Course guide
280697 - 280697 - Inspection, Maintenance and Repair of Marine Systems

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). (Optional subject).
BACHELOR’S DEGREE IN NAVAL SYSTEMS AND TECHNOLOGY ENGINEERING (Syllabus 2010). (Optional subject).
Academic year: 2022  ECTS Credits: 6.0  Languages: Spanish

LECTURER

Coordinating lecturer: ADRIÀ CORTÉS I DEL PINO
Segon quadrimestre:
ADRIÀ CORTÉS I DEL PINO - Grup: DT, Grup: GESTN, Grup: GTM

Others: Segon quadrimestre:
ADRIÀ CORTÉS I DEL PINO - Grup: DT, Grup: GESTN, Grup: GTM

PRIOR SKILLS

It is advisable to have passed the subjects on internal combustion engines, steam generators, steam turbines, mheat exchangers because this subjects reads on survei, repair and maintenance of these installations.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
1. Knowledge of marine diesel engines, gas turbines and steam plants.

TEACHING METHODOLOGY

Class work using graphic material from marine engines and equipments builders. Personal work with the material in ATENEA.

LEARNING OBJECTIVES OF THE SUBJECT

Achievement of knowledge and skills for diagnosos of failure causes. Knowledge of the repair methods of marine equipments. Failure detection methods.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided activities</td>
<td>5,0</td>
<td>3.33</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>10,0</td>
<td>6.67</td>
</tr>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Type</td>
<td>Hours</td>
<td>Percentage</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Hours medium group</td>
<td>15.0</td>
<td>10.00</td>
</tr>
</tbody>
</table>

**Total learning time:** 150 h

**CONTENTS**

**Breakdown and failure diagnosis in plain and roller bearings.**

**Description:**
Breakdown and failure diagnosis in plain and roller bearings.

**Full-or-part-time:** 10h
Theory classes: 10h

**Internal combustion engines survey**

**Description:**
Internal combustion engines survey

**Full-or-part-time:** 10h
Theory classes: 10h

**Breakdown and failure diagnosis in steam generators.**

**Description:**
Breakdown and failure diagnosis in steam generators.

**Full-or-part-time:** 10h
Theory classes: 10h

**Breakdown and failure diagnosis in heat exchangers**

**Description:**
Breakdown and failure diagnosis in heat exchangers

**Full-or-part-time:** 10h
Theory classes: 10h

**Repairs of elements of internal combustion engines.**

**Description:**
Repairs of elements of internal combustion engines.

**Full-or-part-time:** 10h
Theory classes: 10h
**Repair methods of marine engines elements**

**Description:**
Repair methods of marine engines elements

**Full-or-part-time:** 10h
Theory classes: 10h

**Diagnosis by vibration analysis.**

**Description:**
Diagnosis by vibration analysis.

**Full-or-part-time:** 1h
Theory classes: 1h

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**GRADING SYSTEM**

Final exam with a 70% of the total qualification. Activities like control exams, individual or group work and its presentation with a total value of the 30% of the total qualification.

Reevaluation is a single exam with all the content of the subject.

**EXAMINATION RULES.**

The usual ones in written exams.

**BIBLIOGRAPHY**

**Basic:**