General Information	BACELOR DEGREE IN BIOTECHONOLOGIES
Title of the subject	Plant physiology
Degree Course (class)	INDUSTRIAL AND AGRI-FOOD BIOTECHNOLOGIES (L-2)
ECTS credits	6
Compulsory attendance	YES
Language	ITALIAN
Academic year	2020/2021

Subject Teacher		
Name and Surname	NUNZIO DIPIERRO	
email address	nunzio.dipierro@uniba.it	
Place and time of reception	c / o teacher's office on the 2nd floor of the Botanical building by appointment by e-mail	
ECTS credits details	Discipline sector (SSD)	Area
	BIO/04	-----

Study plan schedule	Year of study plan	Semester
	SECOND	SECOND

Time management	Lessons	Laboratory	Exercises	Total
CFU	5	1		6
Total hours	125	25		150
In-class study hours	40	12		52
Out-of-class study hours	85	13		98

Syllabus	
Prerequisites / Requirements	
Basics of cytology, botany and basic chemistry. Knowledge of the morphology of plant organisms, elements of cytology and chemistry.	
Expected learning outcomes (according to Dublin descriptors)	
Knowledge and understanding	*Acquire specific knowledge in the field of plant physiology to understand the basics of the physiology of plant organisms also in relation to environmental parameters*
Applying knowledge	Application of the knowledge of the biological mechanisms that determine the functioning of plant organisms in the context of a global vision of ecosystems
Making informed judgments and choices	Acquire the ability to independently evaluate and interpret the knowledge acquired, in order to critically assimilate the contents
Communicating knowledge	Acquire correct scientific language to expose topics also in the popular field and be able to write concisely and clearly considerations concerning the functions of plant

	organisms also in relation to the responses to environmental parameters.
Capacities to continue learning	Acquire the ability to understand form-function relationships also in relation to environmental parameters
Study Program	
Content	Plant and water: water and plant cells, water balance of plants. Mineral nutrition. Transport of solutes. Photosynthesis. Carbon assimilation. Transport in the phloem and distribution of photosynthates. Assimilation of mineral nutrients (nitrogen, sulfur, phosphorus, cations). Responses of plants to sunlight. Light as an environmental signal. Plant hormones.
Bibliography and textbooks	Plant Physiology. Taiz – Zeiger. Ed. Piccin. fourth Italian edition on the fifth English edition Elements of plant physiology. Taiz – Zeiger. Ed. Piccin. Elements of plant physiology. Rascio. Ed. Edises
Notes to textbooks	To complete the study, provide bibliographic information and possibly articles in pdf format at the student's request
Teaching methods	Frontal lesson with the aid of multimedia supports
Assessment methods (oral, written, ongoing assessment)	Oral assessment
Evaluation criteria (describe criteria for each of the above expected outcomes)	The possession of basic knowledge is assessed, the ability to explain clearly and concisely, to grasp the essential aspects of what has been learned and to be able to connect the topics with logical reasoning by extrapolating the fundamental physiological principles of plant organisms.
Further information	