



SYLLABUS OF THE EDUCATIONAL COMPONENT

HYGIENE AND EXAMINATION OF FOOD

Specialty	211 – Veterinary Medicine	Course commitment	Mandatory
Educational Program	Veterinary Medicine	Faculty	Faculty of Veterinary Medicine
Education Level	Master's Degree	Department	Sanitation, Hygiene and Forensic Veterinary Medicine

LECTURERS

Alla Mykolaivna Petrenko



Higher education Specialty of Veterinary Medicine
Degree - Candidate of Veterinary Sciences 16.00.06 Animal Hygiene and Veterinary Sanitation
Academic Status - Associate Professor of the Department of Sanitation, Hygiene and Forensic Veterinary Medicine
Work Experience - 20 years

Professional Activity Indicators Related to the Course:

- Author of more than 3 methodological developments;
- Co-author of publications included in the Web of Science scientometric database;
- Co-author of 2 thematic publications listed in Ukraine's professional editions;
- Participant in scientific and methodological conferences.

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GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT

Objective	providing applicants with thorough knowledge of the methods and methods of determination, management system and state control of the safety and quality of food products, by-products of animal origin during production, processing and circulation.
Format	lectures, laboratory and practical classes, independent work, individual tasks, interactive online classes
Specific training results and forms of their control	<ul style="list-style-type: none"> • Understanding the essence of the processes of production, storage, and processing of animal and plant-based products (GC2, SC12, PLO14) / Individual practical assignments. • Ability to organize supervision and control over the production, storage, transportation, and sale of animal and plant-based products (GC8, SC15, PLO9) / Exam. • Ability to make informed decisions and conduct educational activities among industry workers and the population (GC9, SC19, SC20, PLO12) / Individual assignments on regulatory framework analysis.
Scope and forms of control	14 ECTS credits (420 hours): 56 hours of lectures, 118 hours of laboratory and practical activities (LPA), 30 hours of training practice, conducted with a separation from training sessions; 216 hours of independent work, current control (6 chapters). At the end of the study of the first part of the course (sections 1-5), the applicant takes the first exam, the second part (section 6) - the second exam.
Lecturer Requirements	Timely completion of assignments, active participation, teamwork
Enrollment Requirements	The basic disciplines for the successful assimilation of the program material of the discipline are the anatomy of domestic animals; veterinary hygiene, sanitation and animal welfare; veterinary microbiology; veterinary virology.

COMPLIANCE WITH THE EDUCATION STANDARD AND EDUCATIONAL PROGRAM

Competencies (GC)	<p>GC 2. Ability to apply knowledge in practical situations</p> <p>GC 8. Ability to learn and master modern knowledge</p> <p>GC 9. Ability to make informed decisions</p> <p>SC 2. Ability to use tools, special devices, instruments, laboratory equipment and other technical means to carry out the necessary manipulations in the course of professional activity.</p> <p>SC 12. Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans</p> <p>SC 15. The ability to organize supervision and control of the production, storage, transportation and sale of animal and plant products.</p> <p>SC 19. Ability to carry out educational activities among industry workers and the population.</p> <p>SC 20. Ability to organize, implement and control document flow during professional activities.</p>	Program Learning Outcomes (PLO)	<p>PLO9. Develop measures aimed at protecting the population from diseases common to animals and humans.</p> <p>PLO12. Know the rules and legislative regulations for the supervision and control of the production, storage, transportation and sale of animal and plant products.</p> <p>PLO14. Understand the essence of the processes of production, storage and processing of biological raw materials.</p>
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STRUCTURE OF THE EDUCATIONAL COMPONENT

Chapret 1 Hygiene and examination of milk			
Lecture 1	Introductory. The importance of discipline in the training of a doctor of veterinary medicine. Objects of food examination.	LPA 1	Occupational safety while working in the laboratory of veterinary and sanitary expertise. Selection, preservation and preparation of average milk
		Independent	Processing lecture material Preparation for laboratory classes

Lecture 2	Chemical composition, physical properties and species characteristics of milk of productive animals.	LPA 2	samples for laboratory tests. Determination of organoleptic parameters of milk	Independent work	The history of the formation and development of food hygiene during the independent Ukraine (abstract) Elaboration of the Law of Ukraine "On Basic Principles and Requirements for Food Safety and Quality" (individual tasks for the analysis of the regulatory framework) Determination of total bacterial contamination in raw cow's milk, conclusion of geometric mean value (abstract)
		LPA 3	Determination of physical and biochemical properties of milk (density, freezing point, acidity)		
		LPA 4	Determination of the content of individual milk components (CP, SZMZ, mass fraction of lactose, protein, fat)		
		LPA 5	Determination of purity, general bacterial contamination of milk and efficiency of its heat treatment		
		LPA 6	Determination of abnormal milk impurities in collected milk		
		LPA 7	Veterinary and sanitary control of milk naturalness		
Lecture 3	Veterinary and sanitary control and hygiene of receipt, storage, harvesting, transportation and processing of milk.	LPA 8	Requirements for milk according to DSTU 3662:2018 "Milk is cow raw material. Technical Specifications "		Counting somatic cells in the udder secret of individual cows and in collected raw milk of cows by microscopic method. Determination of geometric mean (abstract)
		LPA 9	Laboratory control work "Hygiene and examination of milk"		
		Chapret 2 Hygiene and examination of dairy products			
Lecture 4	Hygiene and expertise of fermented milk products	LPA 10	Hygienic requirements and expertise of drinking milk		Independent work
Lecture 5	Hygiene and expertise of cheese, butter	LPA 11	Hygienic requirements and expertise of fermented milk drinks		
		LPA 12	Hygienic requirements and expertise of sour cream		
		LPA 13	Hygienic requirements and examination of fermented milk cheese		
		LPA 14	Hygiene requirements and examination of cheeses		
Lecture 6	Hygiene and expertise of canned milk	LPA 15	Hygienic requirements and examination of butter	Features of packaging and marking for dairy products (abstract) Technology and hygiene of fermented dairy products production (abstract) Technology and hygiene of production of dairy products with high fat content (abstract)вмістом жиру (реферат)	
		LPA 16	Hygienic requirements and examination of spreads		
		LPA 17	Hygienic requirements and examination of condensed dairy products		
Lecture 7	Veterinary and sanitary examination and sanitary evaluation of milk in diseases and poisoning of animals.	LPA 18	Hygiene requirements and examination of dry dairy products		
		LPA 19	Main provisions of the Law of Ukraine "On Milk and Dairy Products"		
		LPA 20	Veterinary and sanitary examination and sanitary evaluation of milk in diseases and poisoning of animals		
		LPA 21	Hygienic requirements and expertise of milk and dairy products in agri-food markets		
		LPA 22	Laboratory control work "Hygiene and examination of milk and dairy products"		
Chapret 3 Hygiene of primary processing of slaughter animals, meat and meat products					

Lecture 8	Slaughter animals. Organization and methods after slaughter veterinary examination of carcasses and organs of slaughter animals	LPA 23	Requirements for transportation of slaughter animals and procedure for execution of accompanying documents	Independent work	Elaboration of lecture material Preparation for laboratory classes	
		LPA 24	Examination of lymph nodes of carcasses and organs of slaughter animals		Veterinary requirements for import of slaughter animals to Ukraine (abstract)	
Lecture 9	Morphology, chemical composition and commodity science of meat of various species of animals. Changes in meat after slaughter of animals	LPA 25	Determination of meat species		Study of regulatory documents on the organization of veterinary and sanitary examination (individual tasks for the analysis of the regulatory framework)	
		LPA 26	Determining the freshness of meat		Fundamentals of technology and hygiene of processing of slaughter animals and poultry (abstract)	
Lecture 10	Basics of canning technology and hygiene of meat and meat products	LPA 27	Hygienic requirements and expertise of sausages		Veterinary and sanitary examination of animal fats (abstract)	
		LPA 28	Hygienic requirements and expertise of canned meat		Determination of fresh meat of rabbits and poultry (abstract)	
					Sausage production technology (abstract)	
					Technology of production of meat products (abstract)	
					Technology of production of meat products, canned food (abstract)	
Chapret 4 Veterinary and sanitary evaluation of animal slaughter products in case of detection of animal diseases						
Lecture 11	Veterinary and sanitary evaluation of animal slaughter products in case of detection of infectious animal diseases	LPA 29	Methods for determining meat obtained from sick and dead animals	Independent work	Elaboration of lecture material Preparation for laboratory classes	
		LPA 30				
Lecture 12	Veterinary and sanitary evaluation of animal slaughter products in case of detection of invasive animal diseases	LPA 31	Veterinary and sanitary study of animal slaughter products for trichinellosis		Post-slaughter inspection and sanitary assessment of poultry slaughter products for diseases and poisoning (abstract)	
		LPA 32	Veterinary and sanitary study of animal slaughter products for cysticercosis		Post-slaughter inspection and sanitary assessment of rabbit slaughter products for diseases and poisoning (abstract)	
Lecture 13	Veterinary and sanitary evaluation of animal slaughter products in case of detection of non-contagious animal diseases	LPA 33	Methods for determining maximum levels of individual pollutants in meat		Post-slaughter inspection and sanitary evaluation of slaughter products of hunting animals for diseases and poisoning (abstract)	
		LPA 34	Methods for determining residues of veterinary drugs in meat			
Lecture 14	Food toxicoinfections and toxicoses and their prevention	LPA 35	Laboratory control work "Hygiene and examination of meat and meat products"		Methods of disinfection of meat and meat products (abstract)	
		LPA 36	Laboratory control work "Veterinary and sanitary evaluation of animal slaughter products in case of detection of animal diseases"			
Chapret 5 Hygiene and examination of food animal hydrobionts, food eggs, apiproducs and plant foods						
Lecture 15	General characteristics of animal food hydrobionts and principles organization and conduct of their veterinary and sanitary expertise	LPA 37	Veterinary and sanitary examination of fresh commercial fish		Independent	Elaboration of lecture material Preparation for laboratory classes
		LPA 38	Hygienic requirements and examination of chilled, frozen and frozen fish	Elaboration of the Law of Ukraine "On Fisheries, Industrial Fisheries and Protection of		

Lecture 16	Veterinary and sanitary examination of animal food hydrobionts for infectious diseases	LPA 39	Hygienic requirements and expertise of fish salted, smoked, dried and dried		Aquatic Biological Resources" (individual tasks for the analysis of the regulatory framework) Veterinary requirements for import to Ukraine of fish products intended for human consumption (abstract) Inspection and sanitary assessment of poisonous fish and in case of poisoning (abstract) Hygiene and expertise of fish caviar (abstract)
Lecture 17	Veterinary and sanitary examination of fish for parasitic diseases	LPA 40	Hygienic requirements and expertise of canned fish and preserves		Hygiene and examination of food quail eggs (abstract) Veterinary and sanitary examination of egg products (abstract)
Lecture 18	Veterinary and sanitary examination of animal food hydrobionts for poisoning and radiation damage	LPA 41	Hygienic requirements and examination of invertebrate animal hydrobionts		Veterinary and sanitary examination of beekeeping products (wax, propolis, bee pollen, royal jelly) (abstract)
Lecture 19	Veterinary and sanitary examination of food eggs	LPA 42	Sanitary assessment of fish for infectious diseases		
		LPA 43	Sanitary assessment of freshwater fish for invasive diseases		
		LPA 44	Sanitary assessment of marine fish for invasive diseases		
		LPA 45	Sanitary assessment of fish for poisoning and radiation damage		
		LPA 46	Requirements for food eggs according to DSTU 5028:2008 "Food chicken eggs. Technical Specifications "		
Lecture 20	Hygiene and examination of honey	LPA 47	Veterinary and sanitary examination and sanitary assessment of eggs in poultry diseases		Characteristic signs of edible and poisonous mushrooms (abstract) General characteristics of the most common diseases and damages of plant foods (abstract)
		LPA 48	Determination of organoleptic indices of honey Natural		Veterinary and sanitary expertise and food hygiene in the markets (abstract)
Lecture 21	Hygiene and expertise of plant foods	LPA 49	Determination of physical and chemical indicators of honey natural.		
		LPA 50	Hygienic requirements and expertise of plant foods and edible oils.		
		LPA 51	Laboratory control work "Hygiene and examination of food animal hydrobionts, food eggs, apiproducs and plant foods"		
Chapret 6 Systems of food safety management and state control					
Lecture 22	Food safety management system based on hazards and critical control points	LPA 52	Methodology for implementing the HACCP system at food production enterprises	Independent work	Processing lecture material Preparation for laboratory classes Good food production practices (abstract)
Lecture 23	Biological, chemical and physical hazards	LPA 53	Prerequisite programs - PP. Development and implementation		HACCP system audit (abstract)
Lecture 24	Analysis of hazards and critical control points	LPA 54	Microbiological criteria for food		
Lecture 25	Ensuring control of products requiring special permission	LPA 55	Principles and application of the HACCP system at pig processing facilities	Independent	Elaboration of the Law of Ukraine "On State Control over Compliance with Legislation on Food, Feed, By-Products of Animal Origin,
Lecture 26	Traceability in food production	LPA 56	GS1 traceability system development procedure		

Lecture 27	International standardization and certification	LPA 57	Implementation of international food standards in Ukraine	Animal Health and Welfare" (individual tasks for the analysis of the regulatory framework)
	Risk-oriented control system of food safety throughout the food chain	LPA 58	Procedure for determining the frequency of implementation planned measures of state control of food safety	Elaboration of the WTO Agreement "On the application of sanitary and phytosanitary measures" (individual tasks for the analysis of the regulatory framework)
		LPA 59	Standard and expanded state control of controlled cargo on the state border of Ukraine and transport	Implementation of state control at the border (abstract) Implementation of state control in exporting countries (abstract)

CORE LITERATURE AND METHODOLOGICAL MATERIALS

Literature	<ol style="list-style-type: none"> Atlas of veterinary and sanitary inspection of animal slaughter products / [I.V. Yatsenko, N.M. Bohatko, I.A. Biben, L.V. Busol, V.Ia. Binkevych, N.M. Zazharska, N.P. Holovko, V.M. Kyrychenko]. Kharkiv: RVV Kharkiv State Veterinary Academy, 2015. 384 p. Hygiene of milk and dairy products. Part 2. Hygiene of dairy products: Textbook / [I.V. Yatsenko, N.M. Bohatko, N.V. Bukalova, T.I. Fotina, I.A., Biben, O.M. Berhilevych, V.Ia. Binkevych, Yu.R. Hachak, S.A. Tkachuk, V.V. Kamianskyi, M.M. Bondarevskyi, N.M. Zazharska, I.L. Tsyvirko, O.I. Kasianenko]. Kharkiv: Disa plus, 2016. 424 p. Hygiene of milk and dairy products. Part 1. Milk hygiene: Textbook / [I.V. Yatsenko, N.M. Bohatko, N.V. Bukalova, T.I. Fotina, I.A. Biben, O.M. Berhilevych, V.Ia. Binkevych, Yu.R. Hachak, S.A. Tkachuk, V.V. Kamianskyi, M.M. Bondarevskyi, N.M. Zazharska, I.L. Tsyvirko, O.I. Kasianenko]. Kharkiv: Disa plus, 2016. 416 p. Hygiene of plant foods: Textbook / I.V. Yatsenko, N.M. Bohatko, I.A. Biben, M.M. Bondarevskyi, V.V. Kamianskyi, V.Ia. Binkevych, S.A. Tkachuk, T.I. Fotina, N.V. Bukalova, N.M. Zazharska. Kharkiv: RVV KhDZVA, 2015. 427 p. 	Methodological support	ELECTRONIC RESOURCES	<ol style="list-style-type: none"> On Aquaculture: Law of Ukraine dated 18.09.2012 No. 5293-VI. URL: https://zakon.rada.gov.ua/laws/show/5293-17#Text. On beekeeping: Law of Ukraine dated 22.02.2000 No. 1492-III. URL: https://zakon.rada.gov.ua/laws/show/1492-14#Text. On Veterinary Medicine: Law of Ukraine dated 25.06.1992 No. 2498-XII. URL: https://zakon.rada.gov.ua/laws/show/2498-12#Text. On withdrawal from circulation, processing, recycling, destruction or further use of low-quality and dangerous products: Law of Ukraine dated 14.01.2000 No. 1393-XIV. URL: https://zakon.rada.gov.ua/laws/show/1393-14#Text. On state control over compliance with legislation on food, feed, animal by-products, animal health and welfare: Law of Ukraine dated 18.05.2017 No. 2042-VIII. URL: https://zakon.rada.gov.ua/laws/show/2042-19#Text On Consumer Protection: Law of Ukraine No. 1023-XII. URL: https://zakon.rada.gov.ua/laws/show/1023-12#Text. On identification and registration of animals: Law of Ukraine dated 04.06.2009 No. 1445-VI. URL: https://zakon.rada.gov.ua/laws/show/1445-17#Text. On milk and dairy products: Law of Ukraine dated 24.06.2004 No. 1870-IV. URL: https://zakon.rada.gov.ua/laws/show/1870-15#Text. On hunting economy and hunting: Law of Ukraine dated 22.02.2000 No. 1478-III. URL: https://zakon.rada.gov.ua/laws/show/1478-14#Text. On the basic principles and requirements for food safety and quality: Law of Ukraine dated 23.12.1997 No. 771/97-VR. URL: https://zakon.rada.gov.ua/laws/show/771/97-%D0%B2%D1%80#Text. On fish, other aquatic living resources and food products from them: Law of Ukraine dated 06.02.2003 No. 486-IV. URL: https://zakon.rada.gov.ua/laws/show/486-15#Text.

5. Yatsenko I.V., Bohatko N.M., Bukalova N.V., Fotina T.I., Biben I.A., Binkevych V.Ia., Trush A.M., Petrov R.V. Hygiene and examination of food animal hydrobionts and their products. Part 1. Hygiene and expertise of fishery products: Textbook. Kharkiv: "Disa Plus," 2017. 680 p.
6. Yatsenko I.V., Bohatko N.M., Bukalova N.V., Fotina T.I., Biben I.A., Binkevych V.Ia., Trush A.M., Petrov R.V. Hygiene and examination of food animal hydrobionts and their products. Part 2. Hygiene and examination of aquatic mammals, invertebrate hydrobionts, fish products: Textbook. Kharkiv: "Disa Plus," 2017. 648 p.

12. Procedure for issuing veterinary documents: Resolution of the Cabinet of Ministers of Ukraine dated 21.11.2013 No. 857. URL: <https://zakon.rada.gov.ua/laws/show/857-2013-%D0%BF#Text>.
13. Veterinary and sanitary rules for slaughterhouses, slaughter and sanitary points of farms and yard slaughter of animals: Order of the State Department of Veterinary Medicine of the Ministry of Agrarian Policy of Ukraine dated January 14, 2004 No. 4. URL: <https://zakon.rada.gov.ua/laws/show/z0121-04#Text>.
14. Instructions for use of the mark of fitness and veterinary stamps: Order of the State Committee of Veterinary Medicine of Ukraine dated 02.02.2010, No. 46. URL: <https://zakon.rada.gov.ua/laws/show/z0278-10#Text>.
15. Instructions for the diagnosis, prevention and elimination of animal trichinosis: Order of the State Department of Veterinary Medicine of the Ministry of Agrarian Policy of Ukraine dated 03.08.2007, No. 79. URL: <https://zakon.rada.gov.ua/laws/show/z0951-07#Text>.
16. Rules of veterinary and sanitary examination of milk and dairy products and requirements for their implementation: Order of the State Department of Veterinary Medicine of the Ministry of Agrarian Policy of Ukraine dated 20.04.2004, No. 49. URL: <https://zakon.rada.gov.ua/laws/show/z0579-04#Text>.
17. Rules of pre-slaughter veterinary inspection of animals and veterinary and sanitary examination of meat and meat products: Order of the State Department of Veterinary Medicine of the Ministry of Agrarian Policy of Ukraine dated 07.06.2002, No. 28. URL: <https://zakon.rada.gov.ua/laws/show/z0524-02#Text>.
18. Rules of veterinary and sanitary examination of poultry eggs: Order of the Chief State Inspector of Veterinary Medicine dated 07.09.01, No. 70. URL: <https://zakon.rada.gov.ua/laws/show/z0850-01#Text>

ASSESSMENT SYSTEM

SYSTEM		POINTS	ACTIVITY THAT IS ASSESSED
Final Assessment	100 point ECTS scale	Up to 50 points	50% of average chapters score
		Up to 50 points	Final test
Rating of section	100 points total	Up to 50 points	answers to test questions
		Up to 20 points	oral answers in laboratory and practical classes
		Up to 30 points	the result of mastering the block of independent work

ACADEMIC INTEGRITY AND ETHICS

All participants in the educational process (including students) must adhere to the Code of Academic Integrity and the requirements outlined in the Regulations on Academic Integrity of DBTU. They should demonstrate discipline, politeness, respect for each other's dignity, goodwill, honesty, and responsibility.