

**COURSE OF STUDY:** *Bachelor degree: Food Science and Technology (L26)*

**ACADEMIC YEAR:** *2023-2024*

**ACADEMIC SUBJECT:** *Quality of vegetables products (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>February 26<sup>th</sup>, 2024 – June 21<sup>th</sup>, 2024</i>
Credits (CFU/ETCS):	<i>3 ECTS</i>
SSD	<i>AGR/04 – Horticulture and Floriculture</i>
Language	<i>Italian</i>
Mode of attendance	<i>No Compulsory</i>

Professor/ Lecturer	
Name and Surname	<i>Massimiliano Renna</i>
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Department and address	<i>DISSPA – University of Bari</i>
Virtual room	<i>Microsoft Teams</i>
Office Hours (and modalities: e.g., by appointment, on line, etc.)	<i>Tuesday-Thursday 10.00-16.00</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>	

<b>Learning Objectives</b>	<i>The course aims to provide basic knowledge on the aspects related to the quality of traditional and innovative horticultural products for the various commercial ranges. Furthermore, practical skills will be acquired as regards some quality assessment techniques.</i>
<b>Course prerequisites</b>	<i>Basic knowledge in chemistry, biology and plant physiology</i>

<b>Teaching strategie</b>	<i>Lectures will be presented through PC assisted tools (PowerPoint, video). Field and laboratory classes, reading of regulations will be experienced. Lecture notes and educational supplies will be provided by means of online platforms</i>
<b>Expected learning outcomes in terms of</b>	<i>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)</i>
<b>Knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Knowledge of the main vegetable crops and the several aspects that contribute to the overall quality of vegetables products</li> </ul>
<b>Applying knowledge and</b>	<ul style="list-style-type: none"> <li>○ Applying knowledge about the quality of the vegetables products in</li> </ul>

<b>understanding on:</b>	order to make aware choices for the correct quality management.
<b>Soft skills</b>	<ul style="list-style-type: none"> <li>• <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> <li>○ The students will acquire ability to correctly direct choices regarding the most frequent problems of quality management of vegetables products</li> </ul> </li> <li>• <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ The student will acquire adequate skills and communication ability to describe arguments relating to the quality of vegetables products</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ The student 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.</li> </ul> </li> </ul>
<b>Syllabus</b>	
<b>Content knowledge</b>	<ul style="list-style-type: none"> <li>• <i>Introduction to the concept of vegetables quality.</i></li> <li>• <i>Organoleptic and nutritional quality, and healthiness of vegetables products.</i></li> <li>• <i>Aspects regarding mandatory and voluntary regulatory.</i></li> <li>• <i>Ranges of vegetables products.</i></li> <li>• <i>Quality of vegetables produced by using soilless systems.</i></li> <li>• <i>Agrobiodiversity and vegetables quality.</i></li> <li>• <i>Product and process innovations.</i></li> </ul> <p><i>Quality management in pre- and post-harvest.</i></p>
<b>Texts and readings</b>	<i>Colelli G., Inglese P., 2021. Gestione della qualità e conservazione dei prodotti ortofrutticoli. Edagricole, Milano, pp. 470.</i>
<b>Notes, additional materials</b>	<i>Notes, slides and other bibliographic materials will be furnished during the course</i>
<b>Repository</b>	<i>The teaching material is made available in the Team class.</i>

<b>Assessment</b>	
<b>Assessment methods</b>	<p>The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in classroom and 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).</p> <p>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.</p> <p>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.</p> <p>The foreign student's profit test can be done in English in the way described above.</p>
<b>Assessment criteria</b>	<ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Describe the various aspects that contribute to the overall quality of the vegetables.</li> </ul> </li> <li>• <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Describe the strategies to apply for ensuring high quality standards of vegetables products. Understanding the quality data sheets related to mandatory and voluntary legislation.</li> </ul> </li> <li>• <i>Autonomy of judgment</i> <ul style="list-style-type: none"> <li>○ Express reasonable hypotheses about choices to adopt for the frequent problems relating to the quality of vegetables products.</li> </ul> </li> <li>• <i>Communication skills</i> <ul style="list-style-type: none"> <li>○ Use of the appropriate technical and scientific language.</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Capacity to deepen and update the knowledge related to the topics of</li> </ul> </li> </ul>

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Final exam and grading criteria	<i>The assessment of the student's preparation will be evaluated out of thirty.</i>
<b>Further information</b>	
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