

General information	
Academic subject	<b><i>Certifications of food quality and safety (I.C. Food quality certification and food law)</i></b>
Degree course	<i>Bachelor programme: Food Science and Technologies (L26)</i>
Academic Year	<i>Third</i>
European Credit Transfer and Accumulation System (ECTS)	6 ECTS
Language	<i>Italian</i>
Academic calendar (starting and ending date)	<i>September 26<sup>th</sup>, 2022 – January 20<sup>th</sup>, 2023</i>
Attendance	<i>Not compulsory</i>

Professor/ Lecturer	
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Virtual headquarters	Microsoft Teams
Tutoring (time and day)	<i>Monday-Friday 10.00 am – 4.00 pm by previous agreement by e-mail</i>

Syllabus	
<b>Learning Objectives</b>	<i>The student will acquire knowledge and skills on the main certifications of food quality and safety in order to implement the risk analysis and to appropriately handle the quality control tools in the food industry</i>
<b>Course prerequisites</b>	<i>Prerequisites: Chemistry; Knowledge about food quality and causes of food alteration</i>
<b>Contents</b>	<p><i>HACCP method: Concepts of hazard and risk. Principles of HACCP method. General procedures. Practical examples and case of study of HACCP systems in different food sectors. Structure and set up of HACCP handbooks. Case of study about the subject. Check list on topics discussed.</i></p> <p><i>Evolution of quality control: Classification of certifications in the agri-food sector. Series 9000 ISO standards. Revisions of ISO rules and their evolution. Principles and structure of ISO standard 9001:2015. Context of Organization. SWOT analysis. PDCA cycle. Case of study: Qualification and selection of suppliers. Document identification. Case of study: Structure and set up of Quality Management handbooks. Concepts of control, non-conformity, corrective action, preventive action, audit. Case study about audit procedure. Check list on topics discussed.</i></p> <p><i>Procedures of certification of company management systems: Audit procedures. Major and minor non conformities, recommendations. Audit report. Accreditation of certification bodies. Laboratories of quality control. Calibration and metrological check. Check list on topics discussed.</i></p> <p><i>Product certification: Basic elements of productive technical sheet. Certifications of typicality. Rules of reference and their evolution. Procedure to set up a typicality mark and technical sheet, with practical examples related to Apulian foodstuffs. De.C.O. marks. Religious-based certifications, Halal and Kosher. Case of study: technical sheet set up. Check list on topics discussed.</i></p> <p><i>Food traceability according to ISO 22005: Concept of tracing and tracking. Systems to manage traceability within a single organization and throughout the food chain. Compulsory and voluntary rules and their evolution. Case of study: set up of Traceability handbooks. Check list on topics discussed.</i></p> <p><i>Food safety: Series 22000 ISO standards. Procedures of BRC Regulation and IFS Standard. Case of study: CCPs and Operative Pre-requisites. Check list on topics discussed.</i></p>
<b>Books and bibliography</b>	<i>C. Peri, V. Lavelli, A. Marjani. Qualità nelle aziende e nelle filiere agro-alimentari.</i>

	<p>Hoepli Ed., 2004. C. Peri. <i>Qualità: concetti e metodi</i>. Franco Angeli Ed., 1998. ISBN 88-204-8919-8. S. Ciappellano. <i>Manuale della ristorazione</i>. Casa Editrice Ambrosiana, 2009.</p>
<b>Additional materials</b>	<p>L. Bacci, S. Rabazzi. <i>Il manuale della rintracciabilità</i>. EPC Libri Ed., 2007. P. Venturi. <i>Il Manuale Integrato della Qualità</i>. Ed. Il Sole 24 ore, 1998, ISBN 88-7187-867-1. A. Galgano. <i>La qualità totale</i>. Ed. Il Sole 24 ore, 2000, ISBN 88-7187-307-6. Cancellieri, F. Italia, G. Manzone. <i>Procedure gestionali per il laboratorio di analisi degli alimenti</i>. Ed. Cavallotto, 1999, ISBN 88-86803-30-3. R. Bonsi, C. Galli. <i>Il metodo HACCP</i>. Ed. Il Sole 24 ore, 2000, ISBN 88-324-4023-7. A. Clerici, V. Rubino. <i>La nuova disciplina comunitaria sull'igiene delle produzioni alimentari</i>. Tarò editore, 2005, ISBN 88-87359-33-4.</p>

<b>Work schedule</b>			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/Self-study hours
<b>Hours</b>			
150	40	14	96
<b>ECTS</b>			
6	5	1	
<b>Teaching strategy</b>	<p>Lectures will be presented through PC assisted tools (PowerPoint, video), discussion of case studies, Seminars held by experts from certification bodies Lecture notes and educational supplies will be provided by means of online platforms</p>		
<b>Expected learning outcomes</b>	<p>The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification)</p>		
<b>Knowledge and understanding on:</b>	<p>Knowledge and understanding about main food safety rules and fundamental concepts and methods of quality management in food industry</p>		
<b>Applying knowledge and understanding on:</b>	<p>Ability to apply risk analysis and to use appropriate tools for quality control and management in the food industry</p>		
<b>Soft skills</b>	<p><i>Making informed judgements and choices</i> Ability to apply risk analysis and to use appropriate tools for quality control and management in the food industry <i>Communicating knowledge and understanding</i> Ability to communicate at company level and to third parties the technical choices made to manage quality and safety in the food industry <i>Capacities to continue learning</i> Ability to deepen and update the knowledge regarding the management of quality and safety in the food industry</p>		
<p>The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification).</p>			

<b>Assessment and feedback</b>	
Methods of assessment	The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the

	<p>laboratory production plants, as reported in the Academic Regulations for the Bachelor Degree in Food Science and Technology (article 9) and in the study plan (Annex A).</p> <p>Students attending at the lectures may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for a year.</p> <p>The evaluation of the preparation of the student occurs on the basis of established criteria, as detailed in Annex B of the Academic Regulations for the Bachelor's degree in food science and Technology.</p> <p>Non-Italian students may be examined in English language, according to the aforesaid procedures.</p>
Evaluation criteria	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Prove to know and having understood the main food safety rules and the fundamental concepts and methods of quality management in food industry</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Prove to be able to apply risk analysis and to use appropriate tools for quality control and management in the food industry</li> </ul> <p><i>Autonomy of judgement</i></p> <ul style="list-style-type: none"> <li>○ Prove to be able to analyze a productive process and to properly program actions and interventions to manage quality and safety in the food industry</li> </ul> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Prove to be able to communicate at company level and to third parties the technical choices made to manage quality and safety in the food industry</li> </ul> <p><i>Communication skills</i></p> <ul style="list-style-type: none"> <li>○ Prove to be able to communicate at company level and to third parties using the appropriate technical language</li> </ul> <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> <li>○ Prove to be able to deepen and update the knowledge regarding the management of quality and safety in the food industry</li> </ul>
Criteria for assessment and attribution of the final mark	<p>The evaluation criteria that contribute to the attribution of the final mark will be: knowledge and understanding, the ability to apply knowledge, autonomy of judgment, i.e. the ability to criticize and formulate judgments, communication skills</p>
<b>Additional information</b>	