280703 - Management of Maritime Safety and Pollution Prevention

Coordinating unit: 280 - FNB - Barcelona School of Nautical Studies
Teaching unit: 742 - CEN - Department of Nautical Sciences and Engineering
Academic year: 2020
Degree: MASTER'S DEGREE IN NAUTICAL SCIENCE AND MARITIME TRANSPORT MANAGEMENT (Syllabus 2016). (Teaching unit Compulsory)
MASTER'S DEGREE IN THE MANAGEMENT AND OPERATION OF MARINE ENERGY FACILITIES (Syllabus 2016). (Teaching unit Compulsory)
MASTER'S DEGREE IN NAVAL AND OCEAN ENGINEERING (Syllabus 2017). (Teaching unit Optional)
ECTS credits: 5
Teaching languages: Spanish, English

Opening hours
Timetable: Thursday 17-20 hs.

Prior skills
Basic knowledge of maritime safety and pollution

Requirements
Not Compulsory

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.

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The student will acquire training that will cover all aspects of maritime risks, management of safety and prevention management and pollution control, from the perspective of engineering and operational, and the regulations and requirements for safety and health. It addresses the needs of both professionals and students working in related management of shipping, ship design, naval architecture and transport management fields and fields including security management, insurance and accident investigation.

On the other hand, one of the objectives of this course is to provide knowledge, understanding and proficiency of skills "COORDINATION OF OPERATIONS SAR", "RESPOND TO NAVIGATIONAL EMERGENCIES". "MONITORING AND ENFORCEMENT OF LEGAL REQUIREMENTS AND MEASURES TO ENSURE THE LIFE AT SEA, MARITIME SECURITY AND POLLUTION PREVENTION ", " KEEP THE TERMS OF SAFETY AND PROTECTION OF PASSENGERS AND CREW AND OPERATING CONDITIONS OF RESCUE SYSTEMS, FIRE FIGHTING AND OTHER SECURITY SYSTEMS ", " EMERGENCY MANAGEMENT AND DAMAGES CONTROL including ("Technology of materials Naval architecture and ship construction, including damage control") competencies required and defined in Section a-II / 2 and a-III / 2 of the International Convention on Standards of Training, Certification and Watchkeeping for seafarers STCW 78/95/2010.

**Teaching methodology**

MD-1- Expositive Method and magistral class
MD-2- Expositive lessons and exercises
MD-3- Authonom learning and practical exercices

**Learning objectives of the subject**

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This course will evaluate the following STCW competences:

Plan and schedule operations
Ensure safe working practices
Monitor and control Compliance with legislative requirements and measures to ensure safety of life at sea, security and protection of the marine environment
Maintain safety and security of the vessel, crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems
Develop emergency and damage control plans and handle emergency situations
Control trim, stability and stress.

More detailed:

Ch. 4.-Coordinate search and rescue operations: 4.1 A thorough knowledge research and ability to apply the rescue procedures contained in operations the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual.

Ch. 9.-Respond to navigational emergencies
9.1 Precautions when beaching a ship
9.2 Action to be taken if grounding is imminent, and after grounding
9.3 Refloating a grounded ship with and without assistance
9.4 Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause
9.5 Assessment of damage control
9.6 Emergency steering
9.7 Emergency towing arrangements and towing procedure

Ch. 17.-Maintain safety and security the ship’s crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems
17.1 Thorough knowledge of life-saving appliance regulations (International Convention for the Safety of Life at Sea)
17.2 Organization of fire drills and abandon ship drills
17.3 Maintenance of operational condition of life-saving, fire-fighting and other safety systems
17.4 Actions to be taken to protect and safeguard all persons on board in emergencies
17.5 Actions to limit damage and save the ship following afire, explosion, collision or grounding

| Study load |
|-------------------|-------------------|-------------------|
| **Total learning time:** | 45h | Hours large group: | 45h | 100.00% |
ITEM 4. SEARCH AND RESCUE OPERATIONS (SAR)

**Description:**

**Learning time:** 30h
- Theory classes: 10h
- Self study: 20h

**Qualification system**
Final mark: $0.5 \times \text{FE} + 0.25 \times \text{Nt1} + 0.25 \times \text{Nt2}$
Final exam: 50%
Nt1: work's mark 1
Nt2: work's mark 2

**Regulations for carrying out activities**
- Not be able to pass the course if the student have submitted all the works and activities of continuous assessment and submitted to the final test.
- He deemed NOT PRESENTED to the student who fails to appear at the evaluable tests.
- In no event shall dispose of any kind of forms or documents in controls or tests.

**Bibliography**

**Basic:**

**Others resources:**
See ATENEA multimedia resources and specialised bibliography.