

## Syllabus

### Course description

<b>Course title</b>	<b>Characterization of mountain wines</b>
<b>Course code</b>	44618
<b>Scientific sector</b>	AGR/15-Food Science and Technology AGR/16-Agriculture Microbiology
<b>Degree</b>	Master in Viticulture, Enology and Wine Marketing (VEM)
<b>Semester</b>	I
<b>Year</b>	II
<b>Academic year</b>	2024/25
<b>Credits</b>	5
<b>Modular</b>	Yes

<b>Total lecturing hours</b>	16 + 12
<b>Total lab hours</b>	12 + 6
<b>Total exercise hours</b>	-
<b>Attendance</b>	strongly recommended
<b>Prerequisites</b>	-
<b>Course page</b>	<a href="https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/master-viticulture-enology-wine-marketing/">https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/master-viticulture-enology-wine-marketing/</a>

<b>Specific educational objectives</b>	<p>the course gives a general overview of scientific contents and is designed for acquiring professional skills and knowledge on the characterization of mountain wines from the sensory and microbiological point of view</p> <p>educational objectives The students can manage adequately the sensory and microbiological analysis of wines and other winery products with emphasis on extreme wines</p>
--	--

<b>Module 1</b>	<b>Sensory analysis approaches for mountain wines (3 ECTS)</b>
<b>Lecturer</b>	Emanuele Boselli, <a href="mailto:emanuele.boselli@unibz.it">emanuele.boselli@unibz.it</a> , +390471017217, <a href="https://www.unibz.it/en/faculties/sciencetechnology/academic-staff/person/37607-emanuele-boselli">https://www.unibz.it/en/faculties/sciencetechnology/academic-staff/person/37607-emanuele-boselli</a>
<b>Scientific sector of the lecturer</b>	AGR/15-Food Science and Technology
<b>Teaching language</b>	English
<b>Office hours</b>	Before and after the lectures and upon appointment from Monday to Friday,
<b>Teaching assistant (if any )</b>	To be appointed
<b>Office hours</b>	Before and after the lectures and by appointment
<b>List of topics covered</b>	Fundamentals of wine sensory analysis. Physiology of human senses; descriptive analysis; effects of the winemaking technology on the sensory properties of wines. Sensory evaluation of mountain (extreme) wines chosen among Gewürztraminer, Chardonnay, Pinot blanc, Pinot gris, Sauvignon, Müller-Thurgau, Sylvaner, Kerner, Riesling, Veltliner, Moscato (white) and Lagrein, Pinot Noir, Merlot, Cabernet Sauvignon, Cabernet Franc and Moscato rosa (red wines). Practical laboratory experiments and technical visits to specialized external companies.
<b>Teaching format</b>	Frontal lectures (Power point and blackboard), labs, projects, visit to companies

<b>Learning outcomes</b>	<p>Learning outcomes according to the Dublin Descriptors:</p> <p>Knowledge and understanding  (a) adequate knowledge and understanding about the development of projects related to the sensory analysis of mountain and extreme wines</p> <p>Applying knowledge and understanding  (a) developing the capability of integration of information, both in horizontal way (technological, chemical and biological aspects influencing the sensory properties of mountain/extreme wines) and in vertical way (reasonable sequence of the processes along the production chain of extreme and mountain wines and their combined effects on the sensory properties); (b) capability of carrying out strategies for the sensory evaluation of extreme and mountain wines; (c) capability of evaluating the sensory potentiality of innovative extreme/mountain wines.</p> <p>Making judgements  Capability of identifying the information needed to sensorically evaluate the quality of extreme and mountain wines.</p> <p>Communication skills</p>
--------------------------	--

	<p>capability of clearly and exhaustively communicate notions, ideas, problems and technical solutions to interlocutors, either professional or not (enologists, agronomists, engineers, biologists, chemists, nutritionists, administrators) on the sensory properties of extreme and mountain wines.</p> <p>Learning skills To get the learning skills that are necessary to make decisions regarding projects on the sensorically evaluation of the wines produced in mountain and extreme areas.</p>
<b>Assessment</b>	Team project work: power point presentation of a project work done in groups on a topic related to the course combined with an individual interview
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	<p>Successful completion of the examination will lead to grades ranging from 18 to 30 with honors (50% project work and 50% individual interview).</p> <ul style="list-style-type: none"> <li>• relevant for individual interview: clarity of answers, mastery of language (also with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics;</li> <li>• relevant for project work: ability to work in a team, creativity, skills in critical thinking, ability to summarize in own words</li> </ul>
<b>Required readings</b>	Key notes provided by the lecturer in the E-learning platform of UNIBZ;
<b>Supplementary readings</b>	<p>R.S. Jackson, Wine tasting, A professional Handbook ; free pdf version available in the internet</p> <p>Ribéreau-Gayon P., Dubourdieu D., Donèche B., Lonvaud A. – Handbook of Enology – Vol. I and II – free pdf version available in the internet</p> <p>Cervim website: <a href="http://www.cervim.org/">http://www.cervim.org/</a></p>

<b>Module 2</b>	<b>Fermentation processes for the production of mountain wines (free choice course) (2ECTS)</b>
<b>Lecturer</b>	Andrea Polo, <a href="mailto:andrea.polo@unibz.it">andrea.polo@unibz.it</a> , +39 0471 017143, <a href="https://www.unibz.it/it/faculties/sciencetechnology/academic-staff/person/36646-andrea-polo">https://www.unibz.it/it/faculties/sciencetechnology/academic-staff/person/36646-andrea-polo</a>
<b>Scientific sector of the lecturer</b>	AGR/16-Agricultural microbiology
<b>Teaching language</b>	English
<b>Office hours</b>	Before and after the lectures and by appointment
<b>List of topics covered</b>	Ecophysiology and metabolism of wine lactic acid bacteria. Lactic acid bacteria and malo-lactic acid fermentation. Evolution of microbial communities during wine fermentation. Control of wine fermentation. Selection of lactic acid bacteria and their use in wine making. Effects of the mountain environment on the overall quality of wines. Practical laboratory experiments.
<b>Teaching format</b>	The course consists of lectures where the topics are presented by the professor. Course topics are presented by using electronic slides. Presentations, scientific papers and bibliography used during the course are provided to students.
<b>Learning outcomes</b>	Knowledge and understanding of the role of microorganisms in the wine fermentation processes, with special focus on lactic acid bacteria. Selection of suitable starters based on pro-technological abilities of microorganisms to drive and exploit fermentation processes. The students will be enabled to manage the principles of the fermentation process.
<b>Assessment</b>	The assessment of the student preparation is through an oral exam. The oral assessment includes questions to assess the knowledge and understanding of the course topics and questions designed to assess the ability to transfer these skills to case studies and practical applications. Questions on practical applications also assess the ability of the student to apply the knowledge and understanding of the course topics, the ability to make judgments and finally, the student communication skills.
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	Successful completion of the examination will lead to grades ranging from 18 to 30 with honors. It is relevant to master the specific language (also with respect to teaching language); prove the understanding of the topics and learning skills; evaluate and establish relationships between topics; grow specific skills in critical thinking.
<b>Required readings</b>	Slides of lesson, papers and key notes provided by the lecturer in the E-learning platform of UNIBZ;

**Supplementary readings**

Wine Microbiology: Practical Applications and Procedures, Eds. K.C. Fugelsang and C.G. Edwards, Springer.  
Microbiologia del vino, M. Vincenzini, P. Romano, G.A. Farris, Casa Editrice Ambrosiana.