Course guide
280614 - 280614 - Naval Construction

Last modified: 09/05/2023

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

Degree: BACHELOR'S DEGREE IN NAUTICAL SCIENCE AND MARITIME TRANSPORT (Syllabus 2010). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: FRANCISCO JAVIER DE BALLE DE DOU

Others: Primer quadrimestre:
FRANCISCO JAVIER DE BALLE DE DOU - GNTM, MNGTM

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
2. Knowledge of major systems and auxiliary engines of the vessel and cooling facilities and air conditioning.
3. Knowledge, use and application to ship the principles of shipbuilding.

Generical:
1. ABILITY TO IDENTIFY AND SOLVE PROBLEMS IN THE FIELD OF ENGINEERING

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

· The student get a good knowledge of the ship's structure and superstructures.
· To get a first view in the used materials and basic ideas on the naval building and maintenance of the ship and its superstructures.
· Knowledge of different engines and marine devices.
· Knowledge and ability to explain where to look for damage and defects most commonly encountered.
· Ship construction.

Competencies
The specific competencies CE 15 and 16 together with the ones corresponding to chart A-II/1 of the STCW convention: "Inspect and report defects and danmage to cargo spaces, hatch covers and ballast tanks" and the section Ship construction of the competency "Maintain seaworthiness of the ship".
Inspect and report defects and damage to cargo spaces, hatch covers and ballast tanks. Maintain seaworthiness of the ship.

STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours large group	60,0	40.00

Total learning time: 150 h

CONTENTS

(ENG) Definicions.

(ENG) Astillers i Societats de classificació.

(ENG) Materials utilitzats en la construcció naval.

(ENG) Instal·lacions.

(ENG) Motors de combustió interna.

GRADING SYSTEM

BIBLIOGRAPHY

Basic:
- Bonilla de la Corte, Antonio. Construcción naval y servicios. Vigo: L'autor, 1984. ISBN 843982629X.
- Comas Turnes, Eduardo. Equipo y servicios. Madrid: ETSIN UPM, 1980.
- Fernández González, Francisco. Construcción naval I : nomenclatura y tecnología navales. Madrid: ETSIN UPM, 1987.
- López García, Gerardo M.; Benita Fernandez, Vicente. Estructura del buque : tecnología y cálculo. Cádiz: Els autors, 1972.
- Cherkassky, V. M. Bombas, ventiladores, compresores. Moscú: Mir, 1986.
- Pérez del Río, José. Tratado general de máquinas marinas. 8 vols [on line]. Barcelona: Planeta, 1959-1970 [Consultation: 24/02/2020]. Available on: http://hdl.handle.net/2117/130277.
- Olivella Puig, Joan. Teoría del buque : flotabilidad y estabilidad [on line]. 2a ed. Barcelona: Edicions UPC, 1995Available on: http://hdl.handle.net/2099.3/36216. ISBN 8483014750.

Complementary:
- Muckle, W. The design of aluminium alloy ship's structures. London: Hutchinson, 1963.
- Pursey, H. J. Merchant ship construction : especially written for the merchant navy. 7a ed.. Glasgow: Brown, Son & Ferguson, 1983. ISBN 0851744540.
- Giacosa, Dante. Motores endotérmicos : motores de encendido por chispa: a carburación y a inyección, motores de encendido por compresión Diesel, lentos y rápidos, motores rotativos - turbinas de gas: teoría, construcción, pruebas. Barcelona: Omega, 1988. ISBN 8428208484.
- Aláez Zazurca, José Antonio. Introducción a la teoría del funcionamiento de la hélice. Madrid: ETSIN UPM, 198-.