Course guide
280811 - 280811 - Yatch Production Methods

Last modified: 27/05/2025

Unit in charge: Barcelona School of Nautical Studies
Teaching unit: 742 - CEN - Department of Nautical Sciences and Engineering.

Degree: MASTER'S DEGREE IN NAVAL AND OCEAN ENGINEERING (Syllabus 2017). (Optional subject).

Academic year: 2025 **ECTS Credits:** 5.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: ORIOL ADSERÀ BARBARÀ

Others: Segon quadrimestre:
ORIOL ADSERÀ BARBARÀ - MUENO

PRIOR SKILLS

Basic knowledge about Naval Architecture

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
ENO_CEe1-1. Knowledge of the existing regulations that regulate the project of pleasure and competition boats (specific competence of the specialty in Design of Yachts and Recreational Boats)
ENO_CEe1-6. Knowledge of the specific production methods of pleasure and competition boats (specific competence of the specialty in Design of Yachts and Pleasure Boats)

Transversal:
CT1. ENTREPRENEURSHIP AND INNOVATION: Knowing and understanding the organization of a company and the sciences that govern the activity; be able to understand the business rules and relationships between planning, industrial and commercial strategies, quality and profit.
CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Know and understand the complexity of economic and social phenomena typical of the welfare society, being able to relate welfare to globalization and sustainability; acquire skills to use in a balanced manner compatible technology, technology, economics and sustainability.
CT3. TEAMWORK: Ability to work as a member of an interdisciplinary team, either as a member or performing management tasks, with the aim of contributing to projects pragmatically and sense of responsibility, assuming commitments considering the resources available.
CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Manage the acquisition, structuring, analysis and visualization of data and information in the field of specialty, and critically evaluate the results of this management.
CT5. THIRD LANGUAGE Learning a third language, preferably English, with adequate oral and written and in line with the future needs of the graduates.

Basic:
CB6. Possess knowledge and understanding that provide a basis or opportunity be original in the development and / or application of ideas, often in a research context.
CB7. That the students can apply their knowledge and ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their study area.
CB8. Students should be able to integrate knowledge and handle the complexity of making judgments based on information that, being incomplete or limited, includes reflections on the responsibilities social and ethical linked to the application of their knowledge and judgments.
CB9. That students can communicate their conclusions and the knowledge and Latest rationale underpinning to specialists and non Specialty clearly and unambiguously.
CB10. Students must possess the learning skills that enable them continue studying in a way that will be largely self-directed or autonomous.

TEACHING METHODOLOGY

Expository method
Cooperative learning
Problem-based learning / Projects
Case studies

LEARNING OBJECTIVES OF THE SUBJECT

Ability to apply practical methods of production.
Deepen in the main current methods of the manufacture of yachts.
Apply with criteria tools for real cases.

STUDY LOAD

Type	Hours	Percentage
Self study	80,0	64.00
Hours large group	45,0	36.00

Total learning time: 125 h

CONTENTS

1. Metodes de fabricacio de iots.

Description:
Methods of manufacture of yachts in metal, steel and aluminum, the evolution of the construction.
-In the fence
-Machinery manufacture
-Integrated manufacturing

Methods of manufacturing small yachts in wood.
-Traditional way
-New techniques: plywood, molded wood and "sprip planking"

Full-or-part-time: 21h
Theory classes: 8h
Guided activities: 8h
Self study : 5h

2. The appearance of composites

Description:
Advantages compared to aluminum.

Full-or-part-time: 21h
Theory classes: 8h
Guided activities: 8h
Self study : 5h

3. Resins

Description:
-Poliester
-Epoxi

Full-or-part-time: 15h
Theory classes: 5h
Guided activities: 5h
Self study : 5h

4. Shipbuilding nowadays

Description:
- Current methods in yacht construction
-Challenges we face

Full-or-part-time: 21h
Theory classes: 8h
Guided activities: 8h
Self study : 5h

5. Techniques used with composites

Description:
-Typology
-Lamination techniques

Full-or-part-time: 21h
Theory classes: 8h
Guided activities: 8h
Self study : 5h

6. Recyclable composites

Description:
RECYCLING OF COMPOSITE MATERIALS OF GLASS FIBER AND THERMOSTABLE MATRIX
- Grinding
- Selective chemical degradation
- Pyrolysis
- Incineration in energy recovery

RECYCLING OF COMPOUND CARBON / EPOXY MATERIALS

Full-or-part-time: 26h
Theory classes: 8h
Guided activities: 8h
Self study : 10h

GRADING SYSTEM

The final grade is: Nfinal = 0.5 · Npp + 0.5 · Nec
Nfinal: Final qualification
Npp: Test qualification
Nec: Qualification exercises course

BIBLIOGRAPHY

Basic:
- Besednjak Dietrich, Alejandro. Materiales compuestos : procesos de fabricación de embarcaciones [on line]. Barcelona: Edicions UPC, 2005 [Consultation: 22/09/2020]. Available on: http://hdl.handle.net/2099.3/36804. ISBN 8483018209.
- Laval, P.F. Le Polyester et la plaisance : éléments de conception et de construction des navires de plaisance. Bourdeaux: Loisirs nautiques, 1980.