## 820529 - OBA1 - Unit Operations I

<table>
<thead>
<tr>
<th>Coordinating unit:</th>
<th>295 - EEBE - Barcelona East School of Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching unit:</td>
<td>713 - EQ - Department of Chemical Engineering</td>
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<tr>
<td>Academic year:</td>
<td>2017</td>
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<tr>
<td>Degree:</td>
<td>BACHELOR'S DEGREE IN CHEMICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)</td>
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<tr>
<td>ECTS credits:</td>
<td>6</td>
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<tr>
<td>Teaching languages:</td>
<td>Catalan</td>
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### Teaching staff

**Coordinator:** Casal Fabrega, Joaquim  
**Others:** Aureli Calvet Tarragona

### 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.
- 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>0 h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Hours small group:</td>
<td>0 h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Guided activities:</td>
<td>0 h</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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</table>
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Content

### Unit Operations I

**Learning time:** 60h

| Theory classes: 60h |

#### 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.