Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	**Viticulture and Oenology**
Course code	43088
Scientific sector	AGR/03+AGR/15
Degree	Bachelor in Agricultural, Food and Mountain environmental Sciences
Semester	2nd
Year	III
Academic year	2024/25
Credits	6
Modular	Yes

Total lecturing hours	36
Total lab hours	
Total exercise hours	24
Attendance	
Prerequisites	basic knowledge of chemistry for the oenology module. Basic knowledge of arboriculture for the viticulture module.
Course page	

Specific educational objectives	This is an elective course including two teaching modules. The module of viticulture aims to allow students to get a good knowledge about general viticulture and to allow them to develop professional skills in the area of vine growing and vineyard management. The module of oenology is designed to teach to the students the comprehension of basic winemaking practices as a source of differences between different wine types as well as wine classifications, basic wine tasting, interpreting a wine label Moreover the module aims to develop student's scientific and technical knowledge that is needed for a critical approach to problems related to the wine industry

Module 1	Viticulture
Lecturer	Prof. Carlo Andreotti, Office: K4.03, e-mail: carlo.andreotti@unibz.it
Scientific sector of the lecturer	AGR/03
Teaching language	English
Office hours	Monday to Friday upon appointment

Teaching assistant (if any)	To be appointed
Office hours	Monday to Friday upon appointment
List of topics covered	• Botanic and systematic of grapevine • Anatomy, morphology and function of grapevine organs • Grapevine growth and fruit production • Vine propagation and planting • Training and pruning of grapevine • Mineral and water nutrition of grapevine • Harvest and grape quality
Teaching format	Frontal lectures and exercises

Module 2	Oenology
Lecturer	Prof. Emanuele Boselli, Office: NOI TechPark Alto Adige/Südtirol - Room A2.3.03b, Via A. Volta, 13B - Bolzano, e-mail: emanuele.boselli@unibz.it, tel. 0471017217, Emanuele Boselli / Libera Università di Bolzano (unibz.it) Dr. Edoardo Longo, e-mail Edoardo.Longo@unibz.it
Scientific sector of the lecturer	AGR/15 – Food Science and Technology
Teaching language	English
Office hours	Monday to Friday upon appointment
Teaching assistant (if any)	to be appointed
Office hours	Monday to Friday upon appointment
List of topics covered	• Harvest decisions, grape ripening, sampling • Crushing and destemming, must handling, must additions and pressing; • Fermentation biochemistry, yeast selection and inoculation, stuck fermentations; • Malolactic fermentation (MLF), wine style and MLF, controlling MLF; • Barrel aging, clarification, fining, settling, cold stabilization, filtering, blending, bottling, closure systems • Introduction to sensory evaluation of wines; • White and red winemaking, protection from oxidation, use of enzymes, maceration and stabilization techniques • Fundamentals of sparkling wine production • Use of the byproducts of the winery
Teaching format	Frontal lectures, exercises, labs, projects, etc.

Learning outcomes	**Knowledge and understanding** • Knowledge of the most important scientific and technical aspects related to viticulture • Overview of the winemaking process for both red and white wines, sparkling wines and other products of the winery; wine tasting **Applying knowledge and understanding** • Be able to identify the most relevant limiting

	factors and constrains (e.g. deriving from the environment or related to the cultivation technique) for a sustainable vine cultivation • Be able to understand basic winemaking practices as source of differences between different wine types **Making judgments** • Through the critical evaluation of the environmental parameters • Through the critical evaluation of the several available agronomic approaches • Through the evaluation of the wine quality using a sensory and a chemical-analytical approach **Communication skills** • Ability to communicate the acquired knowledge by using a correct scientific and technical language commonly used in the viticultural and enological sectors **Learning skills** • Ability to autonomously extend the knowledge acquired during the study course by reading and understanding scientific and technical documentation prepared by professionals in the viticultural and enological fields

Assessment	Oral exam
Assessment language	English
Evaluation criteria and criteria for awarding marks	• clarity of answers, mastery of language (also with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics in viticulture and enology; • ability to show critical thinking and solving problems attitudes in viticulture and enology

Required readings	- lesson notes and didactic materials (papers) loaded on the reserve collection/OLE/Teams
Supplementary readings	-"Manuale di viticoltura". A cura di Paliotti, Poni Silvestroni. Edagricole, 2018 -"Biology of Grapevine". Mullins M.G. , A. Bouquet & L.E. Williams, Cambridge University Press, 1992 - Ribéreau-Gayon P., Dubourdieu D., Donèche B., Lonvaud A. – Handbook of Enology – Vol. I and II – free pdf version available in the internet - OIV technical standards and documents http://www.oiv.int/en/technical-standards-and-documents - Introduction to Wine laboratory practices and procedures, JL Jacobson, Springer (1.pdf (springer.com))