

Annotation of compulsory discipline

Subject	Biology of farm animal production
Tutor	Andriichuk Andrii Vitaliovich PhD in Veterinary Sciences, associate professor Department of Animal Hygiene and Basics of Sanitation
Course and semester	1 courses, 1 semester
Accepted faculties	Biological-technological faculty
List of competencies and learning-related outcomes that discipline provides	<p>According to the requirements of the educational and professional program "Technology of production and processing of animal husbandry products", applicants must acquire the following competencies:</p> <p>GC1 (general competence). Ability to abstract thinking, analysis and synthesis.</p> <p>GC3. The ability to organize and monitor the implementation of measures aimed at improving the selection and breeding work in animal husbandry.</p> <p>PC 1. (professional competence). The ability to use modern ideas about the principles of the organization of the animal body on the basis of knowledge about the course of physiological and biochemical processes.</p> <p>The result of studying the discipline is the students' acquisition of such knowledge and skills:</p> <ul style="list-style-type: none"> - to evaluate and ensure the quality and safety of technologies for the production of livestock products, fodder and feed products, levels of animal nutrition and products of animal origin (applying the acquired theoretical and practical skills, using biochemical and biotechnological methods of stimulating metabolic processes in the animal body and contributing to the increase of animal productivity; in order to increase the biological productivity of animals, to be able to apply in practice the main biological, physiological and biochemical features of digestion of various types of animals); - to search for necessary data in scientific literature, databases and other sources, to analyze and evaluate these data (to be able to use scientific literature, scientific databases, to be able to analyze the received data); - to make effective decisions on production and processing of livestock products, including in difficult and unpredictable conditions, forecast their development, determine factors affecting the achievement of set goals, analyze and compare alternatives, assess risks and probable consequences of decisions (applying acquired theoretical and practical skills, to make effective decisions on increasing the production of livestock products, applying in practice biological methods of stimulating animal productivity, knowing the physiological features of the organism of various types of animals and poultry. To analyze the results obtained, to compare with alternative solutions, to assess the risks and possible consequences of decisions).

The discipline description	
Preconditions necessary for the study of discipline	Compulsory discipline "Biology of farm animal production" is one of the disciplines in master's degree course of higher education in specialty 204 - Technology of production and processing of animal husbandry products. It is based on the knowledge of such disciplines as "Morphology of farm animals", "Physiology of farm animals", "Biochemistry in animal husbandry", "Animal feeding", "Poultry production technology", "Milk and beef production technology", "Pig production technology", studied in previous courses.
Maximum number of students who can study simultaneously	75
Lesson plans	<p style="text-align: center;">Lectures</p> <ol style="list-style-type: none"> 1. Biochemical composition of fodder, animal organism. Biologically active substances. 2. General characteristics of physicochemical characteristics of fodder. Biological significance of carbohydrates, lipids, amino acids, water. 3. Stimulants of animal productivity, production and use in animal husbandry. 4. Mechanism of digestion in farm animals, poultry and fish. Digestion in ruminants. 5. Biological bases of dairy productivity of animals. Ontogeny of the mammary gland. The mechanism of milk production. 6. Biology of egg productivity. Stimulants of egg productivity. 7. Biology of leather and wool productivity. 8. Muscle tissue. The structure of muscle tissue. Biosynthesis of muscle tissue proteins, biosynthesis of carbohydrates, lipids. <p style="text-align: center;">Practical classes</p> <ol style="list-style-type: none"> 1. Biology of the digestion of feed nutrients. Determination of the pH of the chyme of the glandular stomach of a bird. 2. Determination of the pH of the chyme of the muscular stomach of the bird. 3. Determination of the pH of the chyme of the small intestine of the bird. 4. Study of feed digestibility in vitro with the help of an artificial rumen in a buffer soluble rumen juice of cattle. 5. Study of feed digestibility in vitro using artificial rumen in pepsin solution. 6. Determination of the activity of the enzyme preparation of amylobutirin G3x as a stimulator of increasing the productivity of animals. 7. Determination of the activity of the enzyme preparation protosubtilin G3x as a stimulator of increasing the productivity of animals. 8. Study of the technique of obtaining blood serum. Determination of protein content in blood serum in animals with different levels of productivity. 9. Determination of the activity of aspartate aminotransferase in the liver and blood serum of animals of different productivity. animals of different productivity. 10. Determination of alanine aminotransferase activity in the liver of animals of different productivity. 11. Determination of alkaline phosphatase activity in the liver of animals and birds with different levels of productivity. 12. Determination of alanine aminotransferase activity in blood

	serum of animals of different productivity. 13. Determination of alkaline phosphatase activity in blood serum of animals and poultry with different levels of productivity. 14. Determination of carotene content in egg yolk of birds with different levels of feeding.
Languages	Ukrainian and English