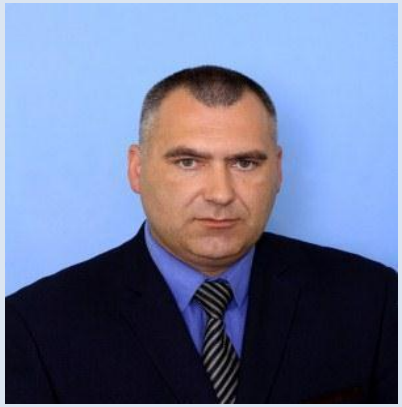
EDUCATIONAL COMPONENT SYLLABUS

Veterinary reproduction

specialty	**211 – Veterinary medicine**	**the obligation of discipline**	**selective component**
educational program	**veterinary medicine**	**faculty**	**veterinary medicine**
educational level	**Master of science**	**department**	**veterinary surgery and reproduction**

LECTURERS

Fedorenko Serhii Yakovych



Higher education – Kharkiv Zooveterinary Institute, 1999, specialist, qualification – doctor of veterinary medicine.
Scientific degree - Doctor of Veterinary Sciences, specialty 16.00.07 - Veterinary obstetrics
Academic rank – Professor
Work experience – 25 years
Indicators of professional activity on the course topic:

- author of over 100 scientific works, including more than 10 articles included in the scientometric databases Scopus and Web of Science, 2 textbooks, 2 monographs, 6 scientific and methodological recommendations and 8 technical specifications for veterinary drugs;
- 20 years of scientific experience.

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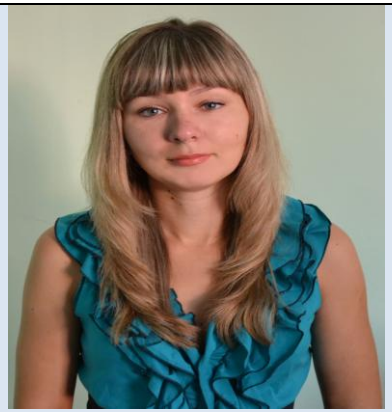
Naumenko Svitlana Valeriivna



Higher education – Kharkiv State Zooveterinary Academy, 2005, specialist, qualification – doctor of veterinary medicine.
Scientific degree - Doctor of Veterinary Sciences, specialty 16.00.07 - Veterinary obstetrics
Academic rank – Professor
Work experience – 20 years
Indicators of professional activity on the course topic:

- author of over 140 scientific works, including 13 articles included in the scientometric database Scopus and Web of Science, 114 articles in scientific professional publications of Ukraine, 2 textbooks, 4 monographs and 2 chapters of collective monographs, 46 abstracts of reports from international and all-Ukrainian scientific and practical conferences, 8 scientific and methodological recommendations and 2 technical conditions for veterinary drugs;
- 20 years of scientific experience.

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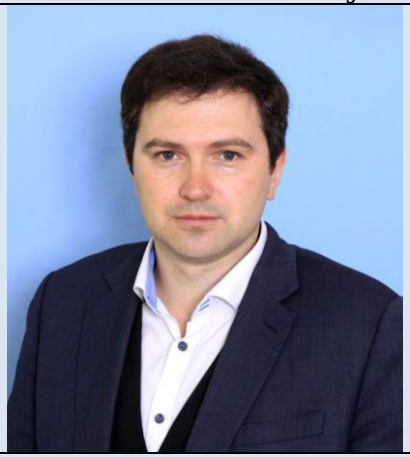
Siehodin Oleksandr Borysovych



Higher education – Kharkiv Zooveterinary Institute, 2001, specialist, qualification – doctor of veterinary medicine.
Scientific degree – Candidate of Veterinary Sciences (Ph.D.), specialty 16.00.05 – Veterinary surgery
Academic rank – Docent
Work experience – 24 years
Indicators of professional activity on the course topic:

- author and co-author of over 30 scientific works, including: textbooks in English – 3; chapter in a collective monograph – 1, patent for a utility model – 1;
- 20 years of scientific experience.

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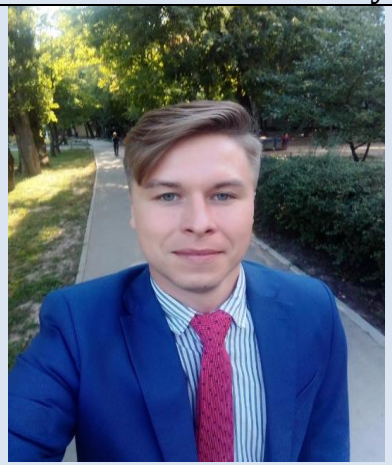
Koshevoi Vsevolod Ihorovych



Higher education – Kharkiv State Zooveterinary Academy, 2019, Master of science, qualification – doctor of veterinary medicine.
Scientific degree – Doctor of Philosophy, specialty – 211 Veterinary medicine, State Biotechnological University, 2023.
Work experience – 2 years
Indicators of professional activity on the course topic:

- author of over 100 scientific works, including 6 articles included in the scientometric database Scopus, 45 articles in scientific professional publications of Ukraine (including 16 in English), 1 monograph and 2 chapters of collective monographs, 42 abstracts of reports of international and all-Ukrainian scientific and practical conferences, 6 scientific and methodological recommendations and 1 technical conditions for a veterinary drug;
- 10 years of scientific experience;
- reviewer of scientific articles in journals included in international scientometric databases (Scopus – World's Veterinary Journal; Web of Science – Uttar Pradesh Journal of Zoology; etc.).

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GENERAL INFORMATION ABOUT THE EDUCATIONAL COMPONENT (DISCIPLINE)

Goal	The purpose of studying the elective component "Veterinary Reproductology" is to enable higher education students to master in-depth fundamental principles of the reproductive capacity of animals and their veterinary support, as well as modern means of therapy and prevention of pathological processes in the reproductive system of animals depending on the physiological period.
Format	lectures, practical classes, independent work, individual tasks.
Scope and forms of control	3 ECTS credits (90 hours): 18 hours of lectures, 36 hours of laboratory work, 36 hours of independent work; module control (2 modules); final control – differentiated test.
Teacher requirements	timely completion of independent work, presentations, activity, teamwork
Enrollment conditions	according to the curriculum

COMPLEMENTARY EDUCATION STANDARDS AND CURRICULUM

Competences	**general competences**: GC 2. Ability to apply knowledge in practical situations. GC 3. Knowledge and understanding of the subject area and profession. GC 6. Skills in using information and communication technologies. **special competences**: SC 9. Ability to perform obstetrical-gynecological and surgical procedures and operations. SC 13. Ability to develop strategies for the prevention of diseases of various etiologies.	**Program learning outcomes**	This academic discipline ensures the formation of the following **program learning outcomes**: PLO 3. Determine the essence of physicochemical and biological processes that occur in the animal body normally and during pathology; PLO 6. Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies; PLO 7. Formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of infectious and non-infectious diseases, as well as production and technological processes at enterprises for keeping, breeding or operating animals of various classes and species.

STRUCTURE OF THE EDUCATIONAL COMPONENT (DISCIPLINE)

Chapter 1. Fundamentals of animal reproduction and their veterinary care

LECTURES		Laboratory and practical lesson		Independent work
Lecture 1	Reproductive health of female domestic animals and factors influencing it	**LPL 1**	Clinical characteristics of the reproductive system of female domestic animals	Information technologies in reproductive science Ontogenesis of reproductive organs in animals Evolution of the sexual process in animals Gynogonads Androgonads Effects of environmental factors on reproduction in animals Phytohormones. Characteristics of producer plants Reproductive endocrinology Endocrine organs-regulators of reproductive function in females
Lecture 2	Reproductive health of male domestic animals and factors influencing it	**LPL 2**	The influence of sanitary factors, diet and season on the reproductive ability of females	
Lecture 3	Regulatory mechanisms for ensuring the reproductive potential of females and males	**LPL 3**	Clinical status of the male reproductive system, its role in the manifestation of reproductive function and the influence of hygienic and nutritional factors	
Lecture 4	Modern diagnostic devices, methods of assessment and control of reproduction processes	**LPL 4**	Neuroendocrine regulation of sexual function in females	
		LPL 5	Neuroendocrine regulation of male reproductive function	

		LPL 6	Antioxidant regulation of reproductive capacity of domestic animals		Hormones. Sex hormones. Features
		LPL 7	Information and diagnostic devices in animal reproduction		
		LPL 8	Modern means of online screening of sexual activity in animals, their prognostic significance and practical application		

Chapter 2. Modern means of therapy and prevention of pathological processes in the reproductive system of animals depending on the physiological period					
Lecture 5	Correction of pathologies that arise during gametogenesis, fertilization and implantation	**LPL 9**	Pathological processes that occur during gametogenesis and their role in damage to genetic material	**Independent work**	Embryonic stem cells. Definition, obtaining, cloning of organs Sex of the embryo, fetus. Definition. Problems. Amniotic membranes. Characteristics Amniotic, allantoic fluid. Characteristics Types of placentas. Macro- and microstructure. Function Causes of labor. Existing theories Synchronization and induction of labor Pharmacocorrection of the reproductive capacity of animals
		LPL 10	Preventive means of correcting pathologies that occur during fertilization and during the implantation period		
Lecture 6	Therapy and prevention of diseases of pregnant animals, measures to prevent pathologies of childbirth and the postpartum period	**LPL 11**	Therapy and prevention of diseases in pregnant animals		
Lecture 7	Innovative means of treating gynecological diseases: modern therapeutic strategies, practical application	**LPL 12**	Measures to prevent and treat birth pathology		
		LPL 13	Therapeutic and preventive measures for animals in the postpartum period		
Lecture 8	Prevention of gynecological pathology as the basis for combating female infertility	**LPL 14**	Animal therapy for gynecological pathology: prevalence, pathogenetic mechanisms and modern tools		
		LPL 15	Antibiotic resistance and its role in gynecological pathology: prevention methods and alternative therapy		
Lecture 9	Pharmacotherapy of andrological diseases and the use of preventive measures	**LPL 16**	Preventive measures for gynecological diseases of domestic animals		
		LPL 17	Modern means of correcting sexual function in males, therapy and prevention of andrological pathologies		
		LPL 18	Pharmacocorrection of antioxidant protection in fruit growers: prospects and possibilities		

BASIC LITERATURE AND METHODOLOGICAL MATERIALS

Basic and additional literature

1. Biotekhnolohichni i molekuliarno-henetychni osnovy vidtvorennia tvaryn / [V.A. Yablonskyi, S.P. Khomyn, V.I. Zaviriukha ta in.] ; pid zah. red. Yablonskoho V.A., O.I. Serhiienka ta R.S. Stoika. – Lviv: TzOV "VF «Afisha»", 2009. – 218 s.: il.
2. Veterynarna perynatolohiia : navch. posibnyk dlia studentiv vyshchykh navchalnykh zakladiv / [V.P. Koshovyi, M.M. Ivanchenko ta in.] ; za zah. red. V.P. Koshovoho. – Kharkiv: RVV KhDZVA, 2008. – 465 s.
3. Berezovskyi A.V., Kharenko M.I. (Red.). Fiziolohiia ta patolohiia rozmnozhennia dribnykh tvaryn: navchalnyi posibnyk (2-e vydannia, pereroblene i dopovnene). Zhytomyr: Polissia, 2017. 392 s.
4. Yablonskyi V.A. Praktychne akusherstvo, hinekolohiia ta biotekhnolohiia vidtvorennia tvaryn z osnovamy androlohii. Kyiv: Meta, 2002. 319 s.
5. Yablonskyi V.A., Khomyn S.P. (Red.). Veterynarne akusherstvo, hinekolohiia ta biotekhnolohiia vidtvorennia tvaryn z osnovamy androlohii: pidruchnyk. Vinnytsia: Nova Knyha, 2006. 592 s.
6. Berezovskyi A.V., Kharenko M.I. (Red.). Fiziolohiia ta patolohiia molochnoi zalozy u tvaryn: navchalnyi posibnyk. Kyiv: DIA, 2018. 476 s.

Methodical support

1. Koshevoi V.P., Fedorenko S.Ia., Ivanchenko M.M., Naumenko S.V., Besedovska K.S., Skliarov P.M. Termohrafichna diahnostyka u veterynarnomu akusherstvi, hinekolohii ta androlohii (metodychni rekomendatsii). Kharkiv: RVV KhDZVA, 2013. 52 s.
2. Koshevoi V.P., Fedorenko S.Ia., Naumenko S.V., Ivanchenko M.M., Besedovskyi V.P., Onyshchenko O.V., Besedovska K.S., Pasternak A.M., Chuiko L.V., Koshevoi V.I., Skliarov P.M., Holota V.I., Taran H.V., Kravtsov M.N. Ozonomistski preparaty ta yikh vykorystannia u veterynarnii reproduktolohii (metodychni rekomendatsii). Kharkiv: RVV KhDZVA, 2014. 81 s.
3. Koshevoi V.P., Fedorenko S.Ia., Naumenko S.V., Ivanchenko M.M., Onyshchenko O.V., Besedovska K.S., Pasternak A.M., Hladtsinova I.O., Koshevoi V.I., Skliarov P.M., Maliukin Yu.V., Yefimova S.L., Klochkov V.K. Kompleksni preparaty, stvoreni na osnovi nano-biomaterialiv ta yikh vykorystannia u veterynarnii reproduktolohii (metodychni rekomendatsii). Dnipro: vydavnytstvo «Porohy», 2016. 110 s.
4. Skliarov P.M. Biotekhnolohiia vidtvorennia sobak i kotiv: navchalnyi posibnyk. Dnipro: FOP Shliupenkov O.A., 2022. 92 s.

EVALUATION SYSTEM

SYSTEM		POINTS	ACTIVITY THAT IS ASSESSED
Final assessment (different credit, exam)Final evaluation	**100 ECTS points (standard)**	**up to 100**	**40 % - Final testing**
			60 % - student's current work during the semester
Final assessment (non-differential credit)	**100 points ECTS (standard)**	**up to 100**	**100 % - average grade for sections**
Rating of section	**100 points total**	**up to 30**	**30 % - answers to test questions**
		up to 30	**30 % - the result of mastering the block of independent work**
		up to 40	**40 % - student activity in class (oral answers)**

NORMS OF ACADEMIC ETHICS AND INTEGRITY

All participants in the educational process (including students) must adhere to the code of academic integrity and the requirements stipulated in the regulation "On Academic Integrity of Participants in the Educational Process of SBTU": to demonstrate discipline, good manners, respect each other's dignity, show kindness, honesty, and responsibility.