

Bachelor's degree in Naval Systems and Technology Engineering

The **bachelor's degree in Naval Systems and Technology Engineering** will provide you with the knowledge and skills required to work as an expert on ship propulsion and systems. Your training will be career-oriented, focusing on technological activities linked to naval engineering in relation to ships and vessels of all types; floating and fixed platforms and structures (floating docks, structures for exploiting and utilising marine resources, and marine structures for generating renewable energy); marine nurseries and fishing systems; and other maritime industries. The following specialisations are offered: Sports and Leisure Watercraft; Business Organisation; and Inspection, Maintenance and Repair.

GENERAL DETAILS

Duration

4 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

Language of instruction

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

Information on [language use in the classroom and students' language rights](#).

Fees and grants

Approximate fees per academic year: €1,107 (€2,553 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 Education's degree register](#)

ADMISSION

Places

60

Registration and enrolment

[What are the requirements to enrol in a bachelor's degree course?](#)

Legalisation of foreign documents

All documents issued in non-EU countries must be [legalised and bear the corresponding apostille](#).

DOUBLE-DEGREE AGREEMENTS

Double-degree pathways at a single school

- Bachelor's degree in Naval Systems and Technology Engineering + Bachelor's degree in Marine Technologies

PROFESSIONAL OPPORTUNITIES

Professional opportunities

- Technical positions with shipyards and shipbuilding companies.
- Maintenance management of maritime and industrial facilities.
- Inspection services in relation to maritime administration, safety and pollution, and recreational craft.
- Average adjustment.
- Industries related to the building, repair and maintenance of ships.
- Naval technical offices.
- Maritime administrations.
- Shipping companies.
- Classification societies.
- Quality certification bodies.
- Self-employment (projects, expert reports, consulting, etc.).

ORGANISATION: ACADEMIC CALENDAR AND REGULATIONS

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 UPC](#)

Language certification and credit recognition

Queries about [language courses and certification](#)

Barcelona School of Nautical Studies (FNB)

CURRICULUM

Subjects	ECTS credits	Type
FIRST SEMESTER		
Fundamentals of Mathematics I	6	Compulsory
Graphic Expression	6	Compulsory
Informatics	6	Compulsory
Introduction to Nautical Sciences	6	Optional
Physics	9	Compulsory
SECOND SEMESTER		
Business Management and Organisation	6	Compulsory
Chemistry	6	Compulsory
Fundamentals of Mathematics II	6	Compulsory
Materials Science and Technology	6	Compulsory
Naval Technology and Mechanics	9	Compulsory
THIRD SEMESTER		
Applied Thermodynamics and Thermotechnics	6	Compulsory
Business Communication	6	Optional
Construction of Recreational Craft	6	Optional
Electricity and Electrotechnics	6	Compulsory
Innovation Management	6	Optional

Subjects	ECTS credits	Type
Inspection, Maintenance and Repair of Electric Facilities	6	Optional
Inspection, Maintenance and Repair of Marine Systems	6	Optional
Inspection, Maintenance and Repair of Ship Structures	6	Optional
Introduction to Naval Design	6	Optional
Management Abilities	6	Optional
Marine Data and Information Processing Using Matlab	6	Optional
Maritime Technical English	6	Optional
Mathematical Methods for Engineering	9	Compulsory
Mechanics for Naval Engineering	7.5	Compulsory
Production Methods with Composite Materials	6	Optional
Project Management	6	Optional
Technical Inspection of Recreational Craft	6	Optional
FOURTH SEMESTER		
Fluid Mechanics	6	Compulsory
Naval Construction	6	Compulsory
Naval Electronics	6	Compulsory
Naval Equipment	3	Compulsory
Professional Communication for Engineers	3	Optional
Ship Power Plant	4.5	Compulsory
Ship Theory	6	Compulsory
FIFTH SEMESTER		
Naval Engines	9	Compulsory
Production Organization and Project Management	7.5	Compulsory
Propulsion	7.5	Compulsory
Structures for Naval Engineering	6	Compulsory
SIXTH SEMESTER		
Materials in the Naval Industry	7.5	Compulsory
Naval System Design	9	Compulsory
Numerical Calculus of Naval Structures	4.5	Compulsory
Quality Management, Safety, Environment and Sustainability	4.5	Compulsory
Regulation and Automatic Control	4.5	Compulsory
SEVENTH SEMESTER		
Inspection and Non-Destructive Testing	4.5	Compulsory
Installations and Maintenance	4.5	Compulsory
Ship and Naval Artifact Design	9	Compulsory
EIGHTH SEMESTER		
Bachelor's Thesis	24	Project

