

ACADEMIC YEAR 2023/2024

General information	
Academic subject	FOOD SAFETY 2
Teaching modules	Hygiene and safety of meat and derived products; Meat production and technologies.
Degree course	Veterinary Medicine
Academic Year	V
European Credit Transfer and Accumulation System (ECTS)	7 (lectURESs: 5 ECTS; exe/lab/tutor: 2 ECTS)
SSD	Vet/04
Language	Italian
Academic calendar	17 weeks period
Attendance	Mandatory

Teacher	Email address	phone
Gaetano Vitale Celano	gaetanovitale.celano@uniba.it	0805443851
Giancarlo Bozzo	giancarlo.bozzo@uniba.it	0805443854

Department and address	Campus of Veterinary MedicineVette – SP 62 Casamassima km3 70010 Valenzano
Virtual room	Microsoft Teams (codice accesso mqo7xha)
Tutoring (time and day)	Wednesday 11.00-13.00; Thursday 14.00-16.00

Syllabus	
Learning Objectives	The course of Food Safety 2, aims to provide the student with knowledge, skills and abilities about: (i) the application of national and European regulations on hygiene and safety in the meat sector and animals protection in breeding, transport and slaughterhouse; (ii) the identification, management and prevention of hazards in the fresh meat and derived products.
Course prerequisites	Exams: Veterinary Pathology and Food Safety 1.

<p>Contents of teaching module: Hygiene and safety of meat and derived products</p> <p>Teacherr: Gaetano Vitale CELANO</p> <p>Lectures ECTS: 3</p> <p>Hours 39</p>	<p>The module concerns the area of Food Safety and Quality, Veterinary Public Health and One Health Concept</p> <p>Hygiene and safety regulatory principles of the animal-derived food products. o Reg. (EU) 2017/625: official controls in legislation foods. Official control of the meats (Reg. EU 2019/624, Reg. EU 2019/627 and Reg. EU 2019/628). The role and competences of the official veterinarian for the protection of health, animal welfare and public health. Responsibilities of the operator of the food sector (OSA) in the production of meat and derivatives (Reg. CE n. 853/2004 and Reg. EC n. 852/04). Traceability and labelling of meat and derivatives (reg. CE n. 1760/2000, Reg. CE 178/2002, Reg. EU n.1169/2011).</p> <p>Pathological lesions of inspection interest in the different animal species. Official sampling at the slaughterhouse and in meat processing laboratories for laboratory tests: good sampling practices. Method of sampling for bacteriological, virological, parasitological, histological and chemical examinations. Sources of contamination of meat to slaughterhouse and processing laboratories, control methods and decontamination techniques of carcasses. National Integrated Plan (PNI), National</p>
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<p>Practical activities for the integrated module ECTS: 1</p> <p>Hours 15</p>	<p>Residues Plan (NRP), National Plan Antimicrobial Resistance (PNCAR).</p> <p>Zoonoses of bacterial, parasitic and viral origin. Fresh minced meats, meat-based preparations. Meat mechanically separated. Sausages and salted meats. Conserve and meat semi conserves. Food additive.</p> <p>Inspection techniques and procedures on organs and tissues of slaughtered animals for a correct assessment of the suitability of meat for food consumption. Sampling techniques, management, and analytical procedures of meat product samples. Inspection and control of the packaging of meat products. Guided visits to slaughterhouses. Good practices applied to the production of fresh and processed meats. Evaluation of the production phases, with particular regard to the control of hygienic-sanitary requirements and critical control points (HACCP).</p>		
<p>Contents of teaching module: Meat production technologies</p> <p>Teacher: Giancarlo Bozzo</p> <p>Lectures ECTS: 2</p> <p>Hours 26</p> <p>Practical activities for the integrated module (Laboratory, working groups, seminars, field trips) ECTS: 1</p> <p>Hours 15</p>	<p>The module concerns the area of Food Safety and Quality, Veterinary Public Health and One Health Concept</p> <p>The slaughterhouse - epidemiological observatory. Farm Animal welfare. Establishments for production, storage, processing and marketing of the fresh meat. The management of self-control in the slaughter cutting. Sanitation and staff training. The transport of animals to the slaughterhouse (EC Reg. 1/2005). Meat. Carcass classification and anatomical cuts. The main alterations of the meat. Mechanically separated meats. Traceability of meat. Commercial aspects of meat production (Reg. CE 1169/2011). Traditional slaughter (cattle, pigs, horses, sheep and goats, poultry, rabbits and game). Flow diagrams and evaluation of CCP (Reg. CE 853/2004). Laboratory tests in the inspection of meat. Heavy metals. Mycotoxins. Ritual slaughter and the protection of animals at the time of killing (Reg. CE 1099/2009).</p> <p>Diagnostic for detection of chemical risk assessment. Evaluation of the main Animal-based parameters for the assessment of animal welfare.</p>		
<p>Biosecurity standard for practical activities</p>	<p>Access to the laboratories of the Food Safety section is allowed only to students with protective clothing (gowns and disposable latex gloves).</p>		
<p>Books and bibliography</p>	<p>(i) Ispezione e Controllo degli Alimenti (2018). B. Cenci Goga. Casa Ed. Point Veterinaire Milano. (ii) Manuale di Ispezione e Controllo delle carni (2018). S. Stella. E. Scanziani, G. Ghisleni Casa Ed. Ambrosiana, Milano.</p>		
<p>Additional material</p>	<p>Scientific papers and lessons notes.</p>		
<p>Work schedule</p>			
<p>Hours</p>			
<p>Total</p>	<p>Lectures</p>	<p>Hands on (laboratory, working groups, seminars, field trips)</p>	<p>Out-of-class study hours/ Self-study hours</p>

175	65	30	80
CFU/ECTS			
7	5	2	/

Teaching strategy	The teaching activity will be carried out mainly through lectures. It will be supplemented by active learning modalities, such as solving case studies. The practical lessons will be held in the laboratories of the Food Safety section. Students divided into groups each one of 8-10 work on (i) the control of fresh and processed meat, (ii) express an inspection judgment on case studies and (iii) carry out sampling tests. In addition, the students, guided by the teacher, will be accompanied to facilities dedicated to the production of fresh and processed meat, outside the departmental structure.
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Expected learning outcomes	
Knowledge and understanding on:	The student must possess: Awareness of other diseases of international importance that pose a risk to national and international biosecurity and trade (DOC 2.6). Legislation relating to animal care and welfare, animal movement, and notifiable and reportable diseases (DOC 2.7). Veterinary public health issues, e.g. epidemiology, transboundary epizootic diseases, zoonotic and food-borne diseases, emerging and re-emerging diseases, food hygiene and technology (DOC 2.10).
Applying knowledge and understanding on:	The student must possess theoretical and practical skills for the management of the meat production. Collect, store and transport samples, select appropriate diagnostic tests, interpret and understand the limitations of test results (DOC 1.21). Recognize signs of possible notifiable diseases and zoonoses and take appropriate actions, including notification to competent authorities (DOC 1.24). Perform ante-mortem inspection of animals destined for the food chain, also paying attention to animal welfare aspects; correctly identify the conditions affecting the quality and safety of products of animal origin, excluding those from the food chain (DOC 1.34). Perform food and feed inspection including post mortem inspection of food producing animals and inspection in the field of food technology (DOC 1.35).
Soft skill	Making informed judgments and choices Ability to analyse and solve hygienic-sanitary problems of the meat production chain. Communicating knowledge and understanding Work effectively as a member of a multi-disciplinary team in the delivery of services (DOC 1.6). Capacities to continue learning The principles of disease prevention and the promotion of health and well-being (DOC 2.9). Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence (DOC 1.13). Take part in self-audit and peer-group review processes in order to improve

	performance (DOC 1.14).
Summary of the competences of the integrated course (Day One Competence) provided by the EAEVE	Competences: 1.13 1.14 1.21 1.24 1.34 1.35 1.6 2.6 2.7 2.9 2.10

Assessment and feedback	
Methods of assessment	Oral exam on topics as for program. The student must demonstrate the skills acquired during the course: theoretical and practical skills for the management of meat production chain; knowledge of national and European regulations.
Evaluation criteria	<ul style="list-style-type: none"> • <i>Knowledge and understanding</i> <ul style="list-style-type: none"> ○ The student must demonstrate knowledge and understanding of the teaching contents, including through the resolution of case studies and the critical interpretation of the regulations • <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> ○ The student must demonstrate knowledge through the evaluation of the ability to approach the problem and the identification of possible solutions. • <i>Autonomy of judgment</i> <ul style="list-style-type: none"> ○ The student will have to demonstrate that he is able to make his own judgments, including through the autonomous processing and application of the knowledge and skills acquired. • <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> ○ The student must possess properties of language and clarity of presentation, with particular reference to the legal regulations of the sector. • <i>Communication skills</i> <ul style="list-style-type: none"> ○ The student must have property of language and expository clarity, also in using of specific scientific and technical terminology. • <i>Capacities to continue learning</i> <ul style="list-style-type: none"> ○ Ability to maintain, develop and expand the knowledge acquired.
Criteria for assessment and attribution of the final mark	The final grade is in thirtieths. The exam is passed when the grade is greater than or equal to 18/30. The final grade is the result of the collegial judgment of the two partial tests in which the student must demonstrate that he has acquired the critical sense of the topics studied. The student must demonstrate the skills acquired during the course as well as the communication ability, the clarity of the exposition, the disciplinary competence and the level of depth.
Additional information	