Basic Environmental Engineering

Code: 102819
ECTS Credits: 6

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<th>Degree</th>
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<td>2501915 Environmental Sciences</td>
<td>OB</td>
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**Contact**

Name: Ernest Marco Urrea
Email: Ernest.Marco@uab.cat

**Use of languages**

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

**Teachers**

Adriana Artola Casacuberta
Xenia Juan Diaz
Ernest Marco Urrea

**Prerequisites**

Students must be able to solve equations, chemical formulation, stoichiometry, to find out molecular weight of ele

**Objectives and Contextualisation**

- To understand some environmental processes and analyze the unit operations.

- To perform mass and energy balances in environmental systems.

- To apply the concept of “ideal reactor” in environmental engineering.

- To know the basic principles that underlie the most relevant biological treatments in environmental engine

**Content**

1. INTRODUCTION TO ENVIRONMENTAL ENGINEERING

Principles. Unit operations. Continuous and discontinuous operations. Steady state and unsteady state. Type of r
2. MASS BALANCES APPLIED IN SYSTEMS WITHOUT REACTION


3. MASS BALANCES APPLIED IN SYSTEMS WITH REACTION

Stoichiometry. Measurement of changes in composition. The rate of reaction. Ideal reactors design equations. Cc

4. ENERGY BALANCES

Forms of energy. The general energy balance. Simplified forms. Energy balance at steady state. Heat energy bal

5. BIOLOGICAL PROCESSES IN ENVIRONMENTAL ENGINEERING