

General Information	
Academic subject	Food safety (I.C. Food Safety, Nutrition and Nutrition Education)
Degree course	Bachelor programme: Food Science and Technology
ECTS credits	6 ECTS
Compulsory attendance	No
Teaching language	Italian

Subject teacher	Name Surname	Mail address	SSD
	<b>Fabio Minervini</b>	<a href="mailto:fabio.minervini@uniba.it">fabio.minervini@uniba.it</a>	AGR/16

ECTS credits details	
Basic teaching activities	4.5 ECTS Lectures   1.5 ECTS Laboratory or field classes

Class schedule	
Period	II semester
Course year	Third
Type of class	Lectures Practical classes with, if necessary, projection of educational videos Practical classes consisting in the discussion of cases-study

Time management	
Hours	150
In-class study hours	57
Out-of-class study hours	93

Academic calendar	
Class begins	February 25 <sup>th</sup> , 2019
Class ends	June 7 <sup>th</sup> , 2019

Syllabus	
Prerequisites/requirements	Knowledge of basic microbiology and microbiology applied to food and beverages
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Knowledge about distribution, prevalence and environmental adaptation of the main food-borne pathogenic microorganisms</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ To prevent food-borne diseases</li> </ul> <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> <li>○ To acquire information needed for actions aiming to improve food salubrity</li> </ul> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Ability to describe general and eco-physiological traits, contamination pathways and modes of prevention of the main food-borne pathogenic microorganisms</li> </ul> <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> <li>○ Ability to improve knowledge for solving food salubrity issues, from production to consumption</li> </ul> <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>
Contents	<ul style="list-style-type: none"> <li>• Classification of food borne diseases</li> <li>• Microbiological risk analysis of food</li> <li>• Methods for controlling over pathogenic microorganisms: use of modified atmosphere packaging, use of high pressure</li> </ul>

	<p>treatments and of other innovative methods</p> <ul style="list-style-type: none"> <li>• Distribution, prevalence, and environmental adaptation of the main microorganisms responsible for food borne diseases</li> <li>• Detection of pathogenic microorganisms and/or their metabolites in food items</li> <li>• In-depth study about microbiological issues of food of vegetable and animal origin</li> </ul>
Course program	
Reference books	<p>Notes from lectures and laboratory classes. Presentations (in pdf) provided by the teacher.</p> <p>Additional readings</p> <ol style="list-style-type: none"> <li>1. Madigan, M.T., J.M. Martinko and J. Parker. Brock – Biology of Microorganisms. 8.a ed. London: Prentice &amp; Hall International. 1997.</li> <li>2. Jay, J.M., M.J. Loessner, D.A. Golden. Modern Food Microbiology. 7th ed. Springer Science+Business Media, LLC. 2005.</li> <li>3. ICMSF. Microorganisms in foods 6 – Microbial Ecology of Food Commodities. 2.a ed. New York: Kluwer Academic/Plenum Publishers. 2005.</li> </ol>
Notes	
Teaching methods	<p>Lectures will be presented through PC assisted tools (Powerpoint) and slide projector. Projection of educational videos and practical classes (ranging from a total of 5 to 10 hours) consisting in the discussion of cases-study are also included as supplementary teaching method. Powerpoint presentations, in pdf format, will be shared with students through a mailing list. A dedicated mailing list will be created for interaction with students.</p>
Evaluation methods	<p>The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the 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 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>○ To describe distribution, prevalence and environmental adaptation of the main food-born pathogenic microorganisms</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ To describe how a food technologist may act in a prevention programme of food-born diseases</li> </ul> <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> <li>○ To describe how to act for improving food salubrity</li> </ul> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ To describe general and eco-physiological traits, contamination pathways and modes of prevention of the main food-born pathogenic microorganisms</li> </ul>

	<i>Capacities to continue learning</i> <ul style="list-style-type: none"><li>○ To describe the means for targeting personal knowledges for solving new food salubrity issues</li></ul>
Receiving times	the teacher is available from Monday to Friday (8:00 am – 6:00 pm) only by appointment