Learning objectives of the subject

- Know, understand and apply the methods of design of ships and artifacts.
- Use knowledge and strategic skills to the creation and management of projects with innovative vision, apply systematic solutions to complex problems.
- Apply sustainability criteria and rules in the design and assessment of technological solutions.
- Identifies the need to apply legislation, regulations and policy.
- Meet the concept of life cycle of a product and to be applied to the development of products and services in the field of naval arquitectura and marine engineering, using the appropriate regulations and legislation.
- Plan and use the information needed for a project or scholar work from a critical appraisal of the information resources used.
- Perform the tasks on schedule, according to the guidelines set by the teacher. Identifies progress and degree of compliance with the learning objectives.
- Performs tasks based on the guidelines set by teachers, deciding the time and resources required. Assesses his/her own strengths and weaknesses and acts accordingly.
- Identify user needs and develops a definition of product-process-service and initial specifications. Follow a management model of the design process based on standards. Assesses the implementation of legislation and regulations.
**280676 - Ship and Naval Artifact Design**

### Study load

<table>
<thead>
<tr>
<th>Total learning time: 225h</th>
<th>Hours large group: 40h</th>
<th>17.78%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 10h</td>
<td>4.44%</td>
</tr>
<tr>
<td></td>
<td>Hours small group: 0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 40h</td>
<td>17.78%</td>
</tr>
<tr>
<td></td>
<td>Self study: 135h</td>
<td>60.00%</td>
</tr>
</tbody>
</table>
## Content

<table>
<thead>
<tr>
<th>Section 1. Project of the ship</th>
<th>Learning time: 30h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 6h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 0h</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 4h</td>
</tr>
<tr>
<td></td>
<td>Self study: 20h</td>
</tr>
</tbody>
</table>

**Description:**

**Related activities:**
Practice on the dimensioning of the vessel.

<table>
<thead>
<tr>
<th>Section 2. Hull shape design</th>
<th>Learning time: 41h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 8h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 4h</td>
</tr>
<tr>
<td></td>
<td>Self study: 25h</td>
</tr>
</tbody>
</table>

**Description:**

**Related activities:**
Practice on the design of the hull shape. Design competition (workshop).

<table>
<thead>
<tr>
<th>Section 3. General arrangement</th>
<th>Learning time: 14h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 6h</td>
</tr>
<tr>
<td></td>
<td>Practical classes: 0h</td>
</tr>
<tr>
<td></td>
<td>Guided activities: 3h</td>
</tr>
<tr>
<td></td>
<td>Self study: 5h</td>
</tr>
</tbody>
</table>

**Description:**

**Related activities:**
Practices on general arrangement of the ship.
### Section 4. Structural design and calculation of displacement

**Learning time:** 27h  
**Description:**  
**Related activities:**  

### Section 5. Stability, maneuverability and seakeeping

**Learning time:** 41h  
**Description:**  
General introduction and review of the main concepts of maneuverability. Criteria for assessment the maneuverability of the vessel. Applicable regulations. Dimension of the steering system.  
General introduction and review of the main concepts of seakeeping. Basic theoretical review of the seakeeping. Assessment criteria for seakeeping of ships and offshore platforms.  
**Related activities:**  

### Section 6. Tonnage Measurement and freeboard

**Learning time:** 9h  
**Description:**  
**Related activities:**  
Practical exercises.
Section 7. Final workshop

Learning time: 63h
- Theory classes: 1h
- Practical classes: 4h
- Guided activities: 18h
- Self study: 40h

Description:
Introduction. Workshop on the project of a ship.

Related activities:
Workshop in working groups on the project of the ship.

Qualification system

The final mark will be the weighted average of all the different evaluating activities in the subject:
\[ N_{\text{final}} = 0.60 \times N_{\text{ec}} + 0.40 \times N_{\text{ex}} \]

- \( N_{\text{ec}} \): mark of the different exercises and practices
- \( N_{\text{ex}} \): mark of the exam

The re-evaluation will consist on carrying out a practical exercise defined by the professors. This work will be focused on the aspects of the matter failed by the student. The student will be required to deliver a written report on the work at the day of the exam. Furthermore, the student could be asked for an oral presentation or written exam on the work.

Regulations for carrying out activities

The student not presenting to any evaluation act will be qualified as "not taken"
Bibliography

Basic:


