UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

General information	
Academic subject	Quality of Fruit trees productions (I.C. Quality of vegetable raw matters)
Degree course	Food Science and Technology (L26)
Academic Year	Third
European Credit Transfer and Accumulation System (ECTS)	3 ECTS
Language	Italian
Academic calendar (starting and ending date)	*September 26th, 2022 – January 20th,2023*
Attendance	No Compulsory

Professor/ Lecturer	
Name and Surname	Alessandra Gallotta
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Department and address	*DiSSPA*
Virtual headquarters	*Microsoft Teams*
Tutoring (time and day)	Monday 9.00-16.00 by appointment only

Syllabus	
Learning Objectives	The course aims to provide knowledge about the nutritional and nutraceutical characteristics and properties of the production of the main fruit tree species; the main factors influencing the quality of the fruit; and the characteristics of the products according to their final destination.
Course prerequisites	Prerequisites: Principles of Biology and General Botany
Contents	Classification, systematic framework, origin and spread; organography and fruiting cycle; factors affecting fruit quality: cultivar, cropping systems and agricultural techniques; climatic and pedological factors; breeding. Definitions and determination of fruit quality according to the methods and disciplinary of production.
Books and bibliography	- Colelli G., Inglese P., eds. Gestione della Qualità e conservazione dei prodotti ortofrutticoli. Edagricole 2020. - A.A. V.V. Arboricoltura Generale. Patron Editore, 2012; - Sansavini S., Errani A. (Eds.) Frutticoltura ad alta densità. Edagricole, 1998; - Thompson A.K. Fruit and vegetables. Harvesting, handling and storage. 3rd edition. Blakwell Publishing, 2014; - Scientific reviews.
Additional materials	Notes, slides and other bibliographic materials will be furnished during the course

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/Self-study hours
Hours			
75	*16*	*14*	*45*
ECTS			
3	*2*	*1*	
Teaching strategy	Lectures will be presented through PC assisted tools (Power Point,video). Field and laboratory classes. Lecture notes and educational supplies will be provided by means of online

	platforms
Expected learning outcomes	The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification)
Knowledge and understanding on:	Knowledge of the biology of fruit trees species and of agronomic and environmental factors affecting the quality of fruit production.
Applying knowledge and understanding on:	Skill to apply a systematic approach to the evaluation of fruit quality control factors to the assessment of the composition and the destination of the production. Understanding phenomena and constituents determining fruits quality and its evolution.
Soft skills	*Making informed judgments and choices* Correctly advising solutions to change properties and quality of fruit. Correctly advising analytical approaches to monitor properties and quality of fruit production for industry. *Communicating knowledge and understanding* The students will acquire adequate skills and communication ability to describe the main nutritional and nutraceutical utilities of the fruits and their essential characteristics for the specific use for industrial transformation. *Capacities to continue learning* - The students will acquire skills to deepen and update their knowledge related to the topics of the course also through efficient bibliographic research using the database Scopus and Google scholar.
The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification).	

Assessment and feedback	
Methods of assessment	The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the laboratory production plants, as reported in the Academic Regulations for the Bachelor Degree in Food Science and Technology (article 9) and in the study plan (Annex A). Students attending at the lectures may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for a year. The evaluation of the preparation of the student occurs on the basis of established criteria, as detailed in Annex B of the Academic Regulations for the Bachelor's degree in food science and Technology. The foreign student's profit test can be done in English in the way described above.
Evaluation criteria	*Knowledge and understanding* - Describing the main commodity parameters of fruits and the factors affecting the fruit production quality. *Applying knowledge and understanding* - Describing phenomena and constituents determining the characteristics and quality of fruits. *Autonomy of judgment* - Expressing reasonable hypotheses about solutions to change properties and quality of fruit production.

	• *Communicating knowledge and understanding*
	   o Describing the main nutritional and nutraceutical functions of the fruits and their essential characteristics for industry.
	• *Communication skills*
	   o The student will be evaluated considering the use of appropriate technical language.
	• *Capacities to continue learning*
	   o The students will be also evaluated considering the capacity to express reasonable hypothesis about the evaluation of quality chain.

Criteria for assessment and attribution of the final mark	The evaluation criteria that contribute to the attribution of the final mark will be: o knowledge and understanding, the ability to apply knowledge, autonomy of judgment, i.e. the ability to criticize and formulate judgments, communication skills.
Additional information	