

**LITHUANIAN UNIVERSITY OF HEALTH SCIENCES
VETERINARY ACADEMY
FACULTY OF VETERINARY MEDICINE
THE DESCRIPTION OF PROCEDURE OF CLINICAL ROTATION FOR
STUDENTS IN THE VETERINARY MEDICINE STUDY PROGRAMME**

I. GENERAL PART

1. The procedure of Formation of Clinical Rotation of the Student of the Study Programme of Veterinary Medicine (VM) in the Faculty of Veterinary medicine (FVM), Veterinary Academy (VA), Lithuanian University of Health Sciences (hereinafter Procedure) was prepared with reference to the following documents:

1.1. Law on Higher Education and Research of the Republic of Lithuania (30 April 2009, No. XI-242, consolidated version as of 27 June 2023);

1.2. Law on Veterinary Activities of the Republic of Lithuania (17 December 1991, No. I-2110, consolidated version).

1.3. Regulations of Studies at the Lithuanian University of Health Sciences, approved by Resolution No. 181-03 of the Senate of the Lithuanian University of Health Sciences on 20 June 2024, with subsequent amendments.

1.4. Description of the Study Field of Veterinary Medicine, approved by Order No. V-1687 of the Minister of Education, Science and Sport of the Republic of Lithuania on 4 November 2020.

1.5. Learning Outcomes of the Veterinary Medicine Study Programme, approved at the meeting of the Council of the Faculty of Veterinary Medicine of the Lithuanian University of Health Sciences on 8 June 2021 (Minutes No. VF10-10).

1.6. Standard Operating Procedure (SOP) of the European System of Evaluation of Veterinary Training (ESEVT), approved on 8 June 2023.

2. This procedure defines organisation, implementation and submission of clinical rotation of third, fourth- and fifth-year students 'of LSMU VA Veterinary medicine study programme at the Dr. L. Kriauciūnas Small Animal Clinic (hereinafter KRSAC), Large Animal Clinic (hereinafter LAC), Veterinary Academy Simulation Centre (hereinafter VASC), Public Institution Practical Training and Testing Centre of Lithuanian University of Health Sciences (hereinafter PTTC) and other bases of formation of veterinary medicine practical skills (hereinafter Bases).

3. The formation of clinical rotation shall be organized by the coordinators of the module or subject of the responsible departments, and schedules are administered by Coordinator of the clinical rotation approved by the LSMU VF Council.

II. BASIC CONCEPTS

4. **Clinical rotation** (hereinafter Rotation) – obligatory part of gain of practical clinical competencies in VM study programme clinical modules: Propedeutics, Radiobiology and Diagnostic Imaging and Propedeutics, Clinical Pathology and Diagnostic Imaging, Small Animal Internal Diseases, Large Animal Internal Diseases, Small Animal General Surgery and Anaesthesiology, Large Animal General Surgery and Anaesthesiology, Small Animal Special Surgery, Large Special Animal Surgery, Animal Obstetrics, Reproductive Disorders and Clinical Rotation. Its form, duration and deadlines are defined by the curriculum of VM programme.

5. **Coordinator of the clinical rotation** (hereinafter Coordinator) – employee FVM of the LSMU VA responsible for the organization of students' practical skills formation). The FVM lecturer recommended by the responsible FVM unit and appointed by the FVM dean's decree upon consent of the LSMU Rector, who has a qualification of veterinary surgeon.
6. **Supervisor of the clinical rotation** (hereinafter Supervisor) – veterinary surgeon/lecturer employed at LSMU FVM or at base of Rotation approved by the LSMU VF Council, who has work experience of at least 3 years, is responsible for implementation VM study programme students' formation of Rotation and gain of clinical competencies. Note: *in praktika.lsmuni.lt Supervisor is marked as Practice Mentor.*
7. **Base of clinical rotation** (hereinafter Bases) – KRSAC, LAC, VASC, PTTC other bases of formation of veterinary medicine clinical rotation (hereinafter Bases).
8. **Electronic Clinical Rotation Logbook** (hereinafter - e-Logbook) – competencies acquired by VM students during their studies are placed in the LSMU Praktiku Sistema (praktika.lsmuni.lt).

III. THE AIM OF FORMATION OF CLINICAL ROTATION

9. To create conditions for students to get practical/professional competencies necessary for study programme results, which are gained when studying Propedeutics, Radiobiology and Diagnostic Imaging, Propedeutics, Clinical Pathology and Diagnostic, Internal Diseases of Small Animals and Internal Diseases of Large Animals, Small Animal General Surgery and Anaesthesiology, Large Animal General Surgery and Anaesthesiology, Obstetrics and Reproductive Disorders of Small and Large Animals, Special Surgery of Small Animals and Special Surgery of Large Animals, achievement and acquirement of qualification of veterinary surgeon.

IV. THE RESULTS OF CLINICAL ROTATION

10. **The third year veterinary medicine student after successful completion of Propedeutics, Radiobiology and Diagnostic Imaging and Propedeutics, Clinical Pathology and Diagnostic Imaging modules students should be able:** to complete treatment and diagnostic documentation; comply with laboratory work procedures and biosafety requirements; select equipment and perform laboratory tests according to methodologies; communicate effectively; assess animal body condition according to WSAVA guidelines; restrain and handle dogs, cats, exotic animals, cattle, and horses; perform a general clinical examination and evaluate the results; prepare the workplace before and after patient examination; care for hospitalized patients; write prescriptions; administer medications; select needles and syringes and prepare medications; select and place intravenous catheters in small and large animals; perform skin, ear, eye, and dental examinations and tests in small animals; perform ECG examinations and evaluate cardiac activity; perform cardiovascular system examinations; collect anamnesis from small and large animals; perform enemas in small animals; collect, store, and transport urine samples; perform diagnostic imaging examinations and evaluate the results; apply fluid therapy; collect blood samples; prepare blood smears, perform laboratory tests, and interpret the results; comply with biosafety requirements in the large animal clinic; diagnose displaced abomasum in cattle; evaluate physiological parameters of the forestomachs in ruminants; determine body condition scores in ruminants and horses; and measure body temperature in horses.
11. **The fourth year veterinary medicine student successfully completed studies of Small Animal Internal Diseases module** shall be able: to perform a targeted clinical examination of a sick animal and comment on the obtained results; develop a diagnostic testing plan; collect samples required for diagnostic testing; interpret laboratory, diagnostic imaging, and other test results; compile a list of differential diagnoses and prepare a treatment plan for the assigned patient; perform procedures required for treatment (subcutaneous, intramuscular, and intravenous injections, enemas, abdominocentesis, thoracocentesis, wound care, etc.); collect a targeted anamnesis from the owner of the sick animal; prepare a prevention plan for a treated or recovered patient; and develop a preventive care plan for a healthy patient, including vaccination and protection against ecto- and endoparasites.
12. **The fourth year veterinary medicine student successfully completed studies of Large Animal Internal Diseases module** shall be able: to register a patient; collect anamnesis and data from

herd management software; perform a general clinical examination of the animal and complete the clinical examination record; select laboratory and diagnostic tests for disease diagnosis; collect blood samples from large animals; perform and interpret hematological and biochemical blood tests in cattle; prepare for specialized diagnostic procedures (endoscopic, radiographic, ultrasonographic); establish a diagnosis; calculate doses and usage of veterinary medicines; monitor and control the course of treatment; complete documentation and medical records for treated patients; collect skin scraping samples for mycosis and ectoparasite testing; apply principles of ration balancing for large animals according to herd health indicators; appropriately apply exercise and movement regimens for different patients; insert stomach tubes in cattle and horses; perform rectal examinations in large animals; analyze and evaluate herd management software data; develop a biosafety measures plan; diagnose displaced abomasum; comply with biosafety regulations in clinics; perform and interpret the California Mastitis Test (CMT); and prepare treatment protocols for large ruminants.

13. **The fourth-year veterinary medicine student successfully completed studies of Small Animal General Surgery and Anaesthesiology module** shall be able: to complete anesthesia records; calculate doses of anaesthetic drugs; connect vital signs monitoring equipment to the patient; analyse monitoring data; inform the owner about possible risks associated with anaesthesia and procedures; and report patient death occurring during anesthesia.

14. **The fourth-year veterinary medicine student successfully completed studies of Large Animal General Surgery and Anaesthesiology module** shall be able: to complete anesthesia records; calculate doses of anesthetic drugs; identify the parts of an endotracheal tube and perform endotracheal intubation; evaluate clinical examination parameters; bandage horse limbs and select appropriate dressings according to the animal species and wound characteristics; correctly connect ECG equipment to a horse during general anesthesia; prepare for surgery (put on a surgical gown and gloves); comply with biosafety requirements during the rotation; inform the owner about possible risks associated with anesthesia and procedures; report patient death during anesthesia; and inform about patient euthanasia.

15. **The fifth year veterinary medicine student after successful completion of Small Animal Surgery module** shall be able: to communicate effectively; recognize and appropriately use surgical instruments; provide owners with detailed information about postoperative animal care at home; complete documentation required for treatment and diagnostics; recognize and select needles and suture materials for suturing organs and tissues; bandage wounds and select appropriate dressings according to the animal species and wound characteristics; assess and analyze medical records of hospitalized patients; evaluate potential anesthesia risks; perform surgeon preparation for surgery; prepare the operating room for use; care for the animal after anesthesia; assess pain; monitor and record vital signs during anesthesia; complete anesthesia records; understand the equipment used during surgery; prepare to perform anesthesia; provide first aid to an animal; position animals for thoracic, abdominal, limb, and pelvic radiographs and interpret the results; and prepare the patient for anesthesia.

16. **The fifth year veterinary medicine student successful completion studies of Large Animal Surgery module** shall be able :to comply with biosafety requirements; provide emergency veterinary care to a surgical patient; perform an orthopedic examination of a lame ruminant; assess hoof and claw health and analyze hoof radiographs; analyze diagnostic imaging and establish a diagnosis; perform ophthalmologic and oral examinations in large animals; assess dental health and perform necessary procedures; prepare to assist during surgery; evaluate the condition of an anesthetized patient; manage the course of anesthesia and complete the required documentation; perform abdominocentesis; select suture materials according to the type of surgery and animal species; prepare surgical instruments and ensure their sterility; understand the purpose of instruments used in large animal surgery; prepare a large animal for general anesthesia and surgery; and understand the course of anesthesia and surgical procedures.

17. **The fifth year veterinary medicine student for successful completion of Animal Obstetrics, Reproductive Disorders and Clinical Rotation subject** shall be able:to perform clinical evaluation of the external genital organs of queens, bitches, male dogs, and tomcats; evaluate radiographs and ultrasonographic findings of the reproductive system in bitches (in cases of pyometra, hydrometra, mucometra, pregnancy, and ovarian cysts); perform ultrasonographic and radiographic evaluation of the prostate and reproductive organs in dogs; select, prepare, and appropriately use obstetrical, gynecological, and andrological instruments for large animals; evaluate the reproductive

organs of a large animal during simulation training; perform gynecological examinations for estrus detection and make decisions regarding further reproductive use; assess the reproductive status of the female based on vaginal and cervical findings; evaluate reproductive status based on anamnesis, clinical condition, and specialized examinations, and prepare an action plan; develop gynecological treatment plans for uterine infections, anestrus, estrous cycle stimulation, and emergency cases; apply ultrasonography in reproductive practice and perform pregnancy diagnosis; diagnose mammary gland disorders; prepare treatment and prevention plans; examine and evaluate fresh and frozen semen; perform artificial insemination procedures during simulation training; communicate with animal owners regarding treatment progress, risks, and examination results; make independent decisions; work in a team; complete clinical documentation; and comply with biosafety requirements.

V. ORGANIZATION AND IMPLEMENTATION OF THE CLINICAL ROTATION

18. The Rotation is obligatory for all the third, fourth and fifth-year students of VM programme.
19. The Rotation is formed according to the curriculum of VM programme approved by LSMU Senate.
20. Cumulative evaluation of achievements is used for evaluation of competencies achieved during formation of Rotation.
21. When the student arrives to form Rotation, s/he is registered in the Base registration journals, introduced to the rules of safe work and internal order, and signs in the journal of occupational safety.
22. Instructions of safe work are located at receptions of LAC and KRSAC, at PTTC, VASC.
23. Formation of Rotation is guided by the Supervisor (mentor), who assigns tasks to the student according to the plan of formation of Rotation of respective course.
24. KRSAC and LAC for the IV and V course the Rotation takes place at nighttime – from 19:30 to 07:30 according to pre-set schedule and timetable.
25. Students form Rotation at KRSAC and LAC, PTTC, VASC according to pre-set schedule and timetable; rotations can also take place on Saturdays according to pre-set schedule and timetable.
26. Timetable of Rotation formation is published in the LSMUSIS and Moodle and is available for students and staff.
27. Student must not leave place of Rotation formation without permission of Supervisor or administrator of the clinic.
28. Student, who has missed formation of Rotation, should inform Coordinator within 5 working day and arrange another time of Rotation formation.
29. Student, who has missed at least one formation of Rotation must redo it, regardless of the reason of the miss: KRSAC is allowed to form Rotation only during holidays, weekends and in LAC at the time specified by the coordinator.
30. On arrival to the Base, the student shall be ready for work. Student shall meet requirements of biosafety and have measures necessary for practical work.
31. Student arrived to **KRSAC** for Rotation should:
 - Be prepared for work at 7:30 a.m. in the morning shift and in the afternoon shift at 13:30 p.m.
 - Have Student card, several sets of disposable work tools (examination gloves, cap, facial mask, shoe covers).
 - Have *personal* phonendoscope, thermometer, diagnostic lamp, clock with second hand, medical scissors; the watch must be attached to the outfit.
 - Have Medical Record Number (MRN) and Visit Number (*Annex 2*) *IV and V for patient registration journal and e-Logbook* (on your personal phone, computer, tablet, or other personal devices)
 - Be neatly combed (long hair tied), nails only natural, short and round cut, unvarnished, hands free from rings, jewellery minor hand wounds should be bandaged and should be handled only with medical gloves (*based on the recommendations of the Lithuanian Hygiene Standard Lietuvos higienos normos HN 47-1:2026 and veterinary biosafety principles*)

32. Student arrived to VASC for Rotation must:

- Have white laboratory coat, Student card, to change footwear;
- Have ability to log to e-Logbook on your personal phone, computer, tablet, or other personal device)

33. Student arrived in LAC for Rotation must:

- Have comfortable work clothes, boots.
- Have Student card personal phonendoscope, clock with second hand, thermometer.
- Have Medical Record Number (MRN) and Visit Number (*Annex 2*) for patient registration journal, e-Logbook (on your personal phone, computer, tablet, or other personal device)
- Leave all personal belongings and mobile devices in the clinic's cloakroom unless otherwise stated, unless they are used to complete an e-Logbook (unless otherwise specified by the supervisor).

34. Student arrived to PTTC for clinical rotation must:

- Have comfortable work, clothes.
- Have Student card, personal phonendoscope, clock with second hand, thermometer.
- Have Have Medical Record Number (MRN) and Visit Number (*Annex 2*) for patient registration journal, e Logbook (on your personal phone, computer, tablet, or other personal device);

35. It is forbidden to use any electronic devices (smart phones, laptops, tablets etc.) during formation of Rotation unless otherwise stated, except when completing e-Logbook.

36. **We recommend** leaving all valuable personal belongings at home, as VA clinics and VASC are not responsible for the safety of items left in the changing room.

37. During each Rotation, the student must complete e-Logbook noting all acquired competencies (note: *in praktika.lsmuni.lt competences is marked as skills*) and the level at which they were performed (A-independently, B-assisted, C-observed) and submitting them to the Supervisor for approval. The Supervisor accepts or rejects (should be marked reason of rejection) the competencies submitted by the student.

The Supervisor who accepts the competencies sent by the student signs and records the date, thus counting the day of the student's clinical rotation.

Before receiving the assessment for the acquired competence (note: in the e-Logbook it is marked as "*Professional values and behaviour*") the student must have completed them (unless otherwise specified by the teacher coordinating the module/subject) at **least twice** A (independently) and / or B (assisted) level.

The Supervisor evaluates the competencies acquired by the student by writing grades in e-Logbook. The e-Logbook can be filled in during laboratory and practical work, if it was so instructed by the coordinating lecturer.

38. It is forbidden to take a photo of patient without permit of its owner or Supervisor!

39. The student, who does not satisfy the requirements of work hygiene and are not prepared for practical work, ignores internal rules and requirements of the clinic are not allowed to form Rotation or attend to practical works in the clinic.

40. If the student disobeys the set rules or leaves the places of Rotation without authorization, he/she will be marked as absent for that day, and this day must be completed in accordance with the prescribed procedure.

41. Practical competences acquired by a student are assessed according to the Rotation assessment strategy in accordance with the LSMU Study Regulations.

VI. FUNCTIONS OF COORDINATOR OF CLINICAL ROTATION

42. Coordinator of the Rotation:

- prepares timetables of Rotation for all third, fourth- and fifth-year students in all units where Rotation is proceeded.
- controls process and timetables of Rotation.

VII. RIGHTS, POSITION AND RESPONSIBILITIES OF THE STUDENT

43. The student shall observe internal orders, rules of safe work and biosafety specified in the requirements of Bases during the formation of Rotation.
44. The student shall observe principles of professional ethics of the veterinarian, behave properly with patients and respect their owners.
45. The student shall conduct tasks assigned by the supervisor of Rotation, together with the Supervisor examine, diagnose and treat ill/sick animals.
46. The student 's gained Rotation is evaluated according to the LSMU Regulation of the Studies.
47. Students have the right to appeal and complain: Regarding the assessment and assessment procedures, the student has the right to appeal in accordance with the provisions of the LSMU Study Regulations.
48. In cases of harassment, sexual harassment, pursuit or violence, the student may contact the University administration directly or fill in the report form in the Academic Ethics section of the University website in Lithuanian or English, as specified in the Rules of Prevention of Harassment, Sexual Harassment, Pursuit and Violence of Lithuanian University of Health Sciences. Free psychological assistance is provided to LSMU staff and students who have experienced discrimination, harassment or other degrading events.
49. Students have the right to complain about disputes with the administration and other employees in accordance with the LSMU Student Dispute Resolution Procedure with the administration and other employees.

VIII. CLINICAL ROTATION IN PROPEDEUTICS Year III

50. The Rotation for third-year students is obligatory part of the modules Propedeutics, Radiobiology and Diagnostic Imaging and Propedeutics, Clinical Pathology and Diagnostic Imaging.
51. Rotation of **Propedeutics, Radiobiology and Diagnostic Imaging** is formed in autumn semester: 4 hours Laboratory (small animal) and VASC - 5 hours (small animal) and LAC - 3 hours, 5 hours -PTTC, 1-hour VASC (large animal).
52. The student ***acquires competencies independently by registering with VASC***. At the time specified in the LSMUSIS schedule, students arrive at VASC **to receive assessments (grades) for the competencies they have acquired**.
53. **Clinical Pathology and Diagnostic Imaging** is formed in spring semester: KRSAC (in one of the clinic sections) 4 hours; VASC - 5 hours (small animal) and LAC - 3 hours, one time at PTTC - 5 hours, 1-hour VASC (large animal).
54. The student ***acquires competencies independently by registering with VASC***. At the time specified in the LSMUSIS schedule, students arrive at VASC **to receive assessments (grades) for the competencies they have acquired**.
55. The formation of Rotation according to the schedule is mandatory for every student.
56. The student who has missed formation of Rotation must redo it, regardless of the reason of the miss. The student missed at least one formation of Rotation is not allowed to take a final evaluation of Propedeutics, Radiobiology and Diagnostic Imaging and Propedeutics, Clinical Pathology and Diagnostic Imaging.
57. The final assessment of the acquired competencies shall be introduced into the cumulative formula of Propedeutics, Radiobiology and Diagnostic Imaging and Propedeutics, Clinical Pathology and Diagnostic Imaging.
58. **During the Rotation at the KRSAC, the students will achieve the following competences and will be able:**
- 57.1. **Propedeutics, Radiobiology and Diagnostic Imaging (in autumn semester in Laboratory):**
- To apply required medical treatment and diagnostics documentation completion.
 - To apply Veterinary laboratory work and documentation peculiarities.
 - To obtain biosafety during Veterinary laboratory work.
 - To choosing correct equipment for laboratory testing.

57.2. Propedeutics, Clinical Pathology and Diagnostic Imaging (in spring semester in one of the clinic sections):

- To communicate effectively.
- To evaluate patient's nutritional condition according to WSAVA.
- To restrain and handle animal (dog, cat and/or exotic animal);
- To perform and interpret small animal clinical examination;
- To obtain biosafety during clinical work;
- To prepare the workplace before receiving the patient and after the examination.
- To monitor and care for hospitalized patients.
- To write a recipe;
- To apply pharmacy work and documentation peculiarities.

58. During the Rotation at the VASC, the students will achieve the following competences and will be able:

58.1. Propedeutics, Radiobiology and Diagnostic Imaging (in autumn semester):

- To restrain and handle cat (simulation);
- To restrain and handle dog (simulation);
- To restrain and handle exotic animal (simulation);
- To give medicine according to the requirements for small animals (simulation);
- To select, prepare and insert of intravenous catheter for small animals (simulation);
- To select appropriate needle and syringe, to take right amount of drug into syringe for small animals (simulation);
- To perform a skin examination and diagnostic tests on small animals (simulation);
- To perform an ear examination and diagnostic tests on small animals (simulation);
- To perform an electrocardiogram (ECG) on small animals and assess heart function (simulation);
- To conduct a cardiovascular examination on small animal (simulation);
- To perform a general clinical examination simulation on a small animal (simulation);
- To administer medications to large animals according to requirements (simulation).
- To prepare and select intravenous catheters for large animals (simulation).
- To place an intravenous catheter in large animals (simulation).
- To select needles and syringes and draw up medications for large animals (simulation).
- To perform a clinical examination of a large animal (simulation).

58.2 Propedeutics, Clinical Pathology and Diagnostic Imaging (in spring semester)

- To collect anamnesis of small animals (simulation).;
- To perform enemas in small animals (simulation);
- To collect, keep and transport of urinary samples of small animals (simulation);
- To diagnose imaging tests performance and interpretation of results of small animals (simulation).;
- To prepare fluid therapy in a small animal (simulation);
- To examine dental of small animals' dental (simulation);
- To examine and testing of small animal's eye (simulation);
- To collect a blood sample from a small animal (simulation);
- To perform diagnostic imaging examinations in large animals (simulation).
- To collect blood samples from large blood vessels in large animals (simulation).
- To perform blood smear examination in large animals (simulation).
- To perform laboratory tests in large animals and interpret the results (simulation).
- To complete the documentation required for the treatment and diagnostic testing of large animals (simulation).

59. During the formation of Rotation at the LAC, the student's III course will achieve the following competences and will be able:

59.1. Propedeutics, Radiobiology and Diagnostic Imaging (in autumn semester)

- To apply required documentation for treatment and diagnostic tests of large animals.;

- To obtain biosecurity requirements in large animals' veterinary clinic;
- To collect anamnesis of large animals.;
- To restrain and handle cattle;
- To restrain and handle horse;
- To perform determination of displaced abomasum of cattle;
- To evaluate of physiological parameters of rumen in ruminants;
- To determinate animal constitution type for cows;
- To determinate animal constitution type for horses;
- To measure body temperature of horses;

59.2. **Propedeutics, Clinical Pathology and Diagnostic Imaging (in spring semester)**

- To communicate effectively while working with large animals.
- To perform clinical trial and interpret the results while working with large animals;
- To obtain biosecurity requirements while working with large animals;
- To monitor and care for hospitalized large animals.
- To collection of anamneses of large animals (possible simulation of the situation when communicating with a teacher / doctor);
- To take a sample of the large animal's faeces;
- To take large animal 's urine sample;
- To interpret blood smears of large animal
- To perform a visual diagnostic test and evaluating the results of large animals (simulation);
- To collect blood samples from the blood vessels of large animals (simulation);
- To perform a laboratory test and interpret the results while working with large animals (simulation);
- To obtain the anamnesis of a large animal.

60. **During the Rotation at PTTC of LSMU the III course students will achieve the following competences and will be able:**

60.1 **Propedeutics, Radiobiology and Diagnostic Imaging (in autumn semester)**

- To apply required treatment and diagnostics tests documentation of large animals;
- To obtain biosecurity requirements in PTTC;
- To collection of anamneses of large animals;
- To restrain and handle cattle;
- To perform determination of displaced abomasum;
- To evaluate the physiological parameters of rumen in ruminants;
- To determinate animal constitution type;
- To measure ruminant body temperature;
- To obtain the anamnesis of a large animal.

60.2 **Propedeutics, Clinical Pathology and Diagnostic Imaging (in spring semester)**

- To communicate effectively while working with large animals.
- To perform large animal clinical trial and interpret the results;
- To obtain biosecurity requirements in PTTC;
- To collection of anamneses of large animals;
- To take a sample of the large animal's faeces;
- To take large animal 's urine sample;

IX. FORMATION OF CLINICAL ROTATION OF SMALL ANIMAL INTERNAL DISEASES Year IV

61. The Rotation for fourth-year students is obligatory part of module of Small Animal Internal Diseases.

62. The Rotation according to the schedule is mandatory for every student.

63. The student who has missed formation of Rotation must redo it, regardless of the reason of the miss. The student who has missed at least one formation of Rotation is not allowed to take a final evaluation of Small Animal Internal Diseases.

64. The final assessment of the *acquired competencies* and *patient registration journal* shall be introduced into the cumulative formula of Small Animal Internal Diseases. Reflection should be written in the end of Rotation.

65. Rotation of Small Animal Internal Diseases are formed for four days consecutively (total 48 hours), 8 times per academic year at the KRSAC. The formation of clinical rotation once is performed during nighttime (12 hours) and once on VASC (4 hours);

66. **During the Rotation at the KRSAC the students will achieve the following competences and will be able:**

- To carry out a targeted clinical examination of the diseased animal and comment on the results obtained
- To develop a diagnostic test plan for the patient
- To take samples for diagnostic tests (patient)
- To interpret the results of diagnostic examinations (laboratory, imaging, etc.) of sick patient
- To make a list of differentiated diseases for a sick patient
- To make a treatment plan for a sick patient
- To perform the procedures required for treatment in the prescribed patient (drug injection: s.c., i.m., i.v., enema, abdominocentesis, thoracocentesis, wound care, etc.).
- To develop a prevention plan for the patient being treated / recovered

67. **During the Rotation at he the VASC, the students will achieve the following competences and will be able:**

- To collect anamnesis from the owner of the diseased animal;
- To develop a plan of preventive measures for a healthy patient (vaccination, measures against ecto- and endoparasites);
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X. CLINICAL ROTATION OF LARGE ANIMAL INTERNAL DISEASES Year IV

68. Rotation for fourth-year students is obligatory part of module of Large Animal Internal Diseases.

69. Rotation according to the schedule is mandatory for every student.

70. Clinical rotation of Large Animal Internal Diseases is formed 8 times per academic year (total 48 hours) at the Large Animal clinic. The formation of clinical rotation is performed during nighttime (12 hours).

71. The student who has missed formation of Rotation must redo it, regardless of the reason of miss. The student who has missed at least one formation of clinical rotation is not allowed to take the final evaluation of Large Animal Internal Diseases.

72. The final assessment of the *acquired competencies* and the patient registration journal shall be introduced into the cumulative formula of Large Animal Internal Diseases. Reflection should be written in the end of Rotation.

73. **During the Rotation at the LAC, PTTC and laboratory works, the students will achieve the following competences and will be able:**

- Register the patient
- Collect the anamnesis (patient history)
- Retrieve anamnesis from the herd-management program (for cattle)
- Perform a general clinical examination of the animal
- Fill in the general clinical examination record
- Select laboratory and diagnostic tests for disease diagnosis
- Draw a blood sample from a large animal
- Perform and interpret a morphological (CBC) blood test (cattle)
- Perform and interpret a biochemical blood test (cattle)
- Prepare for specialised diagnostic procedures (endoscopy, radiography, ultrasonography)
- Establish a diagnosis
- Calculate veterinary drug doses and administration schedules
- Monitor and control treatment progress based on previous test and treatment data

- Complete medical records and patient histories
- Take a skin-scraping sample for mycosis testing or ectoparasite detection
- Know the principles of balancing rations for large animals, based on herd health assessment parameters
- Correctly apply motion (animal handling/restraint) techniques for different patients
- Pass a stomach tube in large animals (cattle, horses)
- Perform a rectal examination in large animals
- Analyse and evaluate herd-management program data
- Draw up a biosecurity plan
- Determine the site of abomasum displacement
- To comply with biosafety requirements in clinics;
- To perform and interpret the CMT test;
- To develop a treatment plan for large ruminants.

XI. CLINICAL ROTATION OF SMALL ANIMAL GENERAL SURGERY AND ANESTHESIOLOGY

Year IV

74. The Rotation for fourth-year students is obligatory part of module of Small Animal General Surgery and Anesthesiology.

75. The formation of Rotation according to the schedule is mandatory for every student.

76. The student who has missed formation of Rotation must redo it, regardless of the reason for the miss. Also, the student who was not evaluated for at least one competence must get evaluation otherwise the student will get debt from Small Animal General Surgery and Anesthesiology subject.

77. The final assessment of the Rotations consists of evaluation of competencies (6 competencies), evaluation of reflection (the grade is added to competencies grades). The formula is in the subject description. The final assessment will be added into the cumulative formula of Small Animal General Surgery and Anesthesiology.

78. During the year, Rotation of Small Animal Surgery is formed: one time in KRSAC (total 8 hours);

79. Before receiving the evaluation for the compulsory competency, the student must register at VASC during independent hours and perform the competencies there twice independently (A) and/or assisted (B).

80. **During the clinical rotation in KRSAC, the IV course students will achieve the following competences and will be able:**

- to fill in anaesthetic protocol;
- to calculate the drug dose of anesthetic;
- to connect the vital signs monitoring device to the patient;
- to analyse data from the patient's vital signs monitoring device.
- to inform the owner about the possible risks of anaesthesia and procedures.
- to inform the owner about the patient's death during anaesthesia.

XII. CLINICAL ROTATION OF LARGE ANIMAL GENERAL SURGERY AND ANESTHESIOLOGY

Year IV

81. The rotation for fourth-year students is a mandatory component of the Large Animal General Surgery and Anesthesiology program.

82. It is imperative for every student to adhere to the prescribed plan for the organization of rotations.

83. During the academic year, the Large Animal General Surgery and Anaesthesiology rotation is conducted for a total of 6 hours at VASC.

84. The student who has failed to attend the formation of Rotation is required to repeat it, irrespective of the cause for their absence. Furthermore, it is imperative that any student who has not

been assessed for at least one competency must undergo evaluation. Failure to do so will result in the student incurring debt in the Large Animal General Surgery and Anesthesiology course.

85. The final assessment of acquired competencies is recorded and included in the cumulative grade formula of the Large Animal General Surgery and Anaesthesiology module. A reflection is written at the end of the clinical rotation

86. Before receiving the evaluation for the compulsory competency, the student must register at VASC during independent hours and perform the competencies there twice independently (A) and/or assisted (B).

87. During the clinical rotation in the VASC, **the IV course students will achieve the following competences and will be able:**

- To complete the anaesthetic protocol;
- To determine the appropriate dosage of an anaesthetic medication;
- To identify the parts of the endotracheal tube and master the procedure for its insertion.
- To evaluate clinical examination parameters
- To bandage horses' legs (apply a bandage up to the hock/carpus; apply a bandage on the carpus/hock; select appropriate dressing materials according to the animal species and the characteristics of the wound).
- To connect ECG monitor to a horse under general anesthesia;
- To prepare for surgery (including correctly putting on a surgical gown and gloves).
- To comply biosecurity requirements during the rotation,
- To inform the owner about the potential risks of anaesthesia and procedures.
- To inform the owner about the patient's death during anaesthesia.
- To inform the owner about the patient's euthanasia;

XIII. CLINICAL ROTATION OF SMALL SPECIAL ANIMAL SURGERY Year V

88. The Rotation for fifth-year students is obligatory part of module of Small Animal Surgery.

89. The formation of Rotation according to the schedule is mandatory for every student.

90. The student who has missed formation of Rotation must redo it, regardless of the reason for the miss. Also, the student who was not evaluated for at least one competence must get evaluation otherwise the student will get debt from Small Animal Surgery subject.

91. The final assessment of the Rotations consists of evaluation of competencies (20 competencies), evaluation of reflection (the grade is added to competencies grades) and evaluation of patient registration journal (30 patients mandatory). The formula is in the subject description. The final assessment will be added into the cumulative formula of Small Animal Surgery.

92. Patients described in the patient registration journal must be seen by the student during Rotation and during lab. works.

93. The patient registration log must be uploaded to Moodle within the activity specified by the coordinator and by the indicated deadline. The patient registration logbook should be uploaded in pdf format as a single document.

94. During the year, Rotation of Small Animal Surgery is formed: one time at VASC (total 16 hours), 4 times (7 hours per time) during daytime in KRSAC per academic year (total 28 hours), and once during the nighttime (12 academic hours) in KRSAC.

95. First 10 competencies grades must be gathered during Rotations in VASC during autumn semester. The grades for the remaining 6 competencies must be obtained at VASC during the spring semester, and the remaining 4 during the KRSAC rotations.

96. If the competencies are not completed during the rotations and/or the Patient Registration Logbook is not submitted on time, it will be possible to do so during the debt week of the spring semester.

Competencies grades will have to be gathered during clinical rotations in VASC.

97. **During the clinical rotation at the VASC, the V course students will achieve the following competences and will be able:**

- To communicate effectively
- To prepare Surgeon 's for surgery;

- To apply properly bandage techniques;
 - To recognise and proper to use of surgical instruments;
 - To complete required medical treatment and diagnostics documentation;
 - To identify and select needles and suture material for suturing various tissues;
 - To give detailed information to the owner about post-operative care of the animal
 - To choose the right dressing material according to needs;
 - To type and specify the infringement;
 - To evaluate, analyse and discuss on disease records of hospitalized patient;
 - To assess the risk of anaesthesia;
 - To prepare an operating room;
 - To know all work materials that are used during the surgery;
 - To prepare for anesthesia;
 - To provide the first aid for the animal;
 - To position animal for X-ray of the thorax, abdomen, front and hind legs, pelvis and interpretation of the radiographs;
 - To prepare of the patient for anaesthesia;
98. **During the clinical rotation at the KRSAC, the students will achieve the following competencies will be able to:**
- To take care of the animal after anaesthesia;
 - To assess pain using pain scales;
 - To monitor animal during anaesthesia;
 - To fill in anaesthesia protocol.

XIV. FORMATION OF CLINICAL ROTATION OF LARGE ANIMAL SPECIAL SURGERY

Year V

99. The 5th-year Rotation is an integral part of the Large Animal Specialized Surgery module.
100. Participation in the Rotation according to the established schedule is mandatory for every student.
101. During the academic year, the Large Animal Specialized Surgery Rotation is carried out 4 times (a total of 22 hours, including 4 hours of VASC). A visit to a pig farm consists of 8 hours. Clinical rotation during night duty consists of 12 hours.
102. Regardless of the reason for absence, a student who misses a scheduled Rotation day must make it up. A student who fails to make up the missed session and does not complete all mandatory competencies loses the right to take the final assessment of the Large Animal Specialized Surgery module.
103. The final evaluation of acquired competencies and the evaluation of the patient registration log are included in the cumulative grade formula of the Large Animal Specialized Surgery module. Reflections are written at the end of the clinical rotation.
104. The patient registration log must be uploaded to Moodle in the activity specified by the coordinator and within the indicated deadline. The patient registration log must be submitted in PDF format as a single document.
105. **During the Rotation at the LAC, the students will achieve the following competences and will be able:**
- To comply with biosafety requirements;
 - To give emergency veterinary care to a surgical patient;
 - To perform orthopaedic examination of a limping ruminant (cattle, sheep, goats, etc.), assess the health of the claws, be able to analyse diagnostic images of the claws;
 - To perform orthopaedic examination of lame horse;
 - To analyse diagnostic imaging findings and establish a diagnosis.
 - To perform an ophthalmic examination of the large animal and to make the diagnosis;
 - To examine oral cavity of the animal and to investigate dental health status of horse, cattle and to perform required procedures;
 - To be able to prepare a large animal for narcosis and surgery and to master their course;
 - To prepare to assist during surgery.

- To be able to evaluate clinical status of the patient under narcosis, and to fill in required documents for monitoring of operation;

106. **During the Rotation at the VASC, the students will achieve the following competences and will be able:**

To Perform abdominocentesis

- To give emergency veterinary care to a surgical patient;
- To analyse diagnostic imaging findings and establish a diagnosis;
- To perform an ophthalmic examination of the large animal and to make the diagnosis;
- To examine oral cavity of the animal and to investigate dental health status of horse, cattle and to perform required procedures;
- To prepare to assist during surgery.
- To be able to select suturing material, to know principles of suturing material marking, to select correct material for different cases in large animal;
- To be able to prepare instruments for surgery sterilization of tools (boiling, autoclaving, aseptic processing with chemical solutions, etc.);
- To know the purpose of tools used in large animal surgery;
- To be able to evaluate clinical status of the patient under narcosis, and to fill in required documents for monitoring of operation;
- To prepare a large animal for general anaesthesia and surgery and to understand the procedures involved.

107. **During the rotation at the pig farm, students will acquire the following competencies and will be able to:**

- Follow biosecurity measures in the pig complex.
- Grind piglets' teeth.
- Identify piglets (ear tagging).
- Castrate piglets.
- Administer medications to piglets.
- Vaccinate piglets.
- Disinfect piglets' umbilical cords.
- Provide obstetrical assistance to sows during farrowing.
- Diagnose pregnancy using ultrasound.
- Collect blood from the jugular vein.
- Restrain pigs.

XV. ANIMAL OBSTETRICS, REPRODUCTIVE DISORDERS AND CLINICAL ROTATION

Year V

108. The subject of Animal Obstetrics, Reproductive Disorders and Clinical Rotation consists of modules of Large Animal Obstetrics and Reproductive Disorders, Large Animal Andrology and Small Animal Obstetrics and Reproductive Disorders.

109. Rotation is integrated into the thematic work plan in each module separately and is obligatory for all students.

110. A student who has missed the work of Rotation must re-work or to do tasks for missed class, regardless of the reason.

111. A student is assessed negatively if s/he has not re-work missed Rotation work.

112. Competencies, reflection and patient registration journal must be assessed positively to be included in the cumulative score formula.

113. The overall assessment of acquired competencies, reflections and patient registration journal are recorded as a practice report in each semester separately in the Large Animal Obstetrics and Reproductive Disorders and in the Large Animal Andrology modules.

114. The overall assessment of acquired competencies and patient registration journal are recorded as a practice report in the Small Animal Obstetrics and Reproductive Disorders module.

115. **During the Animal Obstetrics, Reproductive Disorders and Clinical Rotation, the students will achieve the following competences and will be able:**

- To diagnose pregnancy.

- To evaluation of external reproductive system organs in cat and dog (female);
- To evaluate reproductive system radiograph images of female dog (pyometra/hydrometra, pregnancy);
- To evaluate reproductive system ultrasonography images of female dog (pyometra/hydrometra/mucometra, pregnancy, ovaries cysts);
- To evaluate external genitalia of cat and dog (male);
- To evaluate dog's prostate in ultrasonography images;
- To evaluate reproductive system radiograph of male dog and male cat;
- To perform the artificial insemination (large animal) procedure (simulation)\
- To diagnose disorders of the mammary gland (large animal), make a treatment plan and outline preventive measures
- . To examine and evaluate fresh and frozen large animal male's semen;
- To select, prepare and appropriate use of obstetric, gynecological, andrological instruments and equipments to large animal
- To perform a gynecological examination for estrus detection and make decisions regarding further reproductive use of the female (large animal).
- To assess the female (large animal) reproductive status based on vaginal and cervical Findings
- To compile the large animal gynecological treatment plan: for uterine infections, anestrus, estrous cycle stimulation (synchronization) and emergency cases.
- To assess reproductive status (large animal) based on anamnesis, clinical condition and special diagnostic methods and develop an action plan.
- To evaluate the large animals' reproductive organs using animal by-products (simulation).
- To apply ultrasonography in reproductive practice and perform pregnancy diagnosis.
- To communication: explain treatment plan, potential risks and obtained diagnostic results when working with large animals;
- To demonstrate the ability to make decisions and work effectively in a team when providing veterinary care for large animals.
- To prepare clinical and related documentation associated with large animal practice.
- To comply with biosecurity requirements when working with large animals.

XVI. BIOSECURITY REQUIREMENTS

116. If a student has had contact with farm animals while abroad (including visits to premises where they are kept), the following restrictions on contact with farm animals shall apply upon arrival or return to Lithuania. The student must confirm compliance with these restrictions by signing each time they arrive at the clinical rotation site:

- **No contact with farm animals for 72 hours** (including work in clinics and other animal-related facilities) if arriving or returning from a **non-EU country**;
- **No contact with farm animals for 14 days** if arriving or returning from **any country where at least one of the following infectious diseases has been detected**:
 - Foot-and-Mouth Disease (FMD),
 - African Swine Fever (ASF),
 - Classical Swine Fever (CSF),
 - Swine Vesicular Disease,
 - Avian Influenza (Bird Flu),
 - Newcastle Disease.

XVII. FINAL PROVISIONS

117. A supplement of the procedure entry into force since 1st of September 2026.

118. The procedure may be amended, supplemented or cancelled by the decision of the Council of the Faculty of Veterinary Medicine.

PATIENT REGISTRATION JOURNAL

Student Name, Surname, Group

No. 1 Medical Record Number (MRN) Visit Number	
Date	
ANIMAL SPECIES <i>Breed, gender, age/date of birth, body weight</i>	
THE DETAILS OF THE CASE <i>Detailed anamnesis. Clinical signs: when first observed, course of the condition, owner's observations, and reported symptoms.</i>	
Pulse Respiratory rate Characteristic symptoms <i>Every day clinical examination results written here, most typical symptoms for diagnosis.</i> <i>Clinical examination: mucous membranes color, capillary refill time, respiratory rate, heart rate, body condition, rectal temperature, abdomen palpation, chest auscultation, palpation of superficial lymph nodes, defecation, urination, appetite;</i>	
BLOOD, URINE, PUNCTURE, CYTOLOGY AND OTHERS TEST RESULTS, INTERPRETATION OF RESULTS (if performed) <i>The obtained results are indicated, with changed results highlighted; if tests were performed – specify which ones (e.g., blood morphology or biochemistry). If referring to a blood morphological test and there are deviations, specify – which indicator, the obtained result, reference (normal) values, and the type of change (e.g., if the white blood cell count was higher than normal – indicate the count and define it as leukocytosis, etc. If lower than normal red blood cell count, hematocrit, or hemoglobin values are observed – anemia. Also, understand what this means).</i> <i>If a biochemical blood test was performed – indicate the tested indicators, their reference values, the obtained result, name the condition (e.g., if GLU is higher than normal – hyperglycemia, etc.), explain its significance and possible causes. Similarly, for urine tests or imaging diagnostics – specify what was performed, how it was done, what was found, and what it means.</i>	
METHOD USED FOR THE TEST (SPECIFYING THE NAME OF THE DEVICE AND THE TECHNIQUE USED) <i>Describe the sample collection and testing methodology, i.e., how the sample was taken and processed – for example, the magnification used for microscopy; preparation and staining of a blood smear; parasitological examinations; detection of worm eggs or larvae in the samples;</i>	
SPECIAL EXAMINATION METHODS (if performed) <i>X- ray (indicate projections and visible changes);</i> <i>Ultrasound examination (indicate area and visible changes);</i> <i>MRI or CT (indicate area and visible changes) and so on;</i>	

DIAGNOSIS

The exact diagnosis. If changes every day – note the date and new diagnosis.

(Castration or OHE is not a diagnosis).

It is essential to pay attention and not to confuse a diagnosis with the procedures performed; do not provide symptomatic diagnoses – e.g., diarrhea (this is a symptom, not a diagnosis), etc. In the notes section, indicate how a particular diagnosis is reached – for example, “allergy” – by exclusion, and be able to explain this process, etc.)

TREATMENT AND PREVENTION

(Full description of used materials and procedures in treatment, surgical and diagnostic procedures performed with a brief methodical description.)

(Clearly indicate the medication, active substance, strength, appropriate dosage, how to use it, how many times per day, and the duration of the treatment course.)

A prescription should be recorded when a medication has been prescribed as a one-time prescription.

Brand (trade) names of medicinal products should be written with a capital letter (e.g., Karbasept), while active substances should be written in lowercase (e.g., butorphanol tartrate).

Example:

The animal was sedated by intramuscular administration of 0.3 ml of Cepetor (medetomidine hydrochloride) 1 mg/ml injectable suspension, 0.3 ml of Ketamidor (ketamine hydrochloride) 100 mg/ml solution for injection, and 0.2 ml of Butomidor (butorphanol tartrate) 10 mg/ml solution for injection.

After 15 minutes, an intravenous catheter was placed, and anaesthesia was induced by intravenous administration of 1 ml of Norofol (propofol) 10 mg/ml injectable emulsion to effect.

The surgical site was prepared in accordance with aseptic principles. The wound edges were refreshed, and necrotic tissue was removed. Soft tissues and subcutaneous tissue were closed with PDX 3-0 suture using simple interrupted sutures. The skin was closed with 4-0 polypropylene suture using simple interrupted sutures.

The leg was treated with Karbasept, bandaged, and covered with a protective dressing (Petflex). Following surgery, the animal was disconnected from the inhalation anaesthesia machine.

The animal was extubated once the swallowing reflex returned.

For postoperative pain control, Meloxidyl (meloxicam) 1.5 mg/ml oral suspension for dogs was prescribed orally at a dose of 0.75 ml once daily for 7 days.

For prophylactic purposes, Synulox RTU (amoxicillin 140 mg/ml, clavulanic acid 35 mg/ml) injectable suspension for cattle, pigs, dogs, and cats was prescribed subcutaneously at a dose of 0.75 ml once daily for 7 days.

The wound should be bandaged twice daily. The wound should be gently cleaned with sterile physiological saline solution and treated with Vetramil ointment.

PROGNOSIS AND/OR OUTCOME OF THE DISEASE

Example Recovered

NOTES

Provide a detailed case analysis including student’s remarks, comments, and personal evaluation of the case. Discuss: whether you would recommend additional or alternative diagnostic tests and justify your choice; whether the diagnosis could be different or include concurrent conditions; students’ evaluation of the applied treatment, including possible alternatives. If relevant, include recommendations regarding patient care, feeding, special dietary management. Comment on the selected diagnostic methods: were

they appropriate? What additional tests could help confirm the diagnosis? Provide own recommendations for prevention, for example: parasite (e.g., flea) prevention, measures to protect the animal, environmental management to reduce reinfection risk. Interpret laboratory results (e.g., blood parameters): explain deviations from normal values, provide possible clinical reasons for increased or decreased findings.

No 2. Medical Record Number (MRN) Visit Number

Date

ANIMAL SPECIES

Breed, gender, age/date of birth, body weight

THE DETAILS OF THE CASE

Detailed anamnesis: clinical symptoms, information provided by the owner

Confirmation

By this I certify that all information provided in the journal is correct and are written by my own.

Student 's signature Date

INSTRUCTION HOW TO FILL IN PATIENT REGISTRATION JOURNAL

Each student of IV and V course every year must fill a personal. Data about seen patients during clinical rotation (*during laboratory works, clinical rotation, practice work, when working in the clinic departments, farm, volunteering in animal clinics' of LSMU FVM, etc.*) supervised by the LSMU's veterinary doctor or lecturer should be filled in the journal. Data about patients seen during additional practice can 't be included in the journal.

The Patient Registration Journal should be uploaded *in PDF format* (title of the documents *N. Surname gr.*) in Moodle platform in course specified by the clinical rotation supervisor and coordinator.

The Patient Registration Journal should be uploaded at the time specified by the module coordinating lecturer.

At the end of the academic year, the Patient Registration Journal is evaluated with a grade (from 1-10 according to the procedure provided by the LSMU Study Regulations) which is introduced in cumulative formula of the subject.

It is forbidden to use the *patient registration system in clinics* by completely copying it in Patient Registration Journal and submitting in it as your personal data. Such conduct shall be regarded as academic misconduct. In the Patient Registration Journal, all cases presented **must be described individually for each student**. Clinical cases may be repeated but must be described and submitted individually for each student.

The **Patient Registration Journal** must be completed in a **Word document** (printing is not required). During each clinical rotation, students must submit for the rotation supervisor's signature a document containing the **Medical Record Number (MRN)** and **Visit Number** (Annex 2), confirming the patient cases observed during the rotation whose data will be included in the patient logbook for assessment. The MRNs of these patients must also be entered in the **praktika.lsmuni.lt** system when submitting competencies for approval, in the comments section.

A separate **Annex 2** must be completed for each **small animal** and **large animal** clinical rotation and submitted to the respective rotation supervisor for signature.

IMPORTANT: Students must submit Annex 2 to the clinical rotation supervisor for signature **on the same day that the patient cases are assessed**. Otherwise, the patients included in the Patient Registration Journal will not be evaluated, and the student will be required to register new patient cases.

The minimal number of described patients (according to ESEVT SOP indicator recommendations)

Course	Companion animal (dogs, cats)	Rabbit, rodent, bird, exotic animals	Equine	Ruminants and pigs	Poultry and farmed rabbits
IV <i>Internal medicine</i>	15	2	8	20	1
V <i>Surgery</i>	30	3	5		
V <i>Obstetrics, Reproductive Disorders</i>	-	-	15		

