820529 - OBA1 - Unit Operations I

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 713 - EQ - Department of Chemical Engineering
Academic year: 2017
Degree: BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6
Teaching languages: Catalan

Teaching staff
Coordinator: Casal Fabrega, Joaquim
Others: Aureli Calvet Tarragona

Opening hours
Timetable: To be set previously with the student

Prior skills
Knowledge on fluid mechanics and heat transfer

Requirements
Chemistry
Fluid mechanics
Chemical engineering
Thermodynamics and heat transfer

Degree competences to which the subject contributes

Specific:
CEQUI-19. 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:
04 COE N3. 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.

Teaching methodology
- Lectures on theory and problems by the professors.
- Problems solving by the students.
- Autonomous learning.
- Visit to an industrial plant.

Learning objectives of the subject
Passing the course the student should be able to:
- Know the principles and methodologies of the studied unit operations.
- Design/calculate the equipments corresponding to the studied unit operations.
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- Solve certain projects in the field of chemical engineering.

<table>
<thead>
<tr>
<th>Study load</th>
<th>Hours large group:</th>
<th>60h</th>
<th>40.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total learning time: 150h</td>
<td>Hours medium group:</td>
<td>0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Hours small group:</td>
<td>0h</td>
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<td></td>
<td>Guided activities:</td>
<td>0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Self study:</td>
<td>90h</td>
<td>60.00%</td>
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## Content

<table>
<thead>
<tr>
<th>Unit Operations I</th>
<th>Learning time: 60h</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 60h</td>
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### Description:

**Block 1 (13 h)**

**Block 2 (18 h)**

**Block 3 (7 h)**

**Block 4 (14 h)**

### Specific objectives:

Passing the course, the student should be able to:
- Knowing the principles and procedures of the studied unit operations.
- Designing/calculating the equipments associated to the studied unit operations.
- Solving certain projects in the field of chemical engineering.

### Qualification system

- Partial examination: 30%
- Evaluation test: 10%
- Final examination: 60%
- Re-evaluation: examination of the whole course (the previous marks not taken into account) according to the guideline of EEBE.
Regulations for carrying out activities

Some examinations will take place with documentation available to the students, some without it (the students will be previously informed on this).

Bibliography

Basic:


Others resources:

Additional documentation (graphs, tables, power-point, etc.) given by professors.