

Syllabus

Course description

Course title	Genetics Applied to Foods
Course code	44709
Scientific sector	AGR/07
Degree	LM-70
Semester	I
Year	II
Academic year	2023/24
Credits	6
Modular	no

Total lecturing hours	36
Total exercise hours	24
Attendance	obligatory
Prerequisites	--
Course page	--

Specific educational objectives	<p>The course "Genetics Applied to Foods" is focused on the teaching of the basic rules of plant genetics and the application of the modern biotechnology approaches to ameliorate plants and foods. The course belong to the AGR/07 scientific area and it is part of the "Corso Integrato di Laurea Magistrale in Scienze degli Alimenti per l'Innovazione e l'Autenticità".</p> <p>The objective of the course is to provide to the students the basic concept of Plant Genetics and how the modern technologies can be applied to breeding.</p>
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Lecturer	Fabrizio Costa
Scientific sector of the lecturer	AGR/07
Teaching language	English
Office hours	18
Teaching assistant (if any)	----
List of topics covered	<p>Why genetics is important to foods</p> <p>Genetics and evolution</p> <p>Principles of mendelian genetics and quantitative genetics</p> <p>The discovery of DNA</p> <p>Molecular Plant Breeding</p> <p>Map, QTL and Association Studies</p> <p>The OMIC technologies</p> <p>Genetic engineering and New Breeding Technologies</p>
Teaching format	Frontal Lessons and excercises

<p>Learning outcomes</p>	<p>The learning outcomes need to refer to the Dublin Descriptors:</p> <p>Knowledge and understanding To give students an introduction to Plant Genetics and how this discipline has impacted and changed the foods we are eating nowadays</p> <p>Applying knowledge and understanding With this course the students should acquire all the elements in order to support breeding activities with modern biotechnologies</p> <p>Making judgments This will be a very multidisciplinary course, the students in the end should be able to integrate different knowledge and handling complexity</p> <p>Communication skills The students should be able to communicate to diverse audiences their conclusions and the knowledge acquired during the course</p> <p>Learning skills The student should develop skills necessary to autonomously study further and advanced concepts</p>
<p>Assessment</p>	<p>Indicate the types of assessment (according to the table) and check the coherence with the Dublin descriptors</p> <p>Examples:</p> <ul style="list-style-type: none"> • Oral and lab: oral exam with review questions, oral exam to test knowledge application skills, evaluation of results
<p>Assessment language</p>	<p>English</p>
<p>Evaluation criteria and criteria for awarding marks</p>	<ul style="list-style-type: none"> • During the final assessment will be evaluated the level of preparation of the students and the clarity of answers. An important aspect that will be evaluated is the capacity of the student to make links between the several topics taught during the course.
<p>Required readings</p>	<p>Genetic text books suggested by the professor</p>
<p>Supplementary readings</p>	<p>Teaching slides</p>