280812 - Advanced Project of the Ship

Coordinating unit: 280 - FNB - Barcelona School of Nautical Studies
Teaching unit: 742 - CEN - Department of Nautical Sciences and Engineering
Academic year: 2018
Degree: MASTER'S DEGREE IN NAVAL AND OCEAN ENGINEERING (Syllabus 2017). (Teaching unit Compulsory)
ECTS credits: 5
Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: RAFAEL PACHECO BLAZQUEZ
Others: Primer quadrimestre:
RAFAEL PACHECO BLAZQUEZ - 1

Opening hours
Timetable: Tuesday from 11:00h to 13:00h; by appointment in all the cases.

Prior skills
Remember teh basic concepts referred to "Ship Design", studied in the MARINE TECNOLOGY GRADE/ SYSTEMS ENGINEERING AND NAVAL TECNOLOGY GRADE.

Requirements
Remember teh basic concepts referred to "Ship Design", studied in the MARINE TECNOLOGY GRADE/ SYSTEMS ENGINEERING AND NAVAL TECNOLOGY GRADE.

Degree competences to which the subject contributes
Basic:
CB6. Possess knowledge and understanding that provide a basis or opportunity be original in the development and / or application of ideas, often in a research context.
CB9. That students can communicate their conclusions and the knowledge and Latest rationale underpinning to specialists and non Speciality clearly and unambiguously
CB10. Students must possess the learning skills that enable them continue studying in a way that will be largely self-directed or autonomous.

Specific:
CE1. (ENG) Capacidad para proyectar buques adecuados a las necesidades del transporte marítimo de personas y mercancías, y a las de la defensa y seguridad marítimas.
280812 - Advanced Project of the Ship

Teaching methodology

In this subject three different docent methodologies are combined:
- Presential exposition sessions of the contents of the subject, in which the professor shall introduce the theoretical basis of the subject by means of examples that easy their understanding.
- Presential practical coursework sessions by means of explaining the development of such exercises, problems and algorithms in which the professor will guide the students in the application of theoretical concepts.
- Autonomous study and undertaking of exercise and activities in which the students will apply the knowledge developed during the presential sessions. Inclusion of brief MATLAB assignments, which will require the submission of a report.

Learning objectives of the subject

Understanding of the basic concepts related to ship design.

Capability to resolve mathematic problems applied to ship design.

Understanding of the algorithms, numerical methods basic tools and systems to solve such problems.

Study load

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

<table>
<thead>
<tr>
<th>Organisation and mission requirements</th>
<th><strong>Learning time:</strong> 7h 30m</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Organisation of ship design and parametric design.</td>
<td><strong>Theory classes:</strong> 3h</td>
</tr>
<tr>
<td></td>
<td><strong>Self study:</strong> 4h 30m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Form generation and preliminary powering</th>
<th><strong>Learning time:</strong> 10h 30m</th>
</tr>
</thead>
<tbody>
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<td><strong>Description:</strong> Form generation and preliminary powering</td>
<td><strong>Theory classes:</strong> 3h</td>
</tr>
<tr>
<td></td>
<td><strong>Guided activities:</strong> 3h</td>
</tr>
<tr>
<td></td>
<td><strong>Self study:</strong> 4h 30m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arrangements, structure and displacement</th>
<th><strong>Learning time:</strong> 10h 30m</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td></td>
<td><strong>Guided activities:</strong> 3h</td>
</tr>
<tr>
<td></td>
<td><strong>Self study:</strong> 4h 30m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manoeuvring, stability and seakeeping</th>
<th><strong>Learning time:</strong> 7h 30m</th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>Theory classes:</strong> 3h</td>
</tr>
<tr>
<td></td>
<td><strong>Self study:</strong> 4h 30m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Floodable length and freeboard</th>
<th><strong>Learning time:</strong> 7h 30m</th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>Theory classes:</strong> 3h</td>
</tr>
<tr>
<td></td>
<td><strong>Self study:</strong> 4h 30m</td>
</tr>
</tbody>
</table>
### Intact and damaged stability

**Learning time:** 10h 30m  
- Theory classes: 3h  
- Guided activities: 3h  
- Self study: 4h 30m

**Description:**  
Intact and damaged stability.

### Economic Management, Quality Management and Environmental Management

**Learning time:** 18h  
- Theory classes: 6h  
- Guided activities: 3h  
- Self study: 9h

**Description:**  
Economic Management, Quality Management and Environmental Management.

### Practical case review

**Learning time:** 6h  
- Theory classes: 6h

**Description:**  
Practical case review.

### Qualification system

The final grade is the sum of the partial grades below:

\[
G_{\text{final}} = 0.5 \times C_w + 0.5 \times F_p
\]

On:  
- G\(_{\text{final}}\): Final grade.  
- C\(_w\): Coursework grade.  
- F\(_p\): Final presentation grade.
280812 - Advanced Project of the Ship

Regulations for carrying out activities

Rules for the fulfilment of the course activities:

Coursework Assessment:
Individual/groupal undertaking and submission of the courseworks. A report shall be submitted within the deadline. Any coursework delivered out of the deadline shall be qualified with a penalty of 10% less per day out of the deadline, meaning that a submission over 10 days would be equivalent to a 0.

Presentation:
Presentations will be in groups. A not have taken qualification will be awarded to the student who does not present in the day selected for the presentation.

Bibliography

Basic: