

General information	
Academic subject	HYGIENE AND SAFETY OF MEAT AND DERIVED PRODUCTS
Degree course	Veterinary Medicine
Academic Year	2021/22
European Credit Transfer and Accumulation System (ECTS)	4
Language	Italian
Academic calendar (starting and ending date)	I Bimester
Attendance	Manadatory

Professor/ Lecturer	
Name and Surname	Gaetano Vitale Celano
E-mail	Gaetanovitale.celano@uniba.it
Telephone	0804679854
Department and address	Veterinary Medicine Campus – Valenzano (BA)
Virtual headquarters	
Tutoring (time and day)	Every day of the week: remotely or in presence(only by appointment)10.30 -12.30

Syllabus	
Learning Objectives	The goal of this course is to help students develop theoretical and practical skills for the assessment of hygiene and control measures of meat and animal products processing, with particular attention to technological aspects and health regulations. This method give to the student the capacity to apply his knowledge in the industry of meat and animal products.
Course prerequisites	The student must have a good knowledge of microbiology, parasitology, infectious diseases and pathological anatomy, with particular attention to organ lesions of interest in food inspection field. Prereqs : Infectious Diseases 1 and 2 ; Parasitology , Pathological Anatomy , Food Safety 1
Contents	<p>Hygiene and safety of meat and animal products (39 hours , 3 CFU):</p> <ul style="list-style-type: none"> ○ Introduction to the course. Educational objectives and professional opportunities, teaching methods and modalities to assess learning. ○ Introduction of the program. 2 hours ○ Hygiene and safety regulatory principles of the animal-derived food products. ○ Reg. (EU) 2017/625 relative to official controls in legislation on delegated and executive foods. 2 hours ○ Role and competences of the official veterinarian for the protection of health, animal welfare and public health. 1 hour ○ 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). 1 hour ○ Animal protection at the slaughterhouse. (Reg.ue n.1099 / 2009) 1 hour

- Traceability and labeling of meat and derivatives (reg. CE n. 1760/2000, Reg. CE Ris. 178/2002, Reg. EU n.1169 / 2011). 2 hours
- Official control of the meats (Reg. Delegate EU 2019/624, Reg.Executive EU 2019/627 and Reg.Executive EU 2019/628. 4 hours
- Tasks of the official veterinarian to the slaughterhouse and health judgment. 1 hour
- Main anatom-pathological lesions of inspection interest in the different species and categories of animals to the slaughterhouse. 2 hours
- Official sampling to the slaughterhouse and in meat processing laboratories for laboratory tests: good sampling practices. Method of sampling of champions for bacteriological, virological, parasitological, histological and chemical examinations, and related analytical procedures. 2 hours
- Sources of contamination of meat to slaughterhouse and processing laboratories, control methods and decontamination techniques of carcasses. 2 hours
- process and safety hygiene of meat in different types of slaughter: according to religious rites, special urgent and home (cattle, pigs, goats, horses, volatile, lagomorphs, ratitos and game). 2 hours
- National Integrated Plan (PNI), National Residues Plan (NRP), National Plan-Antimicrobial Resistance (PNCAR). 2 hours
- main zoonoses of bacterial, parasitic and viral (prions) origin of inspection. 2 hours
- By-products of the meat supply chain: Management, enhancement and disposal. 1 hour
- Conservation and transport Fresh meat (refrigeration, freezing, freezing, packaging, vacuum, protective atmosphere). 2 hours
- Main alterations of fresh meat. 2 hours
- Fresh minced meats, meat-based preparations. 2 hours
- Meat mechanically separated. 1 hour
- sausages and salted meats. 2 hours
- Conserve and meat semiconserve. 2 hours
- food additives and technological adjuvants. 2 hours

	<ul style="list-style-type: none"> ○ Volunteer certification systems in the meat and derivative sector. 2 hours <p>PRACTICAL EXERCISE (25 HOURS 1 CFU)</p> <p>Inspection techniques and procedures on bodies and tissues of slaughtered animals for a correct evaluation of food consumption of meat (health judgment) - Settiero Department. 3 hours</p> <p>Inspective techniques and manual skills on bodies and fabrics of slaughtered animals for a correct for evaluation of food consumption suitability (health judgment) sectors. 2 hours</p> <p>Techniques and manual skills of sampling, management and analytical procedures of meat product samples for laboratory tests (bacteriological, parasitological, chemical, histological) - Food Safety Laboratory - 2 hours</p> <p>Inspection and control of packaging of products derived from marketed meats (salted meats, sausages, canned meat, etc.) in the Food Safety Laboratory - 2 hours</p> <p>Inspection procedures in the slaughter of cattle and horses. Visit ante-mortem and post-mortem. Taking samples for laboratory tests. Management and disposal of by-products - Guided visit to the slaughterhouse. 5 hours</p> <p>Good fresh meat processing practices in the cutting and production laboratories of meat derivatives (charcuterie products, canned and semi-preserved products) in the various stages of production, with particular regard to the control of health and hygiene requirements and critical control points (HACCP). Guided tour of the meat processing plant 5 hours;</p>
<p>Books and bibliography</p>	<p>B. Cenci Goga, Ispezione e Controllo degli Alimenti. CASA EDITRICE POINT VETERINAIRE ITALIE, MILANO, 2018.</p> <p>S.Stella, E.Scanziani, G. Ghisleni, Manuale di Ispezione e Controllo delle carni. CASA EDITRICE AMBROSIANA, MILANO, 2018.</p> <p>G. Tiecco: Igiene e tecnologia alimentare - EDAGRICOLE, BOLOGNA</p> <p>Notes</p> <p>Regulations</p> <p>Marcato P.S., Patologia animale e ispezione sanitaria delle carni fresche. EDAGRICOLE, BOLOGNA</p> <p>Web sites</p> <p>http://www.cdc.gov/diseaseschonditions/</p> <p>http://www.epicentro.iss.it/alimentazione/sicurezza</p> <p>https://eur-lex.europa.eu/</p> <p>http://www.salute.gov.it/portale/salute/</p>

	Notes Slides / Video		
Additional materials			
Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
100	39	25	36
ECTS			
4	3	1	
Teaching strategy			
	<p>The theoretical part of the course takes place with lectures in the classroom equipped with multimedia devices such as PCs, projector, Internet connection, which allows the vision of PowerPoint files and teaching video films. Experts in the industry can also intervene during the frontal lessons. The course includes interactive lessons between the teacher and learner in order to focus on specific issues about process and food safety of meat and derivative.</p> <p>The practical lessons are carried out in the equipped laboratories of the safety section of the food and sectors of the Department of Veterinary Medicine. Furthermore, guided tours will be made at slaughter establishments and meat and derivative workshops. Students divided into groups of 10-12 units, accompanied by a tutor (teacher, experts and / or company technicians).</p> <p>The student must carry out at least 1 post-mortem inspection procedure on bodies in the sectors or techniques of sampling of samples for laboratory tests and know how to describe related analytical techniques. Evaluate the documentation and hygienic-sanitary procedures adopted in the slaughterhouses and workshops of meat.</p> <p>In case of need / opportunities the aforementioned theoretical and practical activities take place in the presence or remotely using images, videos or other material, commented by the teacher, experts and learners interactively way or eventual participation in remote sector seminars and conferences.</p>		
Expected learning outcomes			
Knowledge and understanding on:	At the end of the course the student must have acquired: o control procedures for maintenance of the hygienic and nutritional quality of food.		
Applying knowledge and understanding on:	At the end of course the student must be able to: Individually assess the intrinsic and extrinsic factors that affect hygiene and safety of foods in the different phases of production processes to protect health and interests of the consumer		
Soft skills	<ul style="list-style-type: none"> • Making informed judgments and choices <ul style="list-style-type: none"> o Individually assess the intrinsic and extrinsic factors that affect hygiene and safety of foods in the different phases of production processes to protect health and interests of the consumer • and understanding <ul style="list-style-type: none"> o At the end of course the student must be able to communicate and orientate with sufficient operational ability and problem solving ability in control and management of hygiene and food safety of the meat and derivative supply chain. • Capacities to continue learning 		

	<ul style="list-style-type: none"> ○ At the end of course the student must be able to autonomously consult the European food safety regulations of hygiene and food safety of the meat and derivative supply chain. ○
--	---

Assessment and feedback	
Methods of assessment	Oral exam. The oral exam consists of an accurate discussion about the issues of collective catering and food legislation. The candidate is also asked to explain some cases-studies. The ongoing evaluations take place through presentations about topics agreed during the course
Evaluation criteria	<ul style="list-style-type: none"> • Knowledge and understanding <ul style="list-style-type: none"> ○ knowledge and comprehension of Hygiene and safety of meat and derivatives and food law • Applying knowledge and understanding <ul style="list-style-type: none"> ○ knowledge and comprehension of the procedures and Hygiene and safety of meat and derivatives and food law: • Autonomy of judgment <ul style="list-style-type: none"> ○ autonomy of judgment of the correct management and application of the principles of hygiene and safety of meat and derivatives; <ul style="list-style-type: none"> . Check the correct application of food legislation rules • Communicating knowledge and understanding <ul style="list-style-type: none"> ○ Communication skills with language properties about the presentation of topics / courses of hygiene and safety of meat and derivatives and food law • Capacities to continue learning <ul style="list-style-type: none"> ○ Ability to learn the main themes and problems of hygiene and safety of meat and derivatives.
Criteria for assessment and attribution of the final mark	Evaluation in thirtieths with a minimum score of 18/30 to pass the exam and a maximum of 30/30 cum laude.
Additional information	