

Syllabus

Course description

Course title	Cocoa and Coffee fermentations
Course code	44726
Scientific sector	AGR/16
Degree	Master in Food Sciences for Innovation and Authenticity
Semester	I
Year	II
Academic year	2024/25
Credits	3
Modular	No

Total lecturing hours	18
Total lab hours	12
Total exercise hours	
Attendance	Strongly recommended
Prerequisites	
Course page	https://www.unibz.it/en/faculties/sciencetechnology/master-food-sciences-innovation-authenticity

Specific educational objectives	<ul style="list-style-type: none"> • Type of course: area affine integrativa • Scientific area: Food Microbiology and Fermentations • The course is an optional course within the Master in Food Sciences for Innovation and Authenticity. <p>The course gives a general overview of the scientific knowledge about the fermentation process of cocoa and coffee; the attention will be focused on microorganisms involved in the fermentation process.</p> <p>Educational objectives: the students will get knowledge on the role of microorganisms during the different steps of fermentation, and their metabolic activity.</p>
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Lecturer	Dott. Ali Zein Alabiden Tlais
Scientific sector of the lecturer	AGR/16-Agricultural microbiology
Teaching language	English
Office hours	Before and after the lectures and upon appointment
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List of topics covered	Production, processing and fermentation of cocoa and coffee; fermentation methods and microorganisms involved in the fermentation process, metabolites produced during the fermentation, functional nutrients and/or metabolites, problems related to an unsuccessful

	fermentation, safety and quality of cocoa- and coffee-derived products.
Teaching format	Frontal lectures (Power point and blackboard), exercises, labs, projects, etc. Presentations, scientific papers and bibliography used during the course are provided to students.
Learning outcomes	<p>Knowledge and understanding: adequate knowledge and understanding about the fermentation process, and the role of microorganisms during the fermentation process, and the external factors related to the outcome of the fermentation.</p> <p>Applying knowledge and understanding:</p> <ul style="list-style-type: none"> - developing the capability of integration of information, searching and analyzing the most recent studies performed by the scientific community - developing the capability of creation of strategies for carrying out an effective fermentation process, considering both biological, microbiological, chemical and environmental factors. <p>Making judgments: Capability of identifying the information needed to develop or evaluate strategies of fermentation.</p> <p>Communication skills: capability of clearly and exhaustively disseminate knowledge, ideas, problems and strategies to professional or non-professional audience.</p>
Assessment	Oral examination. The level of knowledge and understanding of the topics addressed during the course will be evaluated. The ability to disseminate the information, the ability to establish relationship between topics and the ability to give practical solutions to a problem will be considered.
Assessment language	English
Evaluation criteria and criteria for awarding marks	Successful completion of the examination will lead to grades ranging from 18 to 30 with honors. The following aspects will be evaluated: clarity of answers, ability to summarize, evaluate, and establish relationships between topics.
Required readings	Power point presented during the lectures, papers and key notes will be provided in the E-learning platform of UNIBZ;
Supplementary readings	Schwan, Rosane F., and Graham H. Fleet, eds. Cocoa and coffee fermentations. CRC Press, 2014.