

Course guide

280712 - 280712 - Management of Port Terminals

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 NAUTICAL SCIENCE AND MARITIME TRANSPORT MANAGEMENT (Syllabus 2016).
(Compulsory subject).

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

LECTURER

Coordinating lecturer: JOSE MANUEL VALLELLANO GARCÍA

Others: Segon quadrimestre:
JOSE MANUEL VALLELLANO GARCÍA - MNGTM

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CE15-MNGTM. Conocimiento del transporte marítimo internacional, los mercados de fletes, la construcción y reparación, así como sus aspectos legales y económicos, la contratación y sus especificaciones.

CE17-MNGTM. Gestión de actividades portuarias.

Generical:

CG13-MNGTM. (ENG) Capacidad para dirigir, gestionar y explotar buques y artefactos flotantes, navieras y otras empresas marinas

CG14-MNGTM. Capacitat per al projecte i instal·lació d'equips nàutics i de seguretat del vaixell i instal·lacions marines, dins l'àmbit de la seva especialitat, és a dir, operació i explotació

CG15-MNGTM. (ENG) Capacidad para resolver problemas complejos y tomar decisiones con responsabilidad sobre bases científicas y tecnológicas en el ámbito de su especialidad

Transversal:

CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Managing the acquisition, structuring, analysis and display of data and information in the chosen area of specialisation and critically assessing the results obtained.

CT5. FOREIGN LANGUAGE: Achieving a level of spoken and written proficiency in a foreign language, preferably English, that meets the needs of the profession and the labour market.

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.

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.

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

LEARNING OBJECTIVES OF THE SUBJECT

- The functions of the Terminal within the global supply chain and international trade
- The role and functions of the manager in the successful and efficient operation of cargo and passenger terminals
- Understanding terminal types, configuration and operations
- How terminals are structured and their relationship to ocean carriers, trucking companies, the port and custom authorities and cargo owners.
- How terminals generate revenue
- Technology and its effect on efficiency
- The importance of labor relations with workers and the role of stevedors
- Regulatory and environmental issues related to terminal operations

STUDY LOAD

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

Total learning time: 125 h

CONTENTS

Chapter 1: Types of port terminals: container, ro-ro passenger, gas, chemical, drybulk, monobuoys

Description:

Introduction to international supply chain and logistics. History of trade development and modern trade flows. Goods transported. Globalisation and shipping: supply and demand. Historic development of ports and terminals. Role of ports and terminals and global logistics chains. Type terminals according to the goods handled.

Full-or-part-time: 17h

Theory classes: 4h

Practical classes: 2h

Guided activities: 1h

Self study : 10h

Chapter 2: Rules and laws of maritime terminals

Description:

Spanish background law: Royal Legislative Decree 2/2011 of 5 September. Terminal as customs area: the CAU. Environmental concerns in Terminals. Handling Dangerous Goods. Contingency plans. Health and safety at work. The agreement of the ILO and terminal operations.

Full-or-part-time: 17h

Theory classes: 4h 30m

Practical classes: 1h 30m

Guided activities: 1h

Self study : 10h

Chapter 3: Terminal operation

Description:

Characteristics of the ship and cargo. Terminal types: liquid and solid bulk, general and Project cargo, container, ro-ro, cruises and passenger. New developments. Terminal infrastructure, configuration and equipment. Main terminal operators. Load flow process. Safety in terminals. Terminal performance measures (KPIs)

Full-or-part-time: 17h

Theory classes: 4h 30m

Practical classes: 1h 30m

Guided activities: 1h

Self study : 10h

Chapter 4: Terminal managing

Description:

Business strategy. Principles of marketing, promotional and business development activity. Customer Service. Tariff and pricing structure. Quality management. Economy and port operations. Financial concepts. Budget analysis, benefits and costs. Financial analysis and measures. Depreciation. Cost reduction programs. Risk management

Full-or-part-time: 17h

Theory classes: 4h 30m

Practical classes: 1h 30m

Guided activities: 1h

Self study : 10h

Chapter 5: Multimodal Terminal

Description:

Port position in the intermodal chain. Strategies for improving competitiveness in the port node. Types of intermodal maritime terminals: container, general cargo unitized and ro-ro. Connection with the road and rail corridors. Railway terminals: features, layout and dimensioning. Areas of operation. Rail-port terminal and rail access

Full-or-part-time: 14h

Theory classes: 1h 30m

Practical classes: 1h

Guided activities: 1h 30m

Self study : 10h

Chapter 6: Law rules and docker teams

Description:

History of employment in ports and terminals. The labor reform and other social issues. Contracts and working relationships. State Stevedoring Company. Analysis of the trial of the Supreme Court of Luxembourg about the Spanish model stowage. Compared to other European models. The future.

Full-or-part-time: 14h

Theory classes: 1h

Practical classes: 1h 30m

Guided activities: 1h 30m

Self study : 10h

Chapter 7: The container depot: types of dry containers, reefer and isotank

Description:

History of container. Types of containers. International Convention standardization of containers. Plant and machinery depot. Inspection of the container at the entrance. Repair, cleaning. The inspection and insurance companies. Reefer equipment cleaning, pre-trip, repair. The tank or ISO-Tank.

Full-or-part-time: 14h

Theory classes: 1h

Practical classes: 1h 30m

Guided activities: 1h 30m

Self study : 10h

Chapter 8: Tarifes i taxes portuàries: T0, T1, T2, T3, L7 ...

Description:

Analysis of the Consolidated Law on Ports RDL 02/2011, the administrative concession of the Port Authority and the cost of port marine space, concession and private terminals.

Full-or-part-time: 15h

Theory classes: 2h

Practical classes: 1h 30m

Guided activities: 1h 30m

Self study : 10h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- "Real Decreto Legislativo 2/2011, de 5 de septiembre, por el que se aprueba el Texto Refundido de la Ley de Puertos del Estado y de la Marina Mercante". BOE Boletín Oficial del Estado [on line]. núm. 253, 20 octubre 2011, pàg. 109456 a 109710 [Consultation: 31/01/2020]. Available on: <https://www.boe.es/buscar/doc.php?id=BOE-A-2011-16467>.- Port and terminal management. London: Institute of Chartered Shipbrokers, 2015. ISBN 9781908833631.
- "Reglamento (UE) nº 952/2013 del Parlamento Europeo y del Consejo, de 9 de octubre de 2013, por el que se establece el código aduanero de la Unión (refundición)". Diario Oficial de la Unión Europea [on line]. DO L 269 de 10.10.2013, p. 1/101 [Consultation: 31/01/2020]. Available on: http://www.agenciatributaria.es/AEAT.internet/Norm_aduanera/codigo_aduanero.shtml.

Complementary:

- Stopford, Martin. Maritime economics. 3th ed. London: Routledge, 2009. ISBN 9780415275583.
- Alderton, Patrick. Port management and operations. 2nd ed. London: LLP, 2005. ISBN 1843114224.