Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	Quality of horticultural products
Course code	
Scientific sector	AGR/03
Degree	Food Sciences for Innovation and Authenticity
Semester	I
Year	II
Academic year	2021/22
Credits	3
Modular	No

Total lecturing hours	18
Total lab hours	
Total exercise hours	12
Attendance	
Prerequisites	Basic knowledge of plant biology and biochemistry
Course page	

Specific educational objectives	This course belongs to the group of "Free choice courses" and is offered within the scientific sector AGR/03 (Arboriculture and Fruitculture). 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. Course contents: 1. Definition of fruit and vegetable quality. Pre-harvest factors affecting the quality of horticultural products. 2. Physiology of fruit development and ripening. 3. Methods to assess the fruit ripening stage, time of harvest and final quality (destructive and non-destructive techniques). 4. Factors affecting quality for the processing of horticultural products. 5. Storage techniques: general aspects. Post-harvest of fruits (pome fruits, stone fruits, small fruits) and vegetables (leafy and stem vegetables, tubers).

Learning outcomes	Knowledge and understanding • Knowledge of the most important scientific and technical aspects related to the quality of horticultural products and of their post-harvest management Applying knowledge and understanding • Be able to distinguish the main factors relevant for the achievement and conservation of the quality of horticultural products Making judgments • Through the critical evaluation of all the interplaying factors relevant for the quality of the horticultural products Communication skills • Ability to communicate the acquired knowledge by using a correct scientific and technical language Learning skills • Ability to autonomously extend the knowledge acquired during the study course by reading and understanding scientific and technical documentation

Assessment	Project work on selected topics related to horticulture (one third of the final mark) and oral exam with questions aimed to verify student's knowledge and comprehension of the course topics.
Assessment language	English
Evaluation criteria and criteria for awarding marks	- Knowledge of the topics covered by the course (ability to provide correct answers at the oral exam) - Capacity to manage the acquired knowledge (ability to make connections between different thematic areas - Capacity to develop and defend possible solutions to proposed scientific problems in the area of horticulture

Required readings	Lecture notes (pdf of the slides) and didactic materials (papers) loaded on the reserve collection
Supplementary readings	"Post-harvest technology of horticultural crops" (2002) edited by A. Kader, ANR – University of California, publication 3311