

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

Fees and grants

Approximate fees per academic year: €1,660 (€2,490 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 |
| 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 |
| Construction of Recreational Craft | 6 | Optional |
| Electricity and Electrotechnics | 6 | Compulsory |
| Innovation Management | 6 | Optional |
| 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 |
| Management Abilities | 6 | Optional |
| Marine Data and Information Processing Using Matlab | 4.5 | Optional |
| Mathematical Methods for Engineering | 9 | Compulsory |

| Subjects | ECTS credits | Type |
|--|---------------------|-------------|
| 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 |
| 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 |