

Annotation of the selective educational component

Academic discipline	Safety and quality of aquacultural products
Lecturer	Tetiana Mazur Candidate of Veterinary Sciences, Associate Professor Department of General Ecology and Ecotrophology
The course and semester, when the discipline is planning to study	3 rd course, 5 th semester
Faculties whose students are invited to study discipline	Faculty of Ecology
List of competencies and learning-related outcomes that discipline provides	<p>According to the requirements of the educational and professional program "Aquatic bioresources and aquaculture", students must acquire the ability to acquire the following competencies:</p> <ul style="list-style-type: none"> – Integral Competence. The ability to solve complex specialized tasks and practical problems in the field of aquatic bioresources and aquaculture or in a learning process characterized by complexity and uncertainty of conditions, and involves the application of theories and methods of biology and applied sciences. – GC (general competence) 9. Ability to apply knowledge in practical situations. – GC 10. Ability to learn and master modern knowledge. – GC 11. Ability to identify, ask and solve problems. – GC 12. Ability to conduct research at the level. – SC (special competence) 1. Ability to analyze the conditions of the aquatic environment of natural origin, including anthropogenic impacts, in terms of fundamental principles and knowledge of aquatic bioresources and aquaculture. – SC 2. Ability to investigate biochemical, hydrobiological, hydrochemical, genetic, and other changes in objects. – SC 10. Ability to conduct experiments with aquatic bioresources and aquaculture independently, and to describe, analyze and critically evaluate experimental data. <p>The result of training in the discipline is the acquisition by students of such knowledge and skills:</p> <ul style="list-style-type: none"> - Know the international and national standards governing the safety and quality of aquaculture. - Be able to apply international and national standards in the field of aquaculture safety and quality - Know the main groups and sources of pollutants of the aquatic environment and aquatic organisms. - To be able to apply knowledge and understanding of biotopes of water bodies, life forms of aquatic organisms in

	<p>determining the impact of pollutants on aquatic organisms, indicators of safety, and quality of aquaculture products.</p> <ul style="list-style-type: none"> - Use knowledge and understanding of the origin and structure, lifestyles, distribution, and biological characteristics of fish-like and fish to determine the migration routes of pollutants in the aquatic environment, and the calculation of their accumulation coefficients in the body of hydrobionts. - Use knowledge and understanding of the biological characteristics of fish-like and fish in determining the safety and quality indicators of aquatic biological resources and aquaculture and products from them. - To analyze the results of studies of the ichthyopathological state of aquatic organisms in determining their safety and quality indicators. - Understand the importance of indicators of the ichthyopathological state of aquatic organisms for assessing the safety and quality of aquaculture.
Description of the discipline	
<p>Preconditions necessary for the study of the discipline</p> <p>The maximum number of students who can study simultaneously</p>	<p>The academic discipline "Safety and quality of aquaculture products" is based on the knowledge of such disciplines as "Introduction to the profession", "Hydrochemistry", "Hydrobiology", "Hydroecology", "Physiology and biochemistry of hydrobionts"</p> <p>Lectures - 50 students Practical - 25 students</p>
<p>Lesson plans</p>	<p>Lectures</p> <ol style="list-style-type: none"> 1. Contaminants in food and their pathways. Regulatory framework for food safety. 2. Nutritional value of hydrobionts. Rationing of contaminants in food products. Food safety criteria 3. Metal contamination of food hydrobionts. Toxic and hygienic characteristics of metal contaminants. Accumulation of radionuclides by hydrobionts. 4. Contamination of aquaculture products with pesticides and drugs. Their impact on the human body and the environment. 5. Dioxins and dioxin-like compounds, aromatic polycyclic hydrocarbons and nitroso compounds in fish products. Their toxic-hygienic characteristics and impact on aquatic ecosystems and the human body. 6. Microbiological, parasitic and mycological risk factors in fish and fish products. Microbiological risk factors for non-fish species. Mycotoxins in aquatic organisms. 7. Measures to reduce the content of cations of toxic metals and radionuclides in fish and seafood. Technological methods for reducing the residual amounts of pesticides in fish products.

	<p>8. Improvement of ecological and hygienic characteristics of smoked fish products. Reducing the content of dioxins and nitro compounds in fish and fish products</p> <p>9. Measures to counter the spread of foodborne infections and poisoning Methods for the disinfection of parasites in fish and fish products. Prevention of antibiotic contamination.</p> <p>Practical classes</p> <ol style="list-style-type: none"> 1. Safety briefing. Academic virtue. Methodology of hygienic regulation of xenobiotics in food products. 2. characteristics of the quality of food hydrobionts. 3. Sampling of food aquatic organisms for research. 4. Methods for monitoring the safety and quality of hydrobionts. 5. Organoleptic methods for the study of hydrobionts. 6. Special chemical methods for the study of hydrobionts. 7. Microbiological methods for the study of hydrobionts. 8. Parasitological methods for the study of hydrobionts. 9. Means of measuring equipment, testing, and additional equipment necessary for quality control of food aquatic organisms. 10. HACCP system at the facilities for the processing of food aquatic organisms. 11. Technological ways to reduce the content of xenobiotics in food hydrobands. 12. Requirements for storage and transportation of edible hydrobionts. 13. Final lesson.
Teaching language	Ukrainian