



Course lecturer
Lecturer contact
information (e-mail)
Course page in eLearn

SYLLABUS OF THE DISCIPLINE «FUNDAMENTALS OF ANIMAL BREEDING»

Educational degree - Master
Specialty **211 Veterinary medicine**
Educational program «Veterinary medicine»
Year of study (course) - 2, semester 3
Form of study - full-time
Amounts of credits ECTS - 4
Language of studying - English, Ukrainian
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DESCRIPTION OF THE DISCIPLINE

The course considers the basic concepts of origin, animal breed and breed structure; system of identification in animal husbandry, features of assessment of exterior and types of animal constitution, principles of assessment of individual development, productivity, breeding qualities of animals; rules for reading and constructing individual and group pedigrees, principles of recording and determining the density of inbreeding, basics of rejecting, selection and various methods of breeding in animal husbandry; biological features and breeds of cattle, horses, pigs, sheep, poultry.

Acquisition of competencies:

General Competences (GC). As part of the effects of final competence acquired in the learning process, graduates are able to:

GC10. communicate with representatives of other professional groups of different levels (with experts in other fields of knowledge / types of economic activity);

Professional (special competencies) (SC).

SC 2. The ability to use tools, special devices, laboratory equipment and other technical means to carry out the necessary manipulations during professional activity.

SC 10. Ability to develop strategies for safe, sanitary animal keeping. As part of the effects of final competence acquired in the learning process, graduates are able to be aware of the details of the decisions made, in particular regarding natural resources.

Program learning outcomes (PLO):

PLO 3. Determine the essence of physical and chemical, a biological process that occur in the body of animals in normal and pathological conditions.

PLO 7. Formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of contagious and non-communicable diseases, as well as production and technological processes at enterprises for keeping, breeding or exploiting animals of various classes and species.

PLO 10. Propose and use expedient innovative methods and approaches to solving problematic situations of professional origin.

THE STRUCTURE OF THE DISCIPLINE

Topic	Hours	Learning outcomes	Tasks	Evaluation
3 semester				
Content module № 1. Exterior. Interior. Constitution. Breed. Ontogenesis. Productivity				
Topic 1 Introduction. The concept of the subject. The doctrine of breed.	2/0	Know the origin of the main types of agricultural animals. Understand the concept of breed, breed structure.	Preparation of lecture notes. Writing the tests.	Testing for 1 module (maximum amount of points)

Identification system in animal husbandry.		Distinguish changes in animals in the process of domestication.		per module - 100 points).
Topic 2 Constitution, exterior, interior of agricultural animals	2/4	Know history of the problem, the main methods of estimation the exterior and interior. To analyze types of animal constitution. To be able to estimate the exterior of animals, the zootechnical and veterinary conditions of animals. To use acquired knowledge for predicting productivity, susceptibility to diseases according to the constitution, and the exterior of animals.	Preparation of lecture notes. Execution of laboratory and independent work. Writing the tests.	<i>Credited</i> under the conditions of completed tasks. Testing for 1 module (maximum amount of points per module - 100 points).
Topic 3 Individual development of agricultural animals.	2/4	Know history of ontogenesis and phylogeny, their essence. Understand patterns of individual development. To be able to determine the impact on the ontogenesis of heredity and environmental conditions, to estimate the growth of animals; to determine the age of animals based on external features.	Preparation of lecture notes. Execution of laboratory work. Tasks solving.	<i>Credited</i> under the conditions of completed tasks. Testing for 1 module.
Topic 4 Agricultural animals' productivity	2/4	Know general principles of evaluation of animals by their productivity. To be able to evaluate animals for their performance. Distinguish characteristics of agricultural animals that determine their productivity. Analyze heredity of performance traits and correlation between them.	Preparation of lecture notes. Execution of laboratory and independent work.	<i>Credited</i> under the conditions of completed tasks. Testing for 1 module (maximum amount of points per module - 100 points).
In total by the content module 1				100
Content module 2. Pedigrees. Tribal value. Selection and breeding methods. Inbreeding. Heterosis. Features of selection and breeding of animals				
Topic 1. Methods of agricultural animals' breeding. Breeding work in the herd.	2/4	Know biological essence of purebred breeding and crossing, basics of interspecific hybridization and its tasks. Understand principles of breeding by lines and families in animal husbandry. Distinguish Intra-linear breeding and line crosses, types of crossing, features of purebred breeding and crossing.	Preparation of lecture notes. Execution of laboratory work. Writing the tests.	<i>Credited</i> under the conditions of completed tasks. Testing for 2 module (maximum amount of points per module - 100 points).

Topic 2. Pedigrees. Inbreeding. Heterosis.	0/8	Know basic principles of zootechnical breeding accounting and identification. To be able to determine the breeding value of animals, read and construct an individual and group pedigrees.	Execution of laboratory and independent work.	<i>Credited</i> under the conditions of completed tasks. Testing for 2 module (maximum amount of points per module - 100 points).
Topic 3. Theoretical and practical foundations of selection, rejection and selection.	2/4	Know principles of division of animals into groups and forms of selection at the stud and commercial farms, conditions of inbreeding's using. Understand sequence and stages of rejecting and selection, the concept of inbreeding depression and heterosis. To be able to record and estimate the density of inbreeding.	Preparation of lecture notes. Execution of laboratory and independent work. Writing the tests.	<i>Credited</i> under the conditions of completed tasks. Testing for 2 module (maximum amount of points per module - 100 points).
Topic 4. Biological features and breeds of cattle and horses.	2/2	Know economic value, biological, productive features of livestock and horse breeding. Distinguish different breeds of cattle and horses.	Preparation of lecture notes. Execution of laboratory and independent work. Writing the tests.	<i>Credited</i> under the conditions of completed tasks. Testing for 2 module (maximum amount of points per module - 100 points).
Topic 5. Biological features and breeds of poultry, pigs and sheep.	2/0	To know economic importance, biological, breed, productive features of pig breeding, sheep breeding, poultry farming. To distinguish different breeds of cattle pigs, sheep, birds of different species. To understand egg production technologies and broiler industry.	Preparation of lecture notes. Performing independent work. Writing the tests.	<i>Credited</i> under the conditions of completed tasks. Testing for 2 module (maximum amount of points per module - 100 points).
In total by the content module 2				100
Educational work for the semester $(M_1+M_2)/2*0,7$				70 (≥ 42)
Test				30
In total by the course				100

EVALUATION POLICY

<i>Policy on deadlines and retaking:</i>	Retaking of modules takes place with the permission of the lecturer if there are important reasons (for example, hospital). Retaking of modules takes place with penalty points.
<i>Academic Integrity Policy:</i>	Cheating during the tests and exams are prohibited (including with the use of mobile devices). Presentations, abstracts must have correct textual references to the literature sources used.
<i>Visiting Policy:</i>	Attendance is mandatory. For objective reasons (for example, illness, international internship) studying can take place individually (in online form in consultation with the dean of the faculty).

STUDENT EVALUATION SCALE

Rating of higher education seekers, points	National assessment for the results of compilation	
	exams	tests
90 – 100	Perfectly	Credited
74 – 89	Fine	
60 – 73	Satisfactorily	
0 – 59	Not satisfactorily	Not credited

RECOMMENDED INFORMATION SOURCES:

1. Електронний навчальний курс «Основи розведення тварин» <https://elearn.nubip.edu.ua/course/view.php?id=116> Автор курсу Супрун І.О.
2. Мельник Ю.Ф. Практикум з розведення сільськогосподарських тварин / Ю.Ф. Мельник, К.А. Найденко, М.П. Журавель, А.В. Витриховська, М.М. Майборода, Т.В. Литвиненко. — К.: Видавничий Дім «Слово», 2007. — 240 с.
3. Розведення сільськогосподарських тварин / М.З. Басовський, В.П. Буркат, Д.Т. Вінничук та ін. — Біла Церква: БДАУ, 2001. — 400 с.
4. Супрун І.О. Основи розведення тварин: Робочий зошит. Методичні рекомендації для лабораторних і самостійних робіт студентів ОС «Магістр» за спеціальністю 211 «Ветеринарна медицина» / І.О. Супрун. — К.: НУБіП України, 2024. — 158 с.
5. Хмельничий Л.М., Супрун І.О. Основи розведення тварин / Л.М. Хмельничий, І.О. Супрун. — К.: НУБіП України, 2024. — 342 с. — Рекомендовано до видання рішенням Вченої ради НУБіП України (Протокол №12 від 29 травня 2024 року).

Supporting literature

1. Вінничук Д.Т., Майборода М.М., Витрихівська А.В., Найденко К.А. Методичні рекомендації по темі "Генетичні параметри відбору тварин і якісне групування стада". — К.: УСГА, 1991.
2. Генетика, селекція і біотехнологія в скотарстві / під ред. М.В. Зубця. — К.: «БМТ», 1997.
3. Гопка Б.М., Павленко П.М. Конярство. — К.: Урожай, 1991.
4. Державні книги племінних тварин, каталоги.
5. Зубець М.В., Хмельничий Л.М., Бащенко М.І., Найденко К.А., Витрихівська А.В. Лінійна оцінка екстер'єру молочних корів. — К.: НАУ, 2000.
6. Іовенко В.М. Вівчарство України. — К.: Аграрна наука, 2017.
7. Каталог жеребців-плідників, допущених до племінного використання / П.І. Вербицький, О.В. Білоус, О.О. Новіков, Д.А. Волков, І.В. Ткачова, О.М. Латка, О.В. Бондаренко, С.В. Лютих, О.О. Губін, Т.Є. Ільницька, Н.В. Зуєва, Б.М. Гопка, Л.Ю. Безугла, В.Д. Марущак; за ред. І.В. Ткачової. — 2007. — 55 с.
8. Ладика В.І., Жукорський О.М., Грициняк І.І., Козир В.С., Катеринич О.О., Церенюк О.М., Хмельничий Л.М., Резникова Н.Л. Генетичні ресурси вітчизняних порід сільськогосподарських тварин: монографія. — Одеса: Олді+, 2023. — 336 с.
9. Найденко К.А., Журавель М.П., Витрихівська А.В., Тимченко О.Г. Родоводи с.-г. тварин. — К.: НАУ, 1998.
10. Рибалко З.П., Буркат В.П., Березовський М.Д. Генофонд, оцінка та використання свиней. — К.: Асоціація «Україна», 1994.
11. Рубан С.Ю., Даншин В.О., Мітіогло Л.В., Литвиненко Т.В., Сидоренко О.В., Свириденко Н.П. Генетичні ресурси тваринництва. — К., 2022. — 611 с.
12. Супрун І.О. Методичні рекомендації "Основи розведення сільськогосподарських тварин. Тестові завдання". — К.: Компринт, 2014.

13. Супрун І.О. Методичні рекомендації з дисципліни "Розведення с.-г. тварин" "Poultry breeding": Методичні вказівки до виконання лабораторних та самостійних робіт студентами ОКР «Бакалавр» спеціальності 6.110100 «Ветеринарна медицина». — К.: Компринт, 2015.
14. Тимченко О.Г., Витрихівська А.В., Найденко К.А. Молочна продуктивність с.-г. тварин. — К., 1998.
15. Хмельничий Л.М., Супрун І.О. Основи генетики та селекції сільськогосподарських тварин. — Аграрна освіта, 2011. — 440 с. — (З грифом Міністерства агропромислової політики і продовольства, лист № 18-1-28/812 від 09.07.2011 р.).
16. **Suprun I. Estimation of agricultural animals productivity.** — К.: Центр інформаційних технологій, 2009. — 33 с.
17. **Suprun I. Estimation of agricultural animals exterior.** — К.: Центр інформаційних технологій, 2009. — 51 с.