

COURSE OF STUDY *Bachelor degree: Food Science and Technology (L26)*
ACADEMIC YEAR *2023-2024*
ACADEMIC SUBJECT *Quality of fruit production (3 ECTS) - I.C. Quality of fruit and vegetable production (6 ECTS)*

General information	
Year of the course	<i>third</i>
Academic calendar (starting and ending date)	<i>second semester (February 26th – June 21th, 2024)</i>
Credits (CFU/ETCS):	<i>3 ECTS (2 ECTS of Lectures + 1 ECTS of laboratory or field classes)</i>
SSD	<i>General arboriculture and tree crops (AGR/03)</i>
Language	<i>English</i>
Mode of attendance	<i>No Compulsory</i>

Professor/ Lecturer	
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Department and address	<i>DIP. DISSPA – Università degli Studi di Bari</i>
Virtual room	<i>Microsoft Teams: code hltde1t</i>
Office Hours (and modalities: e.g., by appointment, on line, etc.)	<i>Monday to Friday by appointment only.</i>

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
<i>75</i>	<i>16</i>	<i>14</i>	<i>45</i>
CFU/ETCS			
<i>3</i>	<i>2</i>	<i>1</i>	

Learning Objectives
<p>The course aims to provide knowledge about the characteristics and nutritional and nutraceutical properties of the productions of the main fruit tree species; the main factors that influence the quality of the fruits, the characteristics of the products according to their final destination. The course aims to provide knowledge about the characteristics and nutritional and nutraceutical properties of the productions of the main fruit tree species; the main factors influencing the quality of the fruit, the characteristics of the products according to their final destination. The course aims to provide knowledge about the characteristics and nutritional and nutraceutical properties of the productions of the main fruit tree species; the main factors influencing the quality of the fruit, the characteristics of the products according to their final destination. The course aims to provide knowledge about the characteristics and nutritional and nutraceutical properties of the productions of the main fruit tree species; the main factors influencing the quality of the fruit, the characteristics of the products according to their final destination. The course aims to provide knowledge about the characteristics and nutritional and nutraceutical properties of the productions of the main fruit tree species; the main factors influencing the quality of the fruit, the characteristics of the products according to their final destination.</p>

Course prerequisites	Knowledge of Biology and General Botany. Knowledge of the main technologies and food supply chains. The exam does not include prerequisites
Teaching strategie	The topics of the course will be covered with the help of Power Point presentations. The exercises will consist of study visits to production plants, screening of films and presentation of case studies. All the material used for the lessons will be made available to students on special web platforms.
Expected learning outcomes in terms of	
Knowledge and understanding on:	1. Knowledge of the biology of fruit tree species and of the cultural and environmental factors that influence the quality of fruits for fresh consumption and for industrial processing
Applying knowledge and understanding on:	1. Ability to apply fruit quality control factors through a systemic approach to the evaluation of the composition and destination of fruit production. 2. o Ability to trace the phenomena and constituents that determine the characteristics and quality of fruit production.
Soft skills	<ul style="list-style-type: none"> • Making informed judgments and choices: <ul style="list-style-type: none"> o Ability to correctly direct the search for suitable solutions to modify the characteristics and quality of fruit production. • Communicating knowledge and understanding <ul style="list-style-type: none"> o Ability to use the appropriate terminology to describe the main nutritional and nutraceutical functions and their fundamental characteristics for fresh consumption and industrial processing, regarding packaging materials and their properties • Capacities to continue learning: <ul style="list-style-type: none"> o Ability to deepen and update their knowledge of the main fruit supply chains.
Syllabus	
Content knowledge	<ul style="list-style-type: none"> • Classification, systematics, origin and dissemination; organography and fruiting cycle; fruit quality control factors: cultivars, cultivation systems and techniques; climatic and pedological factors; objectives of genetic improvement. Definition and determination of the quality of the fruit according to the destination and the production regulation.
Texts and readings	<ol style="list-style-type: none"> 1. Lecture notes and teaching material distributed during the course. 2. Quality management and conservation of fruit and vegetables. Edagricole, 2020. A.A.V.V. 3. General Arboriculture. Patron Editore, 2012 4. Harvesting, handling and storage. 3rd edition. Blakwell Publishing, 2014 <p>Scientific reviews from industry journals</p>
Notes, additional materials	<p>For further information:</p> <ol style="list-style-type: none"> 1. Scientific publications <p>The lecture notes and slides integrate the contents of the reference texts</p>

Repository	All teaching material will be available to students on web platforms (class Teams code <i>hltde1t</i>).
Assessment	
Assessment methods	<p>The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in practical activities (laboratory and educational visits).</p> <p>Students 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 one academic year. The result of the mid-term exam is communicated by publication in the student's electronic register and contributes to the assessment of the profit examination by means of calculation of the weighted average.</p> <p>The exam for foreign students may be conducted in English as described above.</p>
Assessment criteria	<ul style="list-style-type: none"> ○ <i>Knowledge and understanding:</i> ○ Describe the product parameters of fruit tree species and the factors determining quality ○ <i>Applying knowledge and understanding:</i> ○ Describe the phenomena and constituents that determine the characteristics and quality of fruit production ○ <i>Autonomy of judgment:</i> ○ Express reasonable assumptions to change the quality of fruit products ○ <i>Communicating knowledge and understanding:</i> ○ Prove to be able to communicate at company level and to third parties the technical choices to manage fruits quality ○ <i>Communication skills:</i> ○ Describe the main nutritional and nutraceutical functions of fruits and their functional characteristics for industrial processing. ○ <i>Capacities to continue learning:</i> ○ Prove to be able to deepen and update the knowledge regarding the management of fruits quality.
Final exam and grading criteria	<p>The assessment of the student's preparation is based on predetermined criteria in accordance with the Didactic Regulations of Course in Food Science and Technology (all8)</p> <p>The Examination Committee has a score ranging from a minimum of 18 to a maximum of 30 points for a positive assessment of the student's performance. By unanimous vote of its members, the Board may award honours in cases where the final mark is 30.</p>
Further information	.