220281 - Refrigeration and Air Conditioning

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 724 - MMT - Department of Heat Engines
Academic year: 2018
Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Teaching unit Optional)
ECTS credits: 5

Teaching languages: Catalan

Teaching staff
Coordinator: MANUEL QUERA MIRO
Others: OSCAR RIBE TORIJANO

Degree competences to which the subject contributes

Specific:
1. Knowledge and ability to analyze the processes of heat transfer that allows the design and calculation of equipment and thermal applications.
2. Knowledge and capability to design and calculate equipment and refrigeration facilities (refrigeration and air conditioning).
3. Knowledge and ability to analyze, design, calculation and application of power cycles and alternative heat engines.
4. Knowledge about technology and applications of unconventional alternatives energy (geothermal energy, solar energy and fuel cells).

Learning objectives of the subject

1

Study load

<table>
<thead>
<tr>
<th>Total learning time: 125h</th>
<th>Hours large group:</th>
<th>30h</th>
<th>24.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours small group:</td>
<td>15h</td>
<td>12.00%</td>
</tr>
<tr>
<td></td>
<td>Self study:</td>
<td>80h</td>
<td>64.00%</td>
</tr>
</tbody>
</table>
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## Content

<table>
<thead>
<tr>
<th>Item 1: Refrigeration</th>
<th>Learning time: 62h 30m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 15h</td>
</tr>
<tr>
<td></td>
<td>Laboratory classes: 7h 30m</td>
</tr>
<tr>
<td></td>
<td>Self study : 40h</td>
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</tbody>
</table>

**Description:**

1. -

<table>
<thead>
<tr>
<th>Item 2: Air Conditioning</th>
<th>Learning time: 62h 30m</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 15h</td>
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**Description:**

1. -

## Bibliography

**Basic:**


