Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	Chemometric approaches to study the chemical and sensory markers of food processing
Course code	46027
Scientific sector	AGR/15-Food Science and Technology
Degree	PhD in Food Engineering and Biotechnology
Semester	2
Year	1
Academic year	2017/2018
Credits	3
Modular	NO

Total lecturing hours	30
Total lab hours	-
Total exercise hours	-
Attendance	-
Prerequisites	Basic knowledge of food chemistry and statistical analysis
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Specific educational objectives	1) provide an adequate knowledge and critical approach to develop projects related to the identification of chemical and sensory markers of food processing and packaging and authenticity; (2) provide adequate knowledge of the influence of the processing conditions on the composition of food products with practical applications

Lecturer	Emanuele Boselli, BZ L5.00, emanuele.boselli@unibz.it, +39 0471 017217, https://www.unibz.it/en/faculties/sciencetechnology/academic-staff/person/37607-emanuele-boselli
Scientific sector of the lecturer	AGR/15 Food Science and Technology
Teaching language	English
Office hours	Before and/or after the lectures
Teaching assistant ***(if any)***	-
Office hours	-
List of topics covered	Discussion of study cases related to the application of traditional and high resolution techniques as well as sensory analysis to evaluate the authenticity of food products; or to evaluate the influence of the processing technology and packaging conditions on the quality of food products (in the sector of wines, edible oils, beer, beehive products; coffee, meat products and other food

	products)
Teaching format	Frontal lectures, exercises, projects

Learning outcomes	*Knowledge and understanding.* (a) adequate knowledge and understanding the development of projects related to the chemometric and sensory analysis applied to the quality evaluation and authenticity of food products; *Applying knowledge and understanding.* (a) developing the capability of integration of information, both in horizontal way (technological, chemical, biological, and regulatory aspects related to the chemometric and sensory analysis of food products) and in vertical way (reasonable sequence of processes affecting the composition of food products for the evaluation of their quality and authenticity); *Making judgements.* Capability of identify the information be needed to improve the efficiency of the chemometric and sensory analysis of food products; *Communication skills.* Capability of clearly and exhaustively communicate notions, ideas, problems and technical solutions for the chemometric and sensory analysis of food products to interlocutors, either professional or not, representative of the various and specific competencies in the food supply chain (agronomist, engineers, biologists, chemists, nutritionists, administrators) *Learning skills.* To get the learning skills that are necessary to continue to undertake further study in the sector of the chemometric and sensory analysis of food products with an appropriate level of autonomy.
Assessment	A project work developed by the student will be assessed: presentation and discussion of a topic related to the contents of the course agreed between lecturer and students; the final mark is attributed in thirties
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. Relevant for the final exam: clarity of the presentation, mastery of language (also with respect to teaching language), ability to summarize, evaluate, and establish relationships between topics; relevant for project work: ability to work in a team, creativity, skills in critical thinking, ability to summarize in own words

Required readings	Keynotes and scientific publications provided by the lecturer
Supplementary readings	Sensory evaluation of Food, H.T. Lawless, H. Heymann, Springer, ISBN 978-1-4419-6488-5 Open-access: R. Guidetti et al., Chemometrics in Food Technology- InTechOpen L. Bertacchini et al., The impact of chemometrics on food traceability