330151 - ERQ - Chemical Reaction Engineering

Coordinating unit: 330 - EPSEM - Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering
Academic year: 2018
Degree: BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6
Teaching languages: Catalan

Teaching staff
Coordinator: MARIA DOLORS GRAU VILALTA
Others: ANTONIO DAVID DORADO CASTAÑO - NÚRIA TORRAS MELENCHÓN

Degree competences to which the subject contributes

Specific:
1. (ENG) Calcular i dissenyar reactors químics ideals i homogenis, des del punt de vista material i energètic.
2. (ENG) Distingir els diferents tipus de reactors heterogenis.

Transversal:
3. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
4. 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.
5. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and written presentations. Adapting to audiences and communication aims by using suitable strategies and means.

Learning objectives of the subject

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 45h</th>
<th>30.00%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group: 15h</td>
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<tr>
<td></td>
<td>Hours small group: 0h</td>
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<td></td>
<td>Guided activities: 0h</td>
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<tr>
<td></td>
<td>Self study: 90h</td>
<td>60.00%</td>
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<tr>
<td>Content</td>
<td>Learning time:</td>
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<tr>
<td>(ENG) 1. Introducció a l'Enginyeria de la reacció química</td>
<td>5h</td>
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<td>Theory classes: 4h</td>
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<td>Self study : 1h</td>
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<tr>
<td>(ENG) 2. Cinètica de les reaccions homogènies</td>
<td>50h</td>
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<td>Theory classes: 15h</td>
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<td>Practical classes: 5h</td>
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<td>Self study : 30h</td>
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<td>(ENG) 3. Aspecte material en el disseny de reactors: Reactors ideals isotèrmics</td>
<td>66h</td>
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<td>Theory classes: 16h</td>
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<td>Practical classes: 8h</td>
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<td>Self study : 42h</td>
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<td>(ENG) 4. Aspecte energètic en el disseny de reactors</td>
<td>23h</td>
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<td>Theory classes: 6h</td>
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<td>Practical classes: 2h</td>
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<td>Self study : 15h</td>
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<tr>
<td>(ENG) 5. Reactors per a sistemes heterogenis</td>
<td>6h</td>
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<td>Theory classes: 4h</td>
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<tr>
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<td>Self study : 2h</td>
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</table>
Planning of activities

(ENG) 1. RESOLUCIÓ DE PROBLEMES A CLASSE

Hours: 7h
Theory classes: 4h
Self study: 3h

(ENG) 2. RESOLUCIÓ DE PROBLEMES A CASA

Hours: 18h
Self study: 18h

(ENG) 3. QÜESTIONARIS ATENEA

Hours: 4h
Self study: 4h

(ENG) 4. PRESENTACIÓ D'UN PROBLEMA EN GRUP

Hours: 9h
Theory classes: 4h
Self study: 5h

(ENG) 5. PROVA INDIVIDUAL ESCRITA

Hours: 14h
Theory classes: 4h
Self study: 10h

Bibliography

Basic:

Complementary:

Others resources: