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THE DESCRIPTION OF ORGANIZATION AND EVALUATION OF OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE) OF THE VETERINARY MEDICINE STUDY PROGRAMME

I. GENERAL PART

1. The description is a determined work procedure. The description of organization and evaluation (hereinafter – **Description**) of Objective Structured Clinical Examination (hereinafter – **OSCE**) defines the organization and evaluation procedure of the Examination of the study programme of Veterinary Medicine, which results in the granted qualification of veterinary doctor, at the LSMU Veterinary Academy (hereinafter – **Academy**).

2. The Description was prepared on the basis of the following legal acts:

2.1. The law of Science and Studies of the Republic of Lithuania, 30 April 2009, No. XI-242 (*Official Gazette*, 2009, No. 54-2140). Amendment act No. XII-2534 (01 January, 2017).

2.2. The order by Minister of Education and Science „General studies execution requirements“ by Order No. V-1168, 30 December 2016. Amendment act No. V953 (01 September, 2023).

2.3. Regulation of the Studies at LSMU (approved by the Decree No. 181-03 of the LSMU Senate on 20 June 2024).

2.4. Description of the Study Field of Veterinary Medicine approved by the Order No. V- 1687 on 04 November 2020.

2.5. Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications (article 38 of the section 5, paragraph 5.4.1 of the annex 5). Amending the Directive 2013/55/ES.

2.6. *Manual of Standart Operating Procedure (ESEVT „Leipzig“ SOP 2023)*.

II. PURPOSE OF THE DESCRIPTION

3. The Description is prepared for the students of the study programme of Veterinary Medicine, lecturers and members of Examination commission.

4. The purpose of the Description:

4.1. to determine general principles, according to organisation of the OSCE;

4.2. to determine general evaluation criteria of the OSCE;

4.3. to help for students, lecturers and commission members to adjust and optimize the preparation and evaluation criteria of the Examination, set in the study programme.

III. PURPOSE OF THE OSCE

5. During the OSCE the student demonstrates the level of professional preparation, independence and his/her ability to apply the knowledge and practical skills necessary to acquire for the qualification of veterinary doctor.

6. The purpose of the Examination:

6.1. to determine the level of student competences, acquired during the study of subjects, necessary for qualification of veterinary doctor and practices of professional activities of veterinary doctor;

6.2. to allow the student to show that s/he has achieved the study goals and has acquired the competences provided in the study programme as necessary to acquire for qualification of veterinary doctor.

Explanations of terms:

OSCE - Objective structured clinical examination

Exam program – prepared by subject coordinators, approved by Study programme committee (SPC), competences, knowledge and abilities that are expected to be tested during OSCE.

The permanent working group for the organization of the OSCE - persons appointed by the decree of the VF dean to prepare and organize the OSCE.

The chairman of the permanent working group for the organization of the OSCE - by order of the VF dean designated person.

Secretary of the permanent working group for the organization of the OSCE - by order of the VF dean designated person.

The OSCE evaluation commission - is a commission approved by the Rector's order at the proposal of the Dean of VF.

OSCE evaluation results summation commission - at the proposal of the VF dean, by order of the Rector approved commission.

OSCE appeals assessment commission - a commission approved by order of the Rector.

Examination chairperson - a person appointed by order of the Rector.

Examination secretary(s) - a person appointed by order of the Rector.

The coordinator of the Exam Station - is a person appointed by the VF dean's decree, the author of the tasks and evaluation sheets, responsible for the smooth work of the station team.

Station team - persons responsible for evaluating station tasks, station preparation and arrangement. OSCE Station Teams are reviewed and updated annually as needed.

Station evaluators - the persons specified in the Rector's order are responsible for the tasks of the stations evaluation.

Assisting persons at the stations - are persons appointed by the exam chairman or heads of departments to assist in stations for team members at work during exam preparation and execution.

Examination service persons - all persons participating in the examination, having different roles in the exam, except for evaluators, secretary(s) and chairman.

Exam scheme - a scheme that indicates the number and arrangement of stations.

A critical mistake - is an action performed by a student in a station task that may pose a threat for the life (health) of a patient (animal, simulant) or student or product quality, or constitutes potentially dangerous conditions for the health of the patient (animal) (e.g. compromised sterility, a lethal dose of medicine is prescribed, etc.).

IV. PREPARATION FOR THE OSCE

7. The Examination programme (Annex 1) will be posted in LSMU Moodle course.

8. The Examination will be organized after the completion of all subjects listed in the study programme of Veterinary Medicine, passed all exams and performed clinical practice.

9. The VF vice-dean organizes meetings with students to present and discuss the progress of the scheduled exam.

10. The exam is organized by the permanent working group for the organization of the exam appointed by the VF dean's decree.

11. The activities of the examination working group are coordinated by the group chairman. The working group works in all fields of study year by updating information and procedures about the exam as needed, preparing exam schemes, execution changes, etc. questions related to the organization of the exam.

12. The examination is conducted at the proposal of the Dean of the Faculty of Arts, approved by the Rector's order.

13. Upon the instructions of the vice-dean (and/or the chairman of the committee) the subject/module coordinators and/or other authorized teachers (Station coordinators) prepare exam tasks and assessment sheets in advance.

14. The exam tasks are created based on real situations that would integrate theoretical knowledge and

practical skills that would encourage students to find the connection between them and draw conclusions and evaluate.

15. The created tasks and evaluation sheets are tested by the station coordinator and discussed with the station team.

16. Tasks and evaluation sheets coordinated with the station team are submitted by the Station Coordinator to the VF vice-dean (and/or committee chairman), but no later than four months before the date of the exam.

17. Station coordinators organize a meeting of the station team to discuss the progress of work at the station no later than 5 days before the exam.

18. The exact date and place(s) of the exam will be specified by the Dean's Office.

19. The VF vice-dean (and/or chairman of the committee) is responsible for the storage of tasks selected for the exam and the organization of the preparation of exam places.

20. For the preparation, maintenance and timely updating of the exam stations during the exam and for arranging after the exam, the station team and designated assistants are responsible.

21. The final list of the persons responsible for the stations, the secretaries of the permanent working group for the organization of the OSCE, is presented for review no later than the 10 working days before the exam.

22. A student with academic debts is not allowed to take the exam.

23. Permission to take the exam is legalized by the Rector's order.

24. OSCE date is published in the study grid.

25. OSCE's exact time is published on MOODLE course.

V. WORK, FUNCTIONS AND RESPONSIBILITIES OF OSCE COMMISSIONS

26. Two commissions are formed for the implementation of OSCE and evaluation of results:

26.1. The Examination Commission (hereinafter – examination commission), consisting of the Chairman, the Secretary (s) and the evaluators.

26.2. The Examination Commission of results summation (hereinafter - results summation commission), consisting of the chairman, secretary, dean of the faculty and 3 evaluators of the examination commission (optional).

27. The Examination commissions (hereinafter - **Commissions**) are approved by the Rector of LSMU upon the recommendation of the Faculty Dean regarding the LSMU Study Regulations.

28. The chairman of the Commission might be a lecturer or veterinary doctor with the degree of PhD in the LSMU study field of veterinary medicine. The same person shall be appointed chairman of both commissions.

29. The lecturers and veterinary doctors – practitioners in the LSMU study field of veterinary medicine may be appointed to the members of examination commission.

30. The secretary of the Commission and observers might be lecturers of the Veterinary Faculty and/or the employees of Departments of Veterinary Faculty (study administrators, administrators, laboratory workers and other specialists).

31. Functions and responsibilities of the examination commission:

31.1. the Examination is carried out by the examination commission, whose work organized by the chairman;

31.2. the examination commission is responsible for the objectivity of the examination and assessment of performed tasks.

31.3. the members of the examination commission are responsible for the confidentiality of information;

32. Functions and responsibilities of *the results summation commission*:

32.1. The members of commission review assessments of student assignments and summarize results.

33. Functions of the chairman:

- 33.1. before the exam, organizes a meeting of evaluators and other responsible persons to discuss the exam progress;
- 33.2. to control the Examination and solve the problems arised during the Examination;
- 33.3. to monitor the Examination;
- 33.4. can monitor the performance and assessment of examination tasks.
- 33.5. to approve the protocol of the Examination Commission;
- 33.6. after the Examination organizes the Commission meeting to discuss the results of the Examination;
- 34. Functions of the evaluators of *the Examination Commission*:
 - 34.1. evaluates students' exam tasks at stations.
 - 34.2. responsible for the objectivity of performed tasks.
 - 34.3. sign a protocol for the student's assessment.
- 35. Functions of the *secretary of the examination commission*:
 - 35.1. to prepare protocols and other necessary documents for the Examination;
 - 35.2. to prepare a list of students and schedules of the Examination;
 - 35.3. to check the student's identity before the Examination;
 - 35.4. to introduce the students with the provisions of the LSMU Regulation of the studies regarding academic honesty and consequences of their violation;
 - 35.5. to count the intermediate evaluation results of the Examination;
 - 35.6. responsible for the delivery of documents to the meeting of the summation commission after the exam.
- 36. Functions of the secretary of *the results summative commission*:
 - 36.1. Prepares exam protocols, fact sheets, etc. for completion. necessary documents.
 - 36.2. After the exam, prepares a report for the dean of the Faculty of Veterinary Medicine.
 - 36.3. After the exam within 5 days summarizes the final evaluations approved by the commission into lsmusis.
- 37. Other service personnel (IT specialists, etc.) may be appointed to carry out the examination by the decree of the Dean of the Faculty of Veterinary Medicine.

VI. DOCUMENTS OF THE OSCE

- 38. **Examination task** – a document that presents the Examination tasks and the description of the stations for the student.
- 39. **Evaluation sheets** – a document, where the evaluator evaluate the tasks done by the student, enter their results and sign.
- 40. **Protocol of the Examination Commission of results summation** – a document of the final Examination, which contains information about the course of the Examination and the final results. The protocol must be signed by the chairman and the secretary of the Commission.
- 41. **Examination register** (formed in the LSMUSIS database) – a document, where results of the Examination of all students are recorded.

VII. EXECUTION OF THE OSCE

- 42. According to pre-defined list, students are assigned to the place where the Examination will be held in alphabetical order at the specified time.
- 43. The place of execution of the OSCE is the units of LSMU.
- 44. Just before the exam, there is a student meeting, registration and coding.
- 45. Students are informed about the course of the exam.
- 46. Students are provided with an examination schedule, which indicates the location of the stations.
- 47. At the place of the exam, each student draws the number of the first station from which she/he will start the exam.
- 48. After the meeting, the students go to the station whose number was drawn.

49. The start and end of the station is announced by a bell.
50. At each stop, the student has 8 minutes to complete the task.
51. The student performs the station tasks individually. At the end of time i.e. when the bell rings the student leaves the station and goes to the next station indicated in the scheme.
52. Rest stops are also specified in the exam schedule.
53. The exam is conducted orally and in writing form.
54. The evaluators evaluate the tasks performed by the students individually, write down (summarize) the evaluations in the evaluation sheets and signs.
55. At the end of the task of the station, the student returns all the material for evaluators.
56. The evaluation sheets signed by the evaluators and the student's written works are submitted to the chairman of the commission or to the secretary.
57. The statistical data of the evaluation sheets shall be submitted by the exam secretary to the exam chairman and to the summation commission.
58. The Examination may be monitored by the Rector of the LSMU, Vice Rectors, Chancellors, Dean of the Faculty of Veterinary Medicine and the Dean's administration, representatives delegated by the Student representation.

VIII. BEHAVIOUR OF THE OSCE COMMISSION AND STUDENTS DURING THE EXAMINATION

59. Before the examination starts, students must submit a student certificate or identity document to the secretary.
60. During the exam, committee members and students must wear a white coat, behave politely and correctly and honestly both towards the committee members and other students, and not to interfere with the performance by their behavior exam tasks.
61. Any action during, before or after the final OSCE, allowing oneself or another a person to get an unfair advantage (benefit) during the final exam in relation to other persons is not allowed.
62. Students, who violated academic honesty, lose the right to continue the assessment, and their assessment tasks are not evaluated. Other actions are taken regarding the procedure established by the LSMU Study Regulation.

IX. EVALUATION OF THE OSCE

63. The results of student's examination are assessed by the evaluator in accordance with the Examination strategy and the LSMU Study Regulation.
64. At each station, the student's examination task is assessed by an evaluator.
65. When assessing the final exam, the evaluators follow the principles provided in the LSMU Study Regulations.
66. Student exam tasks are assessed at the same day.
67. The evaluation of the exam results is carried out at the meeting of the Results Summarization Commission.
68. The commission meeting is legal if at least half of the commission members participate in it.
69. The Commission evaluates the data of the psychometric analysis of the tasks.
70. The commission decides on the best achievement and the minimum achievement for each task according to the actual result of the students who took the exam.
71. The evaluations of students who passed the exam depend on the number of points collected at each station.
72. There may be "critical" station tasks in the exam. If a "critical mistake" is committed, the station is considered failed.
73. The exam is considered passed if the student achieves no lower than the minimum required level of achievement (at least 50% of the points of all exam stations are collected) and can be without passing more than 3 stations.

74. The exam is considered failed if the student does not collect 50% from the total amount of points.
75. The exam is considered failed if the student fails four or more stations.
76. The exam is considered passed if the student was get the grade at least 5 (weak).
77. Final compilation of exam results, completion of documentation, and announcement of results carried out within 5 working days.
78. Pursuant to the LSMU Study Regulations, a student who did not participate in the final exam and his failed or failed is removed from the student lists.
79. It is allowed to retake the exam after resuming studies no earlier than the following academic years Year. The OSCE is organized and conducted once per academic year of study at the scheduled time.

X. APPEALS

80. The appeals regarding Examination evaluation results and procedures shall be delivered to the Rector according to the Regulation of the Studies.
81. Appeals shall be submitted in writing and shall indicate the parts of the assessment or the procedures for which does not agree, and reasons for disagreement.

X. FINAL PROVISIONS

82. The Description may be amended in the Council of the Faculty of Veterinary Medicine.

PROGRAMME OF QUALIFICATION EXAMINATION OF VETERINARY MEDICINE

Internal Diseases

To be able to analyze the symptoms of infectious diseases, to act under the conditions of new situations and to adapt to them, to act independently, to solve the problems and to make decisions.

To recognize clinical condition and to assess its gravity, to form the plan of necessary diagnostic tests, to be able to interpret the test results, and to perform primary (anamnesis, clinical test) and secondary (through interpretation of testing results, planning, performance and interpretation of results of additional tests) differential diagnostics of causes of animal symptoms. To be able to apply the treatment plan suitable for individual animal; to evaluate possible interactions of medicaments and possible adverse effects, as well as effectiveness of prescribed treatment.

To be able to sample substance for morphological, biochemical, microbiological, coprologic, toxicological and other diagnostic tests. To be able to master the peculiarities of morphological, biochemical and immunological test of biological fluids, and coprologic and microbiological tests of other substance, to learn to evaluate and analyze results.

To apply modern diagnostic and treatment methods of non-infectious diseases of animals.

To be able to assess the limits of own competences, to be sincere and honest, and to observe the norms of medical ethics.

Small (dog, cat), large (horse, cattle, small ruminants) animals

1. Collection of anamnesis.
2. Clinical test of the animal ill with digestive diseases, interpretation of received results, formation and implementation of treatment and preventive schemes.
3. Clinical test of the animal ill with respiratory diseases, interpretation of received results, formation and implementation of treatment and preventive schemes.
4. Clinical test of the animal ill with urinary diseases, interpretation of received results, formation and implementation of treatment and preventive schemes.
5. Clinical test of the animal ill with cardiovascular diseases, interpretation of received results, formation and implementation of treatment and preventive schemes.
6. Clinical test of the animal ill with dermal diseases, interpretation of received results, formation and implementation of treatment and preventive schemes.
7. Clinical test of the animal ill with metabolic diseases, interpretation of received results, formation and implementation of treatment and preventive schemes.
8. Diagnostic visualization, animal's position suitable for X-ray test. Analysis of X-ray pictures of various body parts.
9. Entrance of catheter into urinary bladder and its maintenance (mares).
10. Entrance of intravenous catheter and its maintenance, selection of suitable size of catheter.
11. Entrance of nasal-oesophageal probe for horse, assessment of content.
12. Rectal examination, palpation of internal organs and determination of present/possible pathologies.
13. Fluid therapy, determination whether an animal is dehydrated. Entrance of IV drip, planned necessary amount and selection of the dripped liquid (NaCl, Ringer, Metabolase, etc.).
14. Hearing and assessment of peristalsis of intestines (according to the topographical position of intestines).
15. Performance of clinical examination, assessment of condition. Assessment of body's constitution.
16. Restraining an animal.
17. Interpretation of morphological tests of blood.
18. Interpretation of biochemical tests of blood.

19. Interpretation of urinalysis.
20. Interpretation of X-ray test.
21. Interpretation of bacteriological tests.
22. Interpretation of ECG test.
23. Interpretation of ultrasonic, endoscopic, cytological, histological tests.
24. Prescription of medicaments necessary for treatment, substantiation.

Practical-laboratory tasks:

1. Sampling for laboratory tests.
 - 1.1. Taking of skin's sample for microscopic test.
 - 1.2. Taking of skin's sample for bacteriologic test.
 - 1.3. Taking of urine's sample for laboratory test.
 - 1.4. Taking of urine's sample for bacteriologic test.
 - 1.5. Blood sampling for laboratory test.
 - 1.6. Taking of abdominal punctuate for laboratory test.
 - 1.7. Taking of thoracic punctuate for laboratory test.
 - 1.8. Taking of rumen's content for laboratory test.
2. Examination of samples by express methods:
 - 2.1. Cattle's blood sampling and testing with regard to glucose, betahydroxibutirates, calcium by express method, and interpretation of received results.
 - 2.2. Taking of excrement samples of cattle (cows, calves), determination of diarrhoea's agent by express tests, interpretation of received results, formation of treatment and preventive schemes.
3. Formation of blood sampling of cows' herd in order to diagnose metabolic diseases and interpretation of received results.
4. Taking of urine's sample. Analysis of stones and other formations present in urine.
5. Examination of urine using indicator stripes, interpretation of data.
6. Blood sampling and analysis. Analysis of biochemical blood sample results.
7. Blood sampling and analysis from *v. jugularis*, *v. saphena* or other veins. Analysis of morphological blood sample.
8. Preparation of blood smear, determination and calculation of leuco-formula.
9. Collection of excrement sample (fecal sample), its preparation and evaluation.
10. Taking skin scraping sample, test conduction and evaluation of received results, assignment of possible treatment.

Documents to be completed:

1. Case-history.
2. Writing a prescription.
3. Consent of animal check-up.
4. Clinical examination protocol.
5. Referral for mycological analysis.
6. Referral for bacteriological analysis.
7. Referral for mycological analysis.
8. Referral for cytological analysis.
9. Referral for histopathological analysis.
10. Referral for laboratory test.
11. Referral for ultrasound and X-ray.
12. Request form of animal euthanasia.
13. Request form of destruction of animal cadaver.
14. Redirection form for destruction of animal cadaver.

Veterinary Surgery

The student has to demonstrate knowledge about safe work with animals, work hygiene and essence of pathologies, diagnosis of which would allow applying surgical method of treatment. The student has to understand the concepts of aseptics and antiseptics, their practical application, to know common regularities of surgical operations: anaesthesia (local and general), observation of animal under narcosis, rules of tissue separation, bleeding control, sewing of wound, possible complications and their avoidance modes, and to know how to act in case they appear.

The student has to know, how to examine the patient methodically and consistently, to use the diagnostic tools and equipment, to be able to analyze and generalize the findings, to recognize the patient in need for surgical treatment, to determine the necessity for urgent intervention, to form the clinical diagnosis of disease, to determine its causes, to prescribe rational treatment, and to carry out the necessary manipulations, to suggest and apply preventive measures.

The student must communicate correctly, show independence, concentration, logical thinking, quick orientation, complete the task consistently.

Group of animals – large animals (horse, cow, sheep, goat, swine)

1. Selection of preparations required for general anesthesia of a horse (premedication, induction and maintenance of anesthesia), their dosing according to the specified weight of the horse, sequence of use of preparations.

2. Preparations for sedation of ruminants (sheep, cow, goat and their offspring), their doses and routes of application.

3. Selection of the means and preparations required for the performance of epidural-sacral anesthesia (cranial / high and caudal / low) and their doses for large, small ruminants, their offspring and horses, method and place of application.

4. Abdominal wall anesthesia technique for large, small ruminants and horses: analgesic nerves, necessary preparations, their doses, injection points.

5. Nipple anesthesia for cows: necessary preparations, their doses, applied technique.

6. Laparotomy for horses: incision site, analgesia, separating tissues, their approximation (what to sew with whom, threads/filaments of first choice, sutures). Postoperative treatment.

7. Laparotomy for a large ruminant (cow): incision site, analgesia, tissues to be separated, their approximation (what to sew with whom, threads/filaments of first choice, sutures). Postoperative treatment.

8. Laparotomy for small ruminants (sheep, goat): incision site, analgesia, tissues to be separated, their approximation (what to sew with whom, threads/filaments of first choice, sutures). Postoperative treatment.

9. Castration of males (ram, bull, goat, boar, stallion): analgesia, fixation / positioning of the animal, castration technique, tools, suture.

10. Selection of sutures and suturing technique for suturing uterine wounds after Cesarean section (cow).

11. The suture of the first choice and the suturing technique for suturing intestinal wounds after a colonotomy at the bend of the pelvis (horse).

12. X-ray analysis of the foreleg (horse): projection, visible abnormalities, diagnosis, proposed treatment.

13. Warming spirit compress for a horse in the hand area: indication, means, performance technique.

14. Analysis of hind leg radiograph (horse): projection, visible abnormalities, diagnosis, proposed treatment.

15. Horse hoof radiograph analysis: projection, visible abnormalities, diagnosis, proposed treatment.

16. X-ray analysis of the ruminant finger area: projection, visible abnormalities, diagnosis, proposed treatment.

Group of animals – small animals (dog, cat)

1. General anaesthesia of dog (selection of drugs needed for pre-medication, narcosis induction and maintenance, their dosage and sequence of usage).
2. General anaesthesia of cat (selection of drugs needed for pre-medication, narcosis induction and maintenance, their dosage and sequence of usage).
3. Prescribing the necessary medications in the postoperative period. Ensuring pain control
4. Suture material in the surgery of small animals: used suture material, their sorts and calibre, usage location and meaningfulness, international standardization, explanation of package symbols.
5. Neurological examination of dog with comments on the essence of manipulations.
6. Neurological examination of cat with comments on the essence of manipulations.
7. Orthopaedic examination of dog with comments on the essence of manipulations.
8. Orthopaedic examination of cat with comments on the essence of manipulations.
9. Putting of Robert-Jones splint for dog.
10. Stabilization of transverse fracture of dog's forearm bones by plaster splint.
11. Evaluation of dog's teeth condition: comment on findings, provision of necessary manipulations.
12. Evaluation of X-rays of the dog's / cat's chest, abdomen, forelegs and hind legs, hip joints to describe visible changes, possible treatment methods.

Practical-laboratory tasks:

1. Fixing the dog and cat (during lifting, turning the dog/cat on its side, taking blood from the front and back legs);
2. Dog/cat intubation and selection of an appropriate endotracheal tube
3. Preparation and connection of the drip infusion to the patient;
4. Connecting the drip infusion to the drip counter;
5. Intravenous catheter insertion and attachment;
6. Calculation of infusion rate and amount for dog and cat;
7. Surgical treatment of abscess;
8. Identification of instruments commonly used in veterinary surgery and their function;
9. Preparation of the operating field;
10. Surgeon's preparation for surgery (face masks, cap, hand preparation for surgery, sterile coat and sterile gloves);
11. Performing sutures (knotted and continuous) depending on the tissue or organ being sutured;
12. Identification and selection of suture material for organ and tissue suturing;
13. Operational preparation for operation;
14. Introduction of tracheostomy;
15. Abdominal and thoracic punctures;
16. Positioning of the animal by performing radiographs of the abdominal cavity, thorax, anterior and posterior legs and pelvis. X-ray examination requires positions based on the anatomical area.
17. Drawer test, tibia compression test (commentary on findings).
18. Animal (dog, cat) resuscitation.

Documents to be completed:

1. Protocol of anesthesia.
2. Prescription writing.
3. Protocol of teeth.

Veterinary Obstetrics and Reproductive Disorders

Obstetrics and reproductive disorders in small animals

The student has to be able:

To apply clinical and laboratory analytical methods and to be able to perform the complete clinical examination of dog and cat:

- 1.1. To assess the condition of the female reproductive system and mammary gland. Genitals, hormones, phases of the sexual cycle and their physiological features, species features in bitches, cats, rabbits and rodents. Clinical examination, hormonal blood test, cytological vaginal examination, ultrasound and X-ray examination of the genital system.
- 1.2. To assess the condition of the male reproductive system. Genital anatomy and physiology of dogs, cats, rabbits and rodents, sex hormones, the influence of sex hormones on the body, species peculiarities. Collection of medical history of dogs, cats, rabbits, clinical examination, ultrasound and X-ray examination of the reproductive system.
- 1.2. Determine the oestrus and select the optimal mating time for the female.
- 1.3. To determine pregnancy, to know the duration of pregnancy in bitches, cats, rabbits and rodents.
- 1.4. To diagnose female reproductive disorders and to provide motivated diagnostic and treatment plans: endometritis, CEH, pyometra, bigis pyometra, hormonal disorders, genital tumors.
- 1.5. Postpartum period, postpartum pathologies in bitches and cats: bleeding, placental retention, eclampsia, mastitis, agalactia, galactostasis. Diagnosis and treatment.
- 1.6. Dystocia of females and cats, pseudopregnancy. Diagnostic methods, treatment, prevention. Unwanted pregnancy, methods of prevention.
- 1.7. Diagnosis of female reproductive disorders and motivated diagnostic and treatment plans: Frenulum persistent, unilateral and reciprocal cryptorchidism, phimosis, paraphimosis, priapism, male feminization syndrome, acute orchitis and epididymitis, prostatic hyperplasia, prostatic atrophy, benign prostatic hyperplasia , stones.

To be able to properly take, store and transport samples of organs and tissues for laboratory examination, to interpret the results of laboratory examination;

- 2.1. Take and evaluate cytological samples of the vaginal mucosa of the bitch and determine the oestrus stage.
- 2.2. Methods of semen collection, peculiarities for different species, morphological evaluation of semen.

To be able to resuscitate the young and know the critical conditions that require urgent care, intensive care.

Obstetrics and reproductive disorders in large animals

The student must be able to:

1. To apply clinical and laboratory methods of analysis and to be able to perform a clinical examination of an animal:
 - 1.1. To assess the condition of the female reproductive organs (production females) according to rectal palpation data.
 - 1.2. To determine oestrus and select the optimal female insemination time according to female behavior, mucus, ovarian condition, blood progesterone concentration in milk, evaluating the herd management program (production females).
 - 1.3. Determine pregnancy based on u/g test data (production animals).
 - 1.4. Diagnose reproductive disorders and provide motivated treatment (cows) based on u/g scan data.

2. Interpret the results of laboratory tests of blood serum and milk composition in cows in respect of reproductive disorders:
 - 2.1. Prepare a suitable instrument for taking loci (production animals).
 - 2.2. Prepare tools for milk (cow) sampling (bacteriological examination).
 3. To perform actions related to the restriction of animal welfare, to perform them only when absolutely necessary, humanely and to demand the same from others:
 - 3.1. Insert a catheter (cow) into the uterus.
 - 3.2. Inject the medicine into the uterus, into the teat canal (cow).
 - 3.3. To treat breeders and create conditions for their exploitation (bull, stallion, dog).
 - 3.4. Prepare artificial vaginas of breeders (bull, ram, stallion) for semen collection.
 - 3.5. To apply the technology of artificial insemination of cows in practice. To be able to prepare instruments for insemination of cows, mares, sows.
 - 3.6. To be able to select and prepare deep insemination instruments for insemination into the uterine body and horns (sow, mare).
 - 3.7. To be able to thaw a cryopreserved dose of bull semen: take a straw from a Dewar vessel, thaw it, prepare a semen sample for analysis or a semen dose for insemination of cows.
 - 3.8. Be able to evaluate the viability and morphology of sperm by microscopy or recorded photographs, and evaluate the results of the examination.
 - 3.9. Be able to evaluate sperm motility and concentration microscopy or recorded photographs / images / recordings, and evaluate the results of the examination.
 - 4.0. Ability to evaluate the most typical diseases of the testicles, foreskin, penis (bulls, stallions, rams) in the recorded photos.
 - 4.1. Ability to select the main constituents (bulls) used for dilution before cryopreservation of semen.
 - 4.2. Be able to select from the presented preparations and form and substantiate the synchronization protocol (cow, sheep).

Infectious Diseases

The student has to know etiology of infectious diseases, epidemiologic data, clinical signs, diagnosis and treatment; application of means for disease control liquidation and prevention; to collect, analyze and assess various epidemiologic data of infectious diseases; to be able to plan and carry out the epidemiologic tests of infectious diseases; able to plan and carry out the examination and liquidation of outbreak of infectious diseases.

The student has to be able to select appropriate diagnostic tools; send the samples to laboratory and evaluate the received results, take samples and evaluate the results of blood, urine, faeces, bacteriological examination or other special studies; diagnose the disease and make a differential diagnosis; choose the right treatment and preventive measures; explain which diseases could be prevented by vaccination; to prepare a vaccination plan, properly perform vaccination, introduce the animal's owner with the side effects of the vaccination; properly fill the patient's registration journal, disinfection journal, vaccination report, used veterinary medicines report, unused veterinary medicines act, animal euthanasia act, etc; properly dispose the contaminated waste, tissues, syringes, needles, according to the biosafety requirements and proper disposal requirements.

Topics:

1. Infectious diseases of cattle and small ruminants (diagnosis, treatment, prevention).
2. Infectious diseases of birds (diagnosis, treatment, prevention).
3. Infectious diseases of pigs (diagnosis, treatment, prevention).
4. Infectious diseases of horses (diagnosis, treatment, prevention).
5. Infectious diseases of dogs (diagnosis, treatment, prevention).
6. Infectious diseases of cats (diagnosis, treatment, prevention).
7. Infectious diseases of rabbits (diagnosis, treatment, prevention).

8. Zoonotic diseases (diagnosis, treatment, prevention).
9. Examination of herd with regard to infectious diseases.
10. Vaccination of the animal.
11. Examination of outbreak of infectious disease.

Practical-laboratory tasks:

1. Properly collect anamnesis.
 2. Selection of appropriate diagnostic methods for the differentiation of infectious diseases.
 3. Determination of antibodies/antigens by express test from excrement and blood serum.
- Interpretation of results.
4. Preparation of smear test.
 5. Interpretation of changes in blood parameters (morphological and biochemical) of infectious diseases cases.
 6. Antibiogram analysis.
 7. Interpretation of epidemiological data.
 8. Formation of a vaccination scheme (pet animals).
 9. Vaccine selection and vaccination.
 10. Designation of appropriate treatment regimens and medicines (active substances).
 11. Application of measures for prevention and control of infectious diseases.

Documents to be completed:

1. The act of sampling for investigation.
2. Vaccination journal.
3. Disinfection journal.
4. Animal euthanasia consent.

Veterinary Parasitology

On the basis of anamnesis, the student has to be able to make decisions about samples needed from the animal and for what tests, to take them properly, to prepare the samples, to carry out parasitologic tests, to identify the parasites present in certain sample, to form diagnosis and to apply treatment.

The student has to be able to interpret the results of parasitologic tests, to substantiate them with theoretical knowledge, and to give recommendations to the animal's owner regarding prevention and control of parasitic diseases.

Topics

1. Parasitic diseases of horses (diagnosis, treatment and prophylaxis).
2. Parasitic diseases of ruminants (diagnosis, treatment and prophylaxis).
3. Parasitic diseases of pigs (diagnosis, treatment and prophylaxis).
4. Parasitic diseases of dogs and cats (diagnosis, treatment and prophylaxis).
5. Parasitic diseases of rabbits (diagnosis, treatment and prophylaxis).
6. Parasitic diseases of birds (diagnosis, treatment and prophylaxis).

Practical-laboratory tasks:

1. Collection of anamnesis.
2. Taking of parasitologic sample to diagnose internal parasites of large/small animal in the excrements, urine, blood, and collection of anamnesis.
3. Taking of parasitologic sample to diagnose external parasites

4. Selection of an appropriate test method for the diagnosis of endoparasitic infection (faecal native, flotation, McMaster, sedimentation, Berman) and performance of the test according to the description provided.
5. Selection of an appropriate test method for the diagnosis of ectoparasitic infection (skin scalp test) and performance of the test according to the description provided.
6. Selection of an appropriate test method for the diagnosis of infection with blood parasites (stained blood smear, Knott test) and performance of the test according to the description provided.
7. Selection of a suitable test method for the detection of parasites in muscles (compressor, digestion methods) and performance of the test according to the given description.
8. Identification of parasites and interpretation of the obtained research results.
9. Selection of a suitable medicine, prescription and creation of a treatment scheme.
10. Development of a preventive deworming program.
11. Application of measures for the prevention and control of parasitic diseases.

Documents to be completed:

1. Cover letter for the parasitological examination of an animal sample.
2. Animal parasitological examination act.

Veterinary Pathology

The student must be able to independently perform pathological anatomical (macroscopic) and histopathological examination of animal organs and tissues, identify pathological morphological changes. Independently to decide which samples to take for histopathological examination from animal organs or tissues. To be able to properly record and pack the samples taken, to fill in the consignment note for sending to the laboratory (animal carcass, consignment note for pathological material for pathological anatomical examination and consignment note for pathological material for histopathological examination).

The student must be able to interpret the results of pathological anatomical examination of animal organs and tissues, base them on theoretical knowledge.

The student must be able to complete the pathological anatomical examination report of the animal carcass.

The student must know and practically apply the requirements of biosafety, hygiene at the site of pathological anatomical examination of animal organs and tissues, know how to safely dispose of animal by-products (animal waste).

Topics to be repeated:

1. Preparation for pathological anatomical examination of animal organs and tissues, clothing, knowledge of biosafety requirements, collection of anamnesis.
2. Technique of pathological anatomical examination (necropsy) of organs and tissues of animal carcasses (horse, cow, small ruminant, pig, carnivore (dog, cat, mink), rabbit, bird), arrangement of the examination site, disinfection, animal by-products formed after the examination (animal waste) disposal method.
3. Assessment of pathological anatomical changes in organs and tissues.
4. Collection of pathological material for histopathological examination.
5. Equine diseases and their pathomorphological diagnosis.
6. Ruminant diseases and their pathomorphological diagnosis.
7. Swine diseases and their pathomorphological diagnosis.
8. Carnivorous diseases and their pathomorphological diagnosis.
9. Rabbit diseases and their pathomorphological diagnosis.

10. Avian diseases and their pathomorphological diagnosis.

Documents to be completed:

1. Act of pathological anatomic examination of carcass.
2. Bill of lading/ cover letter of the carcass meant for pathological anatomic examination of pathological substance.
3. Bill of lading/cover letter of pathological substance, biopsy for histopathological, cytological test.

Practical tasks:

1. Collection of anamnesis.
2. Preparation for pathological anatomical examination of animal organs and tissues, compliance with biosafety and hygiene requirements.
3. Macroscopic examination of an animal organ, tissue or foreign body and detection of pathological anatomical changes.
4. Completion of the pathological anatomical examination report of the animal carcass.
5. Completion of the consignment note (accompanying letter) of the animal carcass, pathological material for pathological anatomical examination.
6. Sampling for histopathological examination, its fixation and packaging.
7. Completion of the consignment note (accompanying letter) for the histopathological examination of pathological material.
8. Histopathological examination: microscopic examination of the histological preparation and detection of pathological changes.
9. Interpretation of the results of pathological morphological examination of animal organs, tissues or foreign bodies, substantiating them with theoretical knowledge.

State Veterinary and Public Health

Student has:

1. To know the veterinary legal acts guided by doctors of veterinary medicine.
2. To know the work organization and spectrum of performed functions by private veterinary clinics, diagnostic cabinets and private veterinary doctors.
3. To know the procedures and terms of accountability for State Food and Veterinary Service that applies to private veterinary clinics, diagnostic cabinets and private veterinary doctors
4. To know the requirements and applied infringements of biological safety.
5. To be able to fill in correctly the documents approved by the State Food and Veterinary Service.

Practical tasks:

1. To fill the document of veterinary accounting.
2. To indicate the biosafety implements (tools) in the given assignment (clinic, cabinet, farm, zoo, vivarium, etc.)
3. To fill in the sampling act for test.
4. To fill in the vaccination act.
5. To fill in the disinfection act.