

Syllabus

Course Description

Course Title	Advanced spectroscopic techniques
Course Code	44754
Course Title Additional	
Scientific-Disciplinary Sector	CHEM-02/A
Language	English
Degree Course	Master in Food Sciences for Innovation and Authenticity
Other Degree Courses (Loaned)	
Lecturers	Dr. Clara Comuzzi, Clara.Comuzzi@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/48774
Teaching Assistant	
Semester	First semester
Course Year/s	2
CP	4
Teaching Hours	40
Lab Hours	-
Individual Study Hours	60
Planned Office Hours	12
Contents Summary	-
Course Topics	The course is designed to acquire the basic theoretical and practical skills for the acquisition and interpretation of NMR spectra. Through the analysis of the olive oil case study, the course aims to describe how NMR spectroscopy can be applied in the food sector.
Keywords	
Recommended Prerequisites	
Propaedeutic Courses	

Teaching Format	Frontal lectures, exercises, labs, projects.
Mandatory Attendance	No
Specific Educational Objectives and Learning Outcomes	The student will be able to interpret ^1H and ^{13}C spectra of pure or mixed organic molecules. The student will be able to obtain from the spectra the quantitative analytical data necessary for the quality analysis of the food products (olive oil) and evaluate the presence of fraud. The student will be able to evaluate the opportunity of using this technique to solve a problem in the food field.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	Individual project: identification, in the scientific literature, of a food analysis topic addressed with NMR spectroscopy. Drafting of a written report and its oral presentation. Oral exam on the theoretical aspect of the project.
Evaluation Criteria	Correctness and clarity of answers, mastery of language (also with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics.
Required Readings	
Supplementary Readings	
Further Information	
Sustainable Development Goals (SDGs)	Responsible consumption and production, Good health and well-being