Bachelor's degree in Marine Technologies

BARCELONA SCHOOL OF NAUTICAL STUDIES (FNB)

The **bachelor's degree in Marine Technologies** will give you a solid grounding in the operation, maintenance and management of power plants and ship systems, and in the design, reengineering and construction of vessels. In addition to working on board ships, graduates also have the skills needed to fill positions related to the operation of offshore platforms for oil and gas extraction, dredgers, underwater machinery, and any other industrial activity carried out in the maritime and land-based sector. You can choose between two majors:

Major in On-Board Practicals
You will be assigned to a merchant ship as a student trainee to complete part of the work experience component required to qualify as a marine engineering officer.

Major in Marine Electrotechnics
In this course you will develop the knowledge and skills required to work as an electro-technical officer. You will learn about electrical systems, automatic control and computer networks, radio navigation equipment, radio communication systems and other specialised topics.

MAJORS

- On-Board Practicals
- Marine Electrotechnics

GENERAL DETAILS

Duration
4 academic years

Study load
240 ECTS credits (including the bachelor's thesis). One credit is equivalent to a study load of 25-30 hours.

Delivery
Face-to-face

Admission mark 2025-2026 academic year
7,548

Language of instruction

Check the language of instruction for each subject (and timetable) in the course sheet in the curriculum.

Information on language use in the classroom and students' language rights.

Fees and grants
Approximate fees per academic year: €1,061 (€1,800 for non-EU residents). Consult the public fees system based on income (grants and payment options).

Location
Barcelona School of Nautical Studies (FNB)

Official degree
Recorded in the Ministry of Science, Innovation and Universities

ADMISSION

New intake places
44

Pre-enrolment code
31038

New intake places via a change of degree
4

Admission mark 2025-2026 academic year
7,548. Admission mark

Weighting. University entrance examinations (PAU)
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Registration and enrolment
What are the requirements to enrol in a bachelor's degree course?

CFGS credit transfer
Consult the university studies search engine of the Universities Channel of the Generalitat de Catalunya

Legalisation of foreign documents
All documents issued in non-EU countries must be legalised and bear the corresponding apostille.

CURRICULUM

Subjects	ECTS credits	Type
FIRST SEMESTER		
Fundamentals of Mathematics I	6	Compulsory
Graphic Expression	6	Compulsory
Informatics	6	Compulsory
Physics	9	Compulsory
Introduction to Nautical Sciences	6	Optional
SECOND SEMESTER		
Business Management and Organisation	6	Compulsory
Chemistry	6	Compulsory
Fundamentals of Mathematics II	6	Compulsory
Maritime Technical English	6	Compulsory
Mechanics and Strength of Materials	9	Compulsory
THIRD SEMESTER		
Applied Thermodynamics and Thermotechnics	6	Compulsory
Electricity and Electrotechnics	6	Compulsory
Maritime Medicine	3	Compulsory
Mathematical Methods for Engineering	9	Compulsory
Mechanics Technology	6	Compulsory
Business Communication	6	Optional
Construction of Recreational Craft	6	Optional
Innovation Management	6	Optional
Inspection, Repair and Maintenance of Electrical Installations	6	Optional

Subjects	ECTS credits	Type
Inspection, Repair and Maintenance of Marine Systems	6	Optional
Inspection, Repair and Maintenance of Ship Structures	6	Optional
Laboratory of Systems and Innovation Projects	6	Optional
Management Skills	6	Optional
Marine Data and Information Processing Using Matlab	6	Optional
Production Methods with Composite Materials	6	Optional
Project Management	6	Optional
Technical Inspection of Recreational Craft	6	Optional
FOURTH SEMESTER		
Fluid Mechanics	6	Compulsory
Materials Science and Technology	6	Compulsory
Naval Construction	6	Compulsory
Naval Electronics	6	Compulsory
Ship Theory	6	Compulsory
Professional Communication for Engineers	3	Optional
FIFTH SEMESTER		
Automatic Control	6	Compulsory
Maritime Legislation	3	Compulsory
Maritime Safety and Protection	6	Compulsory
Pollution Prevention and Sustainability	6	Compulsory
Propulsion	4.5	Compulsory
Refrigeration and Air Conditioning Installations	4.5	Compulsory
SIXTH SEMESTER		
Internal Combustion Engines	9	Compulsory
Marine Turbomachines and Steam Generators	9	Compulsory
Operation and Maintenance of Marine Engines and Systems	6	Compulsory
SEVENTH SEMESTER		
Electric Propulsion and Power Electronics	4.5	Compulsory
Inspection and Non-Destructive Testing	4.5	Compulsory
Installations and Maintenance	4.5	Compulsory
Transport of Dangerous Goods	4.5	Compulsory
Work Placement	30	Compulsory
EIGHTH SEMESTER		
Maintenance and Repair of Electronic Equipment and Systems	6	Compulsory
Maintenance and Repair of On-Board Electrical Equipment and Systems	6	Compulsory
Maintenance and Repair of Radio Navigation Equipment and Radio Communication Systems	6	Compulsory
On-Board Automatic Control Systems and Computer Networks	6	Compulsory
Operation and Maintenance of High Voltage Systems	6	Compulsory

Subjects	ECTS credits	Type
Final Thesis	12	Project

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Management and coordination of activities related to production, operation, maintenance and repair of power plants and industrial facilities.
- Technical and management positions at thermal and nuclear power plants.
- Maintenance management in maritime and industrial facilities.
- Technical and management positions with shipyards, shipbuilders and shipping companies.
- Customs supervision.
- Drafting and development of technical projects and reports.
- Inspection and certification of civilian vessels.
- Average adjustment.
- Projects related to quality, the environment, maritime safety, and occupational hazard prevention.
- Teaching.

DOUBLE-DEGREE AGREEMENTS

Double-degree pathways at the UPC

You have the possibility of complementing this bachelor's degree with a specific pathway towards a double degree by taking an additional number of credits from one of the other degrees taught at the School. Generally, this involves an additional year of study. To gain admission to a double degree of this kind you must have taken a minimum number of credits on one of the bachelor's degrees. The number of places is limited.

- Bachelor's degree in Marine Technologies + bachelor's degree in Naval Systems and Technology Engineering (FNB)

QUALITY ACCREDITATION

Check the degree’s main quality indicators in the University Studies in Catalonia portal of the Catalan University Quality Assurance Agency. Find information on topics such as degree evaluation results, student satisfaction and graduate employment data.
Further information

ACADEMIC ORGANISATION

Academic calendar

General academic calendar for bachelor’s, master’s and doctoral degrees courses

Academic regulations

Academic regulations for bachelor’s degree courses at the Universitat Politècnica de Catalunya (UPC).

Language certification and credit recognition

Queries about language courses and certification