

Course guide

280666 - 280666 - Naval Equipment

Last modified: 27/05/2024

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

Degree: BACHELOR'S DEGREE IN NAVAL SYSTEMS AND TECHNOLOGY ENGINEERING (Syllabus 2010). (Compulsory subject).

Academic year: 2024 **ECTS Credits:** 3.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: MANUEL RODRIGUEZ CASTILLO

Others: Segon quadrimestre:
MANUEL RODRIGUEZ CASTILLO - DT, GESTN

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Knowledge of naval equipment and auxiliary systems.

TEACHING METHODOLOGY

Receive, understand and synthesize knowledge.
Documenting case studies
Develop critical thinking and reasoning and defend I oral or written form.
Perform work individually.
Prepare technical reports

LEARNING OBJECTIVES OF THE SUBJECT

Learn the basics of marine systems.
Know thoroughly the principles of operation, repair and redesign of existing systems aboard a ship.
Plans and conducts an oral presentation, responds appropriately to questions asked and correctly drawn basic technical level texts.

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	40.00
Self study	45,0	60.00

Total learning time: 75 h



CONTENTS

Overview of systems.

Description:

Overview and introduction to systems.

Full-or-part-time: 6h

Theory classes: 6h

Bilge Service

Description:

Concept, functions and operations.

Full-or-part-time: 4h

Theory classes: 4h

Seawater service.

Description:

Concept, functions and operation of fire services, flushing, ballast and cooling.

Full-or-part-time: 4h

Theory classes: 4h

Freshwater service

Description:

Concept, functions and operation of refrigeration and health service .

Full-or-part-time: 4h

Theory classes: 4h

Air service.

Description:

Concept, functions and operations of the air vent and compress services.

Full-or-part-time: 4h

Theory classes: 4h

Fuel service.

Description:

Concept, functions and operations of the fuel services.

Full-or-part-time: 4h

Theory classes: 4h

Lubrication service.

Description:

Concept, functions and operational of the lubrication services.

Full-or-part-time: 4h

Theory classes: 4h

GRADING SYSTEM

The final score is the sum of the following partial grades:

$$N_{\text{final}} = 0.8 N_{\text{pf}} + 0.2 N_{\text{ac}}$$

N_{final} : final grade.

N_{pf} : final test score.

N_{ac} : continuous assessment.

The final test consists of a part with issues related to the learning objectives of the course with respect to knowledge or understanding concepts, and a set of application exercises.

Continuous assessment consists of different activities, both individual and group formative in nature, occurring during the course.

A final test will be conducted reassessment students who meet the requirements established by the regulations of the center, which will consist of a single test in which all of the matter that will be assessed during the course.

EXAMINATION RULES.

If any of the assessment activities is not done, shall be deemed not scored.

It is considered not submitted when not perform any tests.

BIBLIOGRAPHY

Basic:

- Bonilla de la Corte, Antonio. Construcción naval y servicios. Vigo: l'autor, 1984. ISBN 843982629X.
- Comas Turnes, Eduardo. Equipo y servicios. Madrid: Escuela Técnica Superior de Ingenieros Navales, UPM, 1980.
- "Técnicas de prevención, detección y lucha contra-incendios a bordo". Piniella Corbacho, Francisco. Fundamentos de seguridad marítima : técnicas de seguridad aplicadas al buque. Cádiz: Universidad de Cádiz. Servicio de Publicaciones, 1996. pàg. 189-306.
- Mazarredo Beutel, Luis de. Evolución de la propulsión naval mecánica. Madrid: Fondo Editorial de Ingeniería Naval : Colegio Oficial de Ingenieros Navales, 1992. ISBN 8460081869.
- McGeorge, H. David. Marine auxiliary machinery [on line]. 7th ed. Amsterdam: Butterworth-Heinemann, 1995 [Consultation: 01/09/2022]. Available on : <https://www.sciencedirect-com.recursos.biblioteca.upc.edu/book/9780750643986/marine-auxiliary-machinery>.

Complementary:

- Grau Castello, V. Máquinas marinas. Madrid: Escuela técnica superior de ingenieros navales, UPM, 1995.
- Hernández Molina, Ricardo. Maquinaria auxiliar. Cadiz: Escuela Superior de la Marina Civil, Universidad de Cádiz, 1991.
- Hillier, H. [et al.]. Maquinaria marítima auxiliar. México: Unión Tipográfica Edit. Hispano Americana, 1965.
- The Motor ship. London: A.P.Chalkler, [1920]-.
- Marine propulsion & auxiliary machinery : the journal of ships' engineering systems. Einfield: Riviera Maritime Media, 2003-.
- Ingeniería naval : revista editada por la Asociación de Ingenieros Navales de España. Madrid: Asociación de Ingenieros Navales de España, [1929]-.