280810 - Design of Sailing Yachts

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

Teaching staff
Coordinator: Ortigosa Barragán, Inmaculada
Others: Ortigosa Barragán, Inmaculada

Opening hours
Timetable: To agree with students

Degree competences to which the subject contributes

Basic:
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.

Specific:
CEE1-7. (ENG) Conocimiento de los materiales empleados en la construcción de embarcaciones de recreo.
CEE1-5. (ENG) Conocimientos de los métodos de diseño arquitectónico de embarcaciones de recreo y competición
CEE1-6. (ENG) Conocimiento de los métodos de producción específicos de embarcaciones de recreo y competición.
CEE1-1. (ENG) Conocimiento de las normativas existentes que regulan el proyecto de las embarcaciones de recreo y competición
CEE2-1. (ENG) Capacidad de análisis hidrodinámico, estabilidad y comportamiento en la mar de plataformas y otras
280810 - Design of Sailing Yachts

- Capacity to project sailing yachts
- Knowledge of advanced Naval hydrodynamics
- Knowledge of the different parts of the sailing yacht structure and the influence between the parts into the dressing process.
- Knowledge of the different materials for each part of the structure

Teaching methodology

master classes and practical classes

Learning objectives of the subject

Capacity to project sailing yachts
Knowledge of advanced Naval hydrodynamics
Knowledge of the different parts of the sailing yacht structure and the influence between the parts into the dressing process.
Knowledge of the different materials for each part of the structure

Study load

<table>
<thead>
<tr>
<th>Total learning time: 45h</th>
<th>Hours large group:</th>
<th>45h</th>
<th>100.00%</th>
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</table>
## 280810 - Design of Sailing Yachts

<table>
<thead>
<tr>
<th>Content</th>
<th>Learning time</th>
<th>Theory classes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sailing yacht design methodology</strong></td>
<td>1h 30m</td>
<td>1h 30m</td>
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<tr>
<td><strong>Preliminary Considerations</strong></td>
<td>1h 30m</td>
<td>1h 30m</td>
</tr>
<tr>
<td><strong>Hydrostatics and Stability</strong></td>
<td>4h 30m</td>
<td>4h 30m</td>
</tr>
<tr>
<td><strong>Hull desing</strong></td>
<td>6h</td>
<td>6h</td>
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<tr>
<td><strong>Keel and rudder desing</strong></td>
<td>6h</td>
<td>6h</td>
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<tr>
<td><strong>Sail and rigging desing</strong></td>
<td>6h</td>
<td>6h</td>
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</table>

**Description:**
- Sailing yacht design methodology
- Preliminary Considerations
- Hydrostatics and Stability
- Hull desing
- Keel and rudder desing
- Sail and rigging desing
### 280810 - Design of Sailing Yachts

| **Balance** | **Learning time:** 6h  
Theory classes: 6h |
<table>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Balance</td>
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| **High Speed Hydrodynamics** | **Learning time:** 4h 30m  
Theory classes: 4h 30m |
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>High Speed Hydrodynamics</td>
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</tbody>
</table>

| **Rig and hull construction** | **Learning time:** 3h  
Theory classes: 3h |
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Rig and hull construction</td>
</tr>
</tbody>
</table>

| **Materials** | **Learning time:** 3h  
Theory classes: 3h |
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Materials</td>
</tr>
</tbody>
</table>

| **Design evaluation** | **Learning time:** 3h  
Theory classes: 3h |
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Design evaluation</td>
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### Qualification system

Two partial exams and a practical work developed by each student
Bibliography

Basic:


