



SZKOŁA GŁÓWNA
GOSPODARSTWA
WIEJSKIEGO

Safety of food of animal origin (2)

Educational subject description sheet

Basic information

Field of study Veterinary Medicine	Didactic cycle 2024/25	
Speciality -	Subject code WETFVMS_D.5100K.633d37e9194e3.24	
Organizational unit Faculty of Veterinary Medicine	Lecture languages english	
Study level long-cycle	Mandatory Obligatory subjects	
Study form full-time studies	Block Major subjects	
Education profile General academic	Disciplines Veterinary medicine	
Coordinator	Agnieszka Jackowska-Tracz	
Teacher	Agnieszka Jackowska-Tracz, Joanna Zarzyńska, Anna Didkowska, Katarzyna Filip-Hutsch	
Period Semester 9	Examination Exam	Number of ECTS points 4
	Activities and hours Lecture: 15 Laboratory exercises: 27 Field exercises: 3	

Goals

Code	Goal
C1	The education aims to prepare students to work as official veterinarians, private veterinarians cooperating with processing plants and/or specialists in other governmental and non-governmental organizations in the field of hygiene and safety of hermetically sealed food, aquatic food, poultry, eggs and egg products, and in the field of safety of cold storage.

Entry requirements

- Medical certificate for sanitary and epidemiological purposes;
- Credit for the course "Safety of food of animal origin (1)"

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	technological aspects of food of animal origin production; microbiological, physical and chemical hazards occurring in its production	B.W18	Written credit
W2	the legal aspects of ensuring food safety	B.W21	Written credit
W3	the alternative methods of food preservation;	B.W17	Written exam
W4	the private food safety management systems (FSMS); the relationship between private and obligatory FSMS	B.W16	Written exam
Skills - Student can:			
U1	prepare a protocol from official control, identify the FSC/ PHC, verify the correctness of implementation and maintenance of pre-requisites programs and procedures based on HACCP principles, plan and carry out an organoleptic assessment and microbiological testing of food of animal origin	B.U18, B.U22	Written credit
Social competences - Student is ready to:			
K1	deepen his knowledge and analyse it critically	KS.8	Assessment of activity during classes
K2	communicate and cooperate with representatives of food processing plants in the field of food production supervision	KS.11	Assessment of activity during classes
K3	demonstrate responsibility for decisions taken	KS.1	Assessment of activity during classes
K4	formulate independent conclusions and opinions	KS.7	Assessment of activity during classes

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	Alternative food preservation methods. Relation of HACCP principles to private food safety management systems. Private food safety assurance systems in establishments supervised by the Veterinary Inspection. Implementation of FSC and PHC in animal food processing plants. <i>Listeria monocytogenes</i> as a food safety criterion. Washing, disinfection and deratisation in food processing plants.	W3, W4	Lecture

2.	<p>The training content of the laboratory classes is divided into three sections:</p> <ul style="list-style-type: none"> • Hygiene and safety of food of animal origin in hermetically sealed containers: Production of pasteurised and sterilised canned food - technological aspects and critical control points. Basics of thermobacteriology. Microbiology of canned food. Laboratory testing of sterilised canned food (organoleptic and microbiological tests). Analysis of official checklists. Microbiological criteria for canned food of animal origin • Hygiene and safety of seafood production and cold storage: Processing of fish - technological aspects and critical control points. Laboratory testing of cold marinades. Microbiology of fish and fish products. Microbiological criteria for seafood. Fisheries products - analysis of official checklists. Health status assessment of bivalve molluscs. Low-temperature storage of food of animal origin • Safety and hygiene of poultry meat and eggs: Processing of poultry and eggs - technological aspects and critical control points. Microbiology of eggs and egg products. Microbiological criteria for poultry and egg products. Laboratory testing of eggs and egg products 	W1, W2, U1, K1, K3, K4	Laboratory exercises
3.	<p>Field exercises - depending on the epidemiological situation (activities dependent on external stakeholders).</p> <p>The practical aspects of supervision over the processing of food of animal origin (cold store) - interviews with plant employees, discussion with a representative of the plant quality department, talks with the official veterinarian (ULW) and district veterinarian (PLW); observation of cooperation between the supervised entity and ULW/PLW.</p>	K2	Field exercises

Course advanced

Activities	Methods of conducting classes
Lecture	Lecture
Laboratory exercises	Case study, Presentation, Problem solving, Teamwork, Interpreting the results
Field exercises	Field observations

Activities	Examination method	Percentage
Lecture	Written exam	60%
Laboratory exercises	Written credit	39%
Field exercises	Assessment of activity during classes	1%

Activities	Credit conditions
Lecture	The final exam (max 40 points) covers lecture content. To pass the exam, the student must obtain at least 60% of the points. Prerequisites for taking the exam: <ul style="list-style-type: none"> the student must obtain at least 60% of the points available for each colloquium in the current semester the student must pass the practical skills during the exercises
Laboratory exercises	<ul style="list-style-type: none"> The practical effects of learning within the framework of laboratory classes are verified based on the assessment of work cards (for credit) made by the teacher during the exercises. The student prepares documentation - a protocol from the performed activity, which includes interpreting obtained results. The assessment considers the criterion of form and content, emphasising the correctness of interpreting the obtained results. Credit is the basis for obtaining a confirmation of the examination in the First Day Skills Diary. Theoretical learning outcomes are verified through 2 tests (max. 40 points in total)
Field exercises	Attendance in the field classes

Literature

Obligatory

1. FAO: MEAT PROCESSING TECHNOLOGY FOR SMALL- TO MEDIUMSCALE PRODUCERS <http://www.fao.org/3/a-ai407e.pdf>
2. Arvanitoyannis I.S. HACCP and ISO 22000 Applications to Foods of Animal Origin, Wiley-Blackwell 2009
3. Hui Y.H.et all Handbook of meat and meat processing, CRC Press 2012

Optional

1. Doyle M.P. et all Food Microbiology. Fundamentals and Frontiers ASM Press 2001
2. D'Mello J.P.F. Food Safety. Contaminants and toxins. ©CAB International 2003.
3. Warriss P. D.: MEAT SCIENCE An Introductory Text. © CAB International 2000.
4. Jensen W. K.: Encyclopedia of Meat Sciences. Vol. 1- 4. © 2004 Elsevier Ltd.
5. Bibek Ray & Arun Bhunia: Fundamental food microbiology. Fourth Edition. CRC Press 2007.

Calculation of ECTS points

Activity form	Activity hours*
Lecture	15
Laboratory exercises	27
Field exercises	3
Preparation for the exam	60
Student workload	Hours 105
Number of ECTS points	ECTS 4

* hour means 45 minutes

Effects

Code	Content
KS.1	Absolwent jest gotów do wykazywania odpowiedzialności za podejmowane decyzje wobec ludzi, zwierząt i środowiska przyrodniczego
KS.7	Absolwent jest gotów do rzetelnej samooceny, formułowania konstruktywnej krytyki w zakresie praktyki weterynaryjnej, przyjmowania krytyki prezentowanych przez siebie rozwiązań, ustosunkowywania się do niej w sposób jasny i rzeczowy, także przy użyciu argumentów odwołujących się do dostępnego dorobku naukowego w dyscyplinie
KS.8	Absolwent jest gotów do pogłębiania wiedzy i doskonalenia umiejętności
KS.11	Absolwent jest gotów do współpracy z przedstawicielami innych zawodów w zakresie ochrony zdrowia publicznego
B.U18	Absolwent potrafi ocenić jakość produktów pochodzenia zwierzęcego
B.U22	Absolwent potrafi oszacować ryzyko wystąpienia zagrożeń chemicznych i biologicznych w żywności pochodzenia zwierzęcego
B.W16	Absolwent zna i rozumie zasady funkcjonowania Inspekcji Weterynaryjnej, także w aspekcie zdrowia publicznego
B.W17	Absolwent zna i rozumie zasady ochrony zdrowia konsumenta zapewniane przez właściwy nadzór nad produkcją środków spożywczych pochodzenia zwierzęcego
B.W18	Absolwent zna i rozumie systemy kontroli zgodne z procedurami HACCP (Hazard Analysis and Critical Control Points) - Systemu Analizy Zagrożeń i Krytycznych Punktów Kontroli
B.W21	Absolwent zna i rozumie zasady prawa żywnościowego