

## SYLLABUS

### 1. COURSE DESCRIPTION

<b>Degree:</b>	<b>Environmental Sciences</b>
<b>Course:</b>	<b>Environmental Engineering</b>
<b>Module:</b>	<b>Environmental Technology</b>
<b>Department:</b>	<b>Molecular Biology and Chemical Engineering</b>
<b>Academic Year:</b>	<b>17/18</b>
<b>Term:</b>	<b>Second</b>
<b>ECTS credits:</b>	<b>6</b>
<b>Year:</b>	<b>2nd year</b>
<b>Type:</b>	<b>Compulsory</b>
<b>Language:</b>	<b>Spanish</b>

<b>Course Model:</b>	<b>C1</b>	
<b>a. Basic learning (EB):</b>		<b>50%</b>
<b>b. Practical learning (EPD):</b>		<b>50%</b>

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### 2. LECTURER

<b>Coordinator</b>	
<b>Name:</b>	<b>Enrique Ramos Gómez</b>
<b>School:</b>	<b>School of Experimental Sciences</b>
<b>Department:</b>	<b>Molecular Biology and Chemical Engineering</b>
<b>Area:</b>	<b>Chemical Engineering</b>
<b>Office Hours:</b>	<b>Mondays: 11.00-13.00 and 17.00-18.00</b> <b>Tuesdays: 9.30-11.30 and 17.00-18.00</b> <b>Ask previously through e-mail</b>
<b>Office:</b>	<b>22B11</b>
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<b>Phone:</b>	<b>954977349</b>

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### 3. TOPICS

Unit 1. Introduction. Basic concepts

- Operations and processes
- Environmental Engineering structure
- Environmental quality indicators

Unit 2. Basic operations.

- Basic operations classification
- Physics basic operations
- Chemical basic operations
- Biological basic operations

Unit 3. Balancing matter

- Basic concepts
- BM without chemical reaction
- BM within chemical reaction
- BM with recirculation, derivation and purge

Tema 4. Energy Balance.

- Basic concepts
- EB without chemical reaction
- EB within chemical reaction
- BM and EB simultaneous resolution

Unit 5. Application to transport phenomena. Fluid Mechanics

Unit 6. Separation processes

- Gas separation
- Urban solid waste separation
- Water separation