280808 - Construction, Repair and Life Cycle of Ship and Ocean Structures

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 NAVAL AND OCEAN ENGINEERING (Syllabus 2017). (Teaching unit Compulsory)
ECTS credits: 5
Teaching languages: Catalan, Spanish, English

Opening hours

Degree competences to which the subject contributes

Basic:
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.

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

Specific:
CE5. Conocimiento de los mercados de la construcción y reparación de buques y de sus aspectos legales y económicos, para su aplicación a los correspondientes contratos y especificaciones.
CE6. (ENG) Capacidad para definir la estrategia constructiva de los buques y para planificar y controlar su desarrollo.

Transversal:
CT3. TEAMWORK: Ability to work as a member of an interdisciplinary team, either as a member or performing
management tasks, with the aim of contributing to projects pragmatically and sense of responsibility, assuming
commitments considering the resources available.
CT4. EFFECTIVE USE OF INFORMATION RESOURCES: Manage the acquisition, structuring, analysis and visualization of data and information in the field of specialty, and critically evaluate the results of this management.

**Teaching methodology**

Perform information searches, regulations, analyzes, plans, projects.
Elaboration of concrete projects.

**Learning objectives of the subject**

Relate the technical knowledge of design with the practical application and its implications of quality, cost and term.
Learn the keys to design an efficient Constructive Strategy.
Know the specificities of the Planning and Management of complex multidisciplinary projects.
Knowing the development environment of the industrial activity in shipbuilding in its technical, competitiveness and social aspects.
Know the process of putting into operation, testing and acceptance of the ship.
Identify the keys of efficiency in the management of productive processes.
Know the technology involved in the shipbuilding processes and their specific application.
Identify the keys to the execution of the construction and repair in the environment of the complete project.
Familiarize the student with the techniques of improving current business results.

**Study load**

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time:</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>1.2. Cycles of the Naval Construction Market.</strong></td>
</tr>
<tr>
<td></td>
<td>8h/2h</td>
<td><strong>2. The ship's project</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>2.1. Development of the project for construction.</strong></td>
</tr>
<tr>
<td></td>
<td>3h/8h/2h</td>
<td><strong>3. Production and control methodologies. Production processes. Organization of the shipyards.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>3.1. The construction shipyard.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>3.2. Integral Construction Process. Main processes and flows.</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>**3.3. The ship as an aggregation of intermediate products: Materials, equipment, systems and painting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>4. Constructive strategies of ships, platforms and oceanic artifacts.</strong></td>
</tr>
<tr>
<td></td>
<td>3h</td>
<td><strong>4.1. Contract terms.</strong> <strong>4.2. Planning and monitoring of the project. Critical points.</strong></td>
</tr>
</tbody>
</table>
The final qualification is the sum of the following partial qualifications:

\[ N_{\text{final}} = 0.3 \times N_{\text{pf}} + 0.4 \times N_{\text{pp}} + 0.3 \times N_{\text{ac}} \]

- **Nfinal**: final qualification
- **Npf**: final test qualification
- **Npp**: partial test qualification
- **Nac**: continuous evaluation

Each test, of whatever type, must be passed with a grade of 5 out of 10 or higher. The parts that are exceeded are released until the final evaluation. The partial and final tests consist of a part with questions about concepts associated with the learning objectives of the subject in terms of knowledge or understanding, and a set of application exercises. The continuous evaluation consists in doing different activities, both individual and group, of cumulative and formative nature, made during the course.

### Regulations for carrying out activities

It is mandatory to attend the evaluation activities and participate in the classes, activities and visits that take place during the course, will determine the continuous assessment note.
Bibliography

Basic:


Chorro Oncina, Rosendo. Construcción Naval III. Madrid: ETSIN. Sección de Publicaciones, [197?].


