Course guide
280648 - 280648 - Maritime Safety & Security

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

Degree: BACHELOR'S DEGREE IN MARINE TECHNOLOGIES (Syllabus 2010). (Compulsory subject).

Academic year: 2025 **ECTS Credits:** 6.0 **Languages:** Spanish

LECTURER

Coordinating lecturer: JOSE MANUEL ROBLEDANO ESTEBAN

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DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
CE12. Knowledge, use and application of the principles of the ship systems and quality management applied to the vessel and safety management audits of the ship.

Transversal:
EIN N2. ENTREPRENEURSHIP AND INNOVATION - Level 2. Taking initiatives that give rise to opportunities and to new products and solutions, doing so with a vision of process implementation and market understanding, and involving others in projects that have to be carried out.

STCW:
ME.1. A-III/1-1. Function: Marine engineering at the operational level
ME.2. A-III/1-1.3 Use internal communication systems
ME.3. A-III/1-KUP 1.3.1 Operation of all internal communication systems on board
ME.4. A-III/1-4. Function: Controlling the operation of the ship and care for persons on board at the operational level
ME.5. A-III/1-KUP 4.3.1 Fire prevention and fire-fighting appliances: Ability to organize fire drills
ME.6. A-III/1-KUP 4.3.2 Fire prevention and fire fighting appliances: Knowledge of classes and chemistry of fire
ME.7. A-III/1-KUP 4.3.3 Fire prevention and fire-fighting appliances: Knowledge of fire fighting systems
ME.8. A-III/1-KUP 4.3.4 Prevenció d'incendis i dispositius de lluita contra incendis: Action to be taken in the event of fire, including fires involving oil systems
OM.9. A-III/1-4.4 Operate life-saving appliances
OM.10. A-III/1-KUP 4.4.1 Life-saving: Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, satellite EPIRBs, SARTs, immersion suits and thermal protective aids
ME.11. A-III/1-4.6 Monitor compliance with legislative requirements
ME.12. A-III/1-KUP 4.6.1 Basic working knowledge of the relevant IMO conventions concernint safety of life at sea, security and protection of the marine environment
ME.13. A-III/1-4.8 Contribute to the safety of personnel and ship
ME.14. A-III/1-KUP 4.8.1 Knowledge of personal survival techniques
ME.15. A-III/1-KUP 4.8.2 Knowledge of fire prevention and ability to fight and extinguish fires
ME.16. A-III/1-KUP 4.8.4 Knowledge of personal safety and social responsibilities
ETO.1. A-III/6-1. Function: Electrical, electronic and control engineering at the operational level
ETO.2. A-III/6-1.7 Use internal communication systems
ETO.3. A-III/6-KUP 1.7.1 Operation of all internal communication systems on board
ETO.4. A-III/6-CCS 2.5.3 Practical knowledge: Detection of machinery malfunction, location of faults and action to prevent damage
ETO.5. A-III/6-CCS 3.1.3 Prevention of pollution of the marine environment: Importance of proactive measures to protect the marine environment
ETO.6. A-III/6-3.2 Prevent, control and fight fire on board
ETO.7. A-III/6-CCS 3.2.1 Fire prevention and fire-fighting appliances: Ability to organize fire drills
ETO.8. A-III/6-CCS 3.2.2 Fire prevention and fire-fighting appliances: Knowledge of classes and chemistry of fire
ETO.9. A-III/6-CCS 3.2.3 Fire prevention and fire-fighting appliances: Knowledge of firefighting systems
ETO.10. A-III/6-CCS 3.2.4 Fire prevention and fire-fighting appliances: Mesures que s'han d'adoptar en casos d'incendi, en particular els que afecten els sistemes d'hidrocarburs
ETO.11. A-III/6-3.3 Operate life-saving appliances
ETO.12. A-III/6-CCS 3.5.4 Knowledge and ability to apply decisionmaking techniques: .1 Situation and risk assessment, .2 Identify and consider generated options, .3 Selecting course of action, .4 Evaluation of outcome effectiveness
ETO.13. A-III/6-3.6 Knowledge of personal survival techniques
ETO.14. A-III/6-CCS 3.6.1 Coneixement de les tècniques de supervivència
ETO.15. A-III/6-CCS 3.6.3 Knowledge of elementary first aid

TEACHING METHODOLOGY

The teaching methods to be used, according to the defined topics, are summarized below (% in general ECTS time):
· Expository method / Master lesson (10%)
· Problem-based learning / projects (20%)
· Participatory exhibition class (20%)
· Cooperative learning (10%)
· Autonomous learning by solving exercises and problems and case studies (40%)

LEARNING OBJECTIVES OF THE SUBJECT

This subject validates the theoretical part of the following professional maritime training courses established by the International Convention on Seafarers' Training, Certification and Watchkeeping (STCW):
• Advanced fire fighting techniques (STCW / A-VI / 3).
• Handling of survival craft, rescue boats and fast rescue boats (STCW / A-VI / 2).
• Basic safety familiarization, training and instruction for all seafarers (STCW / A-VI / 1), excluding first aid.
• Aspects related to protection for all seafarers (STCW / A-VI / 6).
• Familiarization for all tanker personnel with regard to safety, excluding first aid and pollution prevention (STCW / A-V / 1).

Therefore, the theoretical competences required by the International Convention on Seafarers' Training, Certification and Watchkeeping (STCW) for this subject are (in parentheses the section of the STCW code that requires it):
1. Monitor compliance with legislative requirements (A-III / 1).
2. Contribute to the safety of the personnel on board and of the ship (A-III / 1).
3. Comply with emergency procedures (A-VI / 1-4).
4. Use of indoor communication systems (A-III / 1).
5. Contribute to effective communications on board the ship (A-VI / 1-4).
6. Minimize fire risks and maintain a state of preparedness that allows responding at all times to emergency situations in which fires occur (A-VI / 1-2).
7. Fight fires and extinguish them (A-VI / 1-2).
8. Control fire-fighting operations on board (A-VI / 3).
9. Organize and train fire fighting crews (A-VI / 3).
10. Inspect and maintain fire detection and extinguishing systems and equipment (A-VI / 3).
11. Investigate and compile reports on events in which fires occur (A-VI / 3).
12. Survival at sea in case of abandonment of the ship (A-VI / 1-1).
13. Taking charge of a survival craft or rescue boat during and after launching (A-VI / 2-1).
14. Run the engine of a survival craft (A-VI / 2-1).
15. Organize survivors and survival craft after leaving ship (A-VI / 2-1).
16. Use locating devices, including communication and signaling devices and pyrotechnic signals (A-VI / 2-1).
17. Understand the construction, maintenance, repairs and equipment of fast rescue boats (A-VI / 2-2).
18. Take charge of the launching equipment and devices that are usually installed, during launching and recovery (A-VI / 2-2).
19. Take charge of the fast rescue boat, with the equipment normally installed, during its launching and recovery (A-VI / 2-2).
20. Take charge of a fast rescue boat after launching (A-VI / 2-2).
21. Contribute to increasing maritime security through greater awareness (A-VI / 6-1).
22. Recognition of threats to protection (A-VI / 6-1).
23. Understanding of the need to maintain awareness and vigilance in the field of protection, and of the methods to achieve this (A-VI / 6-1).
24. Maintain the conditions established in a ship security plan (A-VI / 6-2).
25. Recognition of risks and threats to protection (A-VI / 6-2).
26. Carry out periodic inspections of the ship's security (A-VI / 6-2).
27. Proper use of protective equipment and systems, if any (A-VI / 6-2).
28. Contribute to the safe operation of a tanker (B-V / 1).
29. Carry out fire fighting operations on tankers (B-V / 1).
30. Understand and adopt the necessary measures to control fatigue (A-VI / 1-4).
31. Contribute to good human relations on board the ship (A-VI / 1-4).
32. Observe safety practices at work (A-VI / 1-4).

STUDY LOAD

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

Total learning time: 150 h

CONTENTS

1. IMO, SOLAS and other international conventions

Description:
What is the IMO? What are the regulatory instruments on maritime safety? You will learn how to use an international convention.

Specific objectives:
Basic working knowledge of relevant IMO conventions and other instruments relating to the safety of life at sea.
Basic use of SOLAS.

Related activities:
Question and answer game on IMO, its committees and international conventions and codes regarding maritime safety.
Location exercise in SOLAS.

Related competencies :
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A36-3.0.0. A-III/6-CCS 2.5.3 Practical knowledge: Detection of machinery malfunction, location of faults and action to prevent damage
A31-4.8.0. A-III/1-4.8 Contribute to the safety of personnel and ship
A31-4.8.1. A-III/1-KUP 4.8.1 Knowledge of personal survival techniques
A36-3.6.0. A-III/6-CCS 3.5.4 Knowledge and ability to apply decisionmaking techniques: .1 Situation and risk assessment, .2 Identify and consider generated options, .3 Selecting course of action, .4 Evaluation of outcome effectiveness
A36-3.6.4. A-III/6-CCS 3.6.3 Knowledge of elementary first aid
A31-4.8.2. A-III/1-KUP 4.8.2 Knowledge of fire prevention and ability to fight and extinguish fires
A31-4.6.0. A-III/1-4.6 Monitor compliance with legislative requirements
A31-4.8.4. A-III/1-KUP 4.8.4 Knowledge of personal safety and social responsibilities
A31-4.6.1. A-III/1-KUP 4.6.1 Basic working knowledge of the relevant IMO conventions concernint safety of life at sea, security and protection of the marine environment

Full-or-part-time: 6h
Theory classes: 1h
Guided activities: 1h
Self study : 4h

2. Ship concepts and facilities that affect safety

Description:
General definitions. Access to enclosed spaces. Principles of design and ergonomics of the machine room. Watertightness of the vessel. Bilge means. Sources of electric power. Periodically unattended machinery spaces.

Specific objectives:
Know the critical facilities on board.
Know how to prepare access to an enclosed space.
The competences to which this topic contributes are:
Monitor compliance with legislative requirements (A-III / 1).
Contribute to the safety of the personnel on board and that of the ship (A-III / 1).
Observe safe work practices (A-VI / 1-4).

Related activities:
Exercise about access to closed spaces. Evaluation of a real case.
On-board bilge drainage system problem.

Related competencies :
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A36-3.0.0. A-III/6-CCS 2.5.3 Practical knowledge: Detection of machinery malfunction, location of faults and action to prevent damage
A31-4.8.0. A-III/1-4.8 Contribute to the safety of personnel and ship
A31-4.8.1. A-III/1-KUP 4.8.1 Knowledge of personal survival techniques
A31-4.8.2. A-III/1-KUP 4.8.2 Knowledge of fire prevention and ability to fight and extinguish fires
A31-4.6.0. A-III/1-4.6 Monitor compliance with legislative requirements
A31-4.8.4. A-III/1-KUP 4.8.4 Knowledge of personal safety and social responsibilities
A31-4.6.1. A-III/1-KUP 4.6.1 Basic working knowledge of the relevant IMO conventions concernint safety of life at sea, security and protection of the marine environment
01 EIN N2. ENTREPRENEURSHIP AND INNOVATION - Level 2. Taking initiatives that give rise to opportunities and to new products and solutions, doing so with a vision of process implementation and market understanding, and involving others in projects that have to be carried out.

Full-or-part-time: 10h
Theory classes: 3h
Guided activities: 1h
Self study : 6h

3. Prevention, control and fire fighting on board

Description:
The safety precautions to be taken during the guard and the steps to implement immediately in case of fire or accident with particular reference to the fuel.
Prevention and Firefighting.
Knowledge of fire prevention.
Ability to organize fire fighting exercises.
Knowledge of the various classes of fires and chemical characteristics.
Knowledge of fire fighting systems.
Measures to take in case of fire including affecting oil systems.
Operation of internal communication systems on board.

Related competencies :
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A36-3.2.1. A-III/6-3.2 Prevent, control and fight fire on board
A31-1.3.1. A-III/1-KUP 1.3.1 Operation of all internal communication systems on board
A36-3.2.3. A-III/6-CCS 3.2.2 Fire prevention and fire-fighting appliances: Knowledge of classes and chemistry of fire
A36-3.2.0. A-III/6-CCS 3.1.3 Prevention of pollution of the marine environment: Importance of proactive measures to protect the marine environment
A31-4.0.0. A-III/1-4. Function: Controlling the operation of the ship and care for persons on board at the operational level
A36-3.2.4. A-III/6-CCS 3.2.3 Fire prevention and fire-fighting appliances: Knowledge of firefighting systems
A31-1.3.0. A-III/1-1.3 Use internal communication systems
A31-4.3.3. A-III/1-KUP 4.3.3 Fire prevention and fire-fighting appliances: Knowledge of fire fighting systems
A31-4.3.1. A-III/1-KUP 4.3.1 Fire prevention and fire-fighting appliances: Ability to organize fire drills
A31-4.3.2. A-III/1-KUP 4.3.2 Fire prevention and fire fighting appliances: Knowledge of classes and chemistry of fire
A36-3.2.2. A-III/6-CCS 3.2.1 Fire prevention and fire-fighting appliances: Ability to organize fire drills
A31-1.0.0. A-III/1-1. Function: Marine engineering at the operational level
A31-4.3.4. A-III/1-KUP 4.3.4 Prevenció d'incendis i dispositius de lluita contra incendis: Action to be taken in the event of fire, including fires involving oil systems
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Full-or-part-time: 47h
Theory classes: 12h
Practical classes: 10h
Guided activities: 1h
Self study : 24h

4. Operation of life-saving appliances

Description:
Life saving.
Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their devices and lowering your organization and equipment including radio life-saving appliances, satellite EPIRBs, SART, immersion suits and thermal protective aids.
Knowledge of survival techniques at sea.
Basic working knowledge of the relevant IMO conventions concerning safety of life at sea.
Knowledge of personal safety and social responsabilities.

Related competencies :
A31-4.8.0. A-III/1-4.8 Contribute to the safety of personnel and ship
A31-4.4.1. A-III/1-KUP 4.4.1 Life-saving: Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, satellite EPIRBs, SARTs, immersion suits and thermal protective aids
A31-4.8.1. A-III/1-KUP 4.8.1 Knowledge of personal survival techniques
A36-3.3.1. A-III/6-3.3 Operate life-saving appliances
A31-4.0.0. A-III/1-4. Function: Controlling the operation of the ship and care for persons on board at the operational level
A31-4.4.0. A-III/1-4.4 Operate life-saving appliances
A36-3.3.0. A-III/6-CCS 3.2.4 Fire prevention and fire-fighting appliances: Mesures que s'han d'adoptar en casos d'incendi, en particular els que afecten els sistemes d'hidrocarburs
A31-4.8.4. A-III/1-KUP 4.8.4 Knowledge of personal safety and social responsibilities

Full-or-part-time: 29h
Theory classes: 8h
Practical classes: 4h
Guided activities: 1h
Self study : 16h

5. Safety of navigation

Description:
SOLAS V and COLREG, ROUTEING, manning.
What are the traffic separation schemes? How is the minimum safe manning established? What should be the working language? Lights and navigation marks. Course and maneuver rules.

Specific objectives:
KUPs from the table A-III/1 of the STCW code:
Prevention of pollution of the marine environment. Knowledge of the precautions to be taken to prevent pollution of the marine environment.
Knowledge of the relevant IMO conventions concerning safety of navigation.
Knowledge of personal safety.

Related competencies :
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A31-4.8.0. A-III/1-4.8 Contribute to the safety of personnel and ship
A36-3.6.4. A-III/6-CCS 3.6.3 Knowledge of elementary first aid
A31-4.0.0. A-III/1-4. Function: Controlling the operation of the ship and care for persons on board at the operational level
A31-4.6.0. A-III/1-4.6 Monitor compliance with legislative requirements
A31-4.6.1. A-III/1-KUP 4.6.1 Basic working knowledge of the relevant IMO conventions concernint safety of life at sea, security and protection of the marine environment

Full-or-part-time: 6h
Theory classes: 2h
Self study : 4h

6. Global maritime distress and safety system

Description:
What is the GMDSS? What the concerning equipment are? IAMSAR and maritime radiocommunications

Specific objectives:
KUPs from the table A-III/1 of the STCW code:
Knowledge of the relevant IMO conventions concerning safety.
Knowledge of personal safety.
Life-saving. Radio life saving appliances, satellite EPIRBs, SARTs.
Personal survival techniques. Knowledge of personal safety and social responsibilities.

Related competencies :
A31-1.3.1. A-III/1-KUP 1.3.1 Operation of all internal communication systems on board
A36-1.7.0. A-III/6-1.7 Use internal communication systems
A31-1.3.0. A-III/1-1.3 Use internal communication systems
A36-1.0.0. A-III/6-1. Function: Electrical, electronic and control engineering at the operational level

Full-or-part-time: 9h
Theory classes: 3h
Self study : 6h

7. Security

Description:
Objectives of Maritime Security. Security Level. Ship Security System (SSAS).
Ship Security. Official of the company for maritime security. Ship's security officer. Ship security plan.
THE Security OF THE PORT facilities. Security plan for the port facility. Declaration of maritime security. Security officer of the port facility.
ACTS OF VIOLENCE PERPETRATED AGAINST SHIPS. PIRACY.

Specific objectives:
KUPs from the table A-III/1 of the STCW code:
Knowledge of the relevant IMO conventions concerning security.
Knowledge of personal safety.
Operation of internal communication systems.
Radio life-saving appliances.
Knowledge of personal survival techniques.

Related activities:
Security evaluation and preparation of a security plan.

Related competencies :
CE12. Knowledge, use and application of the principles of the ship systems and quality management applied to the vessel and safety management audits of the ship.
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A31-1.3.1. A-III/1-KUP 1.3.1 Operation of all internal communication systems on board
A36-3.3.1. A-III/6-3.3 Operate life-saving appliances
A31-4.0.0. A-III/1-4. Function: Controlling the operation of the ship and care for persons on board at the operational level
A31-4.4.0. A-III/1-4.4 Operate life-saving appliances
A36-1.7.1. A-III/6-KUP 1.7.1 Operation of all internal communication systems on board
A31-1.3.0. A-III/1-1.3 Use internal communication systems
01 EIN N2. ENTREPRENEURSHIP AND INNOVATION - Level 2. Taking initiatives that give rise to opportunities and to new products and solutions, doing so with a vision of process implementation and market understanding, and involving others in projects that have to be carried out.

Full-or-part-time: 23h
Theory classes: 6h
Practical classes: 5h
Self study : 12h

8. Safety Management onboard: ISM Code

Description:
INTERNATIONAL SAFETY MANAGEMENT CODE. RISK ANALYSIS.
What is the objective of the ISM Code? What are its tools? How are risks on board evaluated and barriers established?

Specific objectives:
KUPs from the table A-III/1 of the STCW code:
Prevention of pollution of the marine environment. Knowledge of the precautions to be taken to prevent pollution of the marine environment. Anti-pollution procedures and associated equipment. Importance of proactive measures to protect the marine environment.
Fire prevention and fire-fighting appliances. Action to be taken in the event of fire.
Knowledge of the relevant IMO conventions concerning safety management.
Knowledge of personal safety and social responsabilities.

Related activities:
Application of the risk matrix.

Related competencies :
CE12. Knowledge, use and application of the principles of the ship systems and quality management applied to the vessel and safety management audits of the ship.
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A31-4.4.1. A-III/1-KUP 4.4.1 Life-saving: Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including radio life-saving appliances, satellite EPIRBs, SARTs, immersion suits and thermal protective aids
A31-1.3.1. A-III/1-KUP 1.3.1 Operation of all internal communication systems on board
A36-3.2.0. A-III/6-CCS 3.1.3 Prevention of pollution of the marine environment: Importance of proactive measures to protect the marine environment
A36-3.6.0. A-III/6-CCS 3.5.4 Knowledge and ability to apply decisionmaking techniques: .1 Situation and risk assessment, .2 Identify and consider generated options, .3 Selecting course of action, .4 Evaluation of outcome effectiveness
A31-4.0.0. A-III/1-4. Function: Controlling the operation of the ship and care for persons on board at the operational level
A31-4.4.0. A-III/1-4.4 Operate life-saving appliances
A36-1.7.1. A-III/6-KUP 1.7.1 Operation of all internal communication systems on board
A31-1.3.0. A-III/1-1.3 Use internal communication systems
A31-4.3.3. A-III/1-KUP 4.3.3 Fire prevention and fire-fighting appliances: Knowledge of fire fighting systems
A31-4.3.1. A-III/1-KUP 4.3.1 Fire prevention and fire-fighting appliances: Ability to organize fire drills
A31-4.3.2. A-III/1-KUP 4.3.2 Fire prevention and fire fighting appliances: Knowledge of classes and chemistry of fire
A31-4.3.4. A-III/1-KUP 4.3.4 Prevenció d'incendis i dispositius de lluita contra incendis: Action to be taken in the event of fire, including fires involving oil systems
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Full-or-part-time: 13h
Theory classes: 4h
Guided activities: 1h
Self study : 8h

9. Human factor

Description:
THE FATIGUE, STCW CODE, THE ILO.
What is fatigue and what are its causes? What is the International STCW Code? The ILO and the International Maritime Labor Convention.

Specific objectives:
KUPs from the table A-III/1 of the STCW code:
Knowledge of the relevant IMO conventions concerning safety management.
Knowledge of personal safety and social responsabilities.

Related competencies :
CE12. Knowledge, use and application of the principles of the ship systems and quality management applied to the vessel and safety management audits of the ship.
CE11. Knowledge, use and application of the ship from the principles of safety and security of the ship, fire fighting and survival, preventing and combating pollution.
A36-3.6.4. A-III/6-CCS 3.6.3 Knowledge of elementary first aid
A31-4.8.2. A-III/1-KUP 4.8.2 Knowledge of fire prevention and ability to fight and extinguish fires
A36-3.2.4. A-III/6-CCS 3.2.3 Fire prevention and fire-fighting appliances: Knowledge of firefighting systems
A31-4.6.0. A-III/1-4.6 Monitor compliance with legislative requirements
A31-4.6.1. A-III/1-KUP 4.6.1 Basic working knowledge of the relevant IMO conventions concernint safety of life at sea, security and protection of the marine environment
A36-3.2.2. A-III/6-CCS 3.2.1 Fire prevention and fire-fighting appliances: Ability to organize fire drills

Full-or-part-time: 6h
Theory classes: 2h
Self study : 4h

10. Guarantee of maritime safety

Description:
Actors of maritime safety. The PSC in Spain. Classification Societies. Vetting. MoUs.

Specific objectives:
KUPs from the table A-III/1 of the STCW code:
Knowledge of the relevant IMO conventions concerning safety inspection and PSC.
Knowledge of personal safety and social responsabilities.

Related competencies :
CE12. Knowledge, use and application of the principles of the ship systems and quality management applied to the vessel and safety management audits of the ship.
A36-3.6.4. A-III/6-CCS 3.6.3 Knowledge of elementary first aid
A31-4.6.0. A-III/1-4.6 Monitor compliance with legislative requirements
A31-4.8.4. A-III/1-KUP 4.8.4 Knowledge of personal safety and social responsibilities
A31-4.6.1. A-III/1-KUP 4.6.1 Basic working knowledge of the relevant IMO conventions concernint safety of life at sea, security and protection of the marine environment

Full-or-part-time: 3h
Theory classes: 1h
Self study : 2h

GRADING SYSTEM

During the course, several activities will be proposed to be carried out individually and by groups whose average grade will represent 60% of the final grade.
There will be a final exam consisting of a questionnaire whose average grade will be 40% of the final grade.
There will be a visit to a ship during which an activity will have to be carried out whose rating will increase the final grade by 10%.
Nas = Nf + 0.1 * Nf
Nas = note of the subject
Nf = 0.6 * Nt + 0.4 * Ne, where Nt = average grade of the activities and Ne = grade of the final exam.

EXAMINATION RULES.

For the activities a list with the obligatory content will be provided.
The QUESTIONNAIRE of the exam will have a maximum duration of one hour and will consist of 50 questions. Those questions that no student had answered correctly will not compute.
Any supporting material can be brought the exam.
The re-evaluation exam will consist of carrying out a task.

BIBLIOGRAPHY

Basic:
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- International Maritime Organization. FSS code : International code for fire safety systems. London: IMO, 2015. ISBN 9789280116014.
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