**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**
**SUMY NATIONAL AGRICULTURAL UNIVERSITY**

# EDUCATIONAL AND PROFESSIONAL PROGRAM

# «ANIMAL HEALTH AND HUSBANDRY»

**HIGHER EDUCATION LEVEL: First (Bachelor's) level**

**HIGHER EDUCATION DEGREE: Bachelor**

**FIELD OF KNOWLEDGE: Agriculture, Forestry, Fisheries and Veterinary Medicine**

**SPECIALTY: H2, Animal Husbandry**

**APPROVED by the Academic Council of Sumy National Agricultural University**
**«** 17 **»** June 2025
(Protocol № 21)
**Chairman of the Academic Council** _____ **Volodymyr LADYKA**

The Educational and Professional Program shall be implemented on
**«** 01 **»** September 2025
**Rector** _____ **Ihor KOVALENKO**
(Order № 268/09 on **«** 23 **»** June 2025)

**Sumy 2025**

# PREFACE

The Educational and Professional Program (EPP) for the training of higher education applicants at the first educational level in the specialty "Animal Husbandry" includes the total ECTS credits required for the degree; a list of graduate competencies; the regulatory content of training formulated in terms of learning outcomes; forms of certification; and requirements for the internal quality assurance system.

**Developed by the Project Group:**

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**LETTER OF APPROVAL**
**of the Educational and Professional Program**
**Animal Health And Husbandry**
**Level of Higher Education – First (Bachelor's) Level**

| **Head of the project group (guarantor of the program):** | |
|---|---|
| Doctor of Philosophy, Associate Professor of the Department of Feed Technology and Animal Nutrition | _____ **Oleksandr MYKHALKO** |
| **Members of the project group:** | |
| Candidate of Agricultural Sciences, Associate Professor, Head of the Department of Feed Technology and Animal Nutrition | _____ **Viktor OPARA** |
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# 1. PROFILE OF THE EDUCATIONAL PROGRAM
# H2, ANIMAL HUSBANDRY

| 1 – General information | |
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| **Full name of higher education institution and structural unit** | Sumy National Agrarian University<br>Faculty of Biology and Technology |
| **Higher education degree and qualification title in the original language** | Higher education degree – Bachelor<br>Qualification – Bachelor in Animal Husbandry |
| **Official name of educational program** | Animal Health And Husbandry |
| **Type of diploma and scope of educational program** | Single,<br>240 ECTS credits, study period 3 years 10 months |
| **Accreditation availability** | None |
| **Cycle/level** | NRQ of Ukraine – level 6, FQ–ENEA – first cycle, EQF–LLL – level 6 |
| **Prerequisites** | Having a complete general secondary education.<br>Having a degree of "junior bachelor" (educational and qualification level of higher education "junior specialist") in specialties within the field of knowledge N "Agriculture, forestry, fisheries and veterinary medicine" |
| **Language of instruction** | Ukrainian |
| **Duration of educational program** | |
| **Internet address of permanent placement of educational program description** | https://snau.edu.ua |

| 2 – Purpose of the educational program | |
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| Training of specialists capable of solving complex specialized tasks and practical problems of professional activity in the field of production and processing of livestock products, veterinary medicine, and breeding of agricultural animals, which are characterized by complexity and uncertainty of conditions, using modern knowledge in biology, genetics, veterinary medicine, and technologies of animal housing and reproduction. | |
| **3 – Characteristics of the educational program** | |
| **Subject area (field of knowledge, specialty, specialization (if any))** | Field of knowledge – N Agriculture, forestry, fisheries and veterinary medicine Specialty – H2 Animal husbandry |

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| **Orientation of the educational program** | Educational and professional.<br>Based on fundamental and professional aspects of problematic issues of production and processing of livestock products and veterinary medicine. |
| **Main focus of the educational program and specialization** | Training of highly qualified specialists in the technology of production and processing of livestock products with a veterinary focus.<br>Keywords: production and processing of livestock products, veterinary medicine, health, breeding, feeding, growing, management. |
| **Program features** | The educational and professional program includes educational and practical training that deepen professional skills, competencies and knowledge of special sections of fundamental and professionally oriented disciplines and thereby provide the opportunity to master professional programs for bachelors. |
| **4 – Graduates' suitability for employment and further education** | |
| **Employment eligibility** | The specialist is able to perform the specified professional work in accordance with the national classifier of occupations DK 003:2010 and/or the International Standard Classification of Occupations 2008 (ISCO–08) and in accordance with the obtained specialty and qualification in the field of knowledge H Agriculture, forestry, fisheries and veterinary medicine.<br>After completing the educational program in the specialty "Animal Husbandry", a specialist is able to perform professional work:<br>3211 – laboratory assistant (biological research)<br>3211 – laboratory technician (biological research)<br>3213 – zootechnician of a department (complex, agricultural area, farm)<br>3213 – breeding technician, feed production technologist<br>3213 – technologist for the production and processing of livestock products, specialist in the organization and management of a farm<br>3530, 3540 – technologist for the processing of livestock raw materials<br>3340 – industrial training instructor |
| **Further training** | Continuing education at the second (master's) level of higher education. Acquiring additional qualifications in the postgraduate education system. |
| **5 – Teaching and assessment** | |

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| **Teaching and learning** | Training of specialists capable of effectively solving complex specialized tasks and practical problems in the field of animal health and breeding, based on a student-centered, problem–oriented approach to learning. The educational process involves the active participation of students in the formation of an individual learning trajectory by choosing disciplines, participating in surveys and questionnaires. Learning is carried out through practical activities, self–study, work in small groups, research activities and close interaction with the teacher in the format of lectures, seminars, laboratory and practical classes, as well as using an electronic environment (Moodle platform) for programmed and problem-based learning.<br>Active learning – interactive teaching methods; problem–oriented learning; the principle of binary – active direct participation of the teacher and student; field trips; learning through practice; self–study; personalized learning – individual consultations; Moodle information and educational environment. |
| **Assessment** | Types of assessment:<br>– formative assessment – formative tasks and descriptive feedback to students from teachers, fellow students, a wide range of stakeholders;<br>– summative assessment – determining the level of achievement of the program learning outcomes by the higher education applicant;<br>– self-assessment.<br>Assessment methods: practical assessment, coursework, examination assessment. |
| **6 – Software competencies** | |
| **Integral competence** | The ability to solve complex specialized tasks and practical problems in the field of animal health, their breeding, issues of production and processing of livestock products, which involves the use of modern methods of diagnostics, prevention, reproduction, care, feeding and maintenance of farm animals, taking into account the requirements of bioethics, animal welfare, biosafety, as well as environmental and economic feasibility, in the context of the complexity and uncertainty of the production environment. |
| **General Competencies (GC)** | **GC 1.** Ability to exercise one's rights and responsibilities as a member of society, to understand the values of a civil (free, democratic) society and the necessity of its sustainable development, the rule of law, |

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| | and human and civil rights and freedoms in Ukraine.<br>**GC 2.** Ability to preserve and enhance moral, cultural, and scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society, and in the development of society, science, engineering, and technology; ability to use various types and forms of physical activity for active recreation and maintaining a healthy lifestyle.<br>**GC 3.** Ability to apply knowledge in practical situations.<br>**GC 4.** Knowledge and understanding of the subject area and understanding of professional activity.<br>**GC 5.** Ability to adapt and act in new situations.<br>**GC 6.** Ability to work in a team and possess interpersonal interaction skills.<br>**GC 7.** Ability to evaluate and ensure the quality of performed work.<br>**GC 8.** Commitment to environmental protection and sustainability.<br>**GC 9.** Ability to search for, process, and analyze information from various sources.<br>**GC 10.** Ability to make decisions and act in compliance with the principle of zero tolerance for corruption and any other manifestations of academic or professional dishonesty.<br>**GC 11.** Ability to use modern digital tools and technologies, create digital content, and protect information in professional activities.<br>**GC 12.** Ability for self–development, maintenance of one's physical and mental health, and participation in public life. |
| **Professional competencies of the specialty (PC)** | **FC 1.** Ability to use professional knowledge in the field of production and processing of livestock products for effective business management.<br>**FC 2.** Ability to use modern knowledge about methods of reproduction, patterns of individual development and breeding of animals for effective activities in the field of livestock farming.<br>**FC 3.** Ability to use knowledge of basic technologies of procurement, production and storage of feed to form the feed base of the enterprise.<br>**FC 4.** Ability to compile rations for different species and sex–age groups of animals and organize their |

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| | standardized feeding, taking into account existing financial and resource limitations.<br>**FC 5.** Ability to apply appropriate systems and methods of keeping farm animals and control and optimize the microclimate of technological premises.<br>**FC 6.** Ability to apply basic knowledge of economics, organization and management in the production and processing of livestock products.<br>**FC 7.** Ability to control technological processes during the production and processing of livestock products.<br>**FC 8.** Ability to control technological processes during the production and processing of pig products.<br>**FC 9.** Ability to control technological processes during the production and processing of poultry products.<br>**FC 10.** Ability to apply knowledge of morphology, physiology and biochemistry of various animal species to implement effective technologies for the production and processing of their products.<br>**FC 11.** Ability to apply knowledge of the organization and management of the technological process of processing livestock products for the effective conduct of economic activities of the enterprise.<br>**FC 12.** Ability to analyze the economic activities of the enterprise, maintain primary accounting of material assets, fixed assets, labor and its payment.<br>**FC 13.** Ability to use special knowledge to carry out sanitary and hygienic and preventive measures on farms and other facilities for the production and processing of livestock products.<br>**FC14.** Ability to recognize the structure and functions of cells, tissues, organs and systems of the animal body, as well as understand their development at different stages of ontogenesis.<br>**FC 15.** Ability to apply knowledge of microbiology, immunology and toxicology to identify pathogenic agents, assess the immune status of animals and prevent toxic lesions.<br>**FC 16.** Ability to use chemical, biochemical and molecular biological analysis methods to study metabolic processes, the composition of biological samples and understand the chemical basis of life.<br>**FC 17.** Ability to analyze hereditary traits, genetic processes and biotechnological methods to improve reproduction, selection and health of animals. |
| **7 – Learning outcomes** | |

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| **LO 1**. Ensure compliance with parameters and control technological processes for the production and processing of livestock products. |
| **LO 2.** Train employees of the enterprise in modern and new components of technological processes for the production and processing of livestock products. |
| **LO 3.** Perform functional duties, leveling the influence of various factors and production situations. |
| **LO 4.** Organize joint activities of the work team. |
| **LO 5.** Ensure the quality of the work performed. |
| **LO 6.** Influence compliance with environmental protection requirements. |
| **LO 7.** Search, process and summarize information using modern information technologies. |
| **LO 8.** Apply knowledge of reproduction and breeding of farm animals for effective management of the enterprise's economic activities. |
| **LO 9.** Choose rational technologies for the procurement, production and storage of feed. |
| **LO 10.** Provide standardized animal feeding. |
| **LO 11.** Ensure optimal conditions for keeping farm animals and the microclimate of technological premises. |
| **LO 12.** Apply the laws of economics, organization and management in the production and processing of livestock products. |
| **LO 13.** Ensure parameters and carry out technological control of modern technologies for milk and beef production. |
| **LO 14.** Ensure parameters and carry out technological control of modern technologies for pork production. |
| **LO 15.** Ensure parameters and carry out technological control of poultry production. |
| **LO 16.** Implement and use in practice scientifically based technologies for the production and processing of livestock products. |
| **LO 17.** Develop and effectively manage technological processes for the processing of livestock products. |
| **LO 18.** Carry out primary accounting of material assets, fixed assets, labor and its payment. |
| **LO 19.** Ensure compliance with biological safety at enterprises for the production and processing of livestock products. |
| **LO 20.** Apply international and national standards and practices in professional activities. |
| **LO 21.** Know the main historical stages of the development of the subject area. |
| **LO 22.** Determine the essence of physicochemical and biological processes that occur in the body of animals in normal and pathological conditions. |
| **LO 23**. Analyze the effectiveness of selected methods and means of keeping, feeding and treating animals, preventing 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. |

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| **LO 24.** Be able to use basic methods of microbiological and immunological diagnostics, interpret the results obtained to identify pathogenic agents, assess the state of the immune system and control infections in animals. | |
| **LO 25.** Monitor the causes of the spread of diseases of various etiologies and biological pollution of the environment with livestock waste, as well as materials and means for veterinary purposes. | |
| **LO 26.** Deeply understand the importance of national security, the preservation of Ukrainian statehood and the functioning of the institutions that protect it; demonstrate civic responsibility and active involvement in the processes of its maintenance, guided by the principles of value–oriented and ethical leadership in professional and public activities. | |
| **LO 27.** The ability to critically reflect on global challenges related to climate change, digitalization and social transformation, as well as apply digital tools to solve complex problems of sustainable development in a multicultural and democratic environment | |
| **8 – Resource provision for program implementation** | |
| **Human resources** | The scientific and pedagogical staff of the educational program meets the requirements of current legislation and licensing conditions. The implementation of the educational program involves scientific and pedagogical workers who are employees of Sumy National Agrarian University by their main place of work, have scientific degrees and academic titles. Also, 100% of teachers of professionally oriented disciplines have English at a level not lower than B2, which is confirmed by international certificates. Advanced training and internships of scientific and pedagogical staff are provided at least once every five years. The educational process is provided by specialized departments responsible for the training of higher education applicants. |
| **Logistics and technical support** | The material and technical support includes classrooms, laboratories, computer workstations, multimedia and laboratory equipment, which ensure the conduct of classes in professionally oriented disciplines in accordance with the curriculum. Training laboratories are equipped with the necessary tools and equipment. Access to local computer networks, wireless Internet connection points with unlimited access are provided.<br>The educational process also includes field practical classes on the basis of specialized enterprises and institutions of various forms of ownership, as well as training and industrial practices. Students have access to a full social and household infrastructure, and the |

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| | number of places in dormitories corresponds to real needs. |
| **Information and educational and methodological support** | Information and educational and methodological support of the educational process includes the use of the scientific library of Sumy NAU, electronic resources, specialized software, multimedia and interactive learning technologies, author's developments of scientific and pedagogical workers. Students are fully provided with methodological and information materials for all types of classes: lectures, practical, seminar, laboratory, coursework, independent work, as well as internship programs. The library has a sufficient number of textbooks, manuals, domestic and foreign professional periodicals. Reading rooms are provided with free access to the Internet. Materials of educational and methodological support of the educational program are posted on the official website of the university www.snau.edu.ua, in the repository repo.snau.edu.ua and on the distance learning platform cdn.snau.edu.ua/moodle. |
| **9 – Academic mobility** | |
| **National credit mobility** | Possible on the basis of agreements on academic credit mobility with higher education institutions of Ukraine. Transfer of credits obtained at other universities of Ukraine is allowed, provided that the level of training and competencies acquired by applicants correspond. |
| **International credit mobility** | Possible on the basis of agreements on academic credit mobility with higher education institutions of other countries. Within the framework of the EU Erasmus+ program on the basis of bilateral agreements between Sumy NAU and educational institutions of partner countries. |
| **Education of foreign higher education applicants** | Training is provided for foreign higher education applicants. |

## 2. List of components of the educational and professional program and their logical sequence

2.1. List of modules

| **Code n/a** | **Components of the educational program (study subjects, course projects (works), practices, qualification work)** | **ECTS** | **Control** |
|---|---|---|---|
| **Compulsory educational components** | | | |
| EC 1. | Historical and philosophical studies | 5 | Exam |

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|---|---|---|---|
| EC 2. | Foreign language[1] | 5 | Test, exam |
| EC 3. | Citizenship education | 5 | Exam |
| EC 4. | Ukrainian language and academic writing[2] | 5 | Exam |
| EC 5 | National Resilience Studies[3] | | |
| EC 5.1 | Psychological adaptation | 3 | Differentiated Test |
| EC 5.2 | Sustainable development in the digital age | 3 | Differentiated Test |
| EC 6 | Emergency protection | 5 | Differentiated Test |
| EC 7 | Animal anatomy | 5 | Exam |
| EC 8 | Veterinary control and ecology in animal husbandry | 5 | Exam |
| EC 9 | Fundamentals of veterinary technological activities | 5 | Test |
| EC 10 | Digital technologies in animal health | 5 | Exam |
| EC 11 | Physiology | 5 | Exam |
| EC 12 | Biochemistry | 5 | Exam |
| EC 13 | Breeding and reproduction of farm animals | 10 | Test, Exam |
| EC 14 | Rationing of feeding of farm animals | 5 | Exam |
| EC15 | Sanitary and hygienic requirements for keeping animals | 10 | Test, Exam |
| EC 16 | Economics, organization and management in animal husbandry | 5 | Exam |
| EC 17 | Milk and beef production technology | 10 | Test, Exam |
| EC 18 | Pork production technology | 10 | Test, Exam |
| EC 19 | Poultry breeding | 5 | Exam |
| EC 20 | Processing of livestock products | 5 | Exam |
| EC 21 | Microbiology and Immunology | 5 | Exam |
| EC 22 | Biosecurity in animal husbandry | 5 | Exam |
| EC 23 | Organic and inorganic chemistry | 5 | Exam |
| EC 24 | Cytology, histology and embryology | 5 | Exam |
| EC 25 | Literature Search and Technology Writing | 5 | Exam |
| EC 26 | Scientific research methodology | 5 | Test |
| EC 27 | Internal diseases of animals | 5 | Test |
| EC 28 | Professional English Course | 5 | Exam |
| EC 29 | Biotechnology | 5 | Exam |
| EC 30 | ***Educational practice*** | 4 | Test |
| EC 31 | ***Production practice*** | 5 | Differentiated Test |
| EC 32 | ***Final certification*** | 5 | Exam |
| **Total volume of compulsory OPP components** | | **180** | |
| **Selective educational components[4]** | | | |
| | **General training cycle** | | Tests |

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|---|---|---|---|
| S 1 | Physical Education with selective activities* | 5 | |
| S 2 | Selective humanitarian discipline * | 5 | |
| S 3 | Selective discipline 1* | 5 | |
| S 4 | Selective discipline 2* | 5 | |
| **Professional training cycle** | | | |
| S 5 | Selective discipline 3** | 5 | |
| S 6 | Selective discipline 4** | 5 | |
| S 7 | Selective discipline 5** | 5 | |
| S 8 | Selective discipline 6** | 5 | |
| S 9 | Selective discipline 7** | 5 | |
| S 10 | Selective discipline 8** | 5 | |
| S 11 | Selective discipline 9** | 5 | |
| S 12 | Selective discipline 10** | 5 | |
| **The total volume of selective components** | | **60** | |
| **General scope of the educational program** | | **240** | |

Notes

1. The mandatory component of general training EK4 Foreign Language for higher education applicants – citizens of the PRC is implemented as the educational component "Language training for a professional direction"

2. The mandatory component of general training EK2 Ukrainian language and academic writing for higher education applicants – citizens of the PRC is implemented as the educational component OK2 Ukrainian language

3. The mandatory component of general training EK5 National Resilience Studies for higher education applicants from among foreign citizens is implemented as the educational component EK5 Psychological Adaptation.

4. Elective components of the educational and professional program are chosen by higher education applicants for a total of 60 credits in accordance with the recommendations for organizing the study of free choice academic disciplines:

* Elective components S 1 – S 4 are chosen from the proposed list of the university catalog for a total of 20 credits;

** Elective components S 5 – S 12 are chosen from the proposed list of elective components of professional (specialized) training for EPP for a total of 40 credits.

## Elective Components

## General Education Cycle

1. Physical Education
2. English Language
3. University-wide Course
4. University-wide Course

## Professional Training Cycle

5. Pathology
6. Clinical Diagnosis of Animal Diseases
7. Veterinary Pharmacology
8. Veterinary Surgery

9. Veterinary Obstetrics and Gynecology
10. Veterinary Parasitology
11. Epizootology and Infectious Diseases
12. Veterinary Professional Terminology
13. Zoology with Fundamentals of Veterinary Arachnoentomology
14. Animal Health Protection
15. Physiotherapy and Physical Prophylaxis
16. Veterinary Epidemiology
17. Diseases of Small Companion Animals
18. Diseases of Honey Bees
19. Poultry Diseases
20. Diseases of Swine
21. Embryo Engineering Biotechnology
22. Prevention of Animal Diseases
23. Standardization of Livestock Products
24. International Standards of Animal Welfare and Safety
25. Feed and Biologically Active Additives in Intensive Livestock Production
26. Machinery and Mechanisms of Production Processes in Livestock and Processing Industries
27. Molecular Biology
28. Design and Construction of Enterprises for the Production and Processing of Livestock Products

*From the list provided, the student chooses 12 disciplines.*.

## 2.2. Structural and logical scheme of EPP

A brief description of the logical sequence of studying the components of the educational program.

Students have the right to choose academic disciplines within the limits provided by the relevant educational program and work curriculum, in the amount of at least 25 percent of the total number of ECTS credits provided for this level of advanced education. At the same time, applicants of a certain level of higher education have the right to choose academic disciplines offered for other levels of higher education in accordance with the Regulation on the Organization of the Study of Academic Disciplines of Free Choice of Students (SNAU, 2020).

## Structural and logical scheme of training

| Code of the subject | name of subject | I year 24–25 | | II year 25–26 | | III year 26–27 | | IV year 27–28 | |
|---|---|---|---|---|---|---|---|---|---|
| | | semesters | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | **1. Compulsory educational components** | | | | | | | | |
| | **1.1. Educational disciplines of general and fundamental training** | | | | | | | | |
| EC 1. | Historical and philosophical studies | • | • | | | | | | |
| EC 2. | Foreign language | • | • | | | | | | |
| EC 3. | Citizenship education | | • | | | | | | |
| EC 4. | Ukrainian language and academic writing | • | | | | | | | |
| EC 5. | National Resilience Studies: | | | | | | | | |
| EC 5.1 | Psychological adaptation | | | • | | | | | |
| EC 5.2 | Sustainable development in the digital age | | | • | | | | | |
| EC 6. | Emergency protection | | • | | | | | | |
| EC 7. | Animal anatomy | • | • | | | | | | |
| | **1.2. Educational disciplines of special (professional) training** | | | | | | | | |
| EC 8. | Veterinary control and ecology in animal husbandry | • | | | | | | | |
| EC 9. | Fundamentals of veterinary technological activities | • | | | | | | | |
| EC 10. | Digital technologies in animal health | | | | | | | • | |
| EC 11. | Physiology | | | | • | | | | |
| EC 12. | Biochemistry | | | | • | | | | |
| EC 13. | Breeding and reproduction of farm animals | | | | | • | • | | |
| EC 14. | Rationing of feeding of farm animals | | | | | • | • | | |
| EC 15. | Sanitary and hygienic requirements for keeping animals | | | | | | • | | |
| EC 16. | Economics, organization and management in animal husbandry | | | | • | | | | |
| EC 17. | Milk and beef production technology | | | | | | | • | • |
| EC 18. | Pork production technology | | | | | | | • | • |
| EC 19. | Poultry breeding | | | | | • | | | |

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| EC 20. | Processing of livestock products | | | | | | • | | |
| EC 21. | Microbiology and Immunology | | | | | | | • | |
| EC 22. | Biosecurity in animal husbandry | | | | | | | | • |
| EC 23. | Organic and inorganic chemistry | | | | | • | | | |
| EC 24. | Cytology, histology and embryology | | | | | • | | | |
| EC 25 | Literature Search and Technology Writing | | • | | | | | | |
| EC 26. | Scientific research methodology | | | • | | | | | |
| EC 27. | Internal diseases of animals | | | | | | | | • |
| EC 28 | Professional English Course | | | | • | | | | |
| EC 29 | Biotechnology | | | • | | | | | |
| EC 30 | ***Educational practice*** | | | • | | | | | |
| EC 31 | ***Production practice*** | | | | | | • | | |
| EC 32 | ***Final certification*** | | | | | | | | • |
| **2. Selective educational components** | | | | | | | | | |
| **2.1. Educational components of general competencies training (from the list of university propositions)** | | | | | | | | | |
| S 01 | Physical Education with selective activities | • | • | • | • | | | | |
| S 02 | Selective humanitarian discipline | | • | | | | | | |
| S 03 | Selective discipline 1 | | | • | | | | | |
| S 04 | Selective discipline 2 | | | | | • | | | |
| **2.2. Educational components of special (professional) competencies training (from the list of veterinary scientist`s and practitioner`s propositions)** | | | | | | | | | |
| S 05 | Selective discipline 3 | | • | | | | | | |
| S 06 | Selective discipline 4 | | • | | | | | | |
| S 07 | Selective discipline 5 | | | | • | | | | |
| S 08 | Selective discipline 6 | | | | | • | | | |
| S 09 | Selective discipline 7 | | | | | | | • | |
| S 10 | Selective discipline 8 | | | | | | | • | |
| S 11 | Selective discipline 9 | | | | | | | | • |
| S 12 | Selective discipline 10 | | | | | | | | • |

## 3. Form of Attestation of Higher Education Applicants

Attestation of graduates of the educational and professional program in specialty H2 "Animal Science" is carried out in the form of a public defense of a qualification paper and an attestation examination and is completed by issuing a state–recognized diploma awarding the Bachelor's degree with the qualification: Bachelor in Animal Husbandry.

### Requirements for the Qualification Paper

The qualification paper shall involve solving a complex specialized task or a practical problem in the production or processing of livestock products, characterized by complexity and uncertainty of conditions, using theories and methods of biology and applied sciences. The qualification paper must not contain academic plagiarism, falsification, or fabrication. The qualification paper must be published in the institutional repository of Sumy National Agrarian University.

The attestation examination provides for the assessment of learning outcomes defined by the educational program and is conducted in written form.

Attestation is carried out openly and publicly.

## 4. Matrix of Compliance of Program Competencies with the Components of the Educational Program

| | EC1 | EC2 | EC3 | EC4 | EC5.1 | EC5.2 | EC6 | EC7 | EC8 | EC9 | EC10 | EC11 | EC12 | EC13 | EC14 | EC15 | EC16 | EC17 | EC18 | EC19 | EC20 | EC21 | EC22 | EC23 | EC24 | EC25 | EC26 | EC27 | EC28 | EC29 | EC30 | EC31 | EC32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GC1** | | | • | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **GC2** | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **GC3** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| **GC4** | | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | • |
| **GC5** | | | | | • | | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **GC6** | • | | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| **GC7** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| **GC8** | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | |
| **GC9** | | • | | • | | | | | | | • | | | | | | | | | | | | | | | | • | | | | | | • |
| **GC10** | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **GC11** | | | | | | • | | | | | • | | | | | | | | | | | | | | | | | | | | | | |
| **GC12** | | | | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FC1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • |
| **FC2** | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | | • | • |
| **FC3** | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | • | • |
| **FC4** | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | • | • |
| **FC5** | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | • | • |
| **FC6** | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | • |
| **FC7** | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | • | • |
| **FC8** | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | • | • |
| **FC9** | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | • | • |
| **FC10** | | | | | | | | • | | | | • | • | | | | | | | | | | | | | | | | | | | | • |
| **FC11** | | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | • | • |
| **FC12** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • |
| **FC13** | | | | | | | | | | | | | | | | • | | | | | | | • | | | | | | | | | | • |
| **FC14** | | | | | | | | • | | | | • | | | | | | | | | | | | | • | | | | | | | | • |
| **FC15** | | | | | | | | | | | | | | | | | | | | | | • | | | | | | • | • | | | | • |
| **FC16** | | | | | | | | | | | | | • | | | | | | | | | | | • | | | | | • | | | | • |
| **FC17** | | | | | | | | | | | | | | | | | | | | | | | | | | • | | • | | • | | | • |

## 5. Matrix of Provision of Program Learning Outcomes (PLOs) by the Relevant Components of the Educational Program

| | EC1 | EC2 | EC3 | EC4 | EC5.1 | EC5.2 | EC6 | EC7 | EC8 | EC9 | EC10 | EC11 | EC12 | EC13 | EC14 | EC15 | EC16 | EC17 | EC18 | EC19 | EC20 | EC21 | EC22 | EC23 | EC24 | EC25 | EC26 | EC27 | EC28 | EC29 | EC30 | EC31 | EC32 | EC1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LO1** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | |
| **LO2** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| **LO3** | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **LO4** | | | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | |
| **LO5** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| **LO6** | | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | |
| **LO7** | | • | | • | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | |
| **LO8** | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | | | |
| **LO9** | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | | |
| **LO10** | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | | |
| **LO11** | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | | |
| **LO12** | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | |
| **LO13** | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | |
| **LO14** | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | |
| **LO15** | | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | |
| **LO16** | | | | | | | | | | | | | | | | | | | | | | • | | | | | | • | | | | • | | |
| **LO17** | | • | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | |
| **LO18** | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | | | | | | |
| **LO19** | | | | | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | |
| **LO20** | | • | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | • | | |
| **LO21** | • | | | | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | |
| **LO22** | | | | | | | | | • | | | | • | • | | | | | | | | | | | • | | • | | | | • | | | |
| **LO23** | | | | | | | | | | | | | | | | | | | | | | | • | | | • | | | • | • | | • | | |
| **LO24** | | | | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | |
| **LO25** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • | • | | | | |
| **LO26** | | | • | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **LO27** | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**List of Regulatory Documents on Which the Educational and Professional Program Is Based**

1. Standard of Higher Education of Ukraine for the first level of higher education (Bachelor's degree), field of knowledge H – Agriculture, Forestry, Fisheries and Veterinary Medicine, specialty H2 – Animal Science, approved and enacted by the Order of the Ministry of Education and Science of Ukraine dated 30 August 2024 No. 1021.
2. Law of Ukraine "On Higher Education" dated 01 July 2014 No. 1556–VII. Available at: http://zakon4.rada.gov.ua/laws/show/1556–18.
3. Law of Ukraine "On Education" dated 05 September 2017 No. 2145–VIII. Available at: http://zakon5.rada.gov.ua/laws/show/2145–19.
4. Resolution of the Cabinet of Ministers of Ukraine dated 23 November 2011 No. 1341 "On Approval of the National Qualifications Framework".
5. Resolution of the Cabinet of Ministers of Ukraine dated 29 April 2015 No. 266 "On Approval of the List of Fields of Knowledge and Specialties under Which Higher Education Applicants Are Trained".
6. Resolution of the Cabinet of Ministers of Ukraine dated 30 December 2015 No. 1187 "On Approval of the Licensing Conditions for Educational Activities", as amended by the Resolution of the Cabinet of Ministers of Ukraine No. 347 dated 10 May 2018.
7. Order of the Ministry of Education and Science of Ukraine dated 06 November 2015 No. 1151 "On the Peculiarities of Implementing the List of Fields of Knowledge under Which Higher Education Applicants Are Trained, Approved by the Resolution of the Cabinet of Ministers of Ukraine dated 29 April 2015 No. 266".
8. Order of the Ministry of Education of Ukraine dated 01 June 2016 No. 600 "On Approval and Enactment of Methodological Recommendations for the Development of Higher Education Standards".
9. Order of the Ministry of Economic Development and Trade of Ukraine dated 18 November 2014 No. 1361 "On Approval of Amendments to the National Classifier of Ukraine DK 003:2010" (Amendment No. 2).
10. National Classifier of Ukraine: "Classifier of Occupations" DK 003:2010. Kyiv: Sotsinform Publishing House, effective as of 01 November 2010.