820523 - EPQ - Chemical Process Engineering

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 713 - EQ - Department of Chemical Engineering
Academic year: 2018
Degree: BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6 Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: ANTONIO ESPUÑA CAMARASA
Others: Antonio Espuña Camarasa - Moisès Graells Sobré - Ana Somoza Tormos

Opening hours
Timetable: Please check the Spanish version

Prior skills
Please check the Spanish version

Requirements
Please check the Spanish version

Degree competences to which the subject contributes

Specific:
2. Analyse, design, simulate and optimise processes and products.
12. Understand mass and energy balances, biotechnology, mass transfer, separation operations, chemical reaction engineering, the design of reactors, and the recovery and processing of raw materials and energy resources.

Transversal:
14. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
22. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 3. Taking social, economic and environmental factors into account in the application of solutions. Undertaking projects that tie in with human development and sustainability.
25. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.

Teaching methodology
Please check the Spanish version

Learning objectives of the subject
Please check the Spanish version
### Study load

<table>
<thead>
<tr>
<th></th>
<th>Hours large group:</th>
<th>Hours medium group:</th>
<th>Hours small group:</th>
<th>Guided activities:</th>
<th>Self study:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total learning time:</strong></td>
<td>150h</td>
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<tr>
<td>Hours large group:</td>
<td>30h</td>
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<tr>
<td>Hours medium group:</td>
<td>0h</td>
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<tr>
<td>Hours small group:</td>
<td>30h</td>
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<tr>
<td>Guided activities:</td>
<td>0h</td>
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<tr>
<td>Self study:</td>
<td>90h</td>
<td></td>
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</tbody>
</table>

- Total learning time: 150h
- Hours large group: 30h (20.00%)
- Hours medium group: 0h (0.00%)
- Hours small group: 30h (20.00%)
- Guided activities: 0h (0.00%)
- Self study: 90h (60.00%)
<table>
<thead>
<tr>
<th>Content</th>
<th>Learning time: 12h</th>
</tr>
</thead>
</table>
| (ENG) Introducción | Theory classes: 6h  
Self study : 6h |

**Description:**
Please check the Spanish version.

**Related activities:**
Please check the Spanish version.

**Specific objectives:**
Please check the Spanish version.

<table>
<thead>
<tr>
<th>(ENG) Herramientas de cálculo (Simulación y optimización)</th>
<th>Learning time: 16h</th>
</tr>
</thead>
</table>
|                                                           | Theory classes: 8h  
Self study : 8h |

**Description:**
Please check the Spanish version.

**Related activities:**
Please check the Spanish version.

**Specific objectives:**
Please check the Spanish version.

<table>
<thead>
<tr>
<th>(ENG) Síntesis de Procesos</th>
<th>Learning time: 12h</th>
</tr>
</thead>
</table>
|                             | Theory classes: 4h  
Self study : 8h |

**Description:**
Please check the Spanish version.

**Related activities:**
Please check the Spanish version.

**Specific objectives:**
Please check the Spanish version.
### (ENG) Análisis de Procesos

**Learning time:** 8h  
- Theory classes: 4h  
- Self study: 4h

**Description:**  
Please check the Spanish version.

**Related activities:**  
Please check the Spanish version.

**Specific objectives:**  
Please check the Spanish version.

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### (ENG) Ingeniería de Producto

**Learning time:** 12h  
- Theory classes: 4h  
- Self study: 8h

**Description:**  
Please check the Spanish version.

**Related activities:**  
Please check the Spanish version.

**Specific objectives:**

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### (ENG) Síntesis de sistemas de separación

**Learning time:** 12h  
- Theory classes: 4h  
- Self study: 8h

**Description:**  
Please check the Spanish version.

**Related activities:**  
Please check the Spanish version.

**Specific objectives:**  
Please check the Spanish version.
### (ENG) Síntesis de sistemas de reacción

**Description:**
Please check the Spanish version.

**Related activities:**
Please check the Spanish version.

**Specific objectives:**
Please check the Spanish version.

**Learning time:** 6h  
Theory classes: 2h  
Self study: 4h

### (ENG) Síntesis de sistemas de control

**Description:**
Please check the Spanish version.

**Related activities:**
Please check the Spanish version.

**Specific objectives:**
Please check the Spanish version.

**Learning time:** 4h  
Theory classes: 2h  
Self study: 2h

### (ENG) Visión global: Integración de Procesos

**Description:**
Please check the Spanish version.

**Related activities:**
Please check the Spanish version.

**Specific objectives:**
Please check the Spanish version.

**Learning time:** 23h  
Theory classes: 9h  
Self study: 14h
### Desarrollo de un caso de Ingeniería de Proceso y de Producto

**Learning time:** 45h  
  *Theory classes: 15h*  
  *Self study: 30h*

#### Description:
Please check the Spanish version.

#### Related activities:
Please check the Spanish version.

#### Specific objectives:
Please check the Spanish version.

### Qualification system

Please check the Spanish version.

### Regulations for carrying out activities

Please check the Spanish version.

### Bibliography

#### Basic:


#### Complementary:


#### Others resources:
Please check the Spanish version.