

STATE BIOTECHNOLOGICAL UNIVERSITY
Faculty of veterinary medicine

**Program and recommendations for
internship in specialty
211 Veterinary Medicine**



Kharkiv – 2024

This program and recommendations address general issues of organizing, conducting, and summarizing the results of internship for higher education students at the Faculty of Veterinary Medicine of the State Biotechnological University.

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CONTENT

	Pages
1. General provisions for the practice	4
2. Organization of the practice	7
3. Practice program	10
4. Requirements for practice bases	11
5. Reporting documentation on the practice	12
6. Summing up the practice and evaluating its results	14
7. Recommended literature	15

1. General provisions for conducting internships

Internship in veterinary medicine is one of the final stages of the educational process under the program for training higher education applicants in specialty 211 "Veterinary Medicine" of the second (master's) level of higher education.

Internship is completed by education applicants in the 4th year (entrance based on the previously obtained level "junior doctor of veterinary medicine"), in the 5th year (entrance based on complete general secondary education and on the basis of first higher education) and master's students of the 1st year of study (entrance based on the educational level "bachelor" or "specialist").

Internship of education searchers is one of the important types of educational work and is carried out with the aim of acquiring production skills to make independent decisions in real production conditions. It is designed to prepare future specialists for real practical work, to ensure the proper level of their professional training.

The main goal of internship in veterinary medicine is to consolidate theoretical knowledge by applicants, master professional practical skills that will be used by future specialists during practical activities in the field of veterinary medicine. It is a continuation of the educational process in industrial conditions, an active form of combining theory and practice.

Practical training tasks:

- to deepen and consolidate theoretical knowledge and practical skills of applicants in the specialty and academic disciplines of the cycle of professional and practical training;
- to be able to work with sick animals;
- to conduct scientific research and analyse the obtained results.

Students should know:

- national and international legislative framework in veterinary medicine;
- clinical signs, methods of diagnosis, treatment and prevention of the most common infectious and non-infectious pathologies of agricultural and domestic small animals;
- basic principles of deratization, disinfection and dezacarization;
- methods of scientific research.

Students must:

- during the period of internship, must master modern methods and forms of organizing the work of a veterinary doctor based on the knowledge obtained at the educational institution;

- to form professional skills and abilities necessary for making independent decisions in real production conditions, systematically update their knowledge and creatively apply them in practical activities.

As a result of completing the internship, students must acquire integral competence:

the ability to solve complex tasks and problems in the field of veterinary medicine, which involves conducting research and/or implementing innovations and is characterized by uncertainty of conditions and requirements.

During the internship, students must acquire the following general competencies:

GC2. Ability to apply knowledge in practical situations.

GC3. Knowledge and understanding of the subject area and profession.

GC4. Ability to communicate in the state language both orally and in writing.

GC6. Skills in using information and communication technologies.

GC7. Ability to conduct research at the appropriate level.

GC8. Ability to learn and master modern knowledge.

GC9. Ability to make informed decisions.

GC10. Ability to communicate with representatives of other professional groups of different levels (with experts in other fields of knowledge/types of economic activity).

GC11. Ability to evaluate and ensure the quality of work performed.

GC12. Commitment to environmental protection.

During their internship, students must acquire the following professional competencies:

PC2. Ability to use tools, special devices, instruments, laboratory equipment and other technical support to perform the necessary manipulations during professional activities.

PC3. Ability to comply with the rules of labour protection, aseptic and antiseptic during professional activities.

PC4. Ability to conduct clinical studies in order to formulate conclusions about the condition of animals or establish a diagnosis.

PC5. Ability to apply methods and techniques of pathological and anatomical diagnostics of animal diseases to establish a final diagnosis and causes of their death.

PC6. Ability to select, pack, fix and send samples of biological material for laboratory research.

PC7. Ability to organize and conduct laboratory and special diagnostic studies and analyse their results.

PC8. Ability to plan, organize and implement measures for the treatment of animals of various classes and species, sick with non-communicable, infectious and invasive diseases.

PC9. Ability to perform obstetric-gynaecological and surgical measures and operations.

PC10. Ability to develop strategies for safe, sanitary-conditioned animal husbandry.

PC11. Ability to apply knowledge of biosafety, bioethics and animal welfare in professional activities.

PC12. Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans.

PC13. Ability to develop strategies for the prevention of diseases of various etiologies.

PC14. Ability to conduct forensic veterinary examination.

PC15. Ability to organize supervision and control of the production, storage, transportation and sale of products of animal and plant origin.

PC16. Ability to protect the environment from pollution by livestock waste, as well as materials and means of veterinary use.

PC17. Ability to carry out marketing and management of veterinary products and services in veterinary medicine.

PC18. Ability to use specialized software to perform professional tasks.

PC19. Ability to carry out educational activities among industry workers and the public.

PC20. Ability to organize, implement and control document flow during professional activities.

During the internship, students must acquire the following program learning outcomes:

PLO1. Know and correctly use the terminology of veterinary medicine.

PLO2. Use information from different sources to develop diagnostic, therapeutic and business strategies.

PLO3. Determine the essence of physic-chemical and biological processes that occur in the animal body in normal and pathological conditions.

PLO4. Collect anamnestic data during registration and examination of animals, make decisions on the choice of effective methods of diagnosis, treatment and prevention of animal diseases.

PLO5. Establish a connection between the clinical manifestations of the disease and the results of laboratory tests.

PLO6. Develop quarantine and health measures, methods of therapy, prevention, diagnosis and treatment of diseases of various etiologies.

PLO7. Formulate conclusions regarding the effectiveness of selected methods and means of keeping, feeding and treating animals, prevention of infectious and non-infectious diseases, as well as production and technological processes at enterprises for keeping, breeding or operating animals of various classes and species.

PLO8. Monitor the causes of the spread of diseases of various etiologies and biological pollution of the environment with animal waste, as well as materials and means of veterinary use.

PLO9. Develop measures aimed at protecting the population from diseases common to animals and humans.

PLO10. Propose and use appropriate innovative methods and approaches to solving problem situations of professional origin.

PLO11. Summarize and analyse information on the effectiveness of the work of veterinary specialists of various subordination.

PLO12. Know the rules and legislative regulations on the supervision and control of the production, storage, transportation and sale of products of animal and plant origin.

PLO13. Understand the logical sequence of actions and be able to draw up appropriate documentation during forensic veterinary examination.

PLO14. Understand the essence of the processes of manufacturing, storage and processing of biological raw materials.

PLO15. Know the rules for storing various pharmaceuticals and biological products, the ways of their enteral or parenteral administration, understand the mechanism of their action, interaction and complex effect on the animal body.

PLO16. Know the principles and methods of marketing and management of veterinary products and services in veterinary medicine.

PLO17. Know the rules and requirements of biosafety, bioethics and animal welfare.

PLO18. Carry out accounting reporting during professional activities.

PLO19. Carry out educational activities among industry workers and the population.

PLO20. Own specialized software tools to perform professional tasks.

2. Organization of internship

Organizational measures that ensure the preparation and procedure for conducting internships for applicants for specialty 211 Veterinary Medicine, EPP "Veterinary Medicine" with a higher education degree of "Master" are:

- development of work programs of internships;
- determination of internship bases;
- conclusion of agreements on internships between the university and enterprises (institutions, organizations, etc.);
- distribution of higher education applicants by internship bases;
- preparation of information for internship bases about the volume, content, period of students' internships, needs for equipment and materials, etc.;
- appointment of internship managers;
- holding orientation meetings with higher education applicants;
- preparation of reporting documentation on the results of internships;
- other activities.

Responsibility for the organization and conduct of the internship lies with the Vice-Rector of the University for Academic and Scientific Work. The general organization of the internship and control over its conduct at the University is carried out by the Dean, and at the departments - by the heads of departments.

The distribution of education searchers by places of internship, the assignment of practice managers from the educational institution and the enterprise is carried out no later than two months before the start of the practice and is approved by order of the rector of the State Biotechnological University.

Before the start of internship, education seekers-interns receive a referral, program, methodological instructions for completing the practice, and a form of a diary-report.

Education seekers are introduced to the procedure for completing the practice and the features of implementing the program and completing documentation.

Measures related to the organization of the practice of education seekers are determined by the order of the rector of the University on the implementation of the practice of higher education seekers.

Internship of higher education seekers is carried out in production conditions during a period that ensures the possibility of performing all types of work by education seekers according to the practice program. At the beginning of the internship, the head of the enterprise (institution, organization, etc.) appoints a manager from the internship base, and also ensures that the applicants-interns are given instructions on labour protection, familiarization with the rules of the internal labour regulations of the internship base, and the procedure for obtaining documentation and materials.

The internship supervisor from the internship base must be a specialist who works on a permanent basis.

The legislation of Ukraine on labour and the rules of the internal labour regulations of the enterprise (institution, organization, etc.) apply to applicants-interns who undergo internships at an enterprise (institution, organization, etc.).

To conduct industrial internships, a practice supervisor from the department is appointed by order of the university.

The head of internship from the department is obliged to:

- provide students with the necessary documents (directions, program, diary-report, etc.);
- monitor the timely arrival of students to the practice bases;
- monitor the implementation of the practice program and the deadlines for its completion;
- advise students on the collection and preparation of materials for scientific work (scientific articles, final qualification work), preparation of a practice report;
- conduct consultations on the processing and generalization of the collected material;
- check practice diaries-reports and evaluate the results of the practice by students;
- participate in the work of the commission for the defence of practice reports.

Practice manager from the practice base:

- provides direct supervision of the practice of students-interns in accordance with the practice program;
- provides instruction in compliance with safety and fire safety rules;
- familiarizes students-interns with the rules of internal regulations and monitors their compliance;
- determines the workplace for the student and the conditions for his/her practice;
- provides advisory and practical assistance during the student's implementation of the practice program, in collecting and analysing materials and preparing a report on the practice;
- monitors the keeping of a diary, preparation of a report by the student-intern;
- informs the head of the practice from the department of the faculty about the violation of labour discipline and internal regulations by the student-intern;
- upon completion of the practice, gives a characteristic to the student with an assessment of his/her activities.

Higher education students undergoing industrial practice are required to:

- attend orientation meetings on internship issues;
- receive documents for internship;
- familiarize yourself with the internship program;
- receive individual tasks from the internship manager from the department;
- arrive at the internship base on time;
- undergo targeted briefing on labour protection;
- comply with labour protection rules at the enterprise (in an institution, organization, etc.);
- comply with the internal regulations in force at the enterprise;
- perform tasks required by the internship program, as well as the tasks of the internship manager from the enterprise;
- be responsible for the work performed and its results on a par with full-time employees;
- actively implement progressive work methods at the enterprise;
- collect materials for compiling a diary and report;
- prepare reporting documentation on internship;
- receive a production characteristic signed by the head of the enterprise and certified by a seal;
- submit a timely internship report and defend it before the commission.

3. Program of practice

1. Characteristics of the practice base – description of the main type of activity of the practice base, the main direction of work, detailed acquaintance with all types of technological documentation, the procedure for its development and execution.

2. Internal diseases of animals – clinical examination of animals for internal pathology, diagnosis, treatment and analysis of the results obtained.

3. Surgical diseases of animals – clinical examination and treatment of animals for surgical pathology, determination of trauma factors and analysis of the results obtained.

4. Obstetrics-gynaecological and andrological pathology of animals – study of obstetric, gynaecological and andrological pathology of animals, diagnosis, treatment, provision of obstetric care and generalization of the results obtained.

5. Infectious diseases of animals – carrying out preventive measures, drawing up a calendar plan of anti-epizootic measures, clinical examination of animals, establishing a diagnosis, carrying out treatment and analysing the results obtained.

6. Parasitology and invasive diseases of animals – clinical examination of animals, carrying out special laboratory tests, establishing a diagnosis, carrying out treatment and analysing the results obtained.

7. Pathological anatomy and autopsy – morphological changes in the animal body in various diseases and pathological processes. Consideration of the entire complex of problems related to the diseased organism.

8. Veterinary and sanitary examination – methods of research and veterinary and sanitary assessment of products of animal and plant origin. Prevention of infectious and invasive diseases that spread among humans and animals through food, feed and technical products of animal origin.

9. Organization and economics of veterinary business – organizational forms of veterinary medicine, organization and economics of veterinary activities, methods of work of veterinary medicine specialists of enterprises, institutions and organizations.

10. Special and laboratory research methods – systematization of laboratory studies that characterize metabolic processes and functional state of organs and systems of the body. Description of methods for studying blood, urine, cerebrospinal fluid, synovial fluid, transudate and exudate, milk, meat, wool, hair, eggs, sperm, tissues, feed, contents of the rumen, stomach and intestines.

Individual practice assignment (if necessary)

– Each higher education student creates a report based on the results of their internship.

4. Requirements for practice bases

Internship of higher education students of the Faculty of Veterinary Medicine of the State Biotechnological University (hereinafter referred to as the University) is carried out at enterprises (institutions, organizations, etc.) that ensure the implementation of the internship program for students of the specialty 211 Veterinary Medicine, EPP "Veterinary Medicine", the degree of higher education "Master".

Practice bases can be business entities, regardless of their organizational and legal form and form of ownership, individuals who conduct independent professional activities, state authorities and local governments, public formations, objects of structural divisions of the University, as well as bases outside Ukraine, provided that they ensure the full implementation of the internship programs.

Enterprises (institutions, organizations, etc.) involved in the implementation of internship by higher education students must meet the following requirements:

- the presence of structural divisions whose activities correspond to the specialties in which students are trained at the University;
- the ability to ensure the implementation of the internship program;

- ensuring qualified guidance for the internship of education seekers;
- ensuring appropriate conditions for internship in production with compliance with the rules and norms of occupational safety and industrial sanitation in accordance with the legislation;
- granting higher education seekers the right to use the documentation necessary for the implementation of the internship program, taking into account the confidentiality policy of the enterprise (institution, organization, etc.);
- the possibility of subsequent employment of University graduates (on a general basis, if there are vacancies).

Taking into account the specifics of training higher education applicants under the educational and professional program, departments may establish additional requirements for practice bases, which are reflected in the relevant practice work program.

5. Reporting documentation on practice

After the end of the internship, students report on the implementation of the program and individual tasks.

The diary-report is the main document of the student on the results of his/her internship. In the diary-report, the student reflects the volume and essence of the work performed during the internship period. At the same time, all issues of the internship program must be completed and worked out by him/her. Upon completion of the internship, the diary-report must be reviewed by the internship manager from the educational institution, who signs it and writes a review of the student's work.

The student enters information about the work performed in the diary-report for each section specified in the diary-report, i.e., cases of diseases of animals of various species, their individual data, clinical signs, features of diagnostic, treatment and preventive measures for various diseases are provided.

The internship report is defended by the student with a differentiated assessment in a commission appointed by the dean's office of the Faculty of Veterinary Medicine on the basis of an order. The report is defended within 2 weeks after the end of the internship period. The student's assessment for the internship is entered into the minutes of the commission meeting.

A student who has not completed the internship program may be granted the right to retake the internship upon fulfilment of the conditions set by the educational institution. A student who has received a negative assessment is expelled from the higher education institution.

Documents that the student must provide after completing the internship:

- diary-report, which is filled out by the student and submitted to the head of the educational institution for verification.
- description of the place of practice with an assessment of the student's work, which is signed by the head of the practice from the enterprise and certified by the seal of the institution.
- referral for practice, signed and certified by the seal of the institution where the student underwent industrial practice.

The student is obliged to submit documents from the internship to the dean's office of the Faculty of Veterinary Medicine the next working day after the completion of the internship.

Requirements for reporting documentation from the internship. The main reporting documentation is a diary-report on production practice (printed copy). The language of the diary-report on production practice is state, the style is scientific, clear, without spelling and syntax errors, the sequence is logical. Direct copying of materials from literary sources in the report is unacceptable. Digital material obtained during research should be placed in compact, thematic subheadings and numbered tables. The table is placed immediately after the text in which it is mentioned for the first time, or on the next page. All tables (if any) must be referenced in the text. Tables should be numbered with Arabic numerals, ordinal numbering within the section, with the exception of tables given in the appendices. The title of the table should be concise and reflect its content.

It is advisable to illustrate the report for the defence of industrial practice with original drawings, which may include macro- and microphotographs, graphs, diagrams and schemes. Illustrations may have a title, which is placed under the illustration, and serial numbers. The number of illustrations should be sufficient to explain the text. Illustrations (drawings, graphs, schemes, diagrams, photographs) should be placed immediately after the text, where they are mentioned for the first time, or on the next page. All illustrations should be referenced in the text.

Illustrations should be numbered with Arabic numerals in sequential order. If there is only one figure, it is designated Figure 1.

The order of teaching materials in a diary-report.

The source material for compiling a diary-report is materials obtained during the internship, as well as copies of expert reports, protocols, photographs, etc. The internship diary-report should include the following sections:

- 1. Characteristics of the practice base*
- 2. Internal diseases of animals*
- 3. Surgical diseases of animals*
- 4. Obstetric-gynaecological and andrological pathology of animals*

5. *Infectious diseases of animals*
6. *Parasitology and invasive diseases of animals*
7. *Pathological anatomy and autopsy*
8. *Veterinary and sanitary examination*
9. *Special and laboratory research methods*

Summaries

In the first part, the higher education applicant gives a brief description of the place of practice and the organization of the enterprise. In the sections indicated above, the higher education applicant summarizes the materials of the educational components and presents the final data both in the form of text and in tables, illustrations, etc.

The conclusions give an assessment of the place of practice, its organization, and the results obtained.

In the appendices, the higher education applicant includes copies of acts of work performed, diagrams, photographs, etc. Their number should be moderate so as not to overload the report with materials that are not of particular importance.

For this, the higher education applicant independently uses available Internet resources.

A higher education applicant who has drawn up a diary-report that has a sufficiently high originality of the text is allowed to defend it.

A higher education applicant who has completed a diary-report on industrial practice, which has satisfactory originality of the text, is allowed to defend it subject to consultation from the practice supervisor from the department.

A higher education applicant who has completed a diary-report on industrial practice, which has a low originality of the text, is not allowed to defend it.

Only a diary-report filled out in the established form is accepted for the defence of industrial practice.

6. Summing up the practice and evaluating its results

After the end of the internship period, higher education applicants report on the implementation of the internship program. Reporting documentation includes a practice diary-report, a description and a referral for practice.

Based on the results of the internship, the applicant submits a report (presentation material on the internship, which is formed on the basis of materials entered in the diary-report).

In the internship diary-report, the student chronologically reflects the content of the work performed by him during the internship with a brief analysis of it.

The internship report is defended by the applicant before a commission appointed by the order of the Dean of the Faculty of Veterinary Medicine of the State Biotechnological University.

Based on the results of the internship, a semester control is carried out in the form of a differentiated assessment.

The head of the commission summarizes the points awarded by the internship supervisor from the department and the internship report defence commission.

The internship supervisor from the department awards points based on: an assessment of the results of the internship by the applicant, provided in the internship supervisor's review-characteristic from the internship database; an assessment of the quality of the design and content of the internship diary-report.

The internship report defence commission awards points (differentiated assessment) based on the results of the applicant's presentation of the internship results and answers to the questions of the commission members.

TOTAL POINTS	RATING ECTS	NATIONAL SCALE ASSESSMENT
90-100	A	excellent
82-89	B	good
74-81	C	
64-73	D	satisfactorily
60-63	E	
35-59	FX	unsatisfactorily
1-34	F	

7. Recommended sources of information

When completing a diary-report on internship, a higher education student can use literary sources and Internet resources.

Main

1. Bayry, J. (Ed.). (2017). *Emerging and re-emerging infectious diseases of livestock*. Springer.
2. Dhaliwal, B. S., & Juyal, P. D. (2013). *Parasitic zoonoses* (pp. 1-135). New Delhi, India:: Springer.
3. Graevenitz, A., & Zahner, H. (2003). *Zoonoses: infectious diseases transmissible from animals to humans* (Vol. 213). ASM Press, Washington DC.
4. Greene, C. E. (2008). Infectious diseases of the dog and cat. *Australian Veterinary Journal*, 77(3), 194.
5. King, J. M., Roth-Johnson, L., Dodd, D. C., & Newsom, M. E. (2014). *The Necropsy Book: A guide for veterinary students, residents, clinicians, pathologists, and biological researchers*. The Internet-First University Press.
6. Mehlhorn, H. (2016). *Animal parasites: diagnosis, treatment, prevention*. Springer.
7. Nelson, R. W., & Couto, C. G. (2019). *Small Animal Internal Medicine-E-Book: Small Animal Internal Medicine-E-Book*. Elsevier Health Sciences.

8. Noakes, D. E., Parkinson, T. J., & England, G. C. (Eds.). (2018). *Arthur's Veterinary Reproduction and Obstetrics-E-Book: Arthur's Veterinary Reproduction and Obstetrics-E-Book*. Elsevier Health Sciences.
9. Smith B. P. (ed.). *Large Animal Internal Medicine-E-Book: Large Animal Internal Medicine-E-Book*. – Elsevier Health Sciences, 2014.
10. Smith, S., & Morrison, L. (2024). *Veterinary Necropsy of Dogs and Cats: A Case Based Approach*. 5m Books Ltd.
11. Summers, A. (2019). *Common Diseases of Companion Animals E-Book: Common Diseases of Companion Animals E-Book*. Elsevier Health Sciences.
12. Sykes, J. E. (2022). *Greene's infectious diseases of the dog and cat*. Elsevier Health Sciences.

Auxiliary

1. Baert, A. L. (2007). *Imaging of parasitic diseases*. Springer Science & Business Media.
2. Blowey, R., & Weaver, A. D. (2011). *Color Atlas of Diseases and Disorders of Cattle E-Book: Color Atlas of Diseases and Disorders of Cattle E-Book*. Elsevier Health Sciences.
3. Bruyette, D. (Ed.). (2020). *Clinical small animal internal medicine*. John Wiley & Sons.
4. Cooper, J. E., & Cooper, M. E. (2008). *Introduction to veterinary and comparative forensic medicine*. John Wiley & Sons.
5. Cork, S. C., & Halliwell, R. (Eds.). (2019). *The Veterinary Laboratory and Field Manual 3rd Edition*. 5m Books Ltd.
6. Despommier, D. D., Gwadz, R. W., & Hotez, P. J. (2012). *Parasitic diseases*. Springer Science & Business Media.
7. Gotthelf, L. N. (2004). *Small Animal Ear Diseases-E-Book: An Illustrated Guide*. Elsevier Health Sciences.
8. Kerr, M. G. (2008). *Veterinary laboratory medicine: Clinical biochemistry and haematology*. John Wiley & Sons.
9. Latimer, K. S. (Ed.). (2011). *Duncan and Prasse's veterinary laboratory medicine: clinical pathology*. John Wiley & Sons.
10. Peek, S. F., & Divers, T. J. (2018). *Rebhun's Diseases of Dairy Cattle-E-Book: Rebhun's Diseases of Dairy Cattle-E-Book*. Elsevier Health Sciences.
11. Radostits, O. M., Gay, C. C., Hinchcliff, K. W., & Constable, P. D. (Eds.). (2006). *Veterinary Medicine E-Book: Veterinary Medicine E-Book*. Elsevier Health Sciences.
12. Rana, T. (Ed.). (2024). *Parasitic Diseases of Goats*. Bentham Science Publishers.
13. Sirois, M. (2018). *Laboratory Procedures for Veterinary Technicians E-Book: Laboratory Procedures for Veterinary Technicians E-Book*. Elsevier Health Sciences.
14. Thomas, N. J., Hunter, D. B., & Atkinson, C. T. (Eds.). (2008). *Infectious diseases of wild birds*. John Wiley & Sons.
15. Williams, E. S., & Barker, I. K. (Eds.). (2008). *Infectious diseases of wild mammals*. John Wiley & Sons.
16. Wobeser, G. A. (2013). *Essentials of disease in wild animals*. John Wiley & Sons.

Information Internet resources

<https://scholar.google.com>

<https://pubmed.ncbi.nlm.nih.gov/>

<https://vetbooks.ir/>