

Faculty of Maritime Studies / Marine Engineering	
About The Program	
<p>The Marine Engineering Bachelor's Program offers a comprehensive education that integrates contemporary marine machinery operation knowledge with its technical, operational, and managerial dimensions, in line with international maritime standards. The primary objective of the program is to educate well-qualified human resources who can serve both at sea and ashore, possessing the competencies of a marine engineering officer and a marine operations engineer.</p> <p>Students are provided with a strong theoretical and practical foundation in areas such as main and auxiliary marine machinery, energy systems, maintenance and operation practices, maritime safety, environmental protection, ship management, and maritime legislation.</p> <p>The program also adopts an educational approach that emphasizes compliance with international maritime regulations and STCW requirements, as well as professional ethics, occupational health and safety, leadership, problem-solving, and emergency management competencies. Graduates are trained as qualified maritime professionals capable of undertaking responsibilities in marine machinery operation and management, prioritizing safety and environmental awareness, adapting to technological advancements, and demonstrating strong analytical thinking skills.</p>	
Profile of the Program	
<p>The Marine Engineering Bachelor's Program offers a comprehensive maritime engineering education encompassing main and auxiliary ship machinery, marine energy systems, maintenance and operation processes, maritime safety, and environmental protection. In line with international maritime standards and STCW requirements, the program provides a holistic engineering formation that focuses on safe machinery operation, energy efficiency, environmental sustainability, and operational effectiveness.</p> <p>Within the scope of the program, students gain competence in shipboard technical applications such as marine machinery operation, fault diagnosis and maintenance planning, automation and control systems, and fuel and energy management, while also having the opportunity to develop expertise in shore-based processes, including ship management, technical management, quality systems, safety management, and environmental management systems. In this respect, the program aims to educate qualified marine machinery operation engineers who are capable of serving both at sea and ashore, adaptable to technological advancements, and committed to a sustainable maritime perspective.</p>	
Qualification Awarded	
Marine Engineering, Bachelor's Degree	
Length of Programme and Number of Credits	
4 years (excluding one year of English Preparatory Program), 2 semesters per year, 15 weeks per semester, 240 ECTS credits	
Level of Qualification	
Bachelor's Degree; YÖK National Qualifications Framework (TYYÇ), Level 6	
Specific Admission Requirements	

The admission of Turkish citizens to higher education is based on a nationwide Student Selection Examination (ÖSYM) organized by the Turkish Higher Education Council (YÖK). The admission of citizens of the Turkish Republic of Northern Cyprus is based on the Near East University Entrance and Placement Examination organized for TRNC citizens. The admission of foreign students is based on their high school diploma. A document proving English language proficiency is also required.

Recognition of Credit Mobility and Prior Learning

The transfer and recognition of courses taken outside University of Kyrenia are carried out in accordance with the principles set forth in the relevant Regulations, based on the decision of the respective Faculty or Institute Board of Directors. If the content of the courses taken at another higher education institution is found to be compatible with the content of the courses offered at University of Kyrenia and is deemed appropriate by the relevant Faculty or Institute Board, students may be granted exemption from these courses.

Qualification and Graduation Requirements and Regulations

Students enrolled in the Marine Engineering program are required to achieve at least the minimum course passing grade and obtain a minimum cumulative grade point average (CGPA) of 2.00 out of 4.00 in order to graduate.

The certificates and qualifications awarded within the Marine Engineering program are fully compliant with the standards set by the Ministry of Transport and Infrastructure of the Republic of Türkiye and the International Maritime Organization (IMO), specifically the Standards of Training, Certification and Watchkeeping for Seafarers (STCW). Within this framework, students are required to complete a compulsory six-month sea internship and a six-month shore-based (workshop) internship in addition to their academic coursework.

The Marine Engineering program is subject to supervision and evaluation by the Ministry of Transport and Infrastructure of the Republic of Türkiye, the Directorate General of Maritime Affairs, the Council of Higher Education of Türkiye (YÖK), and the Higher Education Planning, Evaluation, Accreditation and Coordination Council of the Turkish Republic of Northern Cyprus (YÖDAK). The program is also a member of the International Association of Maritime Universities (IAMU), having fulfilled its accreditation requirements.

Upon graduation, students are awarded an engineering bachelor's degree and simultaneously fulfill the educational requirements for STCW Engine Officers.

Programme Learning Outcomes

- 1** Demonstrate comprehensive knowledge of marine engineering principles, systems, and machinery operations, and effectively apply this knowledge to ensure safe, efficient, and sustainable vessel performance in compliance with IMO and STCW standards.
- 2** Apply advanced engineering design principles to develop, adapt, and optimize mechanical, electrical, and control systems onboard ships and in shore-based industrial contexts, integrating safety, cost-efficiency, and environmental considerations.
- 3** Perform engineering watchkeeping duties and operational management with professional responsibility, situational awareness, and adherence to international maritime conventions and best practices.

4	Identify, formulate, and analyze complex engineering problems using appropriate theoretical, computational, and experimental techniques to derive sound, data-driven solutions in marine and related engineering domains.
5	Integrate principles of safety culture, risk assessment, and environmental protection into all engineering practices, promoting sustainable operations aligned with IMO conventions such as MARPOL and SOLAS.
6	Employ advanced digital tools, diagnostic systems, and automation technologies for monitoring, control, and performance assessment of marine and industrial systems, in line with the requirements of the evolving maritime digitalization era.
7	Demonstrate competence in planning, executing, and managing engineering projects, including resource allocation, budgeting, and maintenance planning, while ensuring quality, safety, and compliance with regulatory frameworks.
8	Function effectively as a leader and member of multidisciplinary and multicultural teams, fostering collaboration, ethical conduct, and efficient communication in dynamic and often high-stress maritime environments.
9	Communicate effectively in both written and oral forms with clarity, professionalism, and technical precision in English and other relevant languages within maritime and industrial contexts.
10	Adhere to the ethical and professional standards of the engineering and maritime professions, demonstrating accountability, integrity, and a commitment to continuous professional development and lifelong learning.
11	Evaluate and implement sustainable engineering practices and emerging green technologies to minimize the environmental footprint of marine and industrial operations.
12	Exhibit the flexibility and interdisciplinary mindset required to transfer marine engineering knowledge and skills to diverse sectors, contributing effectively to innovation and technological advancement beyond the maritime industry.

Program Educational Objectives

1	To educate Marine Engineering who are proficient in international maritime standards (IMO, STCW) and capable of effectively fulfilling professional duties and responsibilities in the fields of main and auxiliary marine machinery, energy and automation systems, and engine room safety.
2	To train specialists who can plan, manage, and optimize marine machinery operation, maintenance and repair, energy management, and technical operations both onboard ships and ashore, while effectively utilizing modern and digital engineering practices by adapting to technological advancements.
3	To develop engineers with a high level of safety and environmental awareness who can integrate the principles of sustainability, environmental protection, energy efficiency, and green ship technologies into engineering applications and managerial decision-making within the maritime sector.
4	To cultivate professionals who can communicate effectively in multidisciplinary and multicultural working environments within the global maritime and related industries, possess strong leadership and problem-solving skills, demonstrate ethical responsibility, and embrace lifelong learning.

Program Curriculum Map

M: Master / D: Develop / I: Introduce / N: None

Curriculum Courses			Key Learning Outcomes											
Level of Course Unit Semester	Course Code	Course Name	1	2	3	4	5	6	7	8	9	10	11	12
1/1	MTH101	Calculus I	I	N	N	I	N	N	N	N	I	N	N	I
1/1	MED101	Workshop I	N	I	I	N	I	N	D	N	I	N	I	I
1/1	SEA101	Seamanship I	I	I	I	N	I	I	I	I	N	I	I	I
1/1	SAF101	Maritime Safety I	I	I	D	N	I	I	I	D	N	I	D	I
1/1	MEC101	Technical Drawing I	N	I	N	I	N	N	I	N	I	N	N	I
1/1	MPH101	Physics for Mariners I	I	N	N	I	N	N	N	N	I	N	N	I
1/1	CFM101	Chemistry for Mariners	I	N	I	I	N	N	N	D	N	N	D	I
1/1	MRE101	General Aspects of Marine Engineering	D	I	I	I	I	I	I	I	I	N	I	D
1/1	ENG101	English I	N	N	N	N	I	N	N	N	I	D	I	I
1/2	MTH102	Calculus II	I	N	N	D	N	N	N	N	I	N	N	I
1/2	MED102	Workshop II	N	D	I	N	I	N	D	N	I	N	I	I
1/2	MED104	Maritime English I	N	N	N	N	I	I	N	N	I	D	I	I
1/2	SAF102	Maritime Safety II	I	I	M	N	I	I	I	D	N	I	D	I
1/2	MPH102	Physics for Mariners II	D	N	N	D	N	N	N	N	I	N	N	I
1/2	MED106	Marine Diesel Engines I	D	D	I	I	N	N	D	I	I	N	I	D
1/2	ENG102	English II	N	N	N	N	I	N	N	N	I	D	I	I
1/2	MED108	Marine Auxiliary Machinery I	D	D	I	I	N	N	D	I	I	N	I	D
1/2	CMP102	Introduction to Information Technologies	N	I	N	I	N	N	I	N	D	I	N	D
2/3	MEC203	Statics	D	N	N	D	N	N	N	N	I	N	N	I
2/3	MTH112	Linear Algebra	D	N	N	D	N	N	N	N	I	N	N	D
2/3	MEC205	Material Science	D	D	I	D	I	N	N	I	I	N	I	D
2/3	NRC201	Ship Construction I	D	D	I	D	I	N	I	I	I	N	I	D
2/3	MEC207	Thermodynamics I	D	D	I	D	N	N	N	N	I	N	N	D
2/3	SAF201	Maritime Safety III	I	I	M	N	I	I	I	D	N	I	D	I
2/3	MED201	Operations and Maintenance of Main and Auxiliary Machinery I	D	D	D	I	I	N	D	I	I	N	D	D

2/3	TUR101	Turkish I: Written Expression	N	N	N	N	N	N	N	I	D	I	I
2/3	AIT101	Ataturk's Principles and History of Turkish Revolution I	N	N	N	N	N	N	N	I	I	D	I
2/3	MEC209	Strength of Materials	D	D	I	D	N	N	N	I	N	N	D
2/4	MEC204	Dynamics	D	D	I	D	N	N	N	I	N	N	D
2/4	SAF202	Maritime Safety IV	I	I	M	N	I	I	I	D	N	I	I
2/4	MTH201	Differential Equations	D	N	N	D	N	N	N	I	N	N	D
2/4	MTH301	Numerical Analysis for Engineers	D	D	I	D	I	N	N	I	I	N	N
2/4	TUR102	Turkish II: Verbal Expression	N	N	N	N	N	N	N	I	D	I	I
2/4	AIT102	Ataturk's Principles and History of Turkish Revolution II	N	N	N	N	N	N	N	I	I	D	I
2/4	MEC208	Thermodynamics II	D	D	I	D	I	N	N	I	N	N	D
3/5	MED301	Marine Electrotechnology I	D	D	I	D	I	N	N	I	N	N	D
3/5	MED303	Marine Engines Simulator	M	M	D	I	D	N	D	I	I	N	D
3/5	MED305	Marine Diesel Engines II	M	D	D	I	I	N	D	I	I	N	N
3/5	LAW301	Maritime Law and Conventions I	N	N	I	N	N	D	I	D	I	I	D
3/5	MED307	Hydraulic, Pneumatic and Automatic Control	D	D	D	D	I	N	N	I	N	N	D
3/5	MEC305	Fluid Mechanics	D	D	D	D	I	N	N	I	N	N	D
3/5	TSM301	Technical Ship Management I	I	I	I	N	D	D	D	D	I	D	I
3/6	SGT302	Seagoing Training	M	M	M	D	D	D	M	D	D	I	D
4/7	MED403	Maritime English II	I	I	N	N	N	N	I	I	I	M	D
4/7	NRC401	Ship Construction II	D	D	D	D	I	N	N	I	N	N	D
4/7	LAW401	Maritime Law and Conventions II	N	N	I	N	N	D	I	D	I	I	D
4/7	MED405	Theory of Marine Steam Engines and Boilers	D	D	D	I	I	N	D	I	I	N	N
4/7	MEC310	Marine Hydromechanics	D	D	D	D	I	N	N	I	N	N	D
4/7	TSM401	Technical Ship Management II	I	I	I	N	D	D	D	D	I	D	D
4/7	TEC409	Latest Power and Propulsion Technologies	D	D	D	D	D	N	I	I	I	N	D
4/8	MED402	Automatic Control	D	D	D	D	D	N	I	I	I	N	N
4/8	EMR402	Emergency Procedures	I	I	D	N	D	M	I	D	I	I	D
4/8	MED404	Engine Room Simulator	D	D	M	I	D	N	D	I	I	N	N
4/8	MED406	Operations and Maintenance of Main and Auxiliary Machinery II	M	D	D	I	D	N	D	I	I	N	N

		<p>Analyzes a system, system component, or process and designs it to meet the desired requirements under realistic constraints; applies modern design methods accordingly.</p> <p>Selects and uses modern techniques and tools necessary for engineering applications.</p> <p>Designs experiments, conducts experiments, collects data, analyzes results, and interprets them.</p>	<p>Develop and optimize mechanical, electrical, and control systems.</p> <p>Using digital tools, automation, and diagnostic systems.</p> <p>Using experimental and computational methods in complex engineering problems.</p>
Competencies	Ability to Work Independently and Take Responsibility	<p>Works effectively both individually and in multidisciplinary teams.</p> <p>Accesses information and conducts source research for this purpose, using databases and other information sources.</p>	<p>Work effectively as a leader or member in highly disciplined and multicultural teams.</p> <p>The ability to transfer knowledge and skills to different sectors and continuous learning.</p>
Competencies	Learning Proficiency	<p>Accesses information and conducts source research for this purpose, using databases and other information sources.</p> <p>He/She is aware of the necessity of lifelong learning; he follows developments in science and technology and constantly renews himself.</p> <p>It combines theoretical and applied knowledge in mathematics, science, and their respective fields to create engineering solutions.</p>	<p>Processing databases using digital and automation technologies.</p> <p>Continuous professional development and learning in accordance with ethical and professional standards.</p> <p>Be effective in applying marine engineering principles and systems.</p>
		<p>Identifies, defines, formulates, and solves engineering problems, selecting and applying appropriate analytical methods and modeling techniques for this purpose.</p>	Defining and solving complex engineering problems.

		<p>Analyzes a system, system component, or process and designs it to meet the desired requirements under realistic constraints; applies modern design methods accordingly.</p> <p>Mühendislik uygulamaları için gerekli olan modern teknik ve araçları seçer ve kullanır.</p> <p>Works effectively both individually and in multidisciplinary teams.</p>	<p>Analyzing and optimizing mechanical and control systems.</p> <p>Selects and uses modern techniques and tools necessary for engineering applications.</p> <p>Work effectively in highly disciplined and multicultural teams.</p>
Competencies	Communication and Social Skills	<p>Uses information and communication technologies along with computer software at a level equivalent to at least the European Computer Driving License Advanced Level, as required by the field.</p>	Using technologies that meet the requirements of the digital age.
		<p>Establishes effective verbal and written communication; uses a foreign language at least at the B1 General Level of the European Language Portfolio.</p>	Establishing technical and professional communication in English and other languages.
		Communicates using technical drawings.	Apply technical drawing in design and system analysis.
		Accesses information and conducts research for this purpose, using databases and other information sources.	Continuous learning to apply knowledge and skills across different sectors.
		<p>Is aware of the universal and societal impacts of engineering solutions and applications; is conscious of entrepreneurship and innovation issues and possesses knowledge about contemporary problems.</p>	Sustainable engineering practices and environmental awareness.

Competencies	Field-Specific Expertise	Possesses a sense of professional and ethical responsibility.	Comply with professional and ethical standards.									
		Project management, workplace practices, employee health, environmental and occupational safety awareness; awareness of the legal consequences of engineering practices.	Planning, executing, and managing engineering projects.									
		Demonstrates awareness of the universal and societal impacts of engineering solutions and applications; is aware of entrepreneurship and innovation issues and knowledgeable about contemporary issues.	Implementing sustainable engineering and green technologies.									
TAY	Program Learning Outcomes											
TAY \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	✓											
2				✓								
3				✓								
4		✓										
5						✓						
6				✓								
7								✓				
8												✓
9						✓						
10										✓		
11	✓											
12				✓								
13		✓										
14						✓						

15								✓					
16							✓						
17										✓			
18		✓											
19													✓
20												✓	
21											✓		
22							✓						
23												✓	

Institutional Learning Outcome / Program Learning Outcome Coverage

R = Relevant PR = Partly Relevant NR = Not Relevant

Institutional Learning Outcome		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	They will be able to analyze, synthesize, and evaluate information and ideas from different perspectives.	R	PR	PR	R	R	PR	PR	PR	PR	PR	PR	PR
2	They will be able to perform their duties within the framework of multidimensional quality standards without disregarding ethical rules.	PR	PR	R	NR	PR	R	R	R	PR	NR	R	NR
3	By being aware of different cultures and global and historical perspectives, they can serve society through consistent and responsible behavior.	PR	NR	R	PR	R	R	PR	R	PR	PR	R	PR
4	By bringing together the concepts and knowledge they will acquire from numerous scientific disciplines, they will be able to access different fields of knowledge, compare them, and critique them.	R	PR	PR	R	PR	PR	PR	PR	PR	PR	PR	R
5	They will be able to demonstrate expertise in a specialized field of work and combine theory with practice.	R	R	PR	R	PR	PR	R	PR	R	NR	PR	PR

Occupational Profiles of Graduates

Graduates sit for the Unlimited Watchkeeping Engineer competency examinations at the Seafarers Examination Center (GASM). Candidates who successfully pass the Seafarer Certificate of Competency Examination administered by the Ministry of Transport and Infrastructure of the Republic of Türkiye are awarded the Unlimited Watchkeeping Engineer Certificate of Competency.

With this certificate, graduates are qualified to serve on commercial vessels as Second Engineer or Third Engineer. Following a specified period of sea service, Unlimited Watchkeeping Engineers may upgrade their certificates of competency, progressing first to Unlimited Chief Engineer (First Engineer) and subsequently to Unlimited Chief Engineer (Master Engineer).

In addition, graduates of the department may assume various shore-based positions within maritime companies, including general management, operations management, technical management, marine engineering inspection, and personnel management. After gaining sufficient sea-going experience, graduates may also serve as watchkeeping engineers and/or chief engineers in the Turkish Straits Area and Turkish ports.

Access to Further Studies

May apply to second cycle (master's) degree programmes.

Maritime Transportation Management Engineering Bachelor's Degree Program Graduate Statistics (Last Five Years)

Year	Number of Graduates
2020	23
2021	11
2022	11
2023	9
2024	6

Course Structure Diagram with Credits

I. Class / I. Semester

Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MTH101	Calculus I	Core	4	0	6
MED101	Workshop I	Core	1	2	3
SEA101	Seamanship I	Core	2	2	3
SAF101	Maritime Safety I	Core	2	2	3

MEC101	Technical Drawing I	Core	2	2	5
MPH101	Physics for Mariners I	Core	3	2	3
CFM101	Chemistry for Mariners	Core	2	2	3
MRE101	General Aspects of Marine Engineering	Core	2	0	3
ENG101	English I	Core	3	0	3
Total ECTS					32

I. Class / II. Semester

Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MTH102	Calculus II	Core	4	0	6
MED102	Workshop II	Core	1	2	3
MED104	Maritime English I	Core	2	0	3
SAF102	Maritime Safety II	Core	2	2	3
MPH102	Physics for Mariners II	Core	3	2	3
MED106	Marine Diesel Engines I	Core	2	2	4
ENG102	English II	Core	3	0	3
MED108	Marine Auxiliary Machinery I	Core	2	2	3
CMP102	Introduction to Information Technologies	Core	3	0	3
Total ECTS					31

II. Class / III. Semester

Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MEC203	Statics	Core	3	0	5
MTH112	Linear Algebra	Core	3	0	5
MEC205	Material Science	Core	3	0	4
NRC201	Ship Construction I	Core	3	0	3
MEC207	Thermodynamics I	Core	3	0	5
SAF201	Maritime Safety III	Core	2	2	3

MED201	Operations and Maintenance of Main and Auxiliary Machinery I	Core	2	2	3
TUR101	Turkish I: Written Expression	Core	2	0	2
AIT101	Ataturk's Principles and History of Turkish Revolution I	Core	2	0	2
MEC209	Strength of Materials	Core	2	2	3
TE**	Technical Elective	Elective	2	2	3
Total ECTS					38

II. Class / IV. Semester

Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MEC204	Dynamics	Core	3	0	5
SAF202	Maritime Safety IV	Core	2	2	3
MTH201	Differential Equations	Core	4	0	6
MTH301	Numerical Analysis for Engineers	Core	3	0	5
TUR102	Turkish II: Verbal Expression	Core	2	0	2
AIT102	Ataturk's Principles and History of Turkish Revolution II	Core	2	0	2
MEC208	Thermodynamics II	Core	3	0	5
TE**	Technical Elective	Elective	2	2	3
TE**	Technical Elective	Elective	2	2	3
Total ECTS					34

III. Class / V. Semester

Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MED301	Marine Electrotechnology I	Core	1	2	3
MED303	Marine Engines Simulator	Core	1	2	3
MED305	Marine Diesel Engines II	Core	2	2	3
LAW301	Maritime Law and Conventions I	Core	4	0	4
MED307	Hydraulic, Pneumatic and Automatic Control	Core	1	2	3
MEC305	Fluid Mechanics	Core	3	0	4

TSM301	Technical Ship Management I	Core	2	2	3
TE**	Technical Elective	Elective	2	2	3
Total ECTS					26
III. Class / VI. Semester					
Course Code	Course Name	Core Elective	Theory	Practice	ECTS
SGT302	Seagoing Training	Core	0	0	30
Total ECTS					30
IV. Class / VII. Semester					
Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MED403	Maritime English II	Core	3	0	2
NRC401	Ship Construction II	Core	1	2	2
LAW401	Maritime Law and Conventions II	Core	4	0	4
MED405	Theory of Marine Steam Engines and Boilers	Core	3	0	3
MEC310	Marine Hydromechanics	Core	3	0	3
TSM401	Technical Ship Management II	Core	2	2	3
TEC409	Latest Power and Propulsion Technologies	Core	3	0	3
TE**	Technical Elective	Elective	2	2	3
Total ECTS					23
IV. Class / VIII. Semester					
Course Code	Course Name	Core Elective	Theory	Practice	ECTS
MED402	Automatic Control	Core	3	0	3
EMR402	Emergency Procedures	Core	2	2	3
MED404	Engine Room Simulator	Core	1	4	3
MED406	Operations and Maintenance of Main and Auxiliary Machinery II	Core	2	2	4
FGP444	Graduation Project	Core	0	4	4

FMC402	First Aid and Medical Care	Core	2	2	3
MED408	Refrigeration and Conditioning	Core	2	2	3
MED410	Gas Turbines and Turbo Machineries	Core	2	2	3
	Total ECTS				26
	Total ECTS				240

Examination Regulations, Assessment and Grading

Grade	Coefficient	Percentage
AA	4	90-100
BA	3.5	85-89
BB	3	80-84
CB	2.5	75-79
CC	2	70-74
DC	1.5	60-69
DD	1	50-59
FF	0	49 and below
NA	-	Participation rate is below 70%

Mode of Study

Full Time

Field(s) of Study

Engineering

Head of Program and ECTS Coordinator

Head of Program	Oceangoing Marine Chief Engineer Volkan Varışlı
ECTS Coordinator	Dr. Gökhan Tarı