

Course guide

280708 - 280708 - Bridge Procedures

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:** Catalan, Spanish, English

LECTURER

Coordinating lecturer: AGUSTIN MARTIN MALLOFRE

Others: Segon quadrimestre:
AGUSTIN MARTIN MALLOFRE - MNGTM

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CE9-MNGTM. Conocimiento del comportamiento del buque en la mar y de su maniobrabilidad.
CE11-MNGTM. Conocimiento de oceanografía para el análisis del comportamiento de los buques, que deben ser tenidos en cuenta en la seguridad marítima y la lucha contra la contaminación.
CE3-MNGTM. Diseño y ejecución de planes de protección marítima, emergencia y seguridad.
CE5-MNGTM. Conocimientos de la gestión del personal a bordo. Dirección y gestión de personal en situaciones de crisis.

Generical:

CG3-MNGTM. Capacitat per mantenir la navegabilitat del vaixell en tot tipus de circumstàncies i condicions
CG4-MNGTM. Capacitat per gestionar, planificar i coordinar la seguretat del vaixell i la protecció de les persones a bord
CG7-MNGTM. Capacitat per gestionar, dirigir i coordinar la protecció del medi ambient marí i aplicar criteris de sostenibilitat mediambiental al transport marítim
CG12-MNGTM. Capacitat per gestionar, dirigir i coordinar inspeccions de seguretat i protecció en els vaixells, proposant solucions tècniques als problemes detectats
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:

CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Being aware of and understanding the complexity of the economic and social phenomena typical of a welfare society, and being able to relate social welfare to globalisation and sustainability and to use technique, technology, economics and sustainability in a balanced and compatible manner.

CT3. TEAMWORK: Being able to work in an interdisciplinary team, whether as a member or as a leader, with the aim of contributing to projects pragmatically and responsibly and making commitments in view of the resources that are available.

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.

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.

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 main objective is that future captains and mates, acquire the appropriate skills to perform navigational watch with full responsibility for navigating the ship safely during periods when they are on duty and the elaboration of the Voyage Plan

Also to take appropriate and effective guards to ensure safety at all times while the ship is at anchor or moored and, if the ship is carrying hazardous cargo, the guards are organized taking fully into account the nature, quantity, packing / packaging and stowage the potentially dangerous card and any special conditions prevailing on board, at sea or on land.

One objective of this course is to impart the knowledge, understanding and proficiency of competencies "Establish watchkeeping arrangements and procedures", "Maintain safe navigation through the use of information from navigation equipment and systems to assist command decision making" and "Organize and manage the provision of medical care on board" necessary competencies defined in Section A-II/2 (minimum requirements applicable to the degree of captains and first officers bridge boat d'arqueig dirty or above 500 GT) of the International Convention on Standards of training , Certification and Watchkeeping for Seafarers (STCW). Part two of these skills will be assessed by the simulator, which is evaluated by simulation according to the STCW Code.

STUDY LOAD

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

Total learning time: 125 h

CONTENTS

CHAPTER 1 INTERNATIONAL SAFETY MANAGEMENT CODE PROCEDURES (ISM - CGS)

Description:

1. Instructions and procedures to ensure the safety of ships and environmental protection under international law and flag State;
2. Procedures for reporting accidents and cases of non-compliance with the Code
3. Procedures for preparing to deal with emergencies, and
4. Procedures for internal audits and management reviews
5. Organization and administration of medical care on board

Full-or-part-time: 25h

Theory classes: 9h

Self study : 16h

CHAPTER 2 BRIDGE TEAM MANAGEMENT (BTM) and BRIDGE RESOURCES MANAGEMENT (BRM)

Description:

1. Human Factor
2. Leadership and Authority
3. Motivation
4. Analysis of accidents
5. Problem solving and decision making
6. Cultural Awareness
7. Workload, stress and fatigue
8. Communication
9. Teamwork
10. Crisis Management and Conflict Resolution
11. Planning the trip / alternative plans
12. Organization of resources on the bridge
13. Briefing and debriefing
14. Competency Profile Captain / Officer / Official duty (STCW)
15. Perception and situational awareness (anticipation)
16. Determination of security levels (forecast)
17. Management of equipment and technical resources of the bridge. Operations and maintenance of the bridge equipments
18. Control of results of travel and bridge resource
19. Control yields team
20. Pilotage
21. Exercises in the simulator

Full-or-part-time: 50h

Theory classes: 18h

Self study : 32h

CHAPTER 3 VOYAGE PLANNING

Description:

1. Concept Voyage planning
2. The condition and state of the vessel, its stability, and its equipment; any operational limitations; its permissible draught at sea in fairways and in ports; its manoeuvring data, including any restrictions
3. Any special characteristics of the cargo (especially if hazardous), and its distribution, stowage and securing on board the vessel
4. Requirements for up-to-date certificates and documents concerning the vessel, its equipment, crew, passengers or cargo
5. Appropriate scale, accurate and up-to-date charts to be used for the intended voyage or passage, as well as any relevant permanent or temporary notices to mariners and existing radio navigational warnings
5. Appropriate scale, accurate and up-to-date charts to be used for the intended voyage or passage, as well as any relevant permanent or temporary notices to mariners and existing radio navigational warnings
6. Accurate and up-to-date sailing directions, lists of lights and lists of radio aids to navigation
7. Information meteorológica and oceanographic (meteorológicos prognoses, tides, etc.)
8. Services of maritime traffic reports and Measurements of Protection of the marine environment
9. Information on pilotage. Exchange of information between the captain and pilot
10. Detailed information on the ports available, including the information on the availability respuesta plains of emergency tierra y equipos
11. Available port information, including information pertaining to the availability of shore-based emergency response arrangements and equipment

Full-or-part-time: 25h

Theory classes: 9h

Self study : 16h



CHAPTER 4 Narrow waters navigation. Pilot on board. Emergency Procedures

Description:

Navigation procedure in areas of special surveillance (shallow waters and sea / river channels)

Pilot on board and operational pilotage

Main emergency procedures (general alarm, abandonment of the ship, fire on board, serious injured)

Full-or-part-time: 25h

Theory classes: 9h

Self study : 16h

GRADING SYSTEM

The final score will be the result of:

$NF = 0.6 AC + 0.2 TFC + 0.2 EF$

AC= Assessment during the course (4 partial exams)

TFC=Final Courses Work

EF= Final Exam

EXAMINATION RULES.

Is compulsory to realise the examens final and partial

Is compulsory to realise the practices and deliver the works proposed

BIBLIOGRAPHY

Basic:

- International safety management code : ISM code : international management code for the safe operation of ships and for pollution prevention. London: International Maritime Organization, 2010. ISBN 9789280151510.
- International Chamber of Shipping. Bridge procedures guide. 6th ed. London: Marisec, 2022. ISBN 9781913997076.
- ECDIS passage planning & watchkeeping. 2th ed. London: Witherby Seamanships, 2015. ISBN 9781856096706.
- Passage planning guidelines 2023 : incorporating Safe nav watch, Teamwork on the nav bridge. 2023 edition. Livingstone: Witherbys, 2023. ISBN 9781914993503.