

## Syllabus

### Course description

<b>Course title</b>	Biotechnologies: Principles and Applications
<b>Course code</b>	46052
<b>Scientific sector</b>	ING-INF/01
<b>Degree</b>	PhD in Food Engineering and Biotechnologies PhD in Advanced Systems Engineering (free choice)
<b>Semester</b>	2 <sup>nd</sup>
<b>Year</b>	I
<b>Academic year</b>	2021/2022
<b>Credits</b>	3
<b>Modular</b>	No

<b>Total lecturing hours</b>	30
<b>Attendance</b>	Preferrable
<b>Prerequisites</b>	None
<b>Course page</b>	

<b>Specific educational objectives</b>	Basic understanding of materials, sensor technologies and data analysis approaches and applications related to the biological field, including plants, medical and food applications; praxis with presentations and scientific writing on topics related to the course.
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<b>Learning outcomes</b>	<p><u>Knowledge and understanding</u>: theoretical know-how on technologies, materials, data analysis and sensing strategies for smart agriculture, food and biomedical applications.</p> <p><u>Applying knowledge and understanding</u>: practical know-how on technologies, materials, data analysis and sensing strategies for smart agriculture, food and biomedical applications.</p> <p><u>Making judgments</u>: a critical evaluation of the current sensing technologies, material science and data analysis approaches used in smart agriculture, food technology and biomedical fields.</p> <p><u>Communication skills</u>: ability to give a presentation supported by power-point and writing a short article.</p> <p><u>Learning skills</u>: performing a literature review on a given topic; extracting the most valuable information and embedding it in a presentation, scientific writing.</p>
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<b>Assessment</b>	There will be no final exam. A presentation and a brief article are mandatory to fulfill the course requirements.
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	Quality of the final presentation and of the scientific article.
<b>Required readings</b>	Materials provided by the lecturer
<b>Supplementary readings</b>	Materials provided by the lecturer