

**Hygiene of meat and slaughter animals II****ECTS: 4.00****SUBJECT MATTER CONTENT****CLASSES**

Detection of antibiotic residues in raw materials of animal origin. Proceedings in the case of suspected infectious and parasitic diseases. Bacteriological examination of carcasses of slaughter animals. Determination of the total number of microorganisms. Methods of detecting Enterobacteriaceae in raw materials of animal origin. Methods of detecting Campylobacter in raw materials of origin. Methods of detecting yeasts and molds in raw materials of animal origin. Interpretation of laboratory test results, proceeding in the event of non-compliant results. Estimating food infections. Post-slaughter waste and methods of its management. Ensuring health safety at the stage of obtaining meat - key issues of the "One Health" concept.,CLASSES LABORATORYJNE:Sanitary and veterinary examination of fish. Test methods for the presence of Trichinella spiralis in meat. Detection of Salmonella in raw materials of animal origin.

LECTURE

Food of aquatic origin. Conditions for obtaining and handling of game animals. Conditions for obtaining and handling of animal by-products. Quality deviations of the carcasses. Endogenous post-slaughter changes. Sources of meat contamination. Microbial spoilage of meat. Food poisoning and infections caused by bacteria. Food poisoning and infections caused by parasites. Viruses in food.

TEACHING OBJECTIVE

The aim of the course is to acquire knowledge and skills by students regarding official supervision over the welfare of animals sent for slaughter, slaughter and post-mortem processing of slaughter animals, sources of meat contamination and decisions determining the health safety of animal products in the field of veterinary protection of public health, in accordance with the principle "from the field to the table"

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:**Symbols for outcomes related to the discipline:**

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Symbols for outcomes related to the field of study:

K.1.+ , A.W16. + , B.W19. + , K.8.+ , A.U23. + , B.W3. + , K.11.+ , A.U22. + , B.W5. + , B.W16. + , B.W20. + , A.W18. + , B.W6. + , A.U10. + , A.U19. + , A.U17. + , A.U18. + , B.W18. + , A.W11. + , A.U3. + , B.W8. +

LEARNING OUTCOMES:**Knowledge:****Legal acts specifying learning outcomes:****682/2020****Disciplines:** Veterinary science**Status of the course:**Obligatoryjny**Group of courses:**B - przedmioty kierunkowe**Code:** ISCED 0841**Field of study:**Veterinary Medicine**Scope of education:****Profile of education:** General academic**Form of studies:** full-time**Level of studies:** uniform master's studies**Year/semester:** 5/9**Types of classes:** Classes, Lecture, Laboratory classes**Number of hours in****semester:**Classes: 36.00, Lecture:

15.00, Laboratory classes: 9.00

Language of instruction:Polish**Introductory subject:** Animal anatomy, Pathomorphology, Microbiology, Epidemiology, Toxicology, Parasitology and Invasiology**Prerequisites:** Knowledge of the spread of infectious diseases, the influence of pathogens on the occurrence pathomorphological and physiopathological changes in the animal's organism, techniques of basic microbiological tests.**Name of the organisational unit****conducting the course:**Katedra Weterynaryjnej Ochrony Zdrowia Publicznego**Person responsible for the realization of the course:**dr hab. wet. Beata Wysok, prof. UWM**e-mail:** beata.wysok@uwm.edu.pl**Additional remarks:**

W1 – The knowledge of the rules of food law. The knowledge of the applicable laws in the field of food safety. The knowledge of the procedures of post-mortem and post-mortem inspection. The knowledge of the rules of operation of the Veterinary Inspection, also in terms of public health. The knowledge of the rules of clinical examination of animals and monitoring the health condition of animals in large-scale farming, assessing whether they are allowed to slaughter. The knowledge of the rules of taking samples for additional tests. The knowledge of the rules of securing samples for research. The knowledge of how to handle the animal and the carcass after receiving the results of additional tests. The knowledge of the pathological changes observed in the course of animal diseases.

Skills:

U1 – The ability to perform ante- and post-mortem inspection. Assesses compliance with the requirements for the protection of slaughter animals, taking into account various methods of slaughter. Can use professional skills to improve the quality of veterinary care, animal welfare, and public health. The ability to collect and secure samples for research and performs standard laboratory tests, as well as correctly analyze and interpret the results of laboratory tests. The ability to estimate the risk of chemical and biological hazards in food of animal origin. Analyzes the obtained test results based on the applicable microbiological criteria. The ability to use the collected information related to the health and welfare of animals, and in selected cases also to the productivity of the herd. Basis on this, is able to predict possible threats according to the One Health concept.

Social competence:

K1 – Demonstrates responsibility for decisions made towards people and animals. Is ready to cooperate with representatives of other professions in the field of public health protection. Is ready to broaden his knowledge and improve his skills.

TEACHING FORMS AND METHODS:

Classes(W1;U1;K1;):Multimedia presentation and problem tasks.

Lecture(W1;U1;K1;):Multimedia presentation

Laboratory classes(W1;U1;K1;):Conducting tests of slaughter raw materials in terms of meeting microbiological standards. Performing microbiological cultures, preparation of preparations microscopic.

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Classes (Colloquium test) - There are 2 written tests per semester. To pass the test, you must obtain at least 65% of the possible points. The grading of grades is based on the score thresholds described in the faculty procedure "Principles of grading students". The student may attempt to improve the test twice. The condition for receiving the final pass from the exercises is to obtain positive grades from all tests taking place in the course of the classes. In the event of passing all tests, the final grade is z of exercises is issued on the basis of the arithmetic mean value of all grades obtained from tests. Failure to pass any of the tests is tantamount to obtaining an unsatisfactory final grade in the exercises. In the event of a top-down suspension of classroom activities and the necessity of distance learning, the methods of verifying the achievement of learning outcomes declared in the syllabus, i.e. the forms of completing the exercises, may change in a manner appropriate to the situation. -

Lecture (Written exam) - The subjects presented during the lectures is valid for the colloquiums and the final exam. - To pass the final exam, you must obtain a positive grade for each of the received exam questions. The final grade for the exam is issued on the basis of the arithmetic mean value of the grades obtained for each question. The student may take the exam improvement twice. In the event of a top-down suspension of classroom activities and the necessity of distance learning, the methods of verifying the achievement of learning outcomes declared in the syllabus, i.e. the forms of completing the exercises, may change in a manner appropriate to the situation. -

Laboratory classes (Evaluation of the work and cooperation in the group) - Evaluation of work during the practical task, selection of materials, selection of methods -

BASIC LITERATURE:

1. Cooper G., *Food Microbiology*, Wyd. ML Books International - IPS, R. 2017
2. , *Molecular Food Microbiology*, Wyd. Taylor Francis Inc., R. 2021

3. Prost E., *Zwierzęta rzeźne i mięso – ocena i higiena*, Wyd. Lubelskie Towarzystwo Naukowe, R. 2006
4. Boroń – Kaczmarska A., *Choroby odzwierzęce przenoszone drogą pokarmową*, Wyd. Wydawnictwo Lekarskie PZWL, R. 1999
5. Wojtatowicz M., Stepniewicz R., Żarowska B., *Mikrobiologia żywności. Teoria i ćwiczenia.*, Wyd. Wydawnictwo Uniwersytetu Przyrodniczego we Wrocławiu, R. 2009
6. Molenda J., *Mikrobiologia żywności pochodzenia zwierzęcego*, Wyd. Wydawnictwo Uniwersytetu Przyrodniczego we Wrocławiu, R. 2010

SUPPLEMENTARY LITERATURE:

1. Don A. Franco, Drago Carl Herenda, *Poultry Diseases and Meat Hygiene*, Wyd. Eds. Wiley, John Sons, R. 1999
2. Girst A., *Poultry Inspection. Anatomy, physiology and disease conditions*, Wyd. Nottingham University Press, R. 2004
3. Girst A., *Bovine Meat Inspection. Anatomy, physiology and disease conditions*, Wyd. Nottingham University Press, R. 2005

