Degree competences to which the subject contributes

Basic:

CB6. Possess knowledge and understanding that provide a basis or opportunity to 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.
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One of the objectives of this subject is to provide the knowledge, understanding, and proficiency of the next competences defined in Section A-II/2 (Mandatory minimum requirements for certification of masters and chief mates on ships of 500 gross tonnage or more) of the Seafarers' Training, Certification and Watchkeeping (STCW) International Code:

- "Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes" with special attention to the "Ability to establish procedures for safe cargo handling in accordance with the provisions of the relevant instruments such as IMDG Code, IMSBC Code, MARPOL 73/78 Annexes III and V and other relevant information.

Learning objectives of the subject

Teaching methodology

- Receive, understand, and synthesize knowledge.
- Solve problems.
- Develop the reasoning and critical thinking.

Specific:
CE13-MNGTM. Conocimiento sobre la gestión y el comportamiento en la mar de los transportes marítimos especiales.

Generical:
CG1-MNGTM. Capacitat per a gestionar, dirigir i coordinar l'anàlisi de les situacions, càlcul de variables i paràmetres específics de la navegació, la maniobra i del transport marítim.
CG2-MNGTM. Capacitat per a gestionar, dirigir i coordinar les tasques de la conservació i manteniment dels elements de coberta i espais de càrrega i estructura del vaixell.
CG5-MNGTM. Capacitat per gestionar, dirigir, coordinar i planificar la manipulació estiba i desestiba de la càrrega.
CG6-MNGTM. Capacitat per planificar i realitzar els càlculs necessaris per a la distribució de la càrrega del vaixell, i la prevenció de sobreesforços estructurals.
CG13-MNGTM. (ENG) Capacidad para dirigir, gestionar y explotar buques y artefactos flotantes, navieras y otras empresas marinas.
CG15-MNGTM. (ENG) Capacidad para resolver problemas complejos y tomar decisiones con responsabilidad sobre bases científicas y tecnológicas en el ámbito de su especialidad.
CG20-MNGTM. Capacitat per a la gestió i direcció d'empreses marines.
CG18-MNGTM. (ENG) Capacidad para dirigir y gestionar puertos deportivos.
CG19-MNGTM. Capacitat per desenvolupar els coneixements per a l'anàlisi i interpretació de mesuraments, càlculs, valoracions, taxacions, peritatges, estudis, informes i documents tècnics en l'àmbit de la seva especialitat.

Transversal:
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.
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. Know and understand the mechanisms that scientific research is based, as well as the mechanisms and instruments of transfer of results between different socio-economic actors involved in the processes of R + D + i.
- "Carriage of dangerous goods"

These competences could be also evaluated though simulator in accordance of the STCW Code.

The topics that will be discussed in this subject are the next ones:
- General knowledge of the IMDG Code with special attention to the parts 2, 3, 5 and 7
- Knowledge of the IMDG Code Supplement
- Segregation and stowage of dangerous goods on board container ships, ro-ro ships and general cargo ships
- Knowledge of different international rules for dangerous goods transport: ADR/RID, IATA, IMDG.
- National regulations regarding dangerous goods
- Harbour management procedures for dangerous goods

**Study load**

| Total learning time: 45h | Hours large group: | 45h | 100.00% |
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## Content

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Learning time</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Chapter 1. IMDG Code</strong></td>
<td></td>
<td><strong>89h 20m</strong></td>
<td>Deep Knowledge of the IMDG code and its supplement. Knowledge of the procedures previous to the embarkation of the dangerous goods, documents needed, segregations, stowage, exemptions, etc.</td>
</tr>
<tr>
<td><strong>Chapter 2. Relation among the international regulations for the transport of dangerous goods</strong></td>
<td></td>
<td><strong>15h</strong></td>
<td>General knowledge of the regulations IMDG, ADR, RID and IATA and the relation among them</td>
</tr>
<tr>
<td><strong>Chapter 3. National regulations for the carriage of dangerous goods at sea</strong></td>
<td></td>
<td><strong>12h</strong></td>
<td>Knowledge of the spanish regulation that regulates the carriage of dangerous goods at sea. Functions of the maritime administration and harbour authorities. Responsibilities of the captain.</td>
</tr>
<tr>
<td><strong>Chapter 4. Harbour management procedure for the dangerous goods</strong></td>
<td></td>
<td><strong>8h 40m</strong></td>
<td>Knowledge of the harbour procedures for the entrance, exit and transit of the dangerous goods.</td>
</tr>
</tbody>
</table>

## Qualification system

Final mark = 50% WORKS + 50% FINAL EXAM
Regulations for carrying out activities

- You can’t pass the course if all works, activities, and exercises are carried out and submitted.
- If the student doesn’t carry out the final exam, he or she will be considered as a “Not presented”.
- In case that the final mark is less than 5 but the student has passed the final exam, he or she will get the final mark of 5 (approved).

Bibliography

Basic:


Complementary: