

## Syllabus

### Course description

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| <b>Course title</b>      | Cocoa and Coffee fermentations                          |
| <b>Course code</b>       | 44726   |
| <b>Scientific sector</b> | AGR/16  |
| <b>Degree</b>            | Master in Food Sciences for Innovation and Authenticity |
| <b>Semester</b>          | I   |
| <b>Year</b>              | II  |
| <b>Academic year</b>     | 2021/22   |
| <b>Credits</b>           | 3   |
| <b>Modular</b>           | No  |

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| <b>Total lecturing hours</b> | 18  |
| <b>Total lab hours</b>       | 12  |
| <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/sciencetechnology/master-food-sciences-innovation-authenticity">https://www.unibz.it/en/faculties/sciencetechnology/master-food-sciences-innovation-authenticity</a> |

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| <b>Specific educational objectives</b> | <ul style="list-style-type: none"> <li>• Type of course: area affine integrativa</li> <li>• Scientific area: Food Microbiology and Fermentations</li> <li>• The course is an optional course within the Master in Food Sciences for Innovation and Authenticity.</li> </ul> <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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| <b>Lecturer</b>                          | Ilaria Carafa, <a href="mailto:ilaria.carafa@unibz.it">ilaria.carafa@unibz.it</a> , +39 0471 017 208, <a href="https://next.unibz.it/it/faculties/sciencetechnology/academic-staff/person/42901-ilaria-carafa">https://next.unibz.it/it/faculties/sciencetechnology/academic-staff/person/42901-ilaria-carafa</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 upon appointment  |
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| <b>List of topics covered</b>            | Production, processing and fermentation of cocoa and coffee; fermentation methods and microorganisms involved in the fermentation process, metabolites produced during  |

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|  | the fermentation, functional nutrients and/or metabolites, problems related to an unsuccessful fermentation, safety and quality of cocoa- and coffee- derived products.  |
| <b>Teaching format</b>                                     | Frontal lectures (Power point and blackboard), exercises, labs, projects, etc. Presentations, scientific papers and bibliography used during the course are provided to students.  |
| <b>Learning outcomes</b>                                   | <p>Knowledge and understanding:<br/>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"> <li>- developing the capability of integration of information, searching and analyzing the most recent studies performed by the scientific community</li> <li>- developing the capability of creation of strategies for carrying out an effective fermentation process, considering both biological, microbiological, chemical and environmental factors.</li> </ul> <p>Making judgements:<br/>Capability of identifying the information needed to develop or evaluate strategies of fermentation.</p> <p>Communication skills:<br/>capability of clearly and exhaustively disseminate knowledge, ideas, problems and strategies to professional or non-professional audience.</p> |
| <b>Assessment</b>  | 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.  |
| <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. The following aspects will be evaluated: clarity of answers, ability to summarize, evaluate, and establish relationships between topics.   |
| <b>Required readings</b>                                   | Power point presented during the lectures, papers and key notes will be provided in the E-learning platform of UNIBZ;  |
| <b>Supplementary readings</b>                              | Schwan, Rosane F., and Graham H. Fleet, eds. Cocoa and coffee fermentations. CRC Press, 2014.  |