

## SYLLABUS

### 1. COURSE DESCRIPTION

<b>Degree:</b>	<b>Environmental Sciences</b>
<b>Course:</b>	<b>Microbiology</b>
<b>Department:</b>	<b>Basic Training</b>
<b>Department:</b>	<b>Molecular Biology and Biochemical Engineering</b>
<b>Academic Year:</b>	<b>2017-2018</b>
<b>Term:</b>	<b>First</b>
<b>ECTS credits:</b>	<b>6</b>
<b>Year:</b>	<b>2<sup>nd</sup> year</b>
<b>Type:</b>	<b>Basic</b>
<b>Language:</b>	<b>Spanish</b>

<b>Course Model:</b>	<b>B2</b>	
<b>a. Basic learning (EB):</b>		<b>60%</b>
<b>b. Practical learning (EPD):</b>		<b>25%</b>
<b>c. Organised activities:</b>		<b>15%</b>

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### 2. LECTURERS

<b>Coordinator</b>	
<b>Name:</b>	<b>Eva M<sup>a</sup> Camacho Fernández</b>
<b>School:</b>	<b>School of Experimental Sciences</b>
<b>Department:</b>	<b>Molecular Biology and Biochemical Engineering</b>
<b>Area:</b>	<b>Microbiology</b>
<b>Office Hours:</b>	<b>MORNING: Wednesdays 10.30-12.00 and Thursdays 12.30-14.00 AFTERNOON: Wednesdays 16.00-17.30 and Thursdays: 16.00-17.30</b>
<b>Office:</b>	<b>22-03-04</b>
<b>E-mail:</b>	<b>emcamfer@upo.es</b>
<b>Phone:</b>	<b>954368644</b>



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### 3. TOPICS

#### TOPIC I: FUNDAMENTALS OF MICROBIOLOGY

- UNIT 1. Microbial diversity
- UNIT 2. Microbiological techniques
- UNIT 3. Prokaryotic cell: structure and function
- UNIT 4. Bacterial genetics
- UNIT 5. Microbial metabolism

#### TOPIC II: MICROORGANISMS AND THE ENVIRONMENT

- UNIT 6. Biogeochemical cycles of the elements and microbial activity
- UNIT 7. Microbial communities and their interactions
- UNIT 8. Microorganisms in terrestrial, water, extreme and animal environments

#### TOPIC III: MICROBIAL BIOTECHNOLOGY

- UNIT 9. Microbiological control of plagues and illnesses
- UNIT 10. Microbiological transformation of pollutant agents and bioremediation