
Transport Systems Strategic Development			+	+		
Scientific Research Methodology						+
Human Resource Management				+		
Economics and Organization of Maritime Passenger Transport	+	+	+	+	+	+
Public Management and Governance	+		+	+	+	
Technological Processes in Transport				+	+	+

Coastal Zone Management			+	+	+	+
Marine Technologies	+	+	+	+		+
Methodology of Transportation Planning				+	+	
Big Data Analysis				+	+	+
Virtual and Augmented Reality				+	+	+
Critical Infrastructure				+		
2nd SEMESTER						
Multimodal Transport and Motorways of the Sea			+	+		
Supply Chain Management	+			+	+	
Managerial Economics	+			+		
Quality in Maritime Industry	+		+	+		
Economics of Maritime Domain Utilization		+	+	+	+	
Urban Logistics	+			+	+	
Business Information Systems	+	+		+		+
Passenger Transport Flows		+				+
Logistics in Land Transport	+					
Sustainable Marinas			+	+	+	
3rd SEMESTER						
Simulation and Modelling	+			+	+	+
Project Management	+	+	+	+	+	
Maritime Financing	+	+	+	+		
Shipping and Port Management	+	+	+	+	+	

Transport Process Optimization				+	+	+
Intelligent Transport Systems		+	+	+	+	+
Artificial Intelligence				+	+	+
European Union Transport Law		+	+	+		
Land Transportation System Planning				+		
Risk Management in Shipping						
4th SEMESTER						
Master of Science Thesis						+
Queueing Theory				+	+	+
Environmental Law			+	+		
Inventory Management	+			+	+	
Student Internship	+			+		
International Maritime Safety System			+	+		
Urban Traffic and Environment	+		+	+		
International Shipping Business	+	+	+	+	+	