

## Syllabus

### Course description

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| <b>Course title</b>      | Quality of horticultural products             |
| <b>Course code</b>       | 44723   |
| <b>Scientific sector</b> | AGR/03  |
| <b>Degree</b>            | Food Sciences for Innovation and Authenticity |
| <b>Semester</b>          | I   |
| <b>Year</b>              | II  |
| <b>Academic year</b>     | 2023/24                                       |
| <b>Credits</b>           | 3   |
| <b>Modular</b>           | No  |

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| <b>Total lecturing hours</b> | 18  |
| <b>Total lab hours</b>       |   |
| <b>Total exercise hours</b>  | 12  |
| <b>Attendance</b>            |   |
| <b>Prerequisites</b>         | Basic knowledge of plant biology and biochemistry |
| <b>Course page</b>           |   |

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| <b>Specific educational objectives</b>   | <p>This course belongs to the group of “Free choice courses” and is offered within the scientific sector AGR/03 (Arboriculture and Fruitculture).</p> <p>The course provides general knowledge on the main factors (intrinsic and extrinsic) affecting the final quality of fruits and vegetables. The main physiological aspects of fruit ripening are considered also with the aim to provide basic knowledge on the use of ripening indexes for the detection of the most appropriate time of harvest. Aspects relating the quality of the horticultural products to their suitability for processing are also addressed. The course includes information on the main post-harvest techniques used for fruits and vegetables conservation.</p> |
| <b>Lecturer</b>                          | Maria Dolores Asensio Abella, <a href="mailto:dolores.asensio@unibz.it">dolores.asensio@unibz.it</a>  |
| <b>Scientific sector of the lecturer</b> | AGR/03  |
| <b>Teaching language</b>                 | English   |
| <b>Office hours</b>                      |   |
| <b>Teaching assistant (if any )</b>      | -   |
| <b>Office hours</b>                      | Monday to Friday upon appointment   |
| <b>List of topics covered</b>            | <p>Course contents:</p> <ol style="list-style-type: none"> <li>1. Definition of fruit and vegetable quality. Pre-harvest factors affecting the quality of horticultural products.</li> <li>2. Physiology of fruit development and ripening.</li> </ol>  |

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|  | <p>3. Methods to assess the fruit ripening stage, time of harvest and final quality (destructive and non-destructive techniques).</p> <p>4. Factors affecting quality for the processing of horticultural products.</p> <p>5. Storage techniques: general aspects. Post-harvest of fruits (pome fruits, stone fruits, small fruits) and vegetables (leafy and stem vegetables, tubers).</p>   |
| <b>Teaching format</b>                                     | Frontal lectures, exercises and labs  |
| <b>Learning outcomes</b>                                   | <p>Knowledge and understanding</p> <ul style="list-style-type: none"> <li>• Knowledge of the most important scientific and technical aspects related to the quality of horticultural products and of their post-harvest management</li> </ul> <p>Applying knowledge and understanding</p> <ul style="list-style-type: none"> <li>• Be able to distinguish the main factors relevant for the achievement and conservation of the quality of horticultural products</li> </ul> <p>Making judgments</p> <ul style="list-style-type: none"> <li>• Through the critical evaluation of all the interplaying factors relevant for the quality of the horticultural products</li> </ul> <p>Communication skills</p> <ul style="list-style-type: none"> <li>• Ability to communicate the acquired knowledge by using a correct scientific and technical language</li> </ul> <p>Learning skills</p> <ul style="list-style-type: none"> <li>• Ability to autonomously extend the knowledge acquired during the study course by reading and understanding scientific and technical documentation</li> </ul> |
| <b>Assessment</b>  | Oral exam with questions aimed to verify student's knowledge and comprehension of the course topics.  |
| <b>Assessment language</b>                                 | English   |
| <b>Evaluation criteria and criteria for awarding marks</b> | The final mark will reflect the quality of the student's answers to the questions and the quality of the final seminar given by the student. Particularly important will be the capacity showed by the student to fully manage the acquired knowledge, also by showing the ability to make connections between different thematic areas. The ability to develop a personal critical view on specific scientific problems will be also positively considered.  |
| <b>Required readings</b>                                   | Lecture notes (pdf of the slides) and didactic materials (papers) loaded on the reserve collection  |
| <b>Supplementary readings</b>                              | "Post-harvest technology of horticultural crops" (2002) edited by A. Kader, ANR – University of California, publication 3311  |