280687 - Maintenance and Repair of Radionavigation Equipment and Radio Communication Systems

**Coordinating unit:** 280 - FNB - Barcelona School of Nautical Studies

**Teaching unit:** 742 - CEN - Department of Nautical Sciences and Engineering

**Academic year:** 2017

**Degree:**
- BACHELOR’S DEGREE IN MARINE TECHNOLOGIES (Syllabus 2010). (Teaching unit Optional)
- BACHELOR’S DEGREE IN MARINE TECHNOLOGIES/BACHELOR’S DEGREE IN NAVAL SYSTEMS AND TECHNOLOGY ENGINEERING (Syllabus 2016). (Teaching unit Optional)

**ECTS credits:** 6

**Teaching languages:** Catalan

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**Teaching staff**

**Coordinator:** JAUME RECOLONS MARTOS

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**Degree competences to which the subject contributes**

**Specific:**

1. Knowledge of electronics applied to the ship and offshore installations and their application to board.

2. Knowledge and capacity to the operation, maintenance, redesign and repair of all existing systems on board a ship and ability to identify and address the different types of faults.

**Generical:**

3. ABILITY TO SHAPE, MANAGE AND IMPLEMENT COMPLEX SYSTEMS IN THE FIELD OF MARINE ENGINEERING. Ability to design, management and implementation of processes, systems and or services in the field of marine engineering, including the development of projects in the field of specialization, knowledge of basic materials and technologies, decision making, the management of the activities under the project, conducting measurements, calculations and valuations, managing specifications, regulations and mandatory standards, assessment of the social and environmental impact of technical solutions, economic valuation and resource human and material involved in the project, with a systematic and inclusive vision.

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**Eng** CG9. ABILITY TO SHAPE, MANAGE AND IMPLEMENT COMPLEX SYSTEMS IN THE FIELD OF MARINE ENGINEERING. Ability to design, management and implementation of processes, systems and or services in the field of marine engineering, including the development of projects in the field of specialization, knowledge of basic materials and technologies, decision making, the management of the activities under the project, conducting measurements, calculations and valuations, managing specifications, regulations and mandatory standards, assessment of the social and environmental impact of technical solutions, economic valuation and resource human and material involved in the project, with a systematic and inclusive vision.

4. IDENTIFY I resoldre Capacitat PER L’Àmbit problemes IN MARINA DE L’ENGINYERIA. Capacitat per the plantejament i resolució de problemes de l'ràbit enginyeria assumint marina iniciatives, prenet decisions i aplicant solucions creatives in the marc d’a systematic methodology.

**Transversal:**
This course will evaluate the following STCW competences:
E10. Maintenance and repair of bridge navigation equipment and ship communication systems

### Learning objectives of the subject

5. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.

6. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.

7. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.

### Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group:</th>
<th>30h</th>
<th>20.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group:</td>
<td>15h</td>
<td>10.00%</td>
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<tr>
<td></td>
<td>Hours small group:</td>
<td>10h</td>
<td>6.67%</td>
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<tr>
<td></td>
<td>Guided activities:</td>
<td>5h</td>
<td>3.33%</td>
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<tr>
<td></td>
<td>Self study:</td>
<td>90h</td>
<td>60.00%</td>
</tr>
</tbody>
</table>
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## Content

<table>
<thead>
<tr>
<th>Subject</th>
<th>Learning time</th>
<th>Theory classes</th>
<th>Laboratory classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ENG) - Manteniment i reparació de línies de transmissió</td>
<td>12h</td>
<td>8h</td>
<td>4h</td>
</tr>
<tr>
<td>(ENG) - Manteniment d'antenes</td>
<td>13h</td>
<td>9h</td>
<td>4h</td>
</tr>
<tr>
<td>(ENG) - Manteniment d'equips de radiocomunicacions</td>
<td>10h</td>
<td>6h</td>
<td>4h</td>
</tr>
<tr>
<td>(ENG) - Manteniment d'una unitat de radar</td>
<td>12h</td>
<td>10h</td>
<td>2h</td>
</tr>
<tr>
<td>(ENG) - Manteniment de sistemes de pont integrat</td>
<td>6h</td>
<td>4h</td>
<td>2h</td>
</tr>
</tbody>
</table>

## Bibliography

### Basic: