

Syllabus

Course description

Course title	Advanced spectroscopic techniques
Course code	44754
Scientific sector	CHIM/02
Degree	Master in Food Sciences for Innovation and Authenticity (LM-70)
Semester	1st
Year	2
Credits	4
Modular	No
Total lecturing hours	40
Total lab hours	-
Total exercise hours	-
Attendance	Strongly recommended
Prerequisites	-
Specific educational objectives	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.
Lecturer	Clara Comuzzi, COT6-LT17, clara.comuzzi@uniud.it, 0432-558845,
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.
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.
Assessment language	English
Evaluation criteria and criteria for awarding marks	<ul style="list-style-type: none"> correctness and clarity of answers, mastery of language (also with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics;