

General information	
Academic subject	<b>INSPECTION AND CERTIFICATION OF FOOD OF ANIMAL ORIGIN</b>
Degree course	<b>BIOTECHNOLOGY FOR FOOD QUALITY AND SAFETY – LM7</b>
Academic Year	<b>2021-2022</b>
European Credit Transfer and Accumulation System (ECTS)	<b>3</b> divided as follows: <b>ECTS lessons: 2</b> <b>ECTS exe/lab/tutor: 1</b>
Language	<b>ITALIAN</b>
Academic calendar (starting and ending date)	<b>Period: Term I (October 2021 – January, 2022)</b>
Attendance	<b>Mandatory</b>

Professor/ Lecturer	
Name and Surname	<b>ANGELA DI PINTO</b>
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Telephone	<b>Tel. 0805443878</b>
Department and address	<b>Department of Veterinary Medicine – Prov.le Casamassima per Casamassima km 3, Valenzano (Bari)</b>
Virtual headquarters	<b>Microsoft Teams platform - Request for an appointment to be agreed in advance via email</b>
Tutoring (time and day)	<b>Tuesday: 10:30 - 12:30 - Thursday: 14:30 - 16:30 - Request for an appointment to be agreed in advance via email</b>

Syllabus	
<b>Learning Objectives</b>	The course aims to provide scientific knowledge relating to health and hygiene requirements, hazards and methods of prevention and management thereof within food of animal origin supply chains. The course aims to analyze the general principles and requirements of European and national legislation on certification of Food of Animal Origin Products in order to transfer knowledge relating to the prevention and management of hazards and to certification in animal origin supply chains.
<b>Course prerequisites</b>	The student should have knowledge and skills relating to chemistry, biochemistry, physics and microbiology.
<b>Contents</b>	<b>Introduction.</b> EU Food Laws: general principles and requirements concerning food safety. Risk analysis methodologies according to the principles of the Codex Alimentarius. Pre-requisite programs, Good Hygiene Practices ( <i>GHP</i> ) and <i>Good Manufacturing Practices</i> ( <i>GMP</i> ). Hazard Analysis and Critical Control Point ( <i>HACCP</i> ) system and guidelines for its application. <b>Milk and dairy products.</b> European legislation. Safety requirements for raw milk production. Criteria for raw milk for dairy products. Wrapping and packing.

	<p>Requirements for heat treatment. Labeling and identification marking. Risk assessment and management.</p> <p><b>Fishery products.</b> European legislation. Sanitation standards. Processing technologies and requirements for processed fishery products. Wrapping and packing. Storage and transport. Labeling.</p> <p><b>Bivalve molluscs.</b> European legislation for bivalve mollusks. Hygiene requirements. General requirements for placing on the market. Sanitary rules for live bivalve molluscs. Transformation technologies. Wrapping and packing. Identification and labeling marking.</p> <p><b>Eggs and egg products.</b> European legislation. Marketing standards. Special hygiene requirements. Risk assessment.</p> <p><b>Meat and meat products.</b> European legislation. Hygiene requirements. Labelling and identification marking. Risk assessment.</p> <p><b>Honey.</b> European legislation and hygiene requirements. Risk assessment.</p> <p><b>Certification of Food of Animal Origin Products.</b> Principles, terms of certifications management.</p>
<b>Books and bibliography</b>	<p>Cappelli/Vannucchi - chimica degli alimenti conservazione e trasformazione - Zanichelli.</p> <p>Colavita - Igiene e tecnologie degli alimenti di origine animale - Point Veterinaire Italie.</p> <p>EU Food Laws</p>
<b>Additional materials</b>	Lecture notes are recommended

<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>			
<b>28</b>	<b>16</b>	<b>12</b>	<b>47</b>
<b>ECTS</b>			
<b>3</b>	<b>2</b>	<b>1</b>	<b>/</b>
<b>Teaching strategy</b>	<p>The teaching strategy involves lectures held in the classroom with the aid of multimedia devices such as PCs, projectors, internet connections that allow viewing of PowerPoint files and educational videos/films. Practical activities include laboratory exercises at the facilities of the Food Safety section. Students are divided into groups and followed individually, when performing the laboratory tests required on the course, by the course leader and collaborators. Considering the average number of students enrolled on the course, this will require at least 2 shifts for each laboratory exercise.</p>		
<b>Expected learning outcomes</b>			

<b>Knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Students need to know and understand the hygiene and safety requirements for milk and milk products, fish and bivalve molluscs, the hazards and methods of prevention and management in the context of the animal origin supply chains of interest. Students need to know and understand the European and national legislative provisions on food safety and on food certification standards.</li> </ul>
<b>Applying knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Students need to apply their knowledge of and understand safety and hygiene issues, prevention and management methods within the specific supply chains of animal origin and must know the main European and national legislative provisions on food safety and on food certification standards.</li> </ul>
<b>Soft skills</b>	<ul style="list-style-type: none"> <li>• <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> <li>○ Students need to be able to acquire and interpret information and draw autonomous conclusions on issues related to food hygiene and safety, independently formulate a correct assessment of the critical issues of production processes and identify methods to ensure their management. Students need to make autonomous analyses concerning food safety.</li> </ul> </li> <li>• <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Students need to be able to effectively discuss the main issues of food hygiene and safety within a multidisciplinary working group.</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Students need to acquire sufficient learning skills to deal with subsequent in-depth studies and / or updates on food hygiene and safety issues.</li> </ul> </li> </ul>

<b>Assessment and feedback</b>	
Methods of assessment	Verification of learning, at the end of the course, consists in an oral discussion of the topics of the course aimed at ascertaining the achievement of the main educational objectives of the course: (1) knowing the terminology used in food safety and being able to express oneself correctly; (2) know the European and national legislation on food safety and the related sanitary parameters set by the legislation; (3) be able to analyze the criticalities of production processes and to correctly identify the criticalities of a process and the methods to ensure their management; (4) know the basic principles relating to traceability and food certification standards.
Evaluation criteria	<ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Knowledge and understanding the basic concepts of food hygiene and safety explained in the course.</li> </ul> </li> <li>• <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Applying knowledge and understanding of the basic concepts for management of food hygiene and safety.</li> </ul> </li> <li>• <i>Autonomy of judgment</i></li> </ul>



	<ul style="list-style-type: none"><li>○ Being able to formulate an opinion independently</li><li>● <i>Communicating knowledge and understanding</i><ul style="list-style-type: none"><li>○ Being able to clearly explain the main topics discussed during the course</li></ul></li><li>● <i>Communication skills</i><ul style="list-style-type: none"><li>○ Being able to discuss the main issues of food hygiene and safety within a multidisciplinary working group</li></ul></li><li>● <i>Capacities to continue learning</i><ul style="list-style-type: none"><li>○ Capacities to continue learning providing access to advanced courses and training periods</li></ul></li></ul>
Criteria for assessment and attribution of the final mark	Assessment and attribution of the final mark is graded on a scale from 0 to 30. The minimum vote for the oral exam is 18/30. The maximal grade is reached if the student proves a knowledge and a thorough understanding of the course content. The maximal grade with honours is reserved to the students who show special independence and excellence.
<b>Additional information</b>	