

Annotation of compulsory academic discipline

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| Academic discipline | Organization of selection and breeding business in animal husbandry |
| Tutor | Tkachenko Serhii Vasyliovych PhD biological sciences, associate professor, department of genetics, breeding and selection of animals |
| Courses and semesters, when the discipline is planning to study | 1 course (master degree) 1 semester |
| Faculties whose students are invited to study discipline | 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 ability to acquire the following competencies:</p> <p>GC 1 (general competence). Ability to abstract thinking, analysis and synthesis.</p> <p>GC 2. Ability to conduct research at the appropriate level.</p> <p>GC 3. Ability to learn and master modern knowledge.</p> <p>GC 4. Skills in using information and communication technologies.</p> <p>PC 14. (professional competence). Ability to apply basic modern fundamental knowledge of animal and poultry breeding, principles of inheritance of economically useful traits of the gene pool of farm animals and poultry.</p> <p>PC 15. Ability to use professional and professional knowledge in in the field of breeding and selection of animals, to master the basic processes of genetic analysis in the latest technologies of production and processing of animal husbandry products.</p> <p>PC 16. Ability to use knowledge of basic processes of changing genetic information in animal populations.</p> <p>PC 17. Ability to apply various methods of genetic engineering; methods and methods of improving the technological process of selection and breeding of animals.</p> <p>The result of teaching the discipline is the acquisition of such knowledge by students and skills:</p> <ul style="list-style-type: none"> - to follow their own improvement and master modern knowledge (to know the properties of populations, parameters and methods of their study, regularities of management of the selection process at the level of populations); - to combine measures of increasing the level of animals productivity and the quality of their products (effectively use of breeding resources, combining in breeding programs measures to increase the level of productivity of animals and the quality of their products); - to create measures to improve selection and breeding business in animal husbandry (to be able to analyze the results, resources and tasks of selection, biological and genetic features of farm animals of the main species, principles and methods, as well as the technique of assessing the breeding qualities of animals; to be able to analyze the specificity of methods selection to improve the productive and breeding qualities of animals, the theory and progressive methods of selection; to know the state of breeding business in Ukraine and in foreign countries with developed animal husbandry; to know the legislative foundations and regulatory legal basis of the activity of breeding subjects in animal |

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| | <p>husbandry; qualified solve organizational issues of the breeding business; use modern methods of identification, accounting and evaluation of breeding animals);</p> <ul style="list-style-type: none"> - to apply the biological, physiological and biochemical characteristics of animals and their products when choosing production technology and conducting research activities (to know the biological and physiological characteristics of animals involved in selection process in order to obtain high-quality livestock products); - the ability to use knowledge of the main directions and perspectives of the development of livestock industries of Ukraine, understanding of problems in entrepreneurial formations of the agrarian sphere and the ability to apply foreign experience in the development of agriculture (to know modern breeding achievements in livestock in Ukraine and abroad; to be able to apply the acquired domestic and foreign experience in the organization of breeding business); - the ability to use knowledge of the basic principles of scientific methodology and methods of conducting laboratory and production research (to know how to evaluate the breeding value of animals by origin, individual qualities, offspring and a complex of information sources; be able to analyze the state of populations and make a long-term forecast of the development of the gene pool of the population under the influence of new factors; to be able to develop models of selection processes in a breed or herd and implement them in practice) |
| Description of the discipline | |
| Preconditions necessary for the study of discipline | <p>Compulsory component "Organization of selection and breeding business in animal husbandry" is one of the main 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 "Genetics with biometrics", "Animal breeding", "Technology of production of cattle products", "Technology of production of pig products", "Technology of production of sheep and goats products" "Technology of production of poultry products", "Horse breeding", "Organization of agrarian of production", "Legislation".</p> |
| Maximum number of students who can study simultaneously | 60 students |
| | <p>Lectures</p> <ol style="list-style-type: none"> 1. Genetic basis of evolution. 2. Theoretical basis for selection. 3. Cytogenetics in animal breeding. Blood groups, biochemical polymorphism of proteins and their use in breeding. 4. Organization of selection and breeding work and development of selection programs. 5. Dairy and beef cattle selection. 6. Pig selection. 7. Horse, sheep and goat selection. 8. Poultry selection. 9. Law of Ukraine "Breeding business in animal husbandry". Law of Ukraine "Licensing of Certain Types of Economic Activity". 10. Identification and registration of animals in Ukraine. 11. State certification in breeding livestock. 12. State approval of breeding achievements in animal husbandry. 13. State support for animal husbandry. 14. Development of breeding plans and measures for their implementation. |

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| | <p>Practical classes</p> <ol style="list-style-type: none"> 1. Determination of the mean square deviation (s) and the coefficient of variability (C_v) according to the main selection traits. 2. Determination of the heritability coefficient (h^2) according to the main selection traits. 3. Evaluation of selection traits. Basic principles of mating and selection. 4. Selection of repair calves according to their origin and main economically useful traits. 5. Evaluation of dairy cattle. 6. Evaluation of beef cattle. 7. Evaluation of boars and sows. 8. The main selection traits in horse breeding. 9. Organization of zootechnical and breeding records as the basis of breeding business in animal husbandry. 10. Identification of different species of farm animals. 11. License and license terms. 12. State approval of breeding achievements. 13. Issuance of documents for the assignment of status to the subjects of the breeding business upon their state attestation. 14. Principles of breeding business plans. |
| Language of teaching | Ukrainian |