

General Information	
Academic subject	Basic Botany
Degree course	Agricultural Science and Technology (L25)
Curriculum	
ECTS credits	6 ECTS (4 ECTS Lectures + 2 ECTS Laboratory)
Compulsory attendance	No
Language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Alessandra Di Franco	alessandrarosari.difranco@uniba.it	AGR/12

ECTS credits details	Area	SSD	
	Basic teaching activities Biological sciences	BIO/01 (declared close to AGR/12)	

Class schedule	
Period	Second semester
Year	2019/2020
Type of class	Lecture - workshops

Time management	
Hours	150
In-class study hours	60
Out-of-class study hours	90

Academic calendar	
Class begins	10.10.2019
Class ends	24.1.2020

Syllabus	
Prerequisites/requirements	Knowledge of general biology.
Expected learning outcomes	<ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Adequate basic knowledge for understanding the basic aspects of cytology, histology, anatomy and physiology of plant organisms</li> </ul> </li> <li>• <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Ability to understand and recognize the anatomical and morphological structures and plant organs of agrarian interest. These skills are to be considered as propedeutics to address the study of successive disciplines, characterizing the course</li> </ul> </li> <li>• <i>Making informed judgements and choice</i> <ul style="list-style-type: none"> <li>○ Ability to understand the morphological, functional and physiological organization of plants of agricultural interest</li> <li>○ Ability to acquire the necessary necessary information on their growth and reproductive mechanisms to evaluate their implications in a production context</li> </ul> </li> <li>• <i>Communication knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Ability to to communicate effectively the biological and reproductive mechanisms underlying the development of</li> </ul> </li> </ul>

	<p>plants of agricultural interest</p> <ul style="list-style-type: none"> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Ability to deepen and update their knowledge of plant biology of agricultural interest even with tools that make use of new technologies of communication and information technology</li> </ul> </li> </ul> <p>The results of the expected learning, in term of knowledge and ability, are listed in the Annex A of the Didactic Regulation of the Bachelor Degree Course (expressed by the European descriptors of the study title).</p>
Contents	<p><b>Structural organisation of plant cell:</b> Basic structure and function of plant cell. Function of the individual cell organelles. Membrane-mediated control of the substances trafficking: diffusion, active transport and osmosis Metabolism and related processes. Photosynthesis and respiration. Cell division: mitosis and meiosis.</p> <p><b>Higher plants structure, morphology and anatomy:</b> Stems, roots and leaves morphology. Plant tissues: apical meristem, lateral meristems, primary and secondary tissues, Anatomy of herbaceous dicot and monocot stems, herbaceous dicot and monocot roots. Anatomy of woody stems and roots, Anatomy of the different leaf symmetries.</p> <p><b>Reproduction in Angiosperms:</b> Flower structure. Sexual reproduction. Seed structure and germination Vegetative reproduction.</p> <p><b>Basic principles of plant physiology:</b> Root absorption, root pressure, movement of water into the xylem, ascent of the sap, transpiration, translocation of plant nutrients. Photoperiodism. Plant hormones.</p>
Course program	
Bibliography	<ul style="list-style-type: none"> <li>• Notes of the lectures distributed during the course</li> </ul> <p>For foreign students (LLP-Erasmus, Tempus, etc.):</p> <ul style="list-style-type: none"> <li>• Neil A. Campbell, Jane B. Reece Biology. Sixth Edition. Pearson Education Inc. publishing as Benjamin Cummings</li> </ul> <p>Study schemes:</p> <ul style="list-style-type: none"> <li>• presentations and other didactic material provided during the lessons</li> </ul> <p>Additional readings:</p> <ul style="list-style-type: none"> <li>• Taiz L. Zeiger E. Plant Physiology. Fourth Edition. Sinauer Associates Inc.</li> <li>• Mauseth J.D. Plant Anatomy. Benjamin Cummings Publ. Co.Inc. Menlo Park California</li> </ul>
Notes	All the texts are available at the Central Library of the former Faculty
Teaching methods	The subjects will be provided with several examples and illustrations by means of Power Point presentations, movies, practical drills in the classroom
Assessment methods	Only the students enrolled in the academic year during which this module is offered, can have an intermediary exam during the teaching period of module. The exemption test is written and consists of 30 multiple choice questions with the following scores. Since Basic Botany is one of the two modules of the integrated course (IC) "Plant Biology", the exemption test is passed if the student has correctly answered at

	<p>least 18 questions out of 30 of the module "Basic Botany" and 18 questions out of 30 of the module "Systematic Botany".</p> <p>The result of this intermediary exam remains valid for the whole academic year and concurs to the final evaluation of the student.</p> <p>The intermediary exam will be given on the subjects treated during the lessons and the practical activities as reported in the Didactic Regulation in Agricultural Science and Technology (art. 9) and syllabus (annex A) and which is correlated to the actual teaching period. The evaluation of the intermediary exam is expressed in thirtieths.</p> <p>At the end of the module teaching period, the students, who passed positively the intermediary exam, can give the final exam concerning on the subjects treated during the lessons and the practical activities since the intermediary exam, as reported in the Didactic Regulation in Agricultural Science and Technology (art. 9) and syllabus (annex A) and which is correlated to the actual teaching period.</p> <p>Students who did not pass or give the intermediary exam will be examined on the whole subjects treated during the lessons and the practical activities as reported in the Didactic Regulation in Agricultural Science and Technology (art. 9) and syllabus (annex A) and which is correlated to the actual teaching period.</p> <p>The final exams consist of a written (30 questions for Basic Botany and 30 questions for Systematic Botany).</p> <p>Can attend oral exams the students who answer correctly at least 18 questions for Basic Botany e 18 questions for Systematic Botany contemporary. The evaluation of the student is based on criteria previously fixed such as reported in the Annex A of the Didactic Regulation in Agricultural Science and Technology.</p> <p>The exam for foreign students can be given in English according to the above reported modalities.</p>
<p>Evaluation criteria</p>	<ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Describe the basic morphological, physiological and reproductive characteristics of plant organisms and to understand the functional relationships</li> </ul> </li> <li>• <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Apply basic knowledge acquired to plants of food interest and to their products used for food and food industries</li> </ul> </li> <li>• <i>Making informed judgements and choice</i> <ul style="list-style-type: none"> <li>○ Introduce reasonable hypotheses to address factors that may affect the development and productivity of plants of food interest in a productive and market context related to food production.</li> </ul> </li> <li>• <i>Communication knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Describe and illustrate comprehensively, with the appropriateness of language, with a wealth of examples and links the basic aspects that characterize the success of plants of food interest</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Ability to deepen and update their knowledge of the morphological and functional organization of plants of food interest and the physiological and reproductive mechanisms developed by them</li> </ul> </li> </ul>

	<p>The results of the expected learning, in term of knowledge and ability, are listed in the Annex A of the Didactic Regulation in Agricultural Science and Technology (expressed by the European descriptors of the study title).</p>
<b>Visiting hours</b>	<p>Official visiting hours: Monday-Friday 11.30-13.30 Additional information on specific topics may be requested at the following e-mail address: <a href="mailto:alessandrarosari.difranco@uniba.it">alessandrarosari.difranco@uniba.it</a></p>