

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

**APPROVED**

Doctor of Agricultural Sciences,  
Professor, Academician of the  
National Academy of Agrarian  
Sciences of  
Ukraine \_\_\_\_\_  
V.I. Ladyka

"" \_\_\_\_\_ 2018

## **Evaluation Report of the Study Programme**

HIGHER EDUCATION LEVEL -	<b>Second (Master's) level</b> <i>(name of higher education level)</i>
STUDY OF HIGHER EDUCATION -	<b>Master</b> <i>(the title of higher education)</i>
SECTORAL SCIENCE -	<b>21 Veterinary Medicine</b> <i>(code and industry name)</i>
SPECIALTY -	<b>211 Veterinary Medicine</b> <i>(code and specialty name)</i>

Sumy, 2018

## **Structure of the Evaluation Report of the Study Programme**

### Introduction

1. Objectives of programme evaluation report
2. Coordinating department
3. Members of programme quality board
4. Description of the Study Programme
  - 4.1. Profile of the programme
  - 4.2. Profile of the graduate
  - 4.3. Study plan
  - 4.4. Learning outcomes of the programme
  - 4.5. State examination courses
  - 4.6. External chairman of the State Exam and Theses Defence Committees
5. Evaluation of the Study Programme
  - 5.1. Basic statistics
  - 5.2. Nationalities of students
  - 5.3. Success rate of current finalist
  - 5.4. Current entrance examination process
  - 5.5. Evaluation of courses by students
  - 5.6. Availability of study materials
  - 5.7. Results of group discussion with students
  - 5.8. Scientific outcomes of course supervisors
  - 5.9. Inter-connection and structure of teaching and examination methods of individual courses
  - 5.10. Evaluation and success rate of individual courses
  - 5.11. Evaluation of teachers
  - 5.12. Participation of external experts and foreigner teachers
  - 5.13. Internationalization – number of student mobilities per academic year
  - 5.14. List of topics for MDs Thesis
  - 5.15. Overall Results of the MDs Final State Exams – or with the protection of diplomas
  - 5.16. Report from alumni questionnaire
  - 5.17. Data on employability of graduates
  - 5.18. Examples of recent programme graduates
6. Final internal and external review and concluding remarks

## Introduction

Sumy National Agrarian University is one of the leading agrarian educational institutions in Ukraine for training personnel for the agro-industrial complex, whose specialty is accredited by the Ministry of Education and Science of Ukraine and the European accreditation agency ACQUIN. The University traditionally takes the first place in the ranking of agrarian universities in Ukraine. It cooperates with almost two dozen of research institutes of the National Academy of Agrarian Sciences and the National Academy of Sciences of Ukraine.

Sumy National Agrarian University was founded in April, 1977 as a branch of Kharkiv Agricultural Institute named after V.V. Dokuchaev. In 1990, the branch was reformed into the institute. Sumy State Agrarian University was founded in accordance with the Resolution of the Cabinet of Ministers of Ukraine in July 15, 1997 № 744. Since 2005, the University is headed by Ladka Volodymyr Ivanovich (Doctor of Agricultural Sciences, Professor, Academician of the National Academy of Agrarian Sciences of Ukraine).

By the Decree of the President of Ukraine in August 7, 2001 No. 591/2001 Sumy State Agrarian University was granted the status of the National University. Location of the University: 160 Herasym Kondratiev, Sumy, 40021, Ukraine tel. (0542) 78-74-76, fax (0542) 78-74-78, admin@sau.sumy.ua; Web site: www.sau.sumy.ua

Sumy National Agrarian University conducts training in 26 specialties for III, IV levels of accreditation.

The University trains highly qualified specialists for the agrarian sector and other sectors of the country's economy with profound learning of foreign languages and modern information technologies under such accredited economical educational programs ("bachelor" and "master"), namely: Economy; Marketing; Finance, Banking and Insurance; Accounting and Taxation; Management; Management of Organizations and Administration; Management of Foreign Economic Relations and European Integration; Logistics; Public Administration and Administration; Entrepreneurship, Trade and Stock-Taking Activity; Administrative Management; Regional management.

All specialties are organizationally united in 3 educational and research institutes, 8 departments, Institute of Post Diploma Education and Consulting, the department of pre-university training, vocational guidance and marketing. The teaching and research processes are provided by 51 chairs, with 54 Doctors of Sciences and 44 Professors, 267 Candidates of Sciences and 191 Associate Professors (up to 20.12.2017).

The staff members are: Academician of the National Academy of Science of Ukraine, Academician of the Academy of Economic Sciences, Academician of the Transport Academy of Civil Engineering, Academician of the New York Academy of Sciences, 4 Corresponding Members of the ANU in Engineering, 3 Honored Workers of National Education, 2 Honored Veterinary Medicine Workers, 2 Honored Workers

of Science and Technology of Ukraine, 5 Excellents of Education in Ukraine, Honored Builder of Ukraine, Honored Worker of Agriculture of Ukraine, State Prize Laureate, other highly skilled teachers. Sumy NAU is the coordinator of scientific research in the region on the problems of the country agricultural sector development

Annually Sumy NAU conducts scientific research on orders of the Ministry of Education and Science of Ukraine and international grants. The university has formed some scientific schools in various spheres of scientific research.

The university operates the principle of continuous computerization: today in the university there are more than 980 computer places and the number of contact display time for each student, depending on the specialty, ranges from 250 to 350 hours.

Students and teachers have the opportunity to learn information about the latest achievements of science through the international information network the INTERNET. The university has a local computer network.

The strategic direction of the development of economic education at the university is the internationalization of the educational process: the teaching of disciplines is carried out in 4 languages (Ukrainian, Russian, English and German).

The material and technical equipment of the specialized training rooms and laboratories of the SNAU is up-to-date, satisfies the requirements and allows to fully ensure the implementation of educational programs in the disciplines.

The material and technical base of the university consists of 8 teaching and laboratory premises with a total area of 243185.4 m<sup>2</sup> with a modern assembly hall for 700 seats. The population of students at the University is located in 4 hostels for 2,167 places.

The principle of continuous computerization of the educational process is in place at the university: today there are more than 980 computer places in the university and the number of contact time for each student, depending on the specialty, ranges from 250 to 350 hours. The university has a local computer network. For the organization of the general computer network SNAU used 10 servers. There is modern science library in SNAU (web site: <http://library.sau.sumy.ua/>). Everyone, who studies or works at University can use different resources, such as: books, journals, electronic resources (SNAU's local library, Bookva library <http://www.bookva.org/tags>, [OpenEdition Books](#), Electronic resources of the Vernadsky National Library of Ukraine etc.).

The University's website is participating in the international Webometrics ranking and ranked 72 out of 295 possible and ranked 26th among 101 in the national ranking as a result of monitoring the openness of websites of higher educational institutions of Ukraine.

The research work is concentrated in 19 laboratories and post-graduate studies work in 20 specialties. The library of Sumy NAU has more than 500 thousand copies. The structure includes scientific, educational, artistic and reference information editions, electronic textbooks of distance learning forms with access to the INTERNET.

The priority direction of Sumy National Agrarian University is the study and implement the modern practices of the best universities in the world, partnerships in them by teachers, and the practice of students.

Substantial and productive relationships have been developed with the educational institutions of the Czech Republic, Poland, Germany, England, Ireland, Denmark, France, and the Netherlands. We have established direct links with the University of Agriculture (VOKU) of Austria, in conjunction with the High School Vienna, join the Master's Degree course in Agrarian Management, the training of which is carried out in accordance with internationally recognized plans and programs, and provides the opportunity to receive a master's degree in Germany at the same time "Master of Business Administration" (teaching in Ukrainian and German).

Cooperation with universities in the USA (Minnesota, Ohio, Wisconsin, California) allows students to take semiannual or annual practice on agrarian farms.

International cooperation in joint projects allows our students and teachers to improve their linguistic and professional level in a high-tech agrarian industry and to disseminate their experience in Ukraine. Students of SNAU have practise on European and the US farms. International activities are carried out through contacts with international funds, the involvement of foreign specialists in the teaching of choosen special courses for students and participation in short-term workshops (cycle events) for business organizations and consumer cooperatives, cooperation with higher educational institutions abroad, exchange of scientific and pedagogical workers.

Together with the Bila Tserkva NAU Sumy National Agrarian University won the European Union Erasmus + CA1 "International Credit Mobility" project. The participation in the program contributes to the improvement of the quality of professional education and the level of knowledge of the English language in order to strengthen scientific and academic cooperation, modernization of educational materials, tools and methods, activation of scientific research.

SNAU is a member of: the International Professional Association for Agricultural Management and Rural Development, the World Scientific Organization for Poultry Production (WPSA-World Poultry Science Association), the World Veterinarians Organization (World Veterinarian Association), the European Association of Agricultural Faculties (ESAF- European Society of Agricultural Faculties), the associations of deans of economic specialties European Universities (Ukrainian-Polish-Slovak Forum), Universities Association under the V4 V4, Network of Natural Sciences Universities of Central and Eastern Europe (CASEE).

The University maintains close contacts with about 200 enterprises of different industry orientation and territorial location. Cooperation gives the positive results both in the sphere of internship placement and further placement of students, as well as in obtaining reliable information for conducting thorough scientific research in all spheres of scientific interests of the SNAU.

The material and technical base of the university consists of 8 teaching and laboratory premises with a total area of 243185.4 m<sup>2</sup> with a modern assembly hall for 700 seats. The population of students at the University is 4 hostels for 2,167 places.

The high level of educational material base, the professionalism of the department, national and international recognition of the activity results of a significant contribution to the development of national education and science give the right to consider Sumy National Agrarian University as a full-fledged educational, scientific and cultural center.

**The Department of Veterinary Medicine provides educational process in specialties:**

- 211 "Veterinary Medicine", an educational degree "Bachelor", the term of study is 4 years (after general secondary education).
- 212 "Veterinary hygiene, sanitation and expertise" an educational degree "Bachelor", the term of study is 4 years (after general secondary education).
- 211 "Veterinary Medicine" an educational degree "Bachelor", the term of study is 3 years (after college).
- 211 "Veterinary Medicine" an educational degree "Master", the term of study is 1,4 years (after the ED "Bachelor").
- 212 "Veterinary Hygiene, Sanitation and Expertise" an educational degree "Master", the term of study is 1,4 years (after the ED "Bachelor").
- 211 "Veterinary Medicine" an educational degree "Master", the term of study is 6 years (after general secondary education).
- 212 "Veterinary Hygiene, Sanitation and Expertise" an educational degree "Master", the term of study is 6 years (after general secondary education).

**Providing of educational process at the Department of Veterinary Medicine.**

The educational process at the faculty is provided by 6 chairs, 5 of which are graduation.

Highly qualified specialists with a sufficient experience of both scientific and pedagogical activity work at the faculty. 6 departments are headed by professors.

The level of scientific and pedagogical staff is high, they provide the educational process for students in the specialty "Veterinary Medicine". It should be noted that 95% of doctors and PhD of veterinary sciences participate in the training of bachelors in this specialty, incl. 13 Doctors - Professors and 46 PhD of veterinary sciences (Associate Professors).

The chairs provide training of scientific and pedagogical staff through doctoral, postgraduate studies and applicants, the continuing improvement of the skills of scientific and pedagogical workers and in accordance with the schedules, they take internship and advanced training in various forms at universities, research institutes, institutions of the State Veterinary Medicine etc.

The Department of Veterinary Medicine has a separate educational building with a total area of about 5 thousand m<sup>2</sup>, in a 2-storied building where 7 chairs are located. The Department has 4 lecture rooms for 150 places each, 7 grounds for animal training, and the rest of the area is distributed in accordance with the needs of each chair and disciplines that are taught at the chairs of other departments. In addition, there is a veterinary clinic and an educational scientific laboratory at the

department, where 18 heads of cattle, sheep and other kinds of farm animals and poultry (geese, chickens, turkeys, guinea fowls, ducks), as well as other types of small laboratory animals are kept. A separate unit of the clinic is the Equestrian School, where 19 horses of various breeds are kept. All animals are for the educational process.

The sanitary condition of the premises of the department is satisfactory. To decontaminate the dead bodies of animals the biothermic pit (pit Beckari) is used.

The level of educational process is quite high. Each training laboratory is provided with the equipment, instruments and tools.

There are 2 computer classes at the department, which are used by students and staff for completing theses and conducting final control. The module-rating system was introduced into the educational process.

Students use the library and the reading rooms at the department and the university. They are equipped with educational and methodological literature. The practical training is carried out on the basis of state veterinary institutions, private hospitals, on basic farms of various forms of ownership in various regions of Ukraine. In general, the material and technical base of the department provides a modern level of training and educational process. The department has its own specialized journal "Visnyk", which is published 2 times a year.

Sumy NAU takes the second place in the rating among higher educational institutions of Ukraine in agrarian sphere.

## 1. Objectives of programme evaluation report

The educational process of Sumy National Agrarian University is a structured system of organizational and didactic measures aimed at the implementation of the education content at the certain educational level to the requirements according to European higher educational area and state standards.

The educational process is based on the principles of science, humanism, democracy, continuity and the degree of education. It focuses on the formation of an educated, harmoniously developed personality, capable of continuous knowledge updating, professional mobility and accelerated adaptation under conditions of the transitivity of the economy.

The concept of educational activities of Sumy National Agrarian University is determined by its status as a national higher educational institution of agrarian profile whose main goal is further integration into the world educational system and establishment in the status of international.

Description of the internal quality assurance system of educational activities Sumy National Agrarian University is guided by the requirements of Articles 10, 16, 32 of the Law of Ukraine "On Higher Education "dated 01.07.2014 №1556-YII and "European Standards and Guidelines for Quality Assurance in the European Higher Education Area "in Sumy National Agrarian University (further - the University), according to the decision of Academic Council (No. 11 dated April 29, 2016) and the order of the rector

The University was founded from No. 174-K in April 29, 2016, the sector was created methodological provision for quality management of educational activity and quality higher education. The main tasks of the sector:

**I. Maintenance of the quality assurance system for educational activities and Quality of Higher Education (Internal Quality Assurance System):**

- definition of principles and procedures for ensuring the quality of higher education;
- monitoring and periodic review of educational programs;
- annual assessment of applicants for higher education, scientific and pedagogical staff of the higher educational institution and regular publicizing the results of such evaluations on the official website of the higher educational institution, on information stands and in any other way;
- provision of advanced training in pedagogical, scientific and scientific and pedagogical workers;
- ensuring the availability of the necessary resources for the organization of educational process, including independent work of students, for each educational institution the program;
- ensuring the availability of information systems for effective management of educational process;
- ensuring publicity of information about educational programs, degrees of higher education and qualifications; - providing an effective prevention and detection



system academic plagiarism in the scientific works of the university staff and applicants for higher education;

- other procedures and measures for the provision of educational quality activities and quality of higher education.

## II. Accompanying the methodological support of the educational process:

- educational and methodical consulting of scientific and pedagogical university staff;

- organization of continuous improvement of scientific and pedagogical staff professional education and qualifications;

- assessment of the quality and effectiveness of teaching and methodological work of scientific and pedagogical workers according to state educational and educational qualification standards;

- organization of researches in the field of development and the technology implementation of teaching and education, improvement forms and methods of work with scientific and pedagogical staff of the university;

- identification, testing and implementation in practice perspective scientific-pedagogical experience, educational and methodical literature, educational technologies and science achievements;

- an effective system organization of methodological work aimed on the development of creative personality of scientific and pedagogical workers;

- educational and methodological counseling and coordination the activities of departments, chairs;

- conducting of informative and reference work, support of the base scientific and pedagogical information, etc.;

- organization of development, approbation and distribution of educational methodological materials;

- information support on organization, conduction and improvement of the educational process;

- methodical support of the creation of educational and methodical complexes for new disciplines;

- concentration, systematization of literature on questions of teaching and methodological work, keeping it in the register and giving teachers for use;

- organization and holding of scientific and methodological conferences on improvement of teaching and methodical work;

- regulation development of the organization and conduction of teaching methodological work in accordance with the standard provisions of the relevant ministries;

### Organize contests for:

- the best lecturer of the university;

- the best teaching-methodical complex of discipline;

- the best statement of work on the computerization of the educational process;

- the assistance to teachers in the preparation of educational methodological literature;

- the preparation of scientific and methodological issues to be approved at the meetings Methodological Council of the University;
- the maintenance of computer databases of methodical support of educational disciplines.

In accordance with European Standards using European Credit Transfer System, taking into account the National Qualification Framework, requirements of current legislation and learning outcomes A set of measures, criteria and procedures for their evaluation has been developed according to improvement of the existing quality system of higher education. In developing measures to improve the existing system The management of education quality provided several stages, namely:

- to determine the directions and responsibilities required for achievement of goals in the field of quality of education;
- to establish the methods that measure performance and the effectiveness of each direction;
- to identify of factors influencing the outcome and ways of elimination unsatisfactory indicators;
- to use of measurement results (indicators) to determine the effectiveness and efficiency of a particular element of the system.

The quality of education at the University has applied such approaches in assessing qualitative indicators: reputation (based on expert assessments), effectiveness (by objective indicators) and overall.

The key points of such a system include:

1. Quality of educational programs.
2. Level of applicant preparation.
3. The quality of the learning process.
4. Qualification of scientific and pedagogical staff.
5. Information and methodological support of the educational process.
6. Level of educational process equipment.
7. Level of research conducted at the university.
8. Participation in national and international rating surveys.
9. Level of graduates training (including practical training and readiness to perform professional functions) and their demand on the work market
- 10 Level of activity information publicity the university.
11. The level of effectiveness of the prevention system and detection of academic plagiarism.

The quality management system at the university is provided with monitoring of the main indicators of quality and on the basis of them are developed the Recommendations for the improvement of all preparation components of the higher education applicants.

The central link in the management and quality assurance system is educational process. Control over the applicant quality assurance system for higher education involves identifying the educational process weaknesses, by self-assessment of the educational institution activity, which is carried out systematically according to the criteria defined by the standards of higher education, and the approved schedule of activities.

To ensure the quality of the higher education graduate training in University requirements for applicants, students, teachers and criteria for assessing their compliance with these requirements. Regarding the level of applicant preparation, then the appropriate requirements for schools, lyceums, colleges are put forward.

As regards the students' educational process, requirements are put forward to everyone Chairs that provide this process, including the cycles of general and vocational training. At the same time for the quality of applicant preparation for higher education correspond to the graduation departments. In order to analyze the quality of training specialists in the disciplines of the general and vocational training cycle at the University introduced a system semester rector's control over the quality of applicant training for higher education in all specialties (specializations). In parallel, the rating system of job evaluation was introduced to scientific and pedagogical employees of the University units, whose results are taken into account when conducting a competitive selection for substitution of positions, as well as in determining the best for material incentives.

Other components of the system evaluation are regular surveys (questionnaires) of students, graduates and their potential clients; introduction credit transfer system of educational organization process, etc.

Thus, during the year complex monitoring is carried out the quality of education at the university level, which takes into account the quality of education process, and provides an assessment of the activity quality of scientific and pedagogical workers. Assessment of the information level, methodological and logistical provision of the educational process are determined in accordance with the regulatory requirements determined by the License conditions. Results of monitoring researches and suggestions concerning improving the quality of education is discussed at academic councils of departments and analytical reports are given at the Academic Council of the University.

The university conducted a systematic work to ensure information publicity on its activities:

1. A local network has been created and organization work has been carried out access to it and the Internet.
2. Computer providing of educational, scientific, administrative and financial subdivisions.
3. Planned work on licensing is being carried out software products, computer laboratories and audiences.
4. There is ongoing maintenance and updating of official information university site.
5. Search for new working forms of using information systems.

The university has a powerful server hub that is satisfying all needs of educational, scientific, administrative and financial activity. All computers have access to the central server and access to the Internet. In the academic building and the hostel there is a wireless connection to the Wi-Fi network of the Internet. Students can access the Internet from computers in classrooms and from the library's general reading room.

Today, the university has 800 computers (315 of them are used for the educational process). Completed 20 computer classes with access to the Internet resources. In the past the University acquired 20 computers, 10 multimedia projectors and 2 interactive boards for use in the educational process. Acquired technique is installed at the departments of the university, distributed for needs in the educational process of the university.

An important role for vocational guidance, educational and methodical work assigned to the University website. The site of a educational institution - a powerful tool for vocational guidance, training, partner search, communication. Its support is not a tribute to fashion, but an ingredient university image. This work is not a part of the department and chair activities only in terms of simple information, but also as a system of management in educational work.

This year the changes have taken place: changed form of the site and created English-language and Russian-language versions. A modern full-fledged portal appeared with a simple website-business cards. Every department, each chair, student council have their place on the university site portal.

The Internet is the presence of the university and, accordingly, its Internet - rating is not a direct quality indication of the training or scientific capacity, but the university's participation in national and international monitoring and it shows the degree of inclusion in the global information field, authority and resonance of the institution activity, its potential in aspect the involvement of talented students and teachers, the popularity among employers, which are important aspects of effective work.

The University website participates in the international ranking of Webometrics and ranks 72 out of 295 possible and 26th among the 101 in the national ranking as a result of monitoring the openness of websites of higher educational institutions of Ukraine. In the World Universities Web Ranking 2015 the University takes the 86th place with 146 popularity on the Internet.

#### **Purposes of the evaluation report:**

- assessment of the quality compliance and preparation level of graduates to the requirements of international professional standards and demands of the specialist labour market,
- identification of the directions and tools for improving the implementation of the curriculum, taking into account the best Ukrainian and foreign educational practices,
- formation of the quality management education system at the level of the educational program in accordance with modern standards and best world practices,
- development of a quality culture in administrative and professors' staff,
- formation of the curriculum external quality assurances in the form of international accreditation of the program,
- development of international academic mobility,
- inclusion of international curriculum rankings.

**The Evaluation Report of the Study Programme** has been prepared by:  
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**Musiienko Y.V.** PhD of Veterinary Sciences, Associate Professor of the Chair of Obstetrics and Surgery, Deputy Dean of the Veterinary Medicine Department.

## **2. Coordinating department**

The Coordinating Department at SNAU is The Educational Department Subordinate to the Vice Rector for scientific- pedagogical and educational work that includes the methodical department managing the quality of educational activity and the quality of higher education. The detailed information is available on a web site: [http://www.sau.sumy.ua/images/nayka/navch-metodrob/2017/opys\\_yakosti\\_osvity.pdf](http://www.sau.sumy.ua/images/nayka/navch-metodrob/2017/opys_yakosti_osvity.pdf)

**Nechiporenko O.L.** PhD of Veterinary Sciences, Associate Professor, Dean of the Faculty of Veterinary Medicine of Sumy National Agrarian University;  
**Kraevskiy A.Y.** Doctor of Veterinary Sciences, Professor, Head of the Obstetrics and Surgery Chair  
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**Fotina T.I.** Doctor of Veterinary Sciences, Professor, Head of the Chair of Veterinary-Sanitary Examination, Microbiology and Zoo hygiene  
**Ulko L.H.** Doctor of Veterinary Sciences, Professor, Head of the Chair of Therapy, Pharmacology, Clinical Diagnostics and Chemistry;  
**Kasich V.Y.** Doctor of Veterinary Sciences, Professor, Head of the Chair of Parasitology and Epizootiology  
**Zon G.A.** PhD of Veterinary Sciences, Professor, Head of the Chair of Virusology, Patanatomy and Bird Diseases after Prof. Panicar I.I.

## **3. Members of programme quality board**

**Zhmaylov V.M.** vice rector for educational work  
**Kolodnenko N.V.** the head of the educational department  
**Nechiporenko O.L.** PhD of Veterinary Sciences, Associate Professor, Dean of the Veterinary Medicine Department;  
**Kalyuzhny M.S.** Student Rector of Sumy NAU;  
**Zhurba L.V.** Student Dean of the Veterinary Medicine Department  
**Assori O.Y.** Director of the Sumy State Biological Factory  
**Pedan V.A.** Head of Animal Husbandry Farm "Rize-Maksymko"

#### 4. Description of the Study Programme

##### 4.1. Profile of the programme

<b>Higher education level</b>	The second (master's) level
<b>Degree of Higher education</b>	Master
<b>Branch of knowledge</b>	21 Veterinary Medicine
<b>Specialty</b>	211 Veterinary Medicine
<b>Restrictions on learning forms level</b>	The form of training of specialists in veterinary medicine is carried out only on a full-time education (Law of Ukraine "On Veterinary Medicine" dated June 25, 1992, No. 2498-XII, art. 101)
<b>Educational qualification</b>	Master of Veterinary Medicine
<b>Qualification in the diploma</b>	Doctor of Veterinary Medicine
<b>Description subject area:</b>	<p>The object of the activity is a system of measures aimed at definition: features of changes in organs and systems of the organism at different physiological state of the animal; the relationship between the clinical manifestations of the disease and the results of laboratory studies; definition of the activity of the doctor of veterinary medicine and the functioning of sectoral production structures in the modern conditions of management; the features of collecting anamnestic data during the registration and examination of animals, to find a decision on the choice of effective methods of diagnosis, treatment and prevention of animal diseases; explanation of the essence and dynamics of the development of physiological processes that arise in an organism of animals under the influence of environmental factors, the action of infectious agents, surgical and obstetric-gynecological interventions; understanding the essence of the processes of manufacturing, storage and processing of biological raw materials. And also monitoring of the spread of diseases of various etiologies and biological pollution of the environment; application of innovative approaches for solving problem situations of</p>

	<p>professional or social origin; formulation of conclusions on the effectiveness of selected methods and means of retention, feeding, prevention of infectious and non-infectious diseases and animal treatment, production and technological processes introduced at enterprises. Generalization of indicators of economic development regarding the efficiency of veterinary enterprises.</p> <p><b>Objectives of the training</b> - the formation of a number of general and special (professional) competencies and the ability to dynamically combine knowledge, skills, communication skills and autonomous activity and responsibility capabilities, and the ability to combine effective professional and human social activity with the future doctor of veterinary medicine.</p> <p><b>Theoretical content of the subject area of a veterinary medicine:</b> comprise the disciplines of general and professional training cycles.</p> <p><b>Methods, techniques and technologies:</b> the graduate must have professional knowledge and be able to organize practical, analytical and research activities on biological processes in organisms of different species of animals in normal and in pathology.</p> <p><b>Instruments and equipment</b> (objects / subjects, arrangement and instruments that are graduate learns to apply and use): profound knowledge and skills in the field of veterinary medicine and their application for solving professional problems; sampling, analyze and interpret data for formulating professional judgments based on social, ethical and scientific considerations.</p>
<b>Academic Rights</b>	<p>The doctor of veterinary medicine has the opportunity to continue postgraduate studies, work in enterprises, organizations and institutions of various forms of ownership, realizing the principle of lifelong learning.</p>

**Volume of ECTS credits needed for a higher education master's degree:**

On the basis of complete secondary education - 300-360 ECTS credits. 50% of the volume of the educational program should be aimed at providing general and special (professional) competencies in the specialty defined by the standard of a

higher education. The volume of educational programs for obtaining a master's degree on the basis of a junior specialist degree is determined by the higher educational institution.

### **List of competencies of the graduate**

<p><b>Integral competence</b></p>	<p>Ability to solve tasks and problems in the field of veterinary medicine regarding to safe, sanitary-conditioned animals, prevention and diagnosis of diseases, sick animals treatment, production and financial activity, judicial veterinary expertise and arbitration, introduction of innovative technologies into professional activities.</p>
	<ol style="list-style-type: none"> <li>1. The ability to abstract thinking, analysis and synthesis, search, processing information from different sources.</li> <li>2. Ability to apply knowledge in practical situations.</li> <li>3. Knowledge and understanding of the subject area and understanding of the profession.</li> <li>4. Ability to communicate in the state language both verbally and in writing, the ability to communicate in a different language on general and professional themes</li> <li>5. Ability to use of information and communication technologies.</li> <li>6. Ability to conduct research at the appropriate level, make informed decisions, evaluate and ensure the quality of the work performed.</li> <li>7. Ability to communicate with non-professionals (with experts from other spheres) .</li> <li>8. Ability to work in an international context.</li> <li>9. Definition and persistence on the tasks and responsibilities assumed.</li> <li>10. The desire to save the environment.</li> </ol>
<p><b>Specials (professional, subject matter) competence</b></p>	<ol style="list-style-type: none"> <li>1. Ability to understand and clarify the features of the structure and functioning of cells, tissues, organs, systems and apparatus of the animal organism.</li> <li>2. Ability to use toolkits, special devices, devices, laboratory equipment and other technical means for carrying out necessary manipulations during performance of professional tasks.</li> </ol>



3. Ability to observe safety rules, asepsis and antiseptics during professional activity.
  4. Ability to conduct clinical studies in order to formulate conclusions about the state of animals or diagnosis.
  5. Ability to select, pack, fix and send samples of biological material for laboratory research.
  6. Ability to organize, conduct and analyze laboratory and special diagnostic studies
  7. Ability to planning, organize and implement measures for the treatment of animals with non-contagious, infectious and invasive diseases.
  8. Ability to carry out obstetric-surgical measures and operations.
  9. Ability to develop strategies of safe, sanitized for keeping animals.
  10. Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans.
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11. Ability to develop prevention strategies
  12. Ability to carry out post-mortem diagnostics in case judicial veterinary examination and arbitration proceedings.
  13. Ability to organize production control, storage, transportation and sale of animal husbandry products, beekeeping and aquaculture.
  14. Ability to protect the environment from waste pollution livestock and veterinary medicine production.
  15. Ability to develop a production and financial strategy activities, marketing and management in the sector of veterinary medicine.
  16. Ability to characterize biological and technological processes using specialized software funds.
  17. Ability to carry out educational activities among specialists, industry workers and the population.
  18. Ability to organize, implement and control office work and paperwork during implementation professional activity.

## **The normative content of the training of higher education graduates, formulated in terms of learning outcomes.**

### **Program results of learning.**

1. Reproduce the terminology of the components of the educational program.
2. Describe the physico-chemical and biological processes that occur in the organism of animals in normal or in pathological processes;
3. To determine the peculiarities of functioning, pathomorphological changes in organs and systems of the organism at different physiological conditions of the animal;
4. Establish the connection between clinical manifestations of the disease and the results of laboratory researches;
5. Demonstrate the understanding of the specifics of the activity of doctor of veterinary medicine and the functioning of the sectoral production structures in the modern conditions of management;
6. To organize information from Ukrainian and foreign sources for development of diagnostic, medical and business strategies;
7. To collect the anamnestic data during the registration and visual inspection of animals, to find a decision of effective methods of diagnostics, treatment and prevention of animal diseases;
8. To explain the essence and dynamics of the development of physiological processes that arise in an organism of animals under the influence of factors of the environment, the action of infectious agents, surgical , obstetric and gynecological interventions;
9. Understand the essence of the processes of manufacturing, storage and processing of biological raw materials;
10. Carry out monitoring regarding spread of diseases of different etiologies and biological pollution of the environment;
11. To prepare and make out account reports during planning, organization and professional activity.
12. To create an atmosphere based on professional ethics, positive social and emotional behavior and respect to ethical principles and standards for discussion urgent issues;
13. Propose innovative approaches for solving problem situations of professional or social origin;

14. To formulate conclusions on the effectiveness of selected methods and means of retention, feeding, prevention of infectious and non contagious diseases and animal treatment, production and technological processes introduced at the enterprises.

15. To recommend quarantine and recreational measures, methods of therapy, prevention, diagnostics and treatment of diseases of different etiologies. Recommend to use pharmaceuticals of different spectrum and mechanism of action.

16. Summarize the indicators of economic development and information regarding work efficiency of veterinary specialists of different subordination.

### **Requirements for the system of internal quality assurance in higher education**

<p>Principles and procedures for ensuring the quality of education</p>	<p>Principles of quality assurance:</p> <ul style="list-style-type: none"> <li>■ institutions of higher education bear primary responsibility for the quality of the higher education provided;</li> <li>■ Quality assurance is consistent with the diversity of higher education systems, higher education institutions, programs and students;</li> <li>■ Quality assurance contributes to the development of a culture of quality;</li> <li>■ Quality assurance takes into account the needs and expectations of students, all other stakeholders and society.</li> </ul> <p>The quality assurance procedures are:</p> <ol style="list-style-type: none"> <li>1) development of the strategy and policies of higher education institutions in the field of higher education quality;</li> <li>2) development of a mechanism for the formation, approval, monitoring and periodic review of educational programs;</li> <li>3) the development of a system for assessing the knowledge of higher education graduates, scientific and pedagogical and pedagogical staff of a higher educational institution, and regularly publishing the results of such assessments on the official web site of the higher educational institution, on information stands and in any other manner according to the developed and approved rules .</li> <li>4) organization of professional development of pedagogical, scientific and scientific-pedagogical workers;</li> <li>5) the formation of the necessary resources for the organization of the educational process, in particular, the independent work of students,</li> </ol>
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	<p>for each educational program;</p> <p>6) creation and functioning of information systems for effective management of educational process;</p> <p>7) the publication of objective and unbiased information about educational programs, degrees of higher education and qualifications;</p> <p>8) development of a policy on an effective system for preventing and detecting academic plagiarism in scientific works of higher education and higher education graduates;</p> <p>9) other procedures and measures.</p>
<p>Monitoring and periodic revision of Educational programs</p>	<p>Information about educational programs, degrees in higher education and qualifications should be available on the public open university website. A higher education institution should provide conditions for the annual assessment of higher education applicants. A higher education institution, with the participation of students, scientific and pedagogical and pedagogical staff, monitors the educational process and regularly publishes its results on the university's website, information stands and in any other way.</p>
<p>Evaluation applicants for higher education</p>	<p>The assessment of applicants for higher education should be based on the principles of student-centered education and includes the following:</p> <ul style="list-style-type: none"> <li>■ appraisers (experts) are familiar with the existing testing and testing methods and receive support to develop their own skills in this area;</li> <li>■ criteria and methods of evaluation, as well as evaluation criteria are made public in advance;</li> <li>■ assessment of higher education graduates, which allows them to demonstrate their degree of achievement</li> <li>■ evaluation is usually carried out by more than one examiner;</li> <li>■ Appraisal procedures for higher education applicants should take into account mitigating circumstances;</li> <li>■ Graduates' assessment of higher education is consistent, transparent and conducted in accordance with established procedures;</li> <li>■ Availability of an official procedure for reviewing appeals of applicants for higher education.</li> </ul>

<p>Increase qualifications scientifically - pedagogical workers</p>	<p>The system of professional development of scientific and pedagogical, pedagogical and scientific workers is developed in accordance with the current normative base and is built on the following principles:</p> <ul style="list-style-type: none"> <li>■ compulsory and periodicity of the training and qualification improvement;</li> <li>■ transparency of the organization of internship and advanced training;</li> <li>■ monitoring compliance of the contents of the programs of professional development with the tasks of professional activity;</li> <li>■ mandatory implementation of the results of advanced training in scientific and pedagogical activities;</li> <li>■ publicizing the results of internship and advanced training.</li> </ul>
<p>Necessary resources for educational process organization</p>	<p>Higher educational institutions provide the educational process with the necessary and accessible resources for students (personnel, methodological, material, informational, etc.) and provide appropriate support to students. The planning, distribution and provision of training resources and support for applicants for higher education take into account the needs of different student contingents (such as students: with experience, distance learning, working, foreign, with special needs) and the principles of student-centered learning. Student support and resource support can be organized in a variety of ways, depending on the conditions in the institution. Internal quality assurance ensures that all resources meet goals, are publicly available, and students are informed about the availability of relevant services.</p>
<p>Informational systems for effective management of educational process</p>	<p>In order to effectively manage educational processes, a higher education institution must have a developed policy in the field of information management and an appropriate integrated information management system for educational process in higher education institutions. Such a system provides for the automation of the main functions of the management of the educational process, in particular: ensuring the holding of an introductory campaign, planning and organizing the educational process, access to educational resources; accounting and analysis of the success of higher education graduates; administering the basic and auxiliary processes of providing educational activities; monitoring of compliance with quality standards; knowledge management and innovation management; management of personnel, etc.</p>
<p>Publicity of</p>	<p>Establishments should publish reliable, objective, relevant, timely and</p>

<p>information about educational programs, degrees of higher education and qualifications</p>	<p>easily accessible information about their activities, in particular programs for potential higher education graduates, students, graduates, other stakeholders and the public. Institutions provide information about their activities, in particular the programs they offer, the criteria for selecting them for study; planned learning outcomes for these programs; the qualifications they provide; training, teaching and assessment procedures used; passing points and learning opportunities available to students, etc.</p>
<p>Prevention and Detection of Academic Plagiarism</p>	<p>The system of ensuring the academic integrity of participants in the educational process, formed in a higher educational institution, is based on the following principles: observance of generally accepted principles of morality; Demonstration of respect for the Constitution and laws of Ukraine and observance of their norms; respect for all participants in the educational process, regardless of their outlook, social status, religious and national affiliation; observance of the norms of the copyright legislation; references to sources of information in the case of borrowing ideas, statements, information; independent performance of individual tasks. In the event of violation of the principles of academic integrity, the relevant persons are prosecuted in accordance with the law and the regulations and norms in force at the educational institution.</p>

**List of normative documents on which the standard of higher education  
is based on:**

1. Law of Ukraine "On Higher Education" of 01.07.2014 № 1556-VII.
2. Law of Ukraine "On Veterinary Medicine" // VVR. - 2007. - № 5-6, - Art. 53; 2008. No. 76, Art. 22; changes in 2008, 2012, 2014
3. Law of Ukraine "On Licensing Types of Economic Activity" dated 02.03.2015 №222-III.
4. Resolution of the Cabinet of Ministers of 29.04.2015 № 266 "On approval of the list of branches of knowledge and specialties, which are training applicants for higher education."
5. Resolution of the Cabinet of Ministers dated December 30, 2015 №1187 "On approval of licensing conditions for conducting educational activities of educational institutions".
6. Order of the Ministry of Education and Science of Ukraine dated February 19, 2015 № 166 "Some Issues of Disclosure of Information on the Activities of Higher Educational Institutions".
7. Order of the Ministry of Education and Science of Ukraine dated November 6, 2015 №1151 "On the peculiarities of the introduction of a list of branches of knowledge, under which the training of applicants for higher education, approved by the decision of the Cabinet of Ministers of Ukraine dated April 29, 2015, No. 266".
8. Order of the Ministry of Education of Ukraine № 600 dated 01.06.2016 "On Approval and Introduction of Methodical Recommendations for the Development of Higher Education Standards".
9. Order of the Ministry of Economic Development and Trade of Ukraine dated November 18, 2014, No. 1361 "On Approval of the Amendment to the National Classifier of Ukraine DK 003: 2010" (amendment No. 2).
10. National Classifier of Ukraine: "Classifier of Occupations" DK 003: 2010. - Kyiv: View "Sotsinform", 2010.
11. Order of MES № 600

**4.2. Profile of the graduate**

The professions, professional titles of works are indicated (according to the current edition of the National Classifier of Ukraine: Classification of Occupations (DK 003: 2010) and International Standard Classification of Occupations 2008

(ISSO-O8)), for which professional education, professional and educational-scientific programs in the specialty: the doctor of veterinary medicine (2223.2), junior researcher (veterinary medicine) (2223.1), scientific research assistant (veterinary medicine) (2223.1), assistant (2310.2), teacher of a higher educational institution (2310.2), doctoral student (2310.1), pharmacy manager (pharmacy institution) (1210.1), head of pharmacy base (1210.1), director of department (1210.1), director of laboratory (1210.1), director (chief, other manager) of enterprise (1210.1).

**Employment prospects:** state veterinary medicine service (regional centers), farms and large enterprises, biological factories, laboratories of veterinary control of safety of products, diagnostic laboratories of veterinary medicine, veterinary pharmacy, state veterinary control at the border and transport, private clinics, meat and dairy plants, supermarkets, lecturers at colleges, universities, research scientists.

**Graduates of the master's educational program "Veterinary Medicine" work in various sectors of the national economy throughout Ukraine and abroad, in particular:**

- Director of the Veterinary Center "Health"
- Director of the Department of Agricultural Development of Chernihiv region State Administration,
- Director of the Institute of Veterinary Medicine of the National Academy of Sciences of Ukraine,
- Director of the Sumy State Biological Factory,
- the head of "Riabushkivsky Bacon" Ltd.
- Head of animal husbandry department of "UkrLandFarming"
- the head of the Sumy border inspection post of veterinary medicine,
- the head of the Yunakovsky border inspection post of veterinary medicine,
- the leading veterinarian of the consulting center of the Association of Milk Producers AVM,
- Vice-rector on scientific work and international relations of the Odessa State Agrarian University.



### 4.3. Study plan

Code	Subjects	ECTS	Form of knowledge assessment	Guarantor
<b>I semester – NORMAL EDUCATIONAL DISCIPLINES</b>				
	Foreign language in professional activity	3	credit	Bilokopytov V.I.
	Information technology in veterinary medicine	3	credit	Kalashnik O.M.
	Veterinary anesthesiology and resuscitation	2	credit	Stotsky O.G.
	Veterinary legislation Ukraine and the International Veterinary Law	3	exam	Fotina G.A.
	Research Methodology	3	credit	Ivanovskaia L. B.
	Parasites of animals	2	credit	Rysovany V.I.
	Pathological physiology	3	exam	Kambur M.D.
	Specificity of internal animal diseases	2	credit	Ulko L.G.
	Philosophy of Science and Innovation	3	credit	Kornienko O.M.
<b>II semester – NORMAL EDUCATIONAL DISCIPLINES</b>				
	Obstetrics and gynecology	3	exam	Krajevsky A.Y.
	Veterinary anesthesiology and resuscitation	2	credit	Stotsky O.G.
	State veterinary and sanitary control and supervision	3	credit	Fotina T.I.
	Parasites of animals	2	exam	Rysovanyy V.I.
	Comparative morphology, special pathomorphology and judicial veterinary medicine	3	exam	Zon H.A.

	Special epizootology	3	exam	Cassich V.Y.
	Specificity of internal animal diseases	2	exam	Ulko L.G.
	Surgical diseases of animal anesthesiology	3	credit	Ponomarenko V.P.
<b>III semester – NORMAL EDUCATIONAL DISCIPLINES</b>				
	Obstetric preventive technologies for animal health	3	exam	Chekan O.M.
	Veterinary Technology prevention of infectious animal diseases	4	exam	Cassich V.Y.
	Veterinary Technology prevention of parasitic diseases of animals	3	credit	Rysovanyy V.I.
	Veterinary Technology prevention of non-communicable animal diseases	3	credit	Ulko L.G.
	Veterinary provision of reproduction biotechnology and prevention of obstetric and gynecological pathology in animal	4	credit	Musiienko Y.V.
	Veterinary surgical techniques		credit	Ponomarenko V.P.
<b>III semester – CURRENT PART</b>				
	Invasive Disease of Horses / Parasitic Diseases of Farm Animals	3	credit	Rysovanyy V.I.
	Surgical Diseases of Farm Animals / Surgical Diseases of Horses	3	credit	Stotsky O.G.
	Infectious Diseases of Pigs / Infectious Disease of Sheep and Goats	3	credit	Rebenko G.I.

**At the end of the course:**

Complex exam of infectious animal diseases

Complex exam of non-communicable animal diseases

Complex

#### 4.4. Learning outcomes of the programme

**Matrix of compliance with the Standards of Competencies for NRC descriptors the standard of higher education of Ukraine of the second (master's) level of education, the degree of higher education - the master's degree, the field of knowledge - 21 Veterinary medicine, specialty - 211 Veterinary medicine**

<b>№</b>	<b>Classification of competences</b>	<b>Knowledge</b>	<b>Ability</b>	<b>Communication</b>	<b>Autonomy and responsibility</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>General competencies</b>					
1.	Ability to abstract thinking, analysis and synthesis, search, processing information from different sources	Know methods of analysis, synthesis and further modern training. Know how to search, process and analyze.	Be able to analyze information, make informed decisions, be able to acquire modern knowledge. Be able to analyze scientific literature, use modern information resources, translate from foreign into the state language	Establish appropriate connections for achieving goals Use information and communication technologies in professional activities	Be responsible for the timely acquisition of modern knowledge. Be responsible for the development of professional knowledge and skills
2.	Ability to apply knowledge in practical situations	Have a profound knowledge of the structure of professional activity	Be able to solve difficult tasks and problems that arise in professional activities	A clear and unambiguous presentation of own conclusions, knowledge and explanations, which are substantiated	Responsible for making decisions in difficult conditions

				by experts and non-specialists.	
3.	Knowledge and understanding of the subject area and understanding of the profession	Have a profound knowledge of the structure of professional activity	Be able to carry out professional activities that require updating and integration of knowledge	Ability to effectively form a communication strategy in professional activity	To be responsible for professional development, the ability to further professional training with a high degree of autonomy
4.	Ability to communicate in the state language both verbally and in writing, ability to communicate in another language	Have a thorough knowledge of state and foreign languages	Be able to apply knowledge of the state language, both verbally and in writing, able to communicate in a foreign language	Use professional language and business communication and when preparing documents, the state language. Use a foreign language in professional activities	To be responsible for fluent possession of state and foreign languages, for the development of professional knowledge
5.	Skills in the use of information and communication technologies	To have deep knowledge in the field of information and communication technologies used in the professions	Be able to use information and communication technologies in a professional industry that needs updating and integrating knowledge	Use information and communication technologies in professional activities	To be responsible for the development of professional knowledge and skills
6.	Ability to	Know the	Be able to	Establish	Be responsible for

	conduct research at the appropriate level, make informed decisions, evaluate and ensure the quality of work performed.	basic methods of scientific research. Have a profound knowledge of the specifics of your profession. Know the methods of evaluating performance indicators.	choose the topic of research, put experiments, conduct analysis, generalization and statistical processing of the data, compare them with literary data. Be able to make informed decisions, acquire up-to-date knowledge, analyze incoming information. Be able to provide high-quality performance of work related to professional activities.	appropriate relationships to achieve the goal, depending on the goals of scientific research. Ability to quickly and clearly articulate their own conclusions and explanations. Establish links to ensure the quality of work related to professional activities.	the reliability of the research results. Be responsible for the correctness of the choice and the effectiveness of the decision. To be responsible for quality work related to professional activity
7.	Ability to communicate with non-professionals in their field (with experts from other industries)	Knowledge of tactics and communication strategies	To be able to solve tasks and problems that require the involvement of non-specialists	Clear and clear proof of your own solutions to non-specialists	Be responsible for accurate and accurate disclosure of information to non-specialists
8.	Ability to work in an international	Knowledge of foreign languages,	Be able to understand the foreign	Use foreign language in professional	Be responsible for owning a foreign language in your

	context	international legislation in their field	language and translate it from the state language, to communicate with specialists from other countries.	activities, communication strategy and interpersonal skills.	field, for choosing and tactics of communication
9.	Determination and perseverance of the assigned tasks and responsibilities	Know the duties and ways of fulfilling the tasks	Be able to define the purpose and objectives, be persistent and conscientious in the performance of duties	Establishing interpersonal relationships to effectively accomplish tasks and responsibilities	Responsible for the qualitative performance of tasks and responsibilities
10.	The desire to save the environment	To know the problems of preservation of the environment and ways of its preservation	Be able to formulate requirements for themselves and others about environmental preservation	To make proposals to the relevant authorities and institutions regarding measures for the preservation and protection of the environment	Be responsible for environmental measures within the scope of its competence

**Special (professional, substantive) competencies**

<b>№</b>	<b>Classification of competencies</b>	<b>Knowledge</b>	<b>Ability</b>	<b>Communication</b>	<b>Autonomy and responsibility</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>1</b>	Ability to understand and clarify the features of the	To have knowledge of the structure of	The ability to find out at the macro, micro and	Explain and make generalizations regarding	The ability to independently determine the presence or

	structure and functioning of cells, tissues, organs, their systems and apparatus of the animal organism.	organs, their systems and apparatus and the whole organism in general on the macro, micro and submicroscopic levels, to know the function, topography, to determine the species and age belonging organs, their systems and apparatus in conditions of norm and pathology	submicroscopic levels the structure, topography, species and age belonging organs, their systems and apparatuses. To find out the function of cells, tissues, organs, their systems and apparatuses of an organism of animals in conditions of norm and pathology	the established features of the structure and functioning of cells, tissues, organs, their systems and apparatus in animals.	absence of deviations between the morpho-functional parameters of the object in terms of norms and clarified parameters, find solutions, recommend ways to implement it, be responsible for the decision and anticipate the possible consequences.
<b>2</b>	Ability to use tools, special devices, laboratory equipment and other technical means for carrying out unnecessary manipulations during performance of professional tasks.	Know the basic parameters of the structure of the function of the organs and the characteristics and designation of the technical devices used to find	The ability to determine which technical means should be used in each case. Apply tools, special devices, laboratory equipment and other technical means to determine the state of the	The ability to find ways to collaborate with technical specialists to obtain the maximum information on the subject under study	Ability to work with the necessary technical devices and their parameters to determine the parameters of the objects under study

		out these parameters	animal organism or to make the necessary manipulations.		
<b>3</b>	Ability to adhere to the rules of safety, aseptics and antiseptics during professional activity.	Know the rules of safety, personal hygiene, aseptic and antiseptic	Take the necessary measures to comply with the rules of safety and personal hygiene. Maintain aseptic and antiseptic during professional activity	To find ways and methods for ensuring safety, personal hygiene, aseptic and antiseptic rules during the performance of official duties	Realize the consequences of violations of the rules of safety, personal hygiene, asepsis and antiseptics and be responsible for their violation
<b>4</b>	Ability to conduct clinical studies to formulate conclusions about the state of animals or diagnosis.	To know the etiology and pathogenesis of diseases, to analyze the epizootic and ecological situation, conditions of maintenance, feeding and exploitation of animals, to take into account their	Ability to collect anamnestic data during the registration and examination of animals. Ability to plan, organize and conduct clinical studies of animals and samples of biological material. Ability to analyze the research results and formulate conclusions and diagnose.	To explain the necessity and necessity of conducting the appointed clinical researches, reasonably argue their results and establish the diagnosis.	To independently decide on the need for prescribed clinical and laboratory studies, interpret their results, substantiate the diagnosis and predict the need for additional clinical or laboratory studies.



		physiologic al state, species, species and individual characteristi cs, to know methods and methods of clinical research			
<b>5</b>	Ability to carry out the selection, packaging, fixation and forwarding of biological material samples for laboratory research.	To have knowledge of the etiology and pathogenesi s of animal diseases, current normative legal acts related to this type of professional activity, to know the most up-to-date methods and methods of laboratory research	Ability to plan, organize and conduct laboratory studies of animals and samples of biological material and analyze the results of research to formulate conclusions and establish a diagnosis.	Explain the need and the need to select a certain type of material for laboratory research, to justify methods and methods of its packaging, fixation and forwarding	To decide on the choice of the necessary biological material, methods of its packaging, fixation and forwarding, and the type of laboratory research to solve certain tasks of professional activity.
<b>6</b>	Ability to organize, conduct and analyze laboratory and special	To have knowledge of current normative legal acts, etiology and	Ability to plan, organize and conduct laboratory studies of animals and	To explain the necessity and necessity of carrying out the assigned	To decide on the necessity of carrying out the prescribed laboratory tests, to interpret their

	diagnostic studies	pathogenesis of animal diseases and methods and methods of laboratory research	samples of biological material. Analyze the results of laboratory tests and formulate conclusions, recommendations, advice or diagnose.	laboratory researches, reasonably argue their results and establish the diagnosis.	results, to substantiate the established diagnosis and to suppose the need for additional clinical or laboratory research.
7	Ability to plan, organize and implement measures for the treatment of animals with non-contagious, infectious and invasive diseases	To know the peculiarities of biology of pathogens of infectious diseases, pathogenesis of diseases, current legal acts on methods of combating them, and methods and means of physiological, diet and pharmacotherapy	Ability to apply a rational scheme of treatment of the diseased animal, choosing etiotropic, nosogenetic, replacement, symptomatic, and if necessary - and radical therapy of the diseased animal. Ability to use specific and symptomatic pharmaceutical preparations and drugs for the treatment of animals suffering from infectious and noncommunicable diseases	To supervise the observance and enforcement of the current normative legal acts regarding the methods and measures for the treatment of animals with non-contagious, infectious and invasive diseases	Own methodology and means of searching for scientific works, methodological developments, recommendations, etc. concerning new methods of prevention, diagnosis and treatment of animal diseases.
8	Ability to	To have	Ability to cook	Be able to	The ability to

	carry out obstetric and surgical procedures and operations	knowledge of the technique of fixing animals, preparing the hands of a surgeon, tools and the field of operation, as well as knowledge of the effect of analgesic, antimicrobial and other drugs used during obstetric and surgical procedures and operations	To perform obstetric and surgical procedures and operations for the animal, sterilize and use tools, seamstress and dressing material, carry out local anesthesia and general anesthesia. Own the technique of intradermal, subcutaneous and intramuscular injection and vascular puncture, blood transfusion, obstetric and surgical measures and operations in different parts of the body on different organs of animals	analyze and predict the course of the operation. Convincingly bring animal owners and service staff the appropriateness of certain operations and manipulations.	properly assess the feasibility and necessity of a midwifery or surgery and to be responsible for the results of this event.
9	Ability to develop strategies for safe, sanitized animal retention.	To know sanitary and hygienic rules and norms concerning the state of	To supervise the observance of sanitary and hygienic rules and norms concerning the state of the	Conduct advocacy of veterinary knowledge, educational work on hygiene, care,	Ability to choose and implement modern methods of safe, sanitary maintenance and feeding and care

		the territory of the livestock facility, its premises, ways of keeping, feeding and watering animals and care for them	territory of the livestock facility, its premises, methods of keeping, feeding and watering animals and care for them	feeding and maintenance of animals, compliance with the rules of occupational safety and personal hygiene by livestock workers	of animals.
<b>10</b>	Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans.	Know the regularities of the development of the epizootic process, the etiology and pathogenesis of non-contagious, infectious and invasive animal diseases. To take into account the nature of various veterinary treatments, species, age, breed and individual peculiarities of animals	To compile and analyze the necessary veterinary documents and conduct an inspection of animals and controlled cargoes. To formulate the concept of antiepidemic measures, analyze the effectiveness of disinfection, disinsection, deratization.	Ability to analyze the effectiveness of planned diagnostic studies and specific and general preventive measures, to substantiate the feasibility of symptomatic treatment of sick animals	The ability to develop and take responsibility for the implementation of a system of measures aimed at protecting the population from diseases common to animals and humans.

11	Ability to develop prevention strategies.	Know the regularities of the development of the epizootic process, the etiology and pathogenesis of non-contagious, infectious and invasive diseases of animals and ways of their prevention and prevention.	To organize and carry out preventive treatment against infectious and invasive diseases, and also to carry out clinical examination of animals for the purpose of the justified prevention of diseases and obtaining high-quality and safe products.	Ability to explain the need for planned preventive treatments against infectious and invasive diseases and the implementation of clinical examination of animals in order to prevent their illnesses and obtain qualitative and safe products.	To predict the possibility of development of the epizootic situation, to determine the priorities of the action of the forces of the epizootic process in one or another infectious disease and to establish the laws of its development; To model pathological phenomena using biological objects and modern equipment
12	Ability to carry out post-mortem diagnostics in the case of forensic examination and arbitration proceedings	Know the peculiarities of the structure of the animal's organism in norm and possible changes in the form and structure of organs for pathology. Own the current normative and legal	Ability to organize and carry out a pathologicoanatomical section, to analyze detected pathoanatomical changes and to document the findings of the autopsy.	The ability to assess the quality of treatment in the case of forensic examination and arbitration proceedings.	The ability to make decisions and to document them and argue them. The ability to be ready to defend their own decisions in case they are examined at a court session

		acts.			
<b>13</b>	Ability to organize the control over the production, storage, transportation and sale of livestock products, beekeeping and aquaculture.	Know the technological processes of production and current legal acts on the storage, transportation and sale of livestock products, as well as beekeeping and aquaculture products.	Ability to possess methods of conducting research on the quality of livestock products and products of beekeeping and aquaculture.	Ability to control the quality of livestock products, beekeeping and aquaculture products at all stages of its production. transportation and realization - from farm and bread - to the table.	Be able to make the right decisions regarding the conditions of production, transportation, sale of livestock products, beekeeping, aquaculture to current legal acts
<b>14</b>	Ability to protect the environment from pollution by livestock and veterinary medicine production	Know the conditions for storing waste from livestock farms and veterinary and medical production	Ability to adhere to conditions of transportation, disinfection, storage of animal waste products and veterinary and medical production	Ability to control the storage of waste animal and veterinary and medical production	To be responsible for the preservation of the environment from pollution by animal and veterinary waste production.
<b>15</b>	Ability to develop a strategy of production and financial activity, marketing and management in veterinary	Understand the peculiarities of the functioning of the veterinary business. Identify sources of	The ability to determine the parameters of market position in enterprises in the industry to respond in a timely manner to changes in the market of	Participate in cooperation with specialists, business entities and the population to ensure production	To control the level of record keeping, to evaluate marketing strategies aimed at the use of highly effective veterinary drugs, modern

	medicine	financing for veterinary and sanitary measures	veterinary services. Ability to calculate the effectiveness of veterinary measures and possible economic losses with the help of modern methods, special methods and methods of work	and commercial activity.	equipment and materials, to prepare proposals for increasing the productivity of industry professionals.
<b>16</b>	Ability to characterize biological and technological processes using specialized software	Know the principles and features of using specialized software	The ability to make a statistical assessment of the parameters of biological objects and processes in organisms of animals of different species in conditions of norm and pathology. Ability to model biological and technological processes.	Ability to use information technology in professional activities and work with non-specialists and the population in computer networks.	To analyze the feasibility of using specialized software, to compare the effects of biometric processing of research results with available literature
<b>17</b>	Ability to carry out educational activities	To have knowledge of the risks that	The ability to analyze the philosophical and	Ability to find a common language with	Ability to independently carry out educational

	among specialists, industry workers and the population.	endanger the stability and the very existence of ecosystems and their components , to know ecologically dependent diseases, environmental factors and their effects, manifestations, changes, and consequences.	methodological problems of modern veterinary medicine. Ability to evaluate, analyze and predict the possible consequences of adverse effects of environmental factors, epizootic situation and other negative factors on the health and welfare of animals.	specialists, industry workers and the population under different conditions and circumstances	activities among specialists of the relevant sphere and the population, to find and make decisions in case of occurrence of life impairments of animals or changes in the ecological situation
<b>18</b>	Ability to organize, execute and control case management and document circulation during professional activity	Understand the sequence of organization of veterinary records in order to plan work and organize reporting in the structures of the industry	The ability to issue veterinary records of the prescribed standard during professional activity	To analyze the expediency of using funds for various medical and preventive measures and other types of professional activity	To be aware of the responsibility for the organization and the procedure for conducting various medical and preventive measures, to carry out documentation on the expenditure of funds for the implementation of professional activities



#### **4.5. State examination courses**

Criteria for assessing the knowledge and skills of students are developed on all subjects, taking into account the specific nature of instructor-led classes and independent work of students.

The development of criteria for assessing students' knowledge is based on the "Regulations on the organization of educational process in higher educational institutions", approved by the order №161 of the Ministry of Education and Science of Ukraine of 02.06.1993 (section control measures), «Methodical recommendations for implementation of 3-4 levels of accreditation of certain normative and educational materials on the credit-module system of educational process organization in agrarian higher educational institutions of Ukraine» and scientific and methodological materials «Principles and ways of integration of higher educational institutions of the Ministry of Agrarian Policy of Ukraine into the European Higher Education Area "of the NMC of Agrarian Education of the Ministry of Agrarian Policy of Ukraine, Regulations on the organization of the educational process in the Sumy National Agrarian University and Regulations on the state attestation of students of SNAU.

The Methodical Council of Sumy NAU has developed criteria for assessing students' knowledge, skills and abilities for all academic disciplines in accordance with the credit - module system of knowledge assessment. Each teacher applies a (100-point) knowledge assessment system, which is to be introduced to students at the beginning of the course, and according to the points scored and the final knowledge control, the student receives an assessment on the national scale and the ECTS scale.

Teachers of the chairs who carry out the training of specialists in the specialty use modern innovative forms and methods of teaching and diagnostics of knowledge that promotes the activation of students' learning and cognitive activity, maintenance of systemic scientific thinking, the skills of independent work and decision making, the reproduction of real professional situations and the formation of professional skills. With the purpose of the current monitoring of the students' knowledge, the department members of the chairs improve existing computer test forms of cross-cutting knowledge, which allow to effectively and efficiently evaluate the degree of mastery of the discipline material.

Control measures include current and final semester control and measures of state certification and are regulated by the provisions of the SNAU "On current and final control of student knowledge" and "On the procedure for the establishment, organization and work of the State Examination Commission at the SNAU". The current control is carried out during the training sessions and is aimed at verifying the level of mastering the student's material. The form of ongoing control during the training sessions and the system for assessing the level of knowledge is determined by the relevant department. Semester control is carried out in the form of a semester examination, a score, or a differentiated score on a specific academic discipline in the

amount of the training material determined by the work syllabus of the academic discipline, in terms defined by the curriculum or the individual student's curriculum.

Settlement is a form of final control, which consists in evaluating the results of training in the discipline on the basis of current control and does not require a student's presence. Differentiated credit is a form of final control, which consists in assessing the level of competence formation based on individual tasks performed by the student (course papers, reports on practice, etc.), and involves the student's mandatory presence. In addition, the department created a department for monitoring the quality of training specialists to implement targeted monitoring of the quality of services and academic achievements of students, the introduction of a university system of quality management and for timely implementation of corrective actions aimed at improving the quality of training specialists in accordance with the modern needs of society.

**The department for monitoring the quality of training of specialists is an independent structural unit whose tasks are:**

- organization and conducting of systematic independent monitoring of the quality of training specialists and the formation on this basis of recommendations for the improvement of all components of the educational process;
- conducting questionnaires for students in order to determine the quality of educational services received;
- analysis of licensing conditions for the provision of educational services in the field of higher education;
- verification of accounting and accounting documents on the organization of the educational process;
- analysis of the correspondence of basic education of scientific and pedagogical staff of the discipline profile;
- analysis of migration flows of applicants according to the results of the admission campaign;
- provision of advisory and methodological assistance on the quality of training of specialists to participants (departments, teachers and students) of monitoring activities;

### **Forms of certification of applicants for higher education**

State certification consists of two stages. The first stage is conducted in the form of independent remote diagnostics of the level of knowledge of graduates. The results are defined as "passed", "failed". The second stage is carried out in the form of two state qualifying exams from infectious and non-infectious pathology or qualifying master's work and one state qualification examination for contagious or non-contagious pathology.

### **Requirements for qualification work**

Master's work is carried out on the subject of programmatic learning outcomes and must be checked for plagiarism. The manuscript submitted to the defense is accompanied by an abstract with an annotation, a scientific supervisor's response, a

feedback letter from the organization where the research was conducted, a review from the teacher. Master's thesis publication is published in the depository (on the official site) of the institution of higher education.

The results of the student's response are evaluated in accordance with the four-point scale ("excellent", "good", "satisfactory", "unsatisfactory") and according to the ECTS system.

National and ECTS Grading scales

Total points for all the educational activities	Mark ECTS	Ukrainian mark	
		For the exam, course project (work) practices	For the test
90 – 100	<b>A</b>	Excellent	Passed
82-89	<b>B</b>	Good	
75-81	<b>C</b>		
69-74	<b>D</b>	Satisfactory	
60-68	<b>E</b>		
35-59	<b>FX</b>	Bad	Not passed with the possibility of repassing
0-34	<b>F</b>	Unsatisfactorily	Not enrolled with compulsory re-learning study of discipline

#### **4.6. External chairman of the State Exam and Theses Defence Committees**

The Examining Commission consisting of the Chairman and members of the commission is created annually and operates during the calendar year. The chairman of the commission is appointed by the rector of the university not later than two months before the beginning of the work of the leading specialists of the industry, as a rule, representatives of state and non-state enterprises, institutions, highly skilled workers of the institutes of the National Academy of Sciences of Ukraine or other state academies (by their consent), higher educational institutions, which train specialists in the same direction and specialties.

One and the same person may be the chairman of the commission for no more than three years in a row. The deputy chairman of the commission (if necessary) may be appointed vice-rector for scientific and pedagogical work, the dean of the faculty, the head of the graduate department or one of the members of the State Commission.

The personal composition of the State Commission with the indication of its duties is approved by the order of the rector of the university not later than a month before commencement of work of the commission.

The chairmen of the examination commission for the examination of masters training and the assignment of the educational degree to them "Master" in the direction of preparation 21 "Veterinary Medicine" in recent years were appointed: Skripka Maryna Victorivna, Head of the Department of Pathological Anatomy and Pathophysiology of Poltava State Agrarian Academy, Doctor of Veterinary Sciences; Professor Kraievskiy Apollinariy Yosypovych, Head of the Department of Obstetrics and Surgery, Sumy National Agrarian University, Doctor of Veterinary Sciences.

## 5. Evaluation of the Study Programme

### 5.1. Basic statistics

In Sumy NAU the training of specialists in the specialty "Veterinary Medicine" began in 1985. The licensed volume of admission to the Department of Veterinary Medicine as of 01.10.2017 is 150 persons of the full-time training of the Master "OS". The number of students as of 01.10.2017, who are studying at the "Master's" degree of education, is 165 people, of which 164 are from Ukraine and 1 is a foreign student. The contingent of the first year of study is 95 people, including 95 people of full-time education (35 budget and 60 commercial), 43 male and 52 female students; 89 were graduates of the Sumy NAU and 6 other educational institutions. The contingent of the second year of study is 70 people, including 70 persons of full-time education (66 budget and 4 commercial), 24 male and 46 female students; 66 were graduates of the Sumy NAU and 4 other educational institutions. The teaching process at the Department of Veterinary Medicine is provided by 14 professors (28%), 34 assistant professors (68%) and 2 teachers (4%). This curriculum is provided by 12 professors and 22 associate professors, representing 68% of the total number of faculty members. 1 teacher of the Department of Veterinary Medicine has 3.3 masters and 12 bachelors.

### 5.2. Nationalities of students

Currently one student from Syria and the others from Ukraine study for the "Master's" degree. However, in general, 24 foreign students from Nigeria, Zimbabwe, Zambia, India and Ghana study at the Department of Veterinary Medicine.

### 5.3. Success rate of current graduate

Results of the session of students of specialty 211 "Veterinary Medicine" Master "Master" in 2016-2017 academic year

Course	the begin of the academ ic year	allow ed for exam	Passed	Received an unsatisfactory score	rate of succe ss	ty of traini ng
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				on an subjectstutor the excellent	only good and excellent evaluation	on mixed grades only satisfactorily	total	one	two	three				
I m	70	-	70	70	8	27	19	14	2	-	-	2	97,1	57,6
II m	66	-	66	66	8	15	34	9	-	-	-	-	100	62,0
Total in specialty	<b>136</b>	-	<b>136</b>	<b>136</b>	<b>16</b>	<b>42</b>	<b>53</b>	<b>23</b>	<b>2</b>	-	-	<b>2</b>	<b>98,5</b>	<b>59,8</b>

All students (100%) successfully passed the final tests and received the qualification of the "Doctor of Veterinary Medicine".

### Current entrance examination process

For entrants to the master's degree on the basis of basic or full higher education, the competition score is calculated as the sum of the result of the professional test, the entrance exams in the foreign language and the average score of the application to the document on basic or complete higher education (calculated up to one hundred points).

The results of the professional written exam are evaluated by a four-point rating system ("excellent", "good", "satisfactory", "unsatisfactory"). "Satisfactorily" is the minimum point for participation in the competition.

The results of a written exam in a foreign language are evaluated by a four-point rating system ("excellent", "good", "satisfactory", "unsatisfactory"). "Satisfactorily" is the minimum point for participation in the competition. For admitted to the master's degree on the basis of basic or full higher education obtained in another specialty, an additional introductory test is established in the form of an interview, the result of which is evaluated by a two-point evaluation system ("admitted", "not allowed").

Applicants who have received the assessment of "admitted" are allowed to compose a written examination in a foreign language and a professional examination.

### Indicators of student contingent formation by specialty 211 "Veterinary Medicine" OS "Master"

№	Indicator	Years	
		2016	2017
1	Licensed training	75	106
2	Enrolled, total (persons):	75	96
	including state order:	70	35
3	Applications filed for one place:	1,16	1,08
4	Competition of entrants to public procurement places:	1,24	3,14

#### 5.4. Evaluation of courses by students

Assessment of students' training is based on a sociological survey (questionnaire). Questions of the questionnaire concerned professional and certain personal qualities of the teacher (knowledge of the subject, ability to convey this knowledge to the student, responsibility, objectivity, exactingness, tolerance, benevolence), the state of methodological and didactic provision of the educational process (availability and quality of methodical manuals, recommendations, instructions, visual aids, media, etc.). The questionnaire was conducted on conditions of anonymity, while students could indicate only standardized typed characteristics such as sex and frequency of student attendance.

After analyzing the students' answers to the questionnaire, they received the following results:

№	Question	Results of answers (%)		
		So	Part	No
1	The teacher is fluent in the content of course	83%	15%	-
2	Teacher explains accessibly, it is interesting to listen to, he can argue and bring an opinion	76%	14%	10%
3	The objectives of the classes held by the teacher are clear to me	82%	18%	-
4	The results of my knowledge and skills prove the achievement of the goals	69%	27%	4%
5	The teacher uses time during lecture and practical classes efficiently	88%	10%	2%
6	The content of lectures individual assignments is associated with praxis	88%	10%	2%
7	The teacher uses the technical means of studying at classes efficiently	85%	13%	2%
8	Methods of interaction with students provide high quality assimilation of knowledge during classes	55%	27%	18%
9	Which of these types of classes (forms of work) are implemented in the teaching process by the professor:	* <i>active lectures</i> - 88%; * <i>classes with the use of information technology</i> - 36%; * <i>business games</i> - 11%; * <i>production trainings</i> - 18%; * <i>research work</i> - 31%; * <i>press conferences</i> - 11%; * <i>Analysis and solution of practical situations</i> - 50%.		

10	Do you understand the teacher's requirements, the criteria for evaluating your work?	75%	18%	7%
11	The instructor informs on the results of the tested tasks on time.	55%	38%	7%
12	Does your grade match your teacher's grade?	48%	45%	7%
13.	Does it objectively assessed the level of your knowledge and skills conducted by the teacher:			
	* oral questioning	93%	7%	-
	* independent work checking	88%	10%	2%
	* reports on creative tasks	79%	21%	-
	* modular control works	88%	12%	-
	* computer certifications	93%	7%	-
	* credits	88%	12%	-
	* examinations	50%	50%	-
15	The instructor is interested in the academic achievements of students	70%	18%	12%
16	Teacher responsive to students willing to provide advice in the classroom and <b>beyond</b>	93%	7%	-
17	The teacher easily establishes relations with the student audience	71%	27%	2%
18	Does the teacher take into account your interests, abilities and psychological peculiarities	86%	14%	2%
19	How does the professor organize students' research work and do you take part in it?	<i>Organization:*</i> <i>well organized - 70%;</i> <i>* insufficiently organized - 18%;</i> <i>* unorganized - 12%.</i>		<i>Your participation:</i> <i>* I am developing a specific problem - 18%;</i> <i>* I take part in conferences, write articles - 12%;</i> <i>* I do not take part - 70%.</i>
20	Does the professor carry out consultation with you and how does he control the research	<i>Advice:</i> <i>* according to the schedule - 65%;</i> <i>* with a deviation from the schedule - 28%;</i> <i>* none- 7%.</i>		<i>CONTROL:*</i> <i>permanent - 34%;</i> <i>* episodic - 38%;</i> <i>* does not carry out - 28%.</i>

## 5.5. Availability of study materials

A powerful information center for providing all subscribers with available information resources, fixed in accordance with certain standards, is the university library. The information and education environment of the university consists of a site, an electronic portal, a subsystem of distance learning, an electronic library and a repository, a virtual student employment office. The use of these resources allows each student and teacher to work with the teaching and methodological provision of courses, use library resources, be able to control their success, download, form electronic journals, etc.

In order to ensure regular access to WEB-resources, network technologies Intranet and Internet are used. Educational buildings, public places on the territory of SNAU and hostels have Wi-Fi coverage with free internet connection. Innovative information and communication technologies of education are widely used in the training process for the training of specialists. The use of applied software products is provided by the curriculum of training specialists and consists of various types of work.

Computer technology training is used to perform situational tasks at practicals and seminars, as well as in the organization of students' independent and individual work.

The creation of information and learning space based on the Moodle platform provides students with full methodological support for theoretical, practical courses, independent work, as well as online contact between the teacher and the student.

№	Name of discipline	Availability information ("+", "-")				
		educational content, electronic textbooks	tasks of laboratory-practical work	tasks for independent work of students	PPT in Moodle	Educational methodical complex
<b>NORMAL EDUCATIONAL DISCIPLINES</b>						
<b>1. Social and humanitarian training</b>						
1	Philosophy of Science and Innovation	+	+	+	+	+
2	Foreign language in professional activity	+	+	+	+	+



3	Information technology in veterinary medicine	+	+	+	+	+
<b>2 Fundamental, natural science and general economic training</b>						
1	Comparative morphology, special pathomorphology and judicial veterinary medicine	+	+	+	+	+
2	Veterinary legislation of Ukraine and the International Veterinary Law	+	+	+	+	+
3	Research Methodology	+	+	+	+	+
<b>3. Professional and practical training</b>						
1	Obstetrics and gynecology	+	+	+	+	+
2	Specificity of internal animal diseases	+	+	+	+	+
3	Surgical diseases of animal anesthesiology	+	+	+	+	+
4	Pathological physiology	+	+	+	+	+

5	Special epizootology	+	+	+	+	+
6	Parasites of animals	+	+	+	+	+
7	State veterinary and sanitary control and supervision	+	+	+	+	+
8	Veterinary anesthesiology and resuscitation	+	+	+	+	+
9	Obstetric preventive technologies for animal health	+	+	+	+	+
10	Veterinary Technology of prevention of infectious animal diseases	+	+	+	+	+
11	Veterinary Technology of prevention of parasitic diseases of animals	+	+	+	+	+
12	Veterinary Technology of prevention of non-communicable animal diseases	+	+	+	+	+

1 3	Veterinary provision of reproductive biotechnology and prevention of obstetric and gynecological pathology in animal	+	+	+	+	+
1 4	Veterinary surgical techniques	+	+	+	+	+
<b>CURRENT PART</b>						
1	Invasive Disease of Horses / Parasitic Diseases of Farm Animals	+	+	+	+	+
2	Surgical Diseases of Farm Animals / Surgical Diseases of Horses	+	+	+	+	+
3	Infectious Diseases of Pigs / Infectious Disease of Sheep and Goats	+	+	+	+	+

### List of professional periodicals

<b>№</b>	<b>Title of the periodical publications</b>	<b>Years of income</b>
1.	Appraisal Bulletin	1997 - 2012
2.	Beekeeping circle For a profitable apiary	2010 - 2012
3.	Life Safety	2015
4.	Library of Veterinary Medicine	1999 - 2012, 2016
5.	Library "Pasika"	2012
6.	Veterinary Medicine	1975 - 2013
7.	Veterinary Medicine. Abstract journal	1998 - 2012
8.	Veterinary Medicine of Ukraine	1997 - 2012
9.	Veterinary practice	2007 - 2012, 2015-2016
10.	Higher education of Ukraine	2002 - 2012
11.	Friend: a magazine for those who love dogs	2005, 2009, 2012 - 2013
12.	Effective animal husbandry	2006 - 2012, 2016
13.	Codes of Ukraine	1996 - 2012
14.	Milk and farm	2016
15.	Dairy and meat industry	2013
16.	Official Bulletin of Ukraine	1997 - 2012, 2014 - 2016
17.	Pork of Ukraine	2012
18.	Modern veterinary medicine	2006 - 2012
19.	Contemporary poultry breeding	2003 – 2012, 2015
20.	Animal husbandry of Ukraine	1983 - 2012, 2015 - 2016
21.	Technology of food processing and processing industry of agroindustrial complex - products of healthy nutrition	2016
22.	Veterinary newspaper	2004 - 2012, 2015 - 2016
23.	SNAU Bulletin	1999 - 2014 - 2015
24.	THE UKRAINIAN FARMER	2015 -2016

## 5.6. Results of group discussion with students

Survey procedure may be considered as one of the most important tools of Higher education institution self-evaluation, as the analysis of the received data allows to reveal inconsistencies and to outline ways of improving the educational process in order to improve the quality of training specialists.

The learning outcomes are the subject of discussion in groups with the participation of the group's curator in addition to the questionnaire. The curator of the group in a unconstrained form conducts a group survey on the most important students' achievements and the issues that prompted youth development during the educational hours. Among other things, he finds out the reasons for the possible passivism of students during training. As a rule, students respond positively to the curator's questions, they are eager to talk about the "strong" and "weak" moments of the educational process. The above survey is generalized by curator and submitted to the dean's office for further generalizations. In some cases (selectively, or if necessary) work in the group is conducted by deputy of dean for educational work. Additionally, work in groups (with all students of that studying program) is provided during the training practice of each summer semester.

After conducting a survey among students, the faculty and university management arrange discussion of the results in the focus groups with representatives of student self-government. As a result of such discussions, both positive aspects and problem issues, "bottlenecks" in the educational process are determined, which from the student's point of view require special attention of the leadership of the faculty, university and teachers. In particular:

- According to students, the factors that improve the learning process are broad computerization of the learning process, the introduction of new and correction of existing training courses and programs. Taking into account the wishes of the students, the updating of the material and technical and informational support of the educational process is constantly being carried out, implementation of the modern software at the teaching of some particular courses.

- The level of teaching during lectures and practical classes is assessed by students as meeting the current professional and personal needs of a future specialist. However, the teaching staff of the University constantly improves its professional competence on the basis of internship and advanced training both in Ukraine and abroad; every year the cooperation of teachers with business structures on the basis of concluded agreements deepens.

- Students who took part in the survey noted that their independence depends mainly on their own interest in learning, but the teacher's ability to stimulate students' motivation to study is of paramount importance. The faculty of veterinary medicine constantly holds scientific and practical conferences, discussion clubs, round tables in different thematic areas.

- Most students consider that, while studying, the necessary condition for successful future employment is the close link between theoretical training and acquiring practical skills. Today at the Faculty of veterinary medicine all students of

senior courses have the opportunity to study by individual curriculum, which makes it possible to combine theoretical training with work in the specialty.

The results of the discussion in the focus groups allow staying in constant dialogue with the students and improving the content and methods of teaching both individual study courses and the educational process as a whole.

### 5.7. Scientific outcomes of course supervisors

Subjects	Guarantor	Experience	Number of publications	Patents	H-index Google Scholar
Foreign language in professional activity	Belokopitov V.I.	23 years			
Information technology in veterinary medicine	Kalashnik O.M.	20years	32	2	2
Veterinary anesthesiology and resuscitation	Stotsky O.G.	22 years	52	5	2
Surgical Diseases of Farm Animals / Surgical Diseases of Horses					
Veterinary legislation Ukraine and the International Veterinary Law	Fotina G.A.	10 years			
Research Methodology	Ivanovskaya L. B.	10 years			
Parasites of animals	Rysovanyy V.I.	13 years			
Veterinary Technology prevention of parasitic diseases of animals					
Invasive Disease of Horses / Parasitic Diseases of Farm Animals					
Pathological physiology	Kambur M.D.	34 years	400	20	4
Specificity of internal animal diseases	Ulko L.G.	20 years	208	5	

Veterinary Technology prevention of non-communicable animal diseases					
Philosophy of Science and Innovation	Kornienko O.M.	20 years			
Obstetrics and gynecology	Krajevsky A.Y.	30 years	121	11	6
State veterinary and sanitary control and supervision	Fotina T.I.	29 years	515	41	7 Scopus – 4
Comparative morphology, special pathomorphology and judicial veterinary medicine	Zon H.A.	30 years			
Special epizootology					
Veterinary Technology prevention of infectious animal diseases	Cassich V.Y.	27 years			
Surgical diseases of animal anesthesiology	Ponomarenko V.P.	20 years	48	5	2
Veterinary surgical techniques					
Obstetric preventive technologies for animal health	Chekan O.M.	13 years	57	1	2
Veterinary provision of reproduction biotechnology and prevention of obstetric and gynecological pathology in animal	Musiienko Y.V.	11 years	38	1	2
Infectious Diseases of Pigs / Infectious Disease of Sheep and Goats	Rebenko G.I.	23 years			

## 5.8. Inter-connection and structure of teaching and examination methods of individual courses

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

SUMY NATIONAL AGRARIAN UNIVERSITY

Approved at the meeting of the  
Academic Council of the University  
(protocol  
№ \_\_\_\_\_ " \_\_\_\_\_ " \_\_\_\_\_ 2017)

### CURRICULUM

"Approved"  
Rector \_\_\_\_\_ V.Ladyka  
" \_\_\_\_\_ " \_\_\_\_\_ 2017

Curriculum "Master" in the field of knowledge 21 "Veterinary Medicine"

in specialty 211 "Veterinary Medicine"

Form of training is full-time education Year of entry is 2017

The term of study is 1,4 years on the basis of on education level "Bachelour"

Qualification "Master of veterinary medicine"

#### I. Schedule of the educational process

Course	September					October					November					December					January					February					March					April					May					June					July					August				
	1	4	11	18	25	2	9	16	23	30	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	7	14	21	28	4	11	18	25		
I	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	C	C	C	K	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	T	C	C	C	Π	Π	K	K	K	K	K	K	Π	Π	Π	Π					
II	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	C	C	ДЕ	ДП																																									

Marking: T - theoretical study; C - session; Π - practice; K - holiday; ДЕ - state examinations; Д - diploma designing; ДП - defence of the thesis (project)

#### II. SUMMARY OF BUDGET TIME, weeks

Course	Theoretical training	Examination period	Practice	State validation (making the thesis (project))	Vacation	Total
I	30	6	2	0	0	44
II	30	3	4	1	1	39
<b>Total</b>	<b>60</b>	<b>9</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>83</b>

#### III. PRACTICE

Name of practice	Semester	Weeks
educational	2	2
practical	2	4

#### IV. STATE VALIDATION

Name of the Subject	Type of State Validation	Semester
Complex (list of subjects is determined by the Academic Council of the faculty)		3
	List of themes is determined by the Academic Council of the faculty)	3



V. PLAN OF STUDYING PROCESS ( Masters 1,4 years studying).

Code of the subject	name of subject	Distribution by semester				Number of credits by ECTS	Number of hours						Distribution of credits by ECTS per week for courses and semesters		
		exams	credits	Course			Total number	Lectures			Individual work	I course		II course	
				projects	thesis			Total	including			SEMESTERS			
		lectur es	Labor ator y						pract ical	1		2	3		
													Number of weeks in semester		
											15	15	15		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>1. NORMATIVE TRAINING COURSE</b>															
<b>1.1. Humanitarian and socio-economic disciplines</b>															
CF. 01	Philosophy of Science and Innovation		1			3	90	30	14		16	60	2		
CF. 02	Foreign language in professional activity		1			3	90	30			30	60	2		
CF.03	Information technology in veterinary medicine		1			3	90	46			46	44	3		
	<b>Total by circle:</b>					<b>9,0</b>	<b>270</b>	<b>106</b>	<b>14</b>		<b>92</b>	<b>164</b>	<b>7,0</b>		
<b>2. Disciplines natural science (basic) training</b>															
ПН01	Comparative morphology, special pathomorphology and judicial veterinary medicine	2				3	90	46	16	30		44		3	
ПН02	Veterinary legislation Ukraine and the International Veterinary Law	1				3	90	30		30		60	2		
ПН03	Research Methodology		1			3	90	44	14		30	46	3		
	<b>Total by circle:</b>					<b>9</b>	<b>270</b>	<b>120</b>	<b>30</b>	<b>60</b>	<b>30</b>	<b>150</b>	<b>8</b>	<b>3</b>	
<b>3. Cycle of professional and practical training</b>															
ПІІ.01	Obstetrics and gynecology	2			2	3	90	46	16	30		44		3	
ПІІ. 02	Special propedeutics, therapy and prevention of internal diseases	2	1		2	4	120	60	30	30		60	2	2	
ПІІ. 03	Surgical diseases of animal anesthesiology		2			3	90	46	16	30		44		3	
ПІІ 04	Pathological physiology	1				3	90	44	14	30		46	3		
ПІІ. 04	Special epizootology	2				3	90	44	14	30		46		3	
ПІІ. 05	Parasites of animals	2	1			4	120	60	14	46		60	2	2	
ПІІ. 06	State veterinary and sanitary control and supervision		2			3	90	44	14	30		46		3	
ПІІ 17	Veterinary anesthesiology and resuscitation		1,2			4	120	60	14	46		60	2	2	
ПІІ 11	Obstetric preventive technologies for animal health		3			3	90	44	14	30		46			3
МІІ1	Veterinary Technology prevention of infectious animal diseases					4	120	46	16	30		74		2	2
МІІ2	Veterinary Technology prevention of parasitic diseases of animals					3	90	44	14	30		46			3
	<b>Complex exam of infectious animal diseases</b>	3*													
МІІ 3	Veterinary Technology prevention of non-communicable animal diseases					3	90	46	16	30		44			3
МІІ 4	Veterinary provision of reproduction biotechnology and prevention of obstetric and gynecological pathology in animal					4	120	30		30		90			2
МІІ 5	Veterinary surgical techniques					3	90	30		30		60			2
	<b>Complex exam of non-communicable animal diseases</b>	3*													
МІІ 6	Veterinary and Sanitary Expertise					4	120	46	16	30		74			3
МІІ 7	Quality and Safety of Livestock Products					4	120	46	16	30		74			3
	<b>Complex exam of quality and safety of livestock products</b>	3*													
	<b>Total by circle:</b>					<b>55,0</b>	<b>1650,0</b>	<b>736,0</b>	<b>224,0</b>	<b>512,0</b>		<b>914,0</b>	<b>9,0</b>	<b>20,0</b>	<b>21,0</b>

SELECTIVE TRAINING SUBJECTS														
2.2. Disciplines of student's free choice														
МП 1	Invasive Disease of Horses / Parasitic Diseases of Farm Animals		3		3	90	30		30		60	2		
МП 2	Surgical Diseases of Farm Animals / Surgical Diseases of Horses		3		3	90	30		30		60		2	
МП 4	Diseases of Bees / Internal non-communicable Diseases of Carnivores		3		3	90	20		20		70		2	
	Infectious Diseases of Pigs / Infectious Disease of Sheep and Goats				9	270	80		80		190		2	
	Total by student's free choice											26	25	23
	Total for the curriculum													
	Total choice division				12	360								
	Total by the master's program				12	360								
	Total:				82	2460								
	Educational practice				2	60								
	Practical training				4	120								
	Defense of the thesis (projects):				1	30								
	State validation				1	30								
	Total by the plan:				90	2700								

### 5.9. Evaluation and success rate of individual courses

	Student name	Obstetrics and gynecology	Special propaedeutics, therapy and	Special epizootology	Comparative morphology	State supervision and supervision	Obstetrics and gynecology	Special propaedeutics, therapy and	Average score
1.	Ivy Natalia Sergeevna	95	99	97	98	95	94	94	96,00
2.	Krivulya Darya Sergeevna	96	99	94	90	98	95	99	95,86
3.	Jury Tetyana Vladimirovna	94	97	92	90	93	90	98	93,43
4.	Gur Dmitry Grigorovich	95	96	91	90	91	93	97	93,29
5.	Piskun Svetlana Borisovna	92	96	92	90	91	93	98	93,14
6.	Kirilenko Vadim Anatoliyovich	92	97	90	92	91	90	99	93,00
7.	Kirechek Liliya Vyacheslavovna	96	92	90	90	91	92	95	92,29
8.	Titus Yaroslav Viktorovich	94	93	92	90	87	94	96	92,29
9.	Tabaka Lidiya Sergievivna	92	92	90	90	91	93	97	92,14
10.	Kalyuzhnaya Tetyana Nikolaevna	97	88	92	90	85	97	95	92,00
11.	Ekaterina Vyacheslavivna Pichkurkunenka	91	94	90	90	90	92	95	91,71
12.	Zaika Jaroslav Ruslanovich	93	94	91	84	87	90	98	91,00
13.	Rusina Yulia Yuryevna	92	90	92	78	93	92	99	90,86
14.	Karas Oleksandra Sergievna	91	93	84	90	89	94	94	90,71
15.	Lukash Alina Yuryevna	93	94	92	91	76	93	95	90,57
16.	Tkachenko Yana Anatolievna	95	90	90	90	80	93	95	90,43

17.	Kurova Anna Anatolievna	91	90	91	84	91	93	92	<b>90,29</b>
18.	Mar'enko Nataliya Mykolayivna	92	92	91	77	90	92	97	<b>90,14</b>
19.	Nedashkova Nataliya Nikolaevna	94	94	85	82	87	91	95	<b>89,71</b>
20.	Karunos Katerina Andreevna	90	92	90	84	86	87	95	<b>89,14</b>
21.	Pashchenko Anastasiya Valerievna	90	90	91	95	73	90	92	<b>88,71</b>
22.	Manzhus Oleg Vladimirovich	88	92	86	80	87	88	98	<b>88,43</b>
23.	Dvornik Antonov Ivanovna	90	93	90	80	78	88	98	<b>88,14</b>
24.	Julia Mikhailovna Zhuk	87	93	90	80	80	87	98	<b>87,86</b>
25.	Sypko Irina Vladimirovna	90	93	90	80	76	87	95	<b>87,29</b>
26.	Matviychuk Denis Nikolaevich	90	92	90	75	77	90	92	<b>86,57</b>
27.	Zagorulko Igor Alexandrovich	90	91	90	76	76	92	90	<b>86,43</b>
28.	Nechiporenko Alexander Yuriyovych	90	88	86	75	84	94	87	<b>86,29</b>
29.	Mezentseva Olga Olegovna	91	84	87	80	87	94	79	<b>86,00</b>
30.	Syurkulova Tetyana Vladimirovna	90	80	90	76	91	95	80	<b>86,00</b>
31.	Tuchenko Natalia Anatolievna	92	84	83	90	80	92	79	<b>85,71</b>
32.	Lyah Yevgeniya Oleksandrivna	91	82	91	87	76	93	80	<b>85,71</b>
33.	Clop Marina Aleksandrovna	90	80	90	75	91	94	78	<b>85,43</b>
34.	Liuba Yulia Yuryevna	91	80	92	83	79	93	79	<b>85,29</b>
35.	Hrin Andrey Alexandrovich	80	78	86	91	90	80	90	<b>85,00</b>
36.	Zikunova Alyona Aleksandrovna	84	90	82	76	72	92	97	<b>84,71</b>
37.	Gortovoy Oleg Alekseevich	80	80	90	90	80	90	80	<b>84,29</b>
38.	Kravchenko Julia Sergeevna	85	82	90	75	75	90	77	<b>82,00</b>
39.	Plashotna Anastasia Sergievna	91	80	90	66	91	79	67	<b>80,57</b>
40.	Chistyakov Denis Sergeevich	91	80	86	75	61	91	79	<b>80,43</b>
41.	Meleshko Anastasia Volodymyrivna	73	69	84	75	76	82	60	<b>74,14</b>
42.	Matviyenko Yaroslav Vladimirovich	70	72	82	80	78	72	65	<b>74,14</b>
43.	Baranenko Elizaveta Igorivna	70	73	81	85	75	70	62	<b>73,71</b>
44.	Popova Polina Ivanovna	75	72	81	68	71	82	62	<b>73,00</b>
45.	Sagaidak Marina Nikolaevna	77	60	67	70	75	75	62	<b>69,43</b>
46.	Garmash Anastasia Vyacheslavovna	79	64	68	60	61	80	62	<b>67,71</b>

47.	Worm Olesya Olegivna	63	60	90	62	72	63	63	<b>67,57</b>
48.	Chernenko Tatyana Sergievnna	65	62	76	65	71	66	60	<b>66,43</b>
49.	Kovtun Kristina Andreevna	62	63	84	60	74	60	60	<b>66,14</b>
50.	Shevlev Dmitry Yevgeniyovych	64	61	73	65	69	65	60	<b>65,29</b>
51.	Dubina Oleksiy Anatoliyovych	63	60	79	60	70	63	60	<b>65,00</b>
52.	Gorban Olga Nikolaevna	62	60	64	71	72	63	62	<b>64,86</b>
53.	Gerasimova Julia Aleksandrovna	65	64	66	75	64	60	60	<b>64,86</b>
54.	Panasenko Elena Vladimirovna	61	63	63	75	69	61	60	<b>64,57</b>
55.	Marina Fedorovna Ostayuk	65	65	68	60	66	62	65	<b>64,43</b>
56.	Romanenko Katerina Vladimirovna	63	60	63	71	71	61	60	<b>64,14</b>
57.	Pyavka Nikolai Sergeevich	66	61	73	60	64	65	60	<b>64,14</b>
58.	Kuzmenko Tetyana Sergeevna	65	63	66	60	68	66	60	<b>64,00</b>
59.	Zigankova Alena Vitalievna	65	61	65	60	74	62	60	<b>63,86</b>
60.	Kravets Elvira Igorevna	63	62	63	66	66	60	65	<b>63,57</b>
61.	Melnyk Sergey Mikhailovich	60	66	61	60	63	63	66	<b>62,71</b>
62.	Shimka Denis Gennadyevich	60	60	65	68	65	60	60	<b>62,57</b>
63.	Tretyakova Tetyana Romanivna	60	64	68	60	60	62	64	<b>62,57</b>
64.	Volk Artem Mikhailovich	65	60	64	61	62	65	60	<b>62,43</b>
65.	Mordach Dmitry Mikhailovich	61	60	62	60	66	60	60	<b>61,29</b>
66.	Bryazkun Igor Igorovich	60	60	65	60	61	63	60	<b>61,29</b>
67.	Bryazkun Igor Igorovich	60	61	65	60	63	60	60	<b>61,29</b>
	<b>Average in discipline</b>	<b>80,57</b>	<b>78,96</b>	<b>81,97</b>	<b>76,75</b>	<b>78,09</b>	<b>80,87</b>	<b>79,04</b>	<b>79,46</b>
	Number 5	34	27	32	18	16	33	29	
	Number 4	9	13	16	26	25	11	10	
	Number 3	24	27	19	23	26	23	28	

## **5.10. Evaluation of teachers**

Evaluation of the quality of the teacher's work by students is based on questionnaires.

The questionnaire concerned certain personal qualities (responsibility, objectivity, demandingness, tolerance, benevolence), including even the way to behave.

The questionnaire was conducted on conditions of anonymity, while students could indicate only standardized typed characteristics such as sex and frequency of student attendance.

Having analyzed the students' answers to the questionnaire, the following results were obtained:

According to the students, the best teachers of this curriculum in 2017 were: Rebenko G.I., Fotina T.I., Kalashnik O.M.

*The best scientists of Veterinary Medicine Department (H-index)*

1. Professor Suray Petro - 46 (Veterinary)
2. Assistant Professor Dvorska Julia - 6 (microbiology)
3. Assistant Professor Ponomarev Lyudmila - 4 (biochemistry)

## **5.11. Participation of external experts and foreigner teachers**

In 2017, the following lectures were invited: Pyatnyk Volodymyr Anatolievich Pedan, Head of Animal Breeding Department "Rize-Maksymko"; General Director of "Bravoforma" Ltd. Berezovsky Andriy Vladimirovich; Director of the Veterinary Clinic "Khels", t. Sumy Bondar Sergey Viktorovich.

## **5.12. Internationalization – number of student mobilities per academic year**

The activity of an agrarian institution of higher education is impossible without active international cooperation and integration into the global educational and research space. Therefore, the development of bilateral and multilateral international relations, educational and scientific projects belongs to the priority tasks of the Sumy NAU. The Department of International Cooperation, established in 1995, coordinates the international relations complex of SNAU.

Despite the fairly young age (35 years), SNAU became a well-known center for international educational and scientific relations. Cooperation with foreign partners is realized in various content areas, using various organizational forms: from student and professors staff academic mobility, participation in international conferences, seminars, "round tables" to realization of joint educational programs and participation in various international scientific and educational organizations.

At present, more than 60 agreements on different types and forms of cooperation with foreign partners from 19 countries have been concluded. SNAU's activities in the international educational space are focused on long-term programs and projects aimed at improving the quality of educational and scientific activities to the level of world standards. In 2017, over 610 students were trained or had international internship abroad.

### **Studying abroad, internships and internships**

	2014 /2015 e.y.	2015/2016 e.y.	2016/2017 e.y.
Germany	28	31	34
Poland	21	26	31
USA	2	3	6
Switzerland	4	4	5
Denmark	1	1	2
Sweden	-	2	1

### **5.13. List of topics for MSc Thesis**

1. Modern methods of prophylaxis of delay in digestion in cows.
2. Comparative effectiveness of cows therapy for hypofunction of ovaries.
3. Comparative effectiveness of treatment methods for cows for different forms of mastitis.
4. Forecasting of morbidity of cows for postnatal pathology and their treatment.
5. Diagnosis, prevention and treatment of cows suffering from sub-evolution of the organs of the genital system.
6. Efficiency of modern methods of cats therapy at serous mastitis in conditions of clinic of small animals "Helps".
7. Diagnosis of symptomatic infertility in cows and their treatment for this pathology.
8. Methods of therapy of females for a large-scale disease in the clinic of small animals "Helps".
9. Comparative effectiveness of different treatments for purulent-catarrhal endometritis in cows.
10. Diagnosis and treatment of cats suffering from infectious anemia, in the clinic of veterinary medicine "Vetservice" in Sumy.
11. Evaluation of methods of diagnosis and treatment of cats suffering from babesiosis, in the clinic of veterinary medicine "Vetservis" in Sumy.
12. Epizootology of leptospirosis of productive animals in the Sumy region.

13. Diagnosis and therapy of pseudomonosis of dogs in the conditions of the clinic of veterinary medicine "Vetservis" in Sumy.
14. Diagnostics and therapy for infectious hepatitis of dogs in the conditions of clinic of veterinary medicine "Vetservice" in Sumy.
15. Epizootological and epidemiological aspects of rabies of animals in the conditions of the Romny district of the Sumy region.
16. «Efficiency of treatment of pigs for nematodoznaya invasion in conditions of DP DH" Garden "of Sumy district of Sumy region.
17. Effectiveness of prevention and treatment of bovine animals in paragrips-3, under the conditions of PREM "Kremin" of Ichnyansky district of Chernihiv region.
18. Effectiveness of prophylaxis and treatment of cows, patients with mastitis, in the conditions of the farm "Svitanok" of V.-Pisarivsky district of the Sumy region.
19. Epizootological features, diagnostics and treatment of cats suffering from ovidectasis, in the conditions of the clinic of veterinary medicine "Vetservis" in Sumy.
20. Processes of LPA in the body of newborn calves and their correction.
21. Quality of milk of cows depending on conditions of detention, season of the year and physiological state.
22. Resistance of the organism of turkeys and its correction.
23. Influence on the reproductive function of the rats and its correction.
24. Effect of solubility of protein of concentrated feed on the processes of scar digestion in cows and their correction.
25. Energy exchange and productivity of cows under the conditions of introduction into the diet of biologically active substances.
26. Treatment of dogs for demodicosis in the conditions of the veterinary clinic "10 Friends".
27. Measures of struggle and veterinary and sanitary evaluation for fish lerniosis.
28. Treatment of dogs for parvovirus enteritis in the conditions of the veterinary clinic "10 Friends".
29. Treatment and prevention of bird colibacteriosis.
30. Diagnosis and treatment of salmonella in poultry.
31. Epizootology and prophylaxis of tuberculosis of cattle in modern conditions of animal husbandry.
32. Therapeutic and prophylactic measures for catheter parathyroid glands.
33. Treatment and prevention of dogs babesiosis in the conditions of Chernihiv City State Hospital of Veterinary Medicine.
34. Veterinary - sanitary examination of plant products in the conditions of Chernihiv Regional Laboratory of Veterinary Medicine.
35. Application of sorbents for the prevention of poultry mycotoxicosis.
36. Improvement of the treatment of postpartum paresis of cows under the conditions of the PJSC "Rise-Maksimka".
37. Improvement of medical and preventive measures for respiratory diseases of calves.

38. Measures to combat leptospirosis of cattle in the State Enterprise "Ukrliktrya" of the Bilopil district, Sumy region.
39. Provision of epizootic well-being of "Indyky" Ltd. of Sumy region, Sumy region.
40. Improvement of veterinary and sanitary measures at LLC Avis Ukraine.
41. Improvement of veterinary and sanitary measures in the conditions of Open Society "Gadyachsir" of Poltava region.
42. Development and application of rotational schemes of disinfection drugs on the basis of the company "Technocor" of Nedrigailivsky region, Sumy region.
43. Improvement of veterinary and sanitary measures at LLC "Kosivshinskoye" of Sumy district, Sumy region.
44. Epizootic situation of coccidiosis of animals in the Sribnyansky district, Chernihiv region.
45. Development of a method for the production of PPD-tuberculin using microfiltration and ultracentrifugation techniques.
46. Organization of measures to prevent African swine fever in Sumypostachfond LLC Sumy District, Sumy Oblast.
47. Measures on the Elimination and Prevention of African Swine Fever in the Novgorod-Seversky District, Chernihiv Oblast.
48. Determination of tension of bird immunity to Newcastle disease after application of specific prevention methods at Avis Ukraine LLC.
49. Improvement of preventive, diagnostic and therapeutic methods of urolithiasis in cats based on the clinic of small animals "Helps".
50. Development and application of rotational schemes of immunostimulants on the basis of the company "Technocor" of Nedrigailivsky region of the Sumy region.
51. Diagnosis and effectiveness of treatment and prophylactic measures for cholecystitis of dogs and cats.
52. Biochemical status and its correction for subclinical ketosis of cows.
53. Treatment of calves for gastro-intestinal diseases in the conditions of "Nadiya" CJSC of Borznyansky district of Chernihiv region.
54. Efficiency of treatment of calves for dyspepsia in the conditions of LLC "Ranok" of the Yampil district of the Sumy region.
55. Prevention of gastrointestinal diseases of pigs at Sumypostachfond LLC Sumy District, Sumy Oblast.
56. Clinical and experimental substantiation of the use of "Fos-Bevita" for the hypotrophy of piglets.
57. Effectiveness of the use of the drug "Fos-Beavit" for hepatodystrophy of cows.
58. Effectiveness of treatment and prophylactic measures for gastroenteritis in dogs.
59. Diagnosis and treatment and prophylactic measures for urozitsa in dogs and cats.
60. Immune status and its correction for bronchopneumonia of calves.



61. Effectiveness of operative treatment at the inguinal-scrotum hernia in the rubbish.
62. Comparative effectiveness of different treatments for uveitis in cows.
63. Distribution and methods of treatment for deformation of ratites and their diseases in cattle.
64. Pathology of teeth (distribution and methods of therapy).
65. Aseptic arthritis in horses (methods of diagnosis and treatment).
66. Comparative efficacy of different treatments for aseptic pododermites in cows.
67. Distribution and effectiveness of therapy for urolithiasis in cats.
68. Comparative effectiveness of different treatments for cattle laminates.
69. Comparative effectiveness of different treatments for purulent wounds in dogs.
70. Effectiveness of therapy in small animals with diaphragmatic hernia in conditions of the veterinary clinic "Health" of Sumy.
71. Papillomatosis of dogs (diagnosis and methods of therapy).
72. Festering pododromati in horses (Methods of diagnosis and treatment).

### **5.12. Overall Results of the MSc Final State Exams**

In 2017, 66 master's works were prepared and defended:

- on the topic of non-contagious pathology
- 38 students;
- on the subject of contagious pathology
- 28 students.

The analysis of the structure of works showed that the themes of the works are relevant. In master's works, usually from 3 to 6 tables, charts, photographs. In the lists of used literature from 25 to 160 sources.

Masters have publications of scientific works. Graduates reasoned and clearly reported the main provisions of their master's thesis, responded to questions from members of the commission and comments from reviewers. Graduates are theoretically and practically trained, have modern approaches in solving certain scientific issues. The results of the defense of master's works are presented in the table:

#### ***Results of defense of master's works***

<b>The number of defendants</b>	<b>mark</b>			<b>Average score</b>
	<b>Excellent</b>	<b>Good</b>	<b>Satisfactorily</b>	
66	46	20	-	4,7

The examination commission believes that the bulk of the master's thesis is executed on topical topics, the results of some of the research studies proposed for use in production.

**Results of the issue, use and adaptation of graduates of specialty 211  
"Veterinary Medicine" OS "Magister"**

№ з/п	Indicator	Years	
		2016	2017
1.	Number of graduates (total):	67	66
2.	Number of graduates with honors (total):	7	8
3.	The share of graduates who have passed the state examination or defended theses on "excellent" and "good" (%)	100	100
4.	The share of theses executed with the use of computers (%)	100	100
5.	Share of theses executed to order of enterprises (%)	97,0	97,0
6.	The share of graduates protected at enterprises (%)	10,4	18,2
7.	Share of works recommended by the EC to implementation (%)	86,6	89,4
8.	The share of graduates who studied under the state order and received their destination (%)	100	100
9.	The share of graduates recommended for postgraduate studies (%): a) of them are enrolled in postgraduate studies	22,4 11,9	28,8 16,7
10.	Share of graduates where the educational institution has data on their place of work and position (%)	100	100

### **5.13. Report from alumni questionnaire**

In the preparatory period (the first semester of the academic year), the department of employment of the SNAU, the dean's office of Veterinary Medicine Department, the graduating department conduct activities that promote further employment of graduates - bachelors and preparation for the passage of industrial practice: meetings with heads of enterprises and organizations, staffing services in the organization of employment, holding "Days of Career", participation in exhibitions, conferences, thematic meetings with university graduates who hold senior positions in the body of state power and local self-government, enterprises and organizations of different forms of ownership.

SNAU constantly maintains links with graduates who have studied at the faculty, traces their career growth, uses this experience in upbringing of junior students. Traditionally meetings with graduates were held every year in the second semester of the initial year. The most popular wishes of graduates:

- regular improvement of the material and technical base of the faculty based on production requirements;
- to increase the percentage of students undergoing training in production farms;
- to conduct internships for students and teachers abroad;
- to prepare students for a particular farm.

#### **5.14. Data on employability of graduates**

Sumy National Agrarian University graduates are sent to leading agricultural enterprises, farms, to regional district administrations of Sumy, Chernihiv and other regions of Ukraine. Sumy Oblast is 49%, Sumy - 24%, Chernihiv Oblast-14%, other oblasts - 13%. Since December 2010, the University has started the tradition of holding a state division of young specialists with the participation of heads of enterprises who need staffing. Representatives of the Sumy Regional State Administration and the Main Directorate of Agro-Industrial Development are invited to this event. During distribution, the commission is considering the issues of recruiting young specialists in detail, taking into account social and living conditions, namely: wages, housing, living conditions, transport links, social guarantees, and so on.

#### **5.15. Examples of recent programme graduates**

*List of graduates of Veterinary Medicine Department of Sumy NAU, who hold the leading positions:* Assori Alexander Yukhanovych - Director of the Sumy State Biological Factory Babaruk Andriy Valerievich - the head of the Southern Regional Service of Internal Affairs. Bondar Sergey Viktorovich - director of the veterinary center "Health". Vievsky Sergey G. - Head of the Yunakiv border inspection post of veterinary medicine. Igor Borisovich Voshchenko - Head of "Ryabushki Bacon" Ltd. Vitaliy Zakharchenko is a leading veterinarian of the Consultancy Center of the Association of Milk Producers. Nikchik Sergey Anatoliyovych - Director of the Institute of Veterinary Medicine of the National Academy of Sciences of Ukraine. Pavlishhenko Yuri Vladimirovich - Director of the Department of Agricultural Development of Chernihiv Oblast State Administration. Panikar Igor Igorovich - Vice-rector on scientific work and international relations of Odessa State Agrarian University. Pedan Volodymyr Anatoliyovych - Head of animal husbandry department of PJSC "Rize-Maksymko". Vasyl G. Titarenko - Head of the Sumy border inspection post of veterinary medicine.

### **6. Final internal and external review and concluding remarks**

Having analyzed in accordance with the set goals, the educational process in the specialty "Veterinary Medicine", using the SWOT analysis, the working group members reached the following conclusions:

1. The results of the study program show that the level of training of masters in veterinary medicine by Sumy National Agrarian University meets the modern requirements. The results of the defense of diploma papers and passing of complex state examinations by the graduates of of Veterinary Medicine Department indicate that the staff of Veterinary Medicine Department successfully performs the training masters of veterinary medicine. The 2017 graduates in the vast majority have sufficient knowledge to solve production problems. Graduates of the magistracy are trained to work in research and education institutions in their specialty.

2. All scientific and pedagogical staff has the appropriate basic education, scientific degree and academic rank, necessary work experience and scientific publications in the specialty teaching, has undergone training and internships, including abroad ones, and takes part in the research work of the department, faculty and university. The educational process is fully ensured by educational and methodological developments of the corresponding content and form of all types of classes provided for by the curriculum.

3. The system of quality assurance of the educational process of the Sumy National Agrarian University combines external national and international requirements in the system of internal quality control with the principle of "responsibility through quality development", which has an integrative task of combining all individual activities in education, research, management and maintenance of the educational process into a single whole. The quality assurance system motivates university administration, staff and students to analyze the quality of their services and processes to evolve.

4. The level of knowledge of graduates is confirmed by external experts, meets the standards of education and labor market requirements.

5. The material and technical basis of the Sumy NAU provides theoretical, practical and seminars at the appropriate level. The Audit Fund meets the requirements of the sanitary and technical requirements and material and technical provision of the educational process of training specialists in the specialty "Veterinary Medicine" at the Sumy National Agrarian University. Use of the global (Internet), local (Internet and auditorium) computer networks in the learning process, the development of its own electronic guides in the program content MOODLE, application of adapted computer programs can increase the information level of training of specialists and provides the opportunity to apply distance learning. In the training process for the training of specialists, innovative information and communication technologies of education are widely used, which provides openness and accessibility in relation to the courses in the educational program, in particular data on the structure of courses, the logic of the construction, the curriculum and partners, taking into account the principle of academic integrity.

At the same time, during the discussion of the Report with representatives of business and external experts, comments were made and recommendations for further improvement of the educational process were developed:

1. To expand the training of the teachers of the department in transnational companies, foreign enterprises, leading enterprises of Ukraine.

2. In order to increase the teaching skills of teachers, to intensify their training in leading educational institutions of the world.

3. To involve more actively the leading specialists of other higher educational and scientific institutions (including abroad) and business representatives in the educational process.

4. Ensure the monitoring and flexibility of the curricula in accordance with the specifics of the regional labor markets in order to prepare specialists with special competencies.

5. Improve the educational and methodical system of education. In particular by implementation of technologies proposed in the program It concerns the methods of remote education using the MOODLE technology.

6. With the purpose of activating the University entrance into the European educational space, deepening of international cooperation, increase the motivation of teachers to improve their foreign language proficiency.

7. Continually develop academic international mobility, including within the framework of existing cooperation agreements with European higher education institutions.

8. Constant monitoring of the quality of the educational process through a sociological survey of students at least once a semester.

9. Introduce an electronic form of questionnaires in order to more quickly identify weaknesses in the organization of the learning process and the ability to respond to them.

## SOUND DATA

### about compliance with licensing conditions in the field of higher education. Comparative table of observance of personnel and technological requirements concerning the material, technical, methodological and informational provision of educational activities in the field of higher education

Name of indicator (norm)	The value of the indicator (norm) for the third (educational-scientific) level of education	Actual value of the indicator	Deviation of the actual value of the indicator from the normative
<b>1. General requirements</b>			
1.1. Declared Licensed Volume (full-time education)	4-5 for one doctor of sciences, 2-3 for one candidate of sciences	45	–
<b>2. Personnel provision of educational activities in the field of higher education</b>			
2.1. Availability of a unit of education or a department responsible for the training of higher education graduates in an educational institution	+	+	+
2.2. The presence of a department or department responsible for the training of applicants for higher education, a temporary working group (project team) from scientific and pedagogical workers, which is responsible for the training of applicants for higher education in a certain specialty	three persons having a degree and a scientific rank, of which at least two doctors of sciences	4 doctors of sciences, professors, 1 doctor of sciences, associate professor, 2 candidates of sciences, associate professors	+2 Doctors of Sciences, Professors, 1 Doctor of Science, Associate Professor
2.3. Presence of the head of the project group (the guarantor of the educational program): a degree and a scientific rank in the corresponding or related specialty; Experience of scientific-pedagogical and / or scientific work not less than 10 years (till September 6, 2019 for the initial level taking into account the experience of pedagogical work)	+	+	+
2.4. Conducting lectures on educational disciplines by scientific and pedagogical (scientific) workers of the corresponding specialty at the main place of work (the minimum percentage of the number of hours determined by the curriculum) of them:	+	+	+

who have a degree and / or a degree (before September 6, 2019, for the entry level, taking into account pedagogical staff having the highest category)	80	100	+20
who have a PhD degree	50	71	+29
2.5. Conducting lectures on educational disciplines that ensure the formation of professional competencies, scientific and pedagogical (scientific) employees, who are recognized professionals with experience in the profession (minimum percentage of the number of hours determined by the curriculum) of them: research, management, innovation or creative work in the specialty	50	90	+40
2.6. Conducting lectures, practical classes, seminars and laboratory classes, conducting scientific guidance courseworks, diploma works (projects), dissertation researches by scientific and pedagogical (scientific) workers, the level of scientific and professional activity of which each is certified by the performance of the last five years at least three the conditions specified in paragraph 5 of the notes	For the last five years, at least three of the conditions specified in paragraph 5 of the notes	+	+
2.7. Availability of the graduation department for special (professional) training, which is headed by a specialist of the corresponding or related scientific and pedagogical specialty with a scientific degree of the doctor of sciences and a scientist degree	+	+	+
2.8. Availability of labor contracts (contracts) with all scientific and pedagogical workers and or orders for their recruitment	+	+	+
<b>3. Material and technical provision of educational activities in the field of higher education</b>			
3.1. Provision of premises for conducting training sessions and control activities (sq. Meters per person for the actual student contingent and the stated amount, taking into account	2,4	2,4	-

the training for changes)			
3.2. Provision of multimedia equipment for simultaneous use in classrooms (minimum percentage of audience)	30	30	-
3.3. The presence of social and domestic infrastructure including: libraries, including a reading room medical point	+ +	+ +	+ +
3.4. Provision of higher education students with a hostel (minimum percentage of needs)	70	100	+30
3.5. Availability of computer workstations, laboratories, landfills, equipment, equipment required for the implementation of curricula.	+	+	+
4. Educational and methodical provision of educational activities in the field of higher education			
4.1. Availability of a description of the educational program	+	+	+
4.2. Availability of a curriculum and an explanatory note to it	+	+	+
4.3. Availability of a work program for each curriculum	+	+	+
4.4. Availability of a complex of educational and methodological support for each curriculum	+	+	+
4.5. Availability of practical training program, practical work programs	+	+	+
4.6. Provision of students with study materials for each curriculum	+	+	+
4.7. Availability of methodical materials for certification of applicants	+	+	+



**Questionnaire**  
**"Monetary evaluation of graduate students"**

Dear expert!

We ask you to evaluate the level of knowledge, skills and qualities that are acquired by student-graduate of SNAU. For each criterion, please set from 1 to 5 points, where 1 - low level, 5 - high level.

Responses will be used to determine the monetary evaluation of student

Full name of the student \_\_\_\_\_

**1. Please assess the level of knowledge acquired by the graduate of the SNAU:**

Criteria for evaluation	1	2	3	4	5
professional knowledge (during the defense of graduation work)					
managerial knowledge (during the interview)					
economic knowledge (during the defense of graduation work and interview)					
Total					

**2. Level of acquired skills of graduate of SNAU:**

Criteria for evaluation	1	2	3	4	5
professional knowledge (during the defense of graduation work)					
managerial knowledge (during the interview)					
economic knowledge (during the defense of graduation work and interview)					
Total					

**3. Practical skills of graduate of SNAU:**

Criteria for evaluation	1	2	3	4	5	6
Self-development skills (Scientific Supervisor's response)						
Skills in working with information technologies (CV)						
Skill of situation analysis and decision making (Scientific Supervisor's response)						
Knowledge of the professional foreign language and its level of use (CV)						
Total						

**4. The personal qualities of a graduate of SNAU:**

Criteria for evaluation	1	2	3	4
Intellectual Potential (Scientific Supervisor's Response)				
Strategic thinking (during an interview)				
Leadership qualities (through curator and interview characteristics)				
Ability to effectively represent oneself and the results of your work (during the defense of graduation work)				
Communicability (through the characteristics of the curator)				
Social activity (through the characteristics of the curator)				
Personality organization and discipline (through the characteristics of the curator)				
Focus on career growth and professional development (during interviews)				
Culture of behavior (during the defense of graduation work)				
Exterior of the student (style of clothes, shoes, hair style) (during the defense of graduation work)				
Total				

**Together scored for all criteria** Processing the results:

Number of points scored	Level	Salary
60-74 points	sufficient	5 000 UAH
75-89 points	high	10 000 UAH
90-100 points	the expert	20 000 UAH

Questionnaire

Dear student, we invite you to participate in the anonymous poll. Your opinion is very important for evaluating the quality of the teaching course

« \_\_\_\_\_ »

1. Evaluate the quality of teaching materials (lectures, workbooks) that was used during the course?
    - a. excellent d. satisfactorily
    - b. very well e. unsatisfactorily
    - c. well
  2. Evaluate the relevance (compliance of modernity requirements) of the lecture material.
    - a. not relevant b. partly relevant c. actual
  3. Evaluate the level of provision of the training course by multimedia support:
    - a. excellent d. satisfactorily
    - b. very well e. unsatisfactorily
    - c. well
  4. Does the teacher uses the practical tasks (team work tasks, case-tasks, deal games) for learning the lectures materials?
    - a. yes b. no
  5. Evaluate the quality level of the Moodle platform for studying the course?
    - a. absolutely satisfied d. not absolutely satisfied
    - b. satisfied e. absolutely unsatisfied
    - c. partly satisfied
  6. Evaluate the level of tolerance of teacher in context of communication with the students
    - a.high d.low
    - b. medium i. extremely low
    - c. partially admissible
  7. Do you understand the scale of assessment of knowledge (marking points) for each task?
    - a. yes b. no
- \* note: we are talking about a clear chart of scoring of every tasks that a student has to perform during all course*
8. Did you have any problems with the mastering the material for self-study?
    - a. yes b. no
  9. How useful was this course for you in a context of your future specialization and professional activity?
    - a. extremely useful d. hardly useful
    - b. useful e. absolutely useless
    - c. useful to some degree
  10. Try to evaluate justly and independently your own level of knowledge acquisition within this course:
    - a. excellent d. satisfactorily
    - b. very well e. unsatisfactorily
    - c. well

Thank you for taking part in questionnaire!

**QUESTIONNAIRE**  
the evaluation of teacher's work

“ \_\_\_\_\_ ”

Professor \_\_\_\_\_

*The survey was attended by \_\_\_\_\_ students*

We have analyzed the student's answers to the questionnaire and received the following results:

#	Questions	Answer results (%)		
		Yes	Partially	No
1.	The teacher is fluent in the content of course			
2.	Teacher explains accessibly, it is interesting to listen to, he can argue and bring an opinion			
3.	The objectives of the classes held by the teacher are clear to me			
4.	The results of my knowledge and skills prove the achievement of the goals			
5.	The teacher uses time during lecture and practical classes efficiently			
6.	The content of lectures individual assignments is associated with praxis			
7.	The teacher uses the technical means of studying at classes efficiently			
8.	Methods of interaction with students provide high quality assimilation of knowledge during classes			
9.	Which of these types of classes (forms of work) are implemented in the teaching process by the professor:	* active lectures – * classes with usage of information technology – * business games – * research work – * analysis–		
10.	Methods of interaction with students provide quality assimilation of knowledge during classroom classes			
11.	Out of these types of classes (forum of work) are implemented in the educational process by the teacher at the university most of all:			
12.	Do you understand the requirements of the teacher, the criteria for evaluating your work?			
	Does Teacher timely inform the audited results of assignments?			
13.	Does your grade match your teacher's grade?			
14.	Does it objectively assessed the level of your knowledge and skills conducted by the teacher:			
	* interview			
	* individual work checking			

	* reports on creative tasks			
	* modular control works			
	* computerattestation			
	* credits			
	* examinations			
15.	The instructor is interested in the academic achievements of students			
16.	Teacher responsive to students willing to provide advice in the classroom and beyond			
17.	The teacher easily establishes relations with the student audience			
18.	Does the teacher take into account your interests, abilities and psychological peculiarities			
19.	How does the professor organize students' research work and do you take part in it?	<b>Organization:</b> * well organized – * not organized enough – * not organized –	<b>Your participation:</b> *developing a specific problem – *participation in conferences, writing articles – *do not participate –	
20.	Does the professor carry out consultation with you and how does he control the research?	<b>Consultation:</b> * according to schedule – * with deviation from the schedule – * do not hold –	<b>Control:</b> *permanent – *episodic – * do not hold –	

Please tell us about yourself:

**Sex:**

Male [-----%]

Female ---%]

**I'm attending classes:**

Always (100%) – ----% visit from the group;

Very often (>75%) – ----% visit from the group

Often (50-75%) – ----% visit from the group