Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	Elements of chemistry and biochemistry applied to food and wine sciences
Course code	40403
Scientific sector	AGR/13
Degree	Bachelor in Enogastronomy in Mountain Areas
Semester	2nd
Year	I
Academic year	2022/23
Credits	6
Modular	No

Total lecturing hours	36
Total lab hours	24
Total office hours	18
Attendance	Strongly recommended
Prerequisites	/
Course page	/

Specific educational objectives	The course contents are crucial for acquiring the scientific background and professional skills regarding the basis of chemistry and biochemistry applied to food and wine sciences.
List of topics covered	- The atom - Chemical bonds - Chemical formulas and equations - States of matter - Acid-Base reactions - Redox reactions - Carbohydrates - Amino acids and proteins - Lipids - Volatile and aroma compounds - The enzyme kinetics and modulation of enzyme activity, inhibition, membranes and solutes' transport.

Learning outcomes	The students will get a comprehensive overview and gather knowledge on different aspects of the chemistry and biochemistry applied to food and wine sciences. The specific outcomes are listed below. **Knowledge and understanding** of chemical and biochemical patterns in relation to qualitative and quantitative aspects of food science. **Capability in applying knowledge** by developing skills useful for food and wine sciences

	Making judgments based on the choice of analytical protocols, writing a report. **Capability in presentation of the skills acquired** with an appropriate language and use of technical and specific terms. **Acquisition of learning strategies** based on the use of technical information and knowledge updating.

Assessment	The assessment of the student preparation is through an oral exam. The exam includes questions to verify the understanding of the course topics. In addition, questions on possible practical implications of the topics taught in the course will be evaluated.
Assessment language	English
Evaluation criteria and criteria for awarding marks	Ability to present clearly the topics studied within the course using appropriate technical terminology. In addition, the capability to establish relationships between different topics will be evaluated.

Required readings	
Supplementary readings	