FACULTY OF VETERINARY MEDICINE

UNIVERSITY OF LIFE SCIENCES
FACULTY OF VETERINARY MEDICINE

Revisitation
Self Evaluation Report

for the European Association of Establishments for Veterinary Education

Lublin September 2021

CONTENT

1. INTRODUCTION

EAEVE Visitation occurred from the 19th to the 23rd of April, 2021

During the Visitation, the Visiting Team identified several areas worthy of praise (i.e. Commendations), e.g.:

-) commitment of staff to teaching activities and curriculum development;

-) high level of availability of staff to assist undergraduate students;

-) strong support for the physical and welfare needs of the students;

-) efficient recovery programme for subjects with more than 30% of failing in assessment;

-) implementation of innovative methods of teaching, e.g. e-learning and competition games in Biochemistry;

-) excellent new VTH with plenty of rooms for services, education and research;

-) outstanding diagnostic equipment for companion animals, e.g. neurology, ophthalmology, diagnostic imaging, dermatology, cardiology, dentistry and endoscopy;

-) efficient equine teaching farm for pre-clinical training in horses and ponies;

-) efficient IT department, which has demonstrated its ability to use modern technologies for the purpose of the hybrid Visitation;

-) effective collaboration with local stakeholders, e.g. farms, practitioners, veterinary public health services;

-) effective collaboration with several European VEEs.

According to the Visitation Team the main features of the VEE are:

-) Modern and well-equipped Veterinary Teaching Hospital (VTH);

-) Access to selected animal health facilities, breeding farms and slaughterhouses, processing plants for practical training;

-) High throughput of doctoral students at doctoral studies and at the Doctoral School in the field of scientific research;

-) Internal Education Quality Assurance System (IEQAS) and Quality Control System (QCS) closing the gap between learning objectives and learning outcomes.

On the other hand, the Visitation Team has also identified two items of non-compliance with the ESEVT Standards (i.e. **Major Deficiency**):

1. Non-compliance with Substandard 3.5 because of insufficient clinical training in food-producing animals and insufficient integrated approach of herd health management, 'From Farm to Fork' and 'One Health' concept;

2. Non-compliance with Substandard 4.7 because of inadequate facilities, equipment and biosecurity as well as safety measures in the building (no.10) currently used by the Department and Clinic of Animal Reproduction.

The Visitation team has also identified one area of concern (i.e. **Minor Deficiencies**):

1. Partial compliance with Substandard 1.5 because of suboptimal organisational structure with numerous departments and sub-departments, which may negatively affect the cohesion of the study programme, the interdisciplinary collaborations and the optimal use of facilities and equipment;

2. Partial compliance with Substandard 2.1 because of suboptimal public funding, which doesn't sufficiently take into account the higher cost of veterinary training when compared to other professions;

3. Partial compliance with Substandard 3.5 because of suboptimal training in some subjects, i.e. anaesthesiology and analytical chemistry in food technology;

4. Partial compliance with Substandard 4.6 because of suboptimal handling of pharmaceutical products and because of suboptimal safety measures in a few rooms;

5. Partial compliance with Substandard 4.7 because of suboptimal recording of the use of teaching animals;

6. Partial compliance with Substandard 4.13 because of suboptimal isolation facilities for companion animals;

7. Partial compliance with Substandard 5.1 because of suboptimal number of necropsies in food-producing animals and absence of healthy pigs on the teaching farm for pre-clinical training;

8. Partial compliance with Substandard 5.6 because of no formal clinical recording in food animals patients;

9. Partial compliance with Substandard 10.4 because of very few formal postgraduate training programmes.

In accordance with the European System of Evaluation of Veterinary Training (ESEVT) and based on the educational requirements of the Directive 2005/36/EC as amended by Directive 2013/55/EU, the status of the Veterinary Education Establishment of the University of Life Sciences in Lublin is non-accredited.

2. CORRECTION OF THE MAJOR DEFICIENCES

2.1 Major deficiency 1. Non-compliance with Substandard 3.5 because of insufficient clinical training in food-producing animals and insufficient integrated approach of herd health management, 'From Farm to Fork' and 'One Health' concept

2.1.1. Factual information

Indeed VEE paid insufficient attention to the integration of some topics. Both modern concepts 'From Farm to Fork' and 'One Health' are taught within different subjects in rather classic way, but it can be modernised. After visitation VEE prepared and introduced into curriculum new obligatory subjects such as "Herd health management" as well as electives ''Practical aspects of rational antimicrobial therapy in animals'' and "Current problems of modern buiatry" (Attachment no 1). Moreover, essential changes in the content of "Milk hygiene" and "Hygiene of food of animal origin" courses were introduced (please see Attachment no. 2). All changes will be implemented since Oct 2021.

General concepts of the "From Farm to Fork" are discussed mainly within the subject entitled "Food hygiene of animal origin". We would like to emphasize that within the concept of "From Farm to Fork", mainly those aspects that are connected and regulated by veterinary law and the activities of veterinary services are addressed (please see scope of lectures, Attachment no. 2). Moreover, as part of the training in veterinary inspection (after X semester), students have the opportunity to participate in controls of milk production farms, which are carried out by an official veterinarian. In addition, as part of the course entitled "Herd health management", visits in milk production holdings are planned. Besides, as it was suggested, the above mentioned issues will be discussed in the context of "From Farm to Fork" conception. VEE signed new agreements with external laboratory in the National Veterinary Institute in Puławy, where students can obtain the knowledge about analytics within meat hygiene.

On-site visits (dairy plant, meat processing plant) are designed to familiarize veterinary students with the basic technological processes in milk and meat processing, e.g. pasteurization, sterilization, cooling, washing, disinfection, and depending on the plant, with selected technologies of the production of dairy and meat products. In order to better acquaint students with the practical aspects of the processing of food of animal origin, it is planned to increase the number of hours in dairy plants and meat processing plants to 4 and 6 hours, respectively. Before the visitation, students will be presented with a detailed plan of the visitation. All technological processes, which students will analyze in the plants as well as GHP principles and HACCP principles (including the exact examples from particular plants as a graphs or photos) will be discussed in detail during lectures and/or classes in a theoretical form. Taking into account conditions and organization of work in Polish establishments, it is not possible to allow students to perform any typical practical activities there.

What is more, basic issues related to "One Health" concept are discussed within the subjects of "Public health protection" and actually within "Food hygiene of animal origin" (please see thematic scope of the lectures, Attachment no. 2). In addition, the above issues will be dealt with in a more comprehensive manner within the multidisciplinary course entitled "Herd health management" (please see Attachment no. 2).

From October 1, 2021, changes will be made to practical training in the field of food-producing animals. The course programme of the subject the ''Diseases of farm animals'' includes practical classes on farms, where students will be able to observe and examine healthy and sick farm animals. During their stay on the farms, students will also acquire practical skills under the supervision of teachers (please see Attachment no. 3 – outgoing classes). The acquisition of practical skills by students on farms will be linked to the herd's veterinary service. At present, students have access to cattle and sheep on farms. Regarding the use of pigs in practical training, the VEE is waiting for the decision of the Official Veterinary Officer (please see 3.7).

Moreover, agreements with slaughterhouse, where students can train rectal palpation will be organized. At present VEE has submitted the application to Official Veterinary Officer for the permission to use animals in slaughterhouse.

Finally, VEE has obtained external funds from the Ministry of Science and Education for veterinary simulators and the organization of Skills lab. At present, tender procedures are almost completed. VEE expects that at the end of 2021 Skills lab will be opened and will provide students with the possibility of training clinical skills in lab before contacting patients. Equipment will cover 2 cows for parturition, 1 horse for colic problems, 5 fantoms for pregnancy diagnosis in cows and mare and insemination procedures, 2 fantoms with access to veins for training of injections as well as several items for small animals.

2.2. Major deficiency 2. Non-compliance with Substandard 4.7 because of inadequate facilities, equipment and biosecurity and safety measures in the building (n°10) currently used by the Department and Clinic of Animal Reproduction

2.1.2. Factual information

As it was explained in the SER, Department and Clinic of Animal Reproduction has rooms located in building 10, building 10a, building A and B of Innovative Center of Pathology and Therapy of Animals (ICPTA).

Nevertheless, the following deviations in the building no. 10 were found during the establishment evaluation:

1. inadequate safety measure
2. some fire extinguishers are missing and one was locked
3. the floor is cracked
4. inadequate drainage for cleaning and disinfection.

According to the Visitation Team clinical activities and teaching animals located currently in building 10 should be relocated into the new VTH, which is an example of the high standard for education and clinical work.

After the visitation, the following measures have been implemented in order to manage the deficiencies:

1. **Clinical and teaching activities were suspended in building 10. All veterinary and teaching activities have been moved to buildings A and B of ICPTA,** equipped with appropriate premises:
   a. Premises for group work: Building A - Room no. 132 Places 30 , Room no. 136 Places 30, Room. no. 137 Places 30
   b. Premises for practical work:
   - Rooms 36-50 (building A) - operating tract for large animals used by the Department and Clinic of Animal Reproduction and the Department and Clinic of Animal Surgery (2 operating blocks)
   - Room no. 34 (building A) - a room for complicated labour of large animals (area 28.9 m^2; for 13 people)
   - Room no. 54 (building A) - room for semen collection from stallions (phantoms) (area 61m^2; for 30 people)
   - Room no. 65 (building A) - milking parlor (milking machine) (area 61 m^2; for 8 people)
   - Laboratories in building A
     - Room no. 118: andrology - semen and embryo bank (frozen sperm container, deep freezing freezer, doppler ultrasound machine in stationary configuration)
     - Room no. 119: andrology - sperm morphological assessment laboratory
     - Room no. 120 - andrology - semen and embryo freezing laboratory

- Room no. 121 - andrology - computer sperm evaluation laboratory (SCA computerized sperm evaluation system)
- Room no. 310 endocrine laboratory
- Room no. 329 immunological laboratory (fume cupboard, spectrophotometer, Real Time PCR apparatus with HRM; three-block PCR apparatus; single block thermocycler for PCR, deep freezing freezer; set for nucleic acid electrophoresis) - apparatus temporarily moved to rooms no. 354-356.
- Room no. 349 mammary gland laboratory (device for diagnosis of mammary gland inflammation based on SOMACOUNT somatic cells; portable set for testing somatic cells in milk CELLCOUNTER DCC; apparatus for chemical analysis of milk DAIRY SPECT, fume cupboard)

- Laboratories Building B
    - Room no. 24 laboratory of Clinic of Animal Reproduction (portable ultrasound doppler)
    - Room no. 119 pharmacy
    - Room no. 216 andrological laboratory
    - Room no. 224 facilities for animals
    - Room no. 231-233 operational tract for small animals

2. The animals are located currently in animal housing located in ICPTA.

3. Fire-fighting equipment and evacuation routes in all VEE facilities are inspected obligatorily once a year. The inspection is carried out by an external company under the supervision of the university department: occupational health and safety. In September these are the buildings at 30 Głęboka Street (Clinics), in August - the building at 12 Akademicka Street (Collegium Veterinarium). During the current inspection, the commission's comments were taken into account, i.e. the marking of the hydrant, which may be external and internal according to the regulations, was changed to be more visible, and the number of fire extinguishers was adjusted to the fire hazard level (more extinguishers in hay warehouses).

At present in building no. 10 there are only rooms for individual work of academic staff. Stables are closed.

3. CORRECTION OF MINOR DEFICIENCES

3.1. Minor Deficiency 1: The VEE is partially compliant with Substandard 1.5 because of suboptimal organizational structure with numerous departments and sub-departments, which may negatively affect the cohesion of the study programme, the interdisciplinary collaborations and the optimal use of facilities and equipment

3.1.1. Factual information

The organizational structure at the University of Life Sciences in Lublin is defined by the provisions of the University's Statute https://up.lublin.pl/bip/statut/ https://up.lublin.pl/bip/wp-content/uploads/sites/9/2021/04/12.pdf. According to these principles, the largest organizational unit in the faculty is the institute, which may include several sub-departments. An institute may be established if it comprises at least fifteen academic teachers, including at least six holders of an academic title of professor or postdoctoral degree for which the University is a primary workplace. In addition, institute must conduct research that covers at least two fields of science. VEE conducts research in the discipline of veterinary science, which belongs to the field of agricultural science. Thus, only one scientific field is researched at the Faculty. Therefore, the largest organizational unit at VEE is the department, which may include sub-departments. According to the ULS Statutes, a department or a clinic can be established when it comprises at least five academic teachers, for whom the University is a primary workplace, including at least one person with an academic title or two people with a postdoctoral degree.

In connection with the rules of the ULS Statute, there have been some organizational changes at the Faculty in recent months. Currently, VEE consists of 13 departments with 10 sub-departments. The basis of the organizational structure is, on the one hand, scientific activity (e.g. the Department of Preclinical Veterinary Sciences, which includes the Sub-Department of Veterinary Microbiology and the Sub-Department of Pathophysiology – joint research, join publications, the use of research equipment and laboratories; the Department of Parasitology and Fish Diseases, which includes the Sub-Department of Biology and Fish Diseases and Sub-Department od Parasitology and Invasive Diseases – the use of research equipment and laboratories), and on the other hand, clinical and teaching activities (e.g. Department and Clinic of Animal Internal Diseases with 3 departments). Some subjects are taught by employees of various organizational units. The classes in Diseases of dogs and cats, Diseases of horse, Diseases of farm animals are conducted by academic staff of 3 units: Department and Clinic of Animal Internal Diseases, Department of Epizootiology and Clinic of Infectious Diseases, Department and Clinic of Animal Reproduction. In each unit there are specialists in specific subjects, who cooperate in the implementation of the programme and classes. These units employ from 10 to 18 employees. Some subjects are conducted by teachers in both clinical sciences and basic sciences, e.g. Veterinary mycology course are conducted by employees of Department of Microbiology, Department of Clinical Diagnostics and Veterinary Dermatology, and Department and Clinic of Animal Reproduction. Classes in the newly created subject such as Herd Health Management will be conducted by the academic staff of several units (from several faculties of the university): Department of Veterinary Prevention and Bird Diseases, Department of Animal Breeding and Agricultural Consulting, Institute of Animal Nutrition and Bromatology, Department of Hygiene of Food of Animal Origin, Department of Epizootiology and Clinic of Infectious Diseases, Sub-Department of Internal Diseases of Farm Animals and Horses, Department and Clinic of Animal Surgery, Department and Clinic of Animal Reproduction.

There is also other didactic cooperation between the units – e.g. the Department of Biochemistry prepares "artificial skin" for general surgery classes, biological material (blood, urine) for *Animal physiology* classes comes from clinic patients. Teachers from clinics are invited for selected hours in theoretical subjects e.g. endocrinology, veterinary mycology.

There is cooperation between units in the use of laboratories and apparatus, which is confirmed by joint science articles. For example, the Department of Animal Physiology conducts joint research with the Department of Histology and Anatomy, the Department of Biochemistry, the Department and

Clinic of Internal Animal Diseases, the Department and Clinic of Animal Surgery; the Department of Biochemistry conducts joint research with the Department and Clinic of Animal Reproduction, Department of Veterinary Preclinical Sciences has cooperation with Department and Clinic of Animal Surgery.

In conclusion, the VEE must have a structure compliant with the provisions of the ULS statutes.

3.2. Minor Deficiency 2: The VEE is compliant with Standard 2, except for Substandard 2.1. The VEE is partially compliant with Substandard 2.1 because of suboptimal public funding, which doesn't sufficiently take into account the higher cost of veterinary training when compared to other professions

3.2.1. Factual information

As stated earlier in the self-evaluation report in the years 2016-2018, VEE did not have financial independence. From January 1, 2019, the model of financing faculties of the ULS in Lublin has changed. The money from the central budget is divided by the Rector of the University into faculties as funding of teaching cost, Faculty cost and scientific subsidy. The scientific subsidy is broken down according to the achievements of the individual employees. Funding for teaching and Faculty costs is divided by the Rector of ULS into faculties mainly according to the key, taking into account the number of employees working at individual positions, students, doctoral students, internationalization and education cost factor. Unfortunately, in 2019 the financing of the Faculty did not include the increased education cost factor of 3.5 (Regulation of the Minister of Science and Higher Education of January 22, 2019 on cost-intensity ratios). It has only been included since 2020.

From September 1, 2020 ULS is managed by the new Rector. The cooperation between the Rector and the Faculty results in a better financial position of the Faculty (Table 1, 2, 3). Moreover, in 2020 and 2021, Rector allocated considerable funds for the renovation of teaching and clinical rooms.

Table 1. Annual expenditures during last 3 years (in Euros)

Area of expenditure	2018	2019	2020	Mean
Personnel	3 471 074	4 165 246	3 857 886	3 831 402
Operating costs	2 060718	2 065 163	1 705 524	1 943 802
Maintenance costs	389 006	431 373	427 387	415 922
Equipment	1 065 658	1 762 945	139 870	989 491
Total expenditure	**6 986 456**	**8 424 727**	**6 130 667**	**7 180 617**

Table 2. Annual revenues during last 3 years (in Euros)

Revenues source		**2018**	**2019**	**2020**	**Mean**
Public authorities		4 075 767	4 589 996	4 575 570	4 413 778
Research grants		677 253	1 127 839	386 696	730 596
Tuition fee	standard students	41 756	84 460	53 629	59 948
	full fee students	582 326	598 415	572 168	584 303
Recruitment fees and ID cards		27 310	29 276	26 340	27 642
Continuing Education		84 651	91 061	41 029	72 247
Clinical service		181 819	250 893	327 011	253 241
Other sources*		1 025 968	57 762	97 182	393 637
Total		**6 696 850**	**6 829 702**	**6 079 625**	**6 535 392**

*Income from the conferences, sale, balanced depreciation

Table 3. Annual balance between expenditures and revenues during last 3 years (in Euros)

Financial year	Total revenues	Total expenditures	Balance
2018	6 696 850	6 986 456	- 289 606
2019	6 829 702	8 424 727	- 1 595 025
2020	6 079 625	6 130667	- 51 042

As mentioned in the self-evaluation report, VEE has no influence on public funding, but is, nevertheless, making constant efforts to obtain funds to enable the proper implementation of veterinary training. Applications for funding are prepared and submitted to the National Science Center, the National Center for Research and Development, the Ministry of Education and Science, the Marshal's Office, etc. Since the Accreditation Visit in April 2021, the VEE has obtained external funds in the amount of 693 144 euro. These funds are intended for the implementation of scientific research, purchase of research equipment and teaching aids. A huge part of the funds obtained are those for financing the Skills Lab for students of VEE – 394 610 euro. This is a targeted grant from the Ministry of Education and Science for VEE. The authorities of the Department take measures to obtain other external funds, e.g. outsourced services, from industry, paid practical training for veterinary technicians.

The authorities and employees of the Faculty work to improve the quality of veterinary services, which translates into the generated profits. The authorities make efforts to ensure that some of the finances from clinical activities are at the disposal of the Faculty authorities. Currently, a draft ordinance of the Rector ULS is prepared, according to which 4 percent of revenues from clinical activity will be at the disposal of the faculty authorities.

The authorities of the Faculty initiated actions aimed at including in public funding the costs of employment, in addition to support staff, also veterinary technicians and veterinary nurses in clinics. The first meeting with the Minister of Education and Science on this matter took place a few weeks ago.

3.3. Minor deficiency 3.5: The VEE is partially compliant with substandard 3.5 because of suboptimal training in some subject-i.e. anaesthesiology and analytical chemistry in food technology)

Training in anaesthesiology can be separated from surgical training and later the acquired knowledge can be applied to all services where anaesthesiology service is needed.

3.3.1.Factual information

Until now, the module: General surgery and anesthesiology was conducted as one subject. Currently, it has been divided into two separate modules (Veterinary anaesthesiology and General surgery with 2 ECTS and 25 hours each of them), which will allow for a better definition of the hourly range allocated to each of the specified parts. Changes to the programme will be introduced for the new recruitment 2021-2022 (in accordance with the university regulations, all changes to the study programme should be made before starting studies for a given year). Syllabuses for the new modules are in Attachment no. 4. Modules will be implemented simultaneously in the same semester as before (6th semester). The practical continuation of both anesthesiology and surgery is implemented during the following blocks: Diseases of horses (mainly block 2, where surgery and orthopedics and obstetrics are conducted), Diseases of farm animals (mainly block 2, where surgery and obstetrics classes are held) and Diseases of dogs and cats, blocks 1 and 2, during the part intended for surgery, dentistry, orthopedics, obstetrics and ophthalmology. Practical issues during clinical rotations are continued: 20 hours during the "Diseases of dogs and cats" and 10 hours each for the block "Diseases of horses" and "Diseases of farm animals". Discussion and practical implementation of elements of anesthesiology is also implemented during other modules requiring sedation e.g. imaging diagnostics, as well as other diagnostic (invasive) procedures requiring anesthesia.

The issues related to analytical chemistry, considered as included in food technology, are not covered

3.3.2 Factual information

So far, the issues related to analytical chemistry in food production have been carried out mainly in theoretical aspect (please see content of lectures, no. 4, 8, 10, Attachment no. 2). The main aim of

simple food chemical analyses performed during the laboratory classes (such as pH-value determination, determination of fat, protein and water content in food of animal origin, detection of inhibitory substances in milk by using rapid tests, etc.) are to acquire basic laboratory experience by the students. As suggested, the practical issues of chemical food analysis will be extended to include, methods for the determination of residues in foods. In this regard, classes in the National Veterinary Research Institute in Puławy (Department of Pharmacology and Toxicology – national reference laboratory) will be introduced. The relevant approvals have already been obtained.

Issues related to the chemical hazards are discussed in detail during the lectures and within the scope of course entitled "Food hygiene of animal origin" (please see scope of lectures, Attachment no. 2). As suggested, the practical issues of chemical hazards will be extended to include methods and laboratory techniques for various residues detection in food of animal origin (classes in the National Veterinary Research Institute, Puławy).

It is planned to renovate existing space for establishing new lab in the Department of Food Hygiene of Animal Origin.

3.4. Minor Deficiency 4: The VEE is partially compliant with Substandard 4.6 because of sub-optimal handling of pharmaceutical products and because of suboptimal safety measures in a few rooms.

3.4.1. Factual information

Pharmaceutical products are registered in the computer system (Klinika 3000) and each therapeutic use can be monitored there. As these products are divided into particular clinics they are distributed between rooms used by different units and particular bottles can be used by many people. This may bring personal errors, which are not eliminated by others. Generally, the procedure for narcotic products exists and should be known by all vets working with animals. The procedure is available at each department and some fragments are in rooms where they are used. The procedure for all pharmaceutical products was prepared and implemented in accordance to the suggestion of visitation team. The procedure is available at each room where animals are present.

Each room was checked for safety measures and attention was paid for its improvement.

3.5. Minor Deficiency 5: The VEE is partially compliant with Substandard 4.7 because of sub-optimal recording of the use of teaching animals

3.5.1. Factual information

VEE owns 10 horses, which are kept in a stable located around 10 km from campus where animals have appropriate space and can work, 6 goats as well as 3 cows which are in ICPTA. These animals have been purchased lately. Within the time between EAEVE visitation and the present , they were already used for teaching purposes not only in clinical but also theoretical subjects (eg. Animal Anatomy, Animal Physiology). Apart from the source of didactic animals, some units organize trips to farms where students can observe patients in their natural environment and train skills. Pandemic has influenced the access to animals – students were present on site only temporarily and owners were afraid of opening their facilities for students. Together with disappearance of pandemic this situation will be improved.

VEE prepared Book of didactic animals, where all activities related to the use of these animals will be registered. Books are available in rooms for animals (Attachment no. 5).

3.6 Minor Deficiency 6: The VEE is partially compliant with Substandard 4.13 because of suboptimal isolation facilities for companion animals

3.6.1. Factual information

Indeed, during the process of planning the hospital for companion animals the space was underestimated. As a result, facilities for experimental, didactic, infected and non-infected animals are too close to each other. The improvement of this situation within the same building was not possible but other rooms were taken into consideration. Experimental animals got individual cages equipped with houses. Small animals suffering from infectious diseases are located in isolated area in the building of surgery (building no 4). There are 3 rooms dedicated for dogs, cats and room for doctors, respectively. These 3 rooms comply with biosafety rules and are isolated from other rooms.

At present, procedures for taking care of infectious cases are modified.

3.7 Minor Deficiency 7: The VEE is partially compliant with Substandard 5.1 because of suboptimal number of necropsies in food-producing animals and absence of healthy pigs in the teaching farm for pre-clinical training

3.7.1. Factual information

VEE has made efforts to increase the number of food-producing animal cadavers. VEE has established cooperation with a PPP rendering company, Bacutil S. Szpetko, T. Szpetko Sp. jawna Zastawie, 24-170 Kurów (cat 1 rendering plant) on the delivery of cadavers for necropsies in terms of patomorphology classes. VEE sourced from rendering company 32 cattle and 3 pigs in the 2019/20 academic year, 24 cattle and 17 pigs in 2020/21. From the 2020/21 academic year, VEE will collect the cadavers of sheep from the Bezek Experimental Farm belonging to the ULS. A contract was signed in this regard.

Due to the very difficult epidemiological situation of ASF in Poland, it is very difficult to ensure contact of students with both sick and healthy pigs. The Faculty has made efforts to ensure that, from the academic year 2021/22, classes on pig diseases will be carried out at the Czesławice Experimental Farm belonging to ULS. This farm keeps a herd of pigs of the native Puławy breed. On the farm in Czesławice, classes will cover: clinical examination, collecting samples for fungal and bacterial diseases, ultrasound examination for fertility, i.m. and s.c. injections, castration, nursing care of newborns. Classes will help to understand rules of herd health management. At present, VEE is waiting for the consent of the Official Veterinary Officer in Puławy to enter the farm. It will depend on epidemiological situation and the location of new outbreaks.

3.8 Minor Deficiency 8: The VEE is partially compliant with Substandard 5.6 because of no formal clinical recording in food animals patients

3.8.1. Factual information

This undesirable situation occurred mainly in one unit and was a result of misunderstanding with regard to the form of recording. Visits with students on farms were defined as didactic and were not added into the system, but there was a different way of documentation. Students had to present medical story. During pandemic when students had limitation in staying at VEE, they were obliged to visit local veterinarians and prepare medical story. Medical stories were confirmed by a signature of local veterinarians and archived in particular units. These cases could not be inserted into the computer system, but in fact, students had contact with patients.

It was discussed with teachers of this unit and will not occur in the future. All food producing animal cases will be recorded in the computer system. Author of the programme Klinika 3000 confirmed that such activity is possible. Adequate staff members were retrained on how to do this.

3.9. Minor Deficiency 9: The VEE is partially compliant with Substandard 10.4 because of very few formal postgraduate training programmes

3.9.1. Factual information

Currently two formal postgraduate trainings are conducted at VEE as a specialization in radiology and diseases of dogs and cats.

University prepared rules for the organization of postgraduate training programmes. They are based on law signed by Minister of Science and Education as well as on Resolutions of Rector and Regulations of specialistic training dated 2019. They require to prepare a lot of documentation, which sometimes is above knowledge of academics. Rules cover indirect costs for university from each programme approaching 40%, what makes these trainings rather expensive. Less formal forms of postgraduate training are possible, but require funds which should be arranged by the organizer. This is limiting point in decisions about undertaking efforts for establishing such trainings or courses. Teachers overloaded with current duties are not interested in additional work. Relatively small number of support staff does not help the situation. University administration is helpful in administrative aspects, but not in preparing content related part.

VEE will undertake efforts to motivate teachers to prepare more training programmes in the future.

VEE is also involved in professional training on the level of the secondary education. Department of Biochemistry has an agreement with a Chemistry secondary school and pupils are invited for professional training there. Agreements with veterinary secondary schools are in progress and students should be invited for professional training within coming months.

4. INDICATORS

Pandemic has influenced the number of patients and in consequence the indicators. There were periods of time when our clinics were opened as emergency only (March-July 2020). It has resulted in the decrease in the number of patients. In addition, students had limitation in staying at VEE. In academic year 19/20 student were at VEE between 9th June - 29th July. In academic year 2020/21 2 weeks in Oct and 1 week in Dec as well as between 11-29th Jan. In the summer semester 2020/21 each year of students came twice for 2 weeks. Clinical rotations in the winter semester 2020/21 academic year occurred almost during the whole period of time similarly in the summer semester. Students followed strict sanitary rules. Tables represent years 2017/18, 2018/19, 2019/20.

ESEVT Indicators

Name of the Establishment:									
Date of the form filling:									
Calculated Indicators from raw data							**Establishment values**	**Median values[1]**	**Minimal values[2]**	**Balance[3]**
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students						0,116	0,16	0,13	-0,010
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually						0,737	0,87	0,59	0,147
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually						0,307	0,94	0,57	-0,259
I4	n° of hours of practical (non-clinical) training						979,250	905,67	595,00	384,250
I5	n° of hours of clinical training						914,000	932,92	670,00	244,000
I6	n° of hours of FSQ & VPH training						330,000	287,00	174,40	155,600
I7	n° of hours of extra-mural practical training in FSQ & VPH						160,000	68,00	28,80	131,200
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually						104,527	70,48	42,01	62,517
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually						2,914	2,69	0,46	2,451
I10	n° of equine patients seen intra-murally / n° of students graduating annually						1,378	5,05	1,30	0,080
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually						18,703	3,35	1,55	17,158
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually						1,794	6,80	0,22	1,570
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annuall						10,826	15,95	6,29	4,531
I14	n° of equine patients seen extra-murally / n° of students graduating annually						1,142	2,11	0,60	0,547
I15	n° of visits to ruminant and pig herds / n° of students graduating annually						0,445	1,33	0,55	-0,102
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually						0,065	0,12	0,04	0,020
I17	n° of companion animal necropsies / n° of students graduating annually						2,021	2,07	1,40	0,621
I18	n° of ruminant and pig necropsies / n° of students graduating annually						0,285	2,32	0,97	-0,685
I19	n° of equine necropsies / n° of students graduating annually						0,104	0,30	0,09	0,012
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually						2,958	2,05	0,69	2,266
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating ann						0,183	0,20	0,06	0,120
I22*	n° of PhD graduating annually / n° of students graduating annually						0,037	0,15	0,09	-0,051
1	Median values defined by data from Establishments with Approval status in April 2016									
2	Recommended minimal values calculated as the 20th percentile of data from Establishments with Approval status in April 2016									
3	A negative balance indicates that the Indicator is below the recommended minimal value									
*	Indicators used only for statistical purpose									

5. ATTACHMENTS

Attachment No 1

1.1. Syllabus of module "Herd health management"

Module code	M_WE_SEM11 ZZS
Field of study	Veterinary medicine
Module name, also the name in English	Herd health management Zarządzanie zdrowiem stada
Language of instruction	Polish/English
Module type	Obligatory
Study cycle	Long-cycle Master's Degree studies
Mode of study	Full-time
Year of study in the field of study	V
Semester of study in the field of study	XI
ECTS credits, divided into contact/non-contact	3 (2/1)
Academic title/degree, name of the person in charge of the module	Prof. dr hab. Renata Urban-Chmiel
Unit teaching the module	Department of Veterinary Prevention and Avian Diseases Department of Animal Breeding and Agricultural Consulting Institute of Animal Nutrition and Bromatology Department of Food Hygiene of Animal Origin Department of Epizootiology and Clinic of Infectious Diseases Sub-Department of Internal Diseases of Farm Animals and Horses Department and Clinic of Animal Surgery Department and Clinic of Animal Reproduction
Module objective	Expanding theoretical knowledge and practical skills in herd health management of various livestock species in terms of improving the quality of nutrition, veterinary care, animal welfare and public health.
Learning outcomes for the module are a description of the knowledge stock, skills and social competences that the student will gain after completing the module.	Knowledge:
	K1- has knowledge of herd health management development and implementation methods in feeding, rearing and breeding as well as health for different livestock species (cattle, sheep, goats, pigs).
	K2- expands knowledge on developing prevention programmes for metabolic diseases, poisoning, infectious diseases, and osteoarticular diseases in livestock herds.
	Skills:
	S1- is able to identify hazards, estimate the level of risk and indicate critical points in various stages of the production cycle based on, among others, the use of computer systems for animal identification and registration - breeding programmes - control systems, quality.
	S2- Designs system and technological solutions to ensure proper food quality and safety in the production chain according to the "One Health" concept.
	S3- Acquires skills in wide-ranging animal health analysis and the ability to draw conclusions and develop strategic programs.
	Social competences:
	C1 - Recognises the need for maximal utilisation of professional skills to improve the quality of veterinary care, animal welfare and public health

	C2 - Communicates effectively with clients, other veterinarians, and employees of inspection authorities and offices, state and local government.
	C3 - Has the habit of continuous improvement of knowledge and skills
Entry and additional requirements	Sequence
Module content	**Lectures** Principles of chemotherapeutic use in livestock. Rearing and health status monitoring of calves and small ruminant newborns. Determining the purpose of rearing calves, lambs, kids. Using collected data about herd health and welfare, developing a management programme depending on the rearing objective. Economic analysis of production cycle diseases in livestock. The use of metabolic tests and laboratory diagnostic panels in herd health evaluation. The importance of energy and mineral deficiencies in juvenile rearing and herd productivity. Technologisation of veterinary decision-making processes in herd health testing (livestock). Nutritional needs and feed resources of different species and ruminant physiological groups. Feeding systems for ruminants (traditional, TMR, PMR, others). Nutritional prevention of diseases, especially metabolic diseases. Genetic basis of livestock herd health. Nutritional prevention of diseases in dairy cow herds based on analysis of performance reports (RW - 1, RW - 2). Musculoskeletal system care and health. Impact of nutrition on the development of surgically treated gastrointestinal disorders in cattle. Official supervision of compliance with animal identification and registration rules **Practical classes** Methods of reducing and eliminating antibiotic therapy in livestock under current legal regulations. The principles of bio-assurance in livestock herds to combat ASF and BSE in the light of the current legislation Interpretation of laboratory test results used in herd health monitoring. Nutritional monitoring in dairy cattle and small ruminant herds. Livestock production technology and herd health. Practical evaluation of feedstuffs and mixtures and direct assessment of their nutritional value - comparison of methods using dedicated scales and tools. Practical ration balancing for different animal production groups (high-yielding dairy cows, beef cattle, beef herds, sheep and goats). Ration structure depending on production stage, computerized rationing in production groups. Ruminant herd feeding process. The use of virtual productivity assessment and herd health monitoring programs for reproductive indices, udder diseases, lameness, milk production (dairy farms). Herd fertility management. Milk production management. The analysis of performance reports concerning the optimisation of cattle and milk production management activities. Principles of animal identification and registration based on current legislation.

	Prevention and control of infectious diseases in cattle, pig, sheep and goat herds (BVD/MD, IBR/IPV, Q fever, Aujeszky's disease,CAE).
Recommended and obligatory reading list	Obligatory 1. Lecturers carrying out the course of studies, "Author's materials". 2. National and EU legislation, - Laws, regulations and directives, instructions of the GLVet. 3. Mordak. R. Monitorowanie problemów zdrowotnych stad bydła. 2008. MedPharm Polska 4. Hafez E.S.E. - Reproduction in farm animals, Wiley 2016- R. Dąbrowski 5. Malinowski E., A Kłossowska - Diagnostyka zakażeń i zapaleń wymienia, Puławy 2002- R. Dabrowski 6. Szulc T. (red.) Hodowla Zwierząt. Wyd. UP we Wrocławiu, 2016 - M. Babicz 7.Mikołajczak J.: Żywienie bydła. Praca zbiorowa. Wydawnictwo Uczelniane ATR Bydgoszcz, 2006. – R. Klebaniuk 8. Strzetelski i in.: Zalecenia Żywieniowe dla Przeżuwaczy i Tabele wartości pokarmowej pasz. IZ-Kraków-Balice 2014.- R. Klebaniuk 9. Ochrona zdrowia świń. Zygmunt Pejsak PWR Poznań 2007- Ł. Jarosz 10. Zdzisław Gliński, Krzysztof Kostro. Choroby zakaźne zwierząt z zarysem epidemiologii weterynaryjnej i zoonoz. PWRiL Warszawa, 2003- Ł. Jarosz 11. Szczegółowa patologia i terapia chorób świń. H.Janowski, W.Szweda, T.E. Janowski,Wyd. AR-T Olsztyn 1994- Ł. Jarosz 12. Kuleta Z. Choroby cieląt. Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego w Olsztynie. Olsztyn, 2005.- Ł. Jarosz 13. Sikora J. Wybrane choroby bydła. Wydawnictwo SI-MA, 2007- 14. Pejsak Z. Choroby Świń. Wydawnictwo Galaktyka. 2005 15. Zabiegi chirurgiczne i leczenie kulawizn u bydła, A. David Weaver, Guy St. Jean, Adrian Steiner, Wydawnictwo Galaktyka 16. Kurek Ł., Lutnicki K.: Weterynaryjna praktyka kliniczna. Książka „Magnez pierwiastek życia” 2016, rozdział 5.4 pt. Weterynaryjna praktyka kliniczna, s. 249 – 267, Wydawnictwo Malamut ISBN 978-83-934442-8-1. (1,3 ark. wyd.)- K. Lutnicki 17. Lutnicki K., Sobiech P., Kurek Ł., Marczuk J.: Choroby metaboliczne i niedobory mineralne u krów mlecznych. Książka wydawnictwo Elamed, Katowice 2017 r. Additional: 1. Szarek J. - Chów bydła mlecznego, Poznań 2010 2. Kołacz M., Dobrzański Z. (red.). Higiena i dobrostan zwierząt. Wyd. UP we Wrocławiu 2019. 3. Feed programs in the field of balancing rations and feeding the herd in practice, based on NRC, INRA and DLG: Winwar, Winpasz, INRA-tion, Winmix, Win-Pasze, OptiPasz - available at the Institute of Animal Nutrition and Bromatology of the University of Life Sciences in Lublin 4. Diseases of Swine. H.W.Dunne, A.D.Leman,Iowa State University Press 5. Sheep and goat medicine. Pugh D.G, W.B. Saunders Company.Philadelphia, Pennsylvania, 2002 6. Diseases of dairy cattle. Thomas J. Divers, Simon F. Peek, Saunders Elsevier. 2008 7. Pig diseases. D.J. Taylor, St Edmunsbury Press Ltd, Bury St Edmunds, Suffolk 2006

	8. Agencja Restrukturyzacji i Modernizacji Rolnictwa: System identyfikacji i rejestracji zwierząt. ARiMR Warszawa 2006, ISBN 8387381845 9. Malicki K., Binek M. - Zarys klinicznej bakteriologii weterynaryjnej tom 1-2 SGGW Warszawa 2004- R. Dąbrowski 10. Kołacz M., Dobrzański Z. (red.). Higiena i dobrostan zwierząt. Wyd. UP we Wrocławiu 2019 11. Litwińczuk Z., Szulc T. (red.) Hodowla i użytkowanie bydła. Wyd. PWRiL, 2005
Planned forms/activities/teaching methods	As a part of the courses, students have the opportunity to participate in classes conducted in the form of lectures and laboratory classes. Moreover, they complete some of the topics in groups, using computer and simulation programs on herd health. Practical classes on farms, visits in milk production holdings..
Verification methods and ways of documenting the achieved learning outcomes	Verification of achieved outcomes consists of: manual acquisition of skills in using a herd management program. Verification of knowledge and skills, including the development of a herd management program based on the oral or written examination for each part of the course. In order to receive a credit for the course, a student has to both attend at least 80% of the practical classes and pass the laboratory classes with the use of herd management software. Prerequisite for passing the course is obtaining a grade for each part of the module taught by the person in charge (nutrition, internal diseases and surgery, infectious diseases, slaughter and meat animal hygiene, veterinary prevention). The final grade will be the average of the partial grades given by the lecturers of each class. To receive a passing grade, a student is required to earn at least a satisfactory grade on each subtest. The subject is scheduled for 5 oral and/or written partial credits of equal value of 20% each. Grading scale: 0 - 50% - unsatisfactory 58 - 60% - satisfactory 61 - 69% - satisfactory plus 70 - 80% - good 81 - 90% - fairly good 91 - 100% - very good
ECTS credits	Types of classes: lecture, practical class, preparatory class, project preparation, literature class - participation in lectures - 15 hrs., - participation in recitation and laboratory classes - 20 hrs., - recitation introduction class- 6 hrs. - preparation for laboratory exercises - 10 x 2 hrs. = 20 hrs. - participation in consultations on the credit and exam preparation - 6 x 1 hour. = 3 hrs., - exam preparation and attendance - 19 hrs. + 2 hrs. = 21 hrs. The total student workload is 95 hrs. which corresponds to 5 ECTS credits. Lectures, laboratory classes, recitation, reading recommended literature, preparation for classes, preparation for the exam, the exam. **Form of course** **Number of hours** **ECTS credits** **Contact hours** Lectures 15 0.5

	Recitation class, laboratory	20	1
	Consultations related to preparation for credit and exam	6	0.4
	Final credit	2	0.1
		Number of hours Non-contact hours	
	Preparation for laboratory classes	10	0.3
	Preparation for recitation classes	4	0.1
	Preparation for tests and exams	10	0.5
	Reading literature	4	0.1
	TOTAL:	**71**	**3.0**
The workload of activities that require direct participation of an academic teacher	participation in lectures - 15 hrs.; in practical classes - 20 hrs.; consultations - 6 hrs.; examination - 2 hrs.		
Relation of module learning outcomes to major learning outcomes	Module learning outcome code - major learning outcome code K1 - B.W13 +++, B.W17++, B.W20++ K2- B.W13++, B.W17++, B.W20 +++ S1, - B.U1 ++, B.U9++, B.U20. +++ S2- B.U1++, B.U9++, B.U20++ S3 - B.U1++, B.U9. ++, B.U20+++ C1- K1 ++, K8 +++, K11 +++ C2-K1++, K8++, K11++ C3- K1++, K8- +++, K11++		
Elements and values affecting final grade	5 oral and/or written partial credits of equal value of 20% each.		

1.2. Syllabus of module "Practical aspects of rational animal antibiotic therapy"

Code of subject	M_WE_SEM8 PW 1F/2F ANTYB
Field of study	Veterinary medicine
Name of the training module including the Polish name	Practical aspects of rational antimicrobial therapy in animals
	Praktyczne aspekty racjonalnej antybiotykoterapii u zwierząt
Language of instruction	Polish/English
Type of the training module	elective
Level of the training module	Master level
Form of studies	Full-time/part-time
Location in the programme (year)	IV
Location in the programme (semester)	VIII
Number of ECTS credits with a division into contact/noncontact	1 (0,73/0,27)
Name and surname of the person in charge	Aneta Nowakiewicz dr hab.
Unit offering the subject	Sub-Department of Veterinary Microbiology

Aim of the module	The aim of the module is to familiarize the student with the principles of rational antibiotic therapy used in various species of animals and the practical aspects of the methodology of determining and interpreting the drug susceptibility of microorganisms. The module also aims to familiarize the student with the principles of selecting antibacterial drugs when constructing antibiograms depending on the species / group of animals, availability, route of administration and side effects of the administered substances, as well as conditions related to the specificity of the species of the microorganism. The most common types of drug resistance and multi-drug resistance in terms of threats to animal and human health will also be presented.
Learning outcomes	Knowledge:
	K1. knows the principles of selection, advantages and disadvantages of the methods of drug susceptibility testing and the criteria for the interpretation of the obtained results
	K2. Knows the principles of proper antibiotic therapy in various animal species and the consequences of improper use of antibacterial drugs and their impact on public health
	Skills:
	S1. Is able to select and apply appropriate methods of drug susceptibility assessment, to perform procedures, properly and safely handle biological material as well as to analyze and interpret test results depending on the species of microorganism, species and clinical status of the host
	S2 Is able to design his own profile of drug susceptibility assessment tests in accordance with the diagnostic needs, the progress of knowledge as well as legal and economic conditions
	S3. Can rationally apply the obtained results in the antimicrobial therapy of infectious animal diseases.
	Social competences: student is ready to:
	C1. work and collaborate in a group, has a sense of responsibility for other team members
	C2. demonstrate social and professional responsibility for the tasks performed in the aspect of animal health and public health protection.
	C3. self-criticism and evaluation of own limitations, in the era of rapidly emerging new diagnostic techniques and therapeutic methods, understands the need for ongoing training and deepening knowledge of the issues of the module
Preliminary and additional requirements	-
Contents of the training module – a compact description	Content of lab classes: Main definitions and standards for the determination of antimicrobial resistance: available guides that define drug susceptibility criteria Methods of phenotypic determination of drug susceptibility: test principles, factors influencing the formation of false-positive or false-negative results. Importance and validity of molecular tests in routine diagnostics. Why should we follow the standards? The most common mistakes when assessing drug susceptibility and creating an antibiogram. Interpretation of results: drug susceptibility criteria for particular groups of microorganisms; the most common types of natural resistance among bacteria isolated from animals - importance in diagnosis and therapy

	Principles of rational antibiotic therapy in dogs and cats Principles of rational antibiotic therapy in horses Principles of rational antibiotic therapy in production animals Principles of rational antibiotic therapy in rabbits and rodents Resistance and multi-drug resistance versus therapeutic possibilities in human and veterinary medicine. "True pathogens" and indicator bacteria: why monitor? Drug resistance as a result of improper therapeutic treatment: today and future threats		
Recommended and obligatory reading list	Antimicrobial therapy in veterinary medicine, Eds. Giguere S., Precsott JF, Dowling P. Willey Blackwell		
The intended forms/activities/ teaching methods	discussion, independent project of the diagnostic procedure		
Methods of verification and documentation forms of the achieved learning outcomes	K –pass the module is based on a positive result obtained in the thematic test: answer to 4 open-ended questions at a minimum level of 61% - oral response during each exercise S - assessment of self-conducted laboratory procedures and experiments by the teacher, C - participation in the discussion, answer to the questions at the beginning of each laboratory class, written tests. The grading scale is in line with FBQC		
Balance of ECTS credits	CONTACT		
		Hours	*ECTS*
	Lab classes	*15*	*0,6*
	consultations	*1*	*0,03*
	grade	*3*	*0,1*
	Total	***18***	***0,73***
	NON CONTACT		
	Preparation for lab classes	*3*	*0,1*
	Preparation for passing	*5*	*0,17*
	Total	***8***	***0,27***
Number of contact hours	Lab classes	*15*	*0,6*
	consultations	*1*	*0,03*
	Grade	*3*	*0,1*
	Total	***18***	***0,73***
Relationship between subject learning outcomes and veterinary studies learning outcomes	K1-WE_W11+++, WE_W21++ K2-WEW11++ S1-WE_U5++, WE_U19+++ S2- WE_U5++, WE_U19+++ S3- WE_U22++, WE_U23++, WE_U25++ C1-WE_K11++ C2-WE_K1++ C3-WE_K6++, WE_K13++		
Impact of selected compounds to final grade	The number of absences cannot exceed 2 hours. Final grade: 80% final pass grade, 20% grade for active participation in classes. The grade may be increased by half a grade if the student prepares an additional thematic speach and presents it during class.		

1.3. Syllabus of module "Current problems of modern buiatry"

Code of subject	M_WE_ SEM11 PW K1/K2 BUJATR
Field of study	Veterinary medicine
Name of the training module including the Polish name	Current problems of modern buiatry
	Aktualne problemy współczesnej bujatrii

Language of instruction	Polish/English
Type of the training module	elective
Level of the training module	Master level
Form of studies	Full-time
Location in the programme (year)	6
Location in the programme (semester)	11
Number of ECTS credits with a division into contact/noncontact	1 (0,6/0,4)
Name and surname of the person in charge	Prof. dr hab. Lutnicki Krzysztof
Unit offering the subject	Department and Clinic of Animal Internal Diseases, Subdepartment of Internal Diseases of Farm Animal and Equine
Aim of the module	To introduce the specificity of diagnostics and therapy of subclinical and atypical non-infectious and deficiency diseases occurring in modern large-scale/ large herd cattle breeding resulting from herd management errors and to acquire practical skills for their recognition, prevention and treatment in a herd.
Learning outcomes	Knowledge:
	K1 Student knows the most common diseases of dairy and beef cattle in large-scale/ large herd farming.
	K2 Knows the principles of nutrition in selected diseases of cattle.
	K3 The student has knowledge of the specific aetiopathogenesis, diagnosis, treatment and prevention of diseases occurring in livestock farming, including those with a subclinical course.
	Skills:
	S1 is able to carry out the history and clinical examination of the herd and interpret the results of laboratory and ancillary tests in large-scale cattle farming.
	S2 is able to apply dietary nutrition to specific disease entities occurring during the transition period.
	Social competences:
	C1 is ready to adhere to ethical principles and legal standards, demonstrating responsibility in decision-making under specific conditions of large-scale farming
	C2 is willing to self-improve and continuously educate himself/herself in the field of large-scale cattle ranching.
	C3 Understands the importance of correct medical treatment in the food chain and of producing food of the highest quality.
Preliminary and additional requirements	In accordance with the sequence of subjects.
Contents of the training module – a compact description	Analysis of computer data available in the herd, reading and interpretation of tabulograms. Principles of good nutrition and maintenance affecting herd welfare. Contemporary recognition programmes in cattle herds. Laboratory evaluation of health status in a cow herd, designing test panels. Planning and execution of laboratory specialised tests. Subclinical and atypical non-infectious diseases in the dairy herd. Technopathies. Neurodegenerative diseases of cattle. Diseases of the offspring and their prevention.
Recommended and obligatory reading list	1. Divers T, Peek S.: Diseases of Dairy cattle, Elsevier, Elsevier 2. Radostits O. M., Gay C. C., Blood D. C., Hinchcliff K. W.: Veterinary Medicine, 1999. 3. Smith B.P. Large Animal Internal Medicine, 1990. 4. Professional journals.
The intended forms/activities/ teaching methods	Lecture, multimedia presentations, films, performing laboratory analyses, visiting herds, experience and practical exercises on clinical material, discussion.

Methods of verification and documentation forms of the achieved learning outcomes	K - all class attendance or according to current study regulations and a passing grade on the test are required for credit. S - evaluation of independently performed procedures (clinical examination, diagnostic procedure, independent analysis and measurement of physiological parameters, proposal of therapeutic process) by the teacher, C - participation in discussion, answering the questions at the beginning of each laboratory class, final written assessment. Final written assessment consists of 25-50 single-choice test questions. The questions concern the whole material covered during the classes. The student is obliged to obtain at least 61% of all possible points to get a positive grade in the final examination. Criteria used to grade the exam: Number of points: Grade: 0 - 60% 2.0 (insufficient) 61 - 69% 3.0 (satisfactory) 70 - 79% 3.5 (sufficient plus) 80 - 89% 4.0 (Good) 90 - 94% 4.5 (Good plus) 95 - 100% 5.0 (very good)
Balance of ECTS credits	Exercises 14 hours – 0,56 ECTS Examination 1 hour – 0,04 ECTS Total – 15 hours, 0.6 ECTS Preparation for the exercises 6 hours – 0,2 ECTS Reading the recommended literature 3 hours – 0,1 ECTS Preparation for the examination 3 hours – 0,1 ECTS Total – 12 hours, 0.4 ECTS
Number of contact hours	Participation in the exercises - 14 hours - 0.56 ECTS; examination - 1 hour - 0.04 ECTS. Total – 15 hours, 0.6 ECTS
Relationship between subject learning outcomes and veterinary studies learning outcomes	K1 – WE_W16++, WE_W17++, WE_W18++, WE_W19++, WE_W20++, WE_W21+++, WE_W27++ K2- WE_W26++, WE_W27++, WE_W28++ K3 - WE_W16++, WE_W17++, WE_W18++, WE_W19++, WE_W20++, WE_W21+++, WE_W27++ S1 – WE_U14+++, WE_U15++, WE_U16 +++ , WE_U18++, WE_U19++, WE_U20++, WE_U25++ S2 – WE_U18+++, WE_U31+ C1 – WE_K2+++ C2 – WE_K6+++, WE_K10+++ C3 – WE_K4+++, WE_K9+++
Impact of selected compounds to final grade	Final evaluation: - attendance at classes - weight 10 % - preparation for discussion on a given topic - weight of 15% - practical handling of the animal and experimental material in clinical conditions - weight of 15% - evaluation from the test (final written assessment) - weight of 60%.

Attachment No 2

2. 1. Module: Milk hygiene

1. Thematic scope of the lectures:
   1. 1. Veterinary requirements in the production of raw milk
   1.2. Composition, properties and nutritive value of raw milk
   1.3.Factors influencing production and hygienic quality of raw milk
   1.4. Microflora of raw milk
   1.4. Influence of head treatment on the composition and microflora of milk
   1.5. Fermentation of milk
   1.6. Starter cultures
2. Thematic scope of the classes:
   2.1. Organoleptic, physicochemical and microbiological examination of raw milk
   2.2. Detection of the inhibitory substances in the milk
   2.3. Characterisation and examination of dairy products:
      - cream and soured cream
      - butter
      - cottage cheese
      - ripened and processed cheeses
      - fermented milk drinks
      - milk concentrates
   2.4. HACCP system in the dairy industry
   2.5. Selected problems of dairy technology

2.2 Module: Hygiene of food of animal origin

A. Thematic scope of the lectures:

1. Food quality.
2. Food health quality.
3. Food sensory analysis and organoleptic assessment of food.
4. Nutritional value of food:
- energy values of food
- digestibility and bioavailability
- biological value
- food nutritional value assessment methods (chemical and biological)
5. Food quality and safety
- “from farm to fork” – general information
-risk, risk analysis, risk assessment, risk management, risk communication,
-one health conception- basic information
6. Food safety hazards
7. Physical hazards in food
8. Chemical hazards:
-natural, including marine biotoxins
- as a result of agronomic treatments (nitrates, nitrites, nitrosamines, pesticides, PNAs dioxins)
- as a result of veterinary procedures (antibiotics, hormones, and other veterinary drugs)
- as a result of using contaminated lands (heavy metals, radionuclides)
- methods for the determination of chemical residues in food
9. Radiation hazards.
10. Additives allowed in food of animal origin:
- food colorings
- preservatives
- antioxidants
- flavor enhancers
11. Salt and its importance in food and human nutrition.
12. Biological hazards:
- the role of enzymes in food health quality
- prions as a biological hazard
- food-borne viral infections

- microbiological quality of food
- beneficial effect of microflora (fermented products, bacteriocins)
- indicator microorganisms
- microbial spoilage of food
- kinetics of microbial growth in food

13. Food related enteropathies:
- salmonellosis and shigellosis
- colibacteriosis
- yersioniosis
- Staphylococcal food poisoning
- campylobacteriosis
- *Vibrio parahaemoliticus*
- aerobic and anaerobic sporulating bacteria (*B. cereus*, *Cl. botulinum*, *Cl. perfringens*)
- *Clostridium difficile*
- listeriosis
- *Cronobacter sakazakii*
- opportunistic microorganisms (*Enterococcus faecalis* and *E. faecium*)
- biogenic amines
- mycotoxins

14. Food preservation:
- drying, cooling, freezing
- culinary treatments
- pasteurization and sterilization
- food irradiation

B. Thematic scope of the classes:

1. Course introduction. Occupational Health and Safety. Recommendations for students of veterinary in connection with participation in laboratory classes
2. Food sensory analysis/Organoleptic analysis of food. Principles and methodology
3. Chemical analysis of food of animal origin – techniques and applications
4. Microbiological analysis of food of animal origin – principles and methodology (part 1 and 2)
5. Veterinary-sanitary examination of cured and/or smoked meat (processed meat) - part 1 and 2
6. Veterinary-sanitary examination of canned meat - part 1and 2
7. Sanitary-veterinary examination of eggs and egg products
8. Sanitary-veterinary examination of delicatessen goods
9. Veterinary-sanitary examination of fish and fishery products
10. Rendered animal fats and greaves. Veterinary- sanitary examination of edible fats of animal origin - part 1and 2
11. Sanitary and veterinary examination of meat in terms of domestic and foreign trade
12. Detection of adulteration of meat and meat products
13. Meat substitutes – technology and application
14. Veterinary-sanitary examination of crustaceans and molluscs
15. Minced meat and mechanically separated meat
16. Marginal, localised and restricted activity and on-farm sale
17. Agricultural retail trade and traditional food.
18. Proceedings of the Veterinary Inspection with food of inadequate health quality
19. Meat processing technology

Attachment No 3.

CLASS SCHEDULE IN THE SUBJECT OF INTERNAL DISEASES OF FARM ANIMALS FOR 4th YEAR STUDENTS OF THE FACULTY OF VETERINARY MEDICINE
ACADEMIC YEAR 2021/22

Classes	Topic of the classes	Place of classes
1.	Health and safety at work with large herds of animals. On-the-job training Propaedeutics of internal diseases of ruminants	Żurawniki, WIERZCHOWSKI farm
2.	The course of medical proceedings. Herd study plan and metabolic tests, principles of creating and using metabolic profiles. Principles of intensive therapy of farm animals in the case of an individual patient and in a herd.	Uhrusk Experimental Station of ULS – 200 cattle
3	Acidic and alkaline indigestion: symptoms, diagnosis, treatment. Bloating of the rumen. Keratosis and parakeratosis of the forestomachs	Żurawniki, WIERZCHOWSKI farm
4	Forestomach diseases caused by motor dysfunction and inflammation of various etiologies. Practical recognition and assessment of the current state of the tested animals.	Żurawniki, WIERZCHOWSKI farm
5	Diseases of abomasum. A video presentation of abomasum displacements, practical recognition of displacements in a clinical trial. Repositions. Principles of prevention.	Veterinary Clinic of VEE Głęboka 30 street
6	Diseases of the intestines, liver and pancreas in ruminants. Clinical examination, laboratory and field methods of diagnosis, ultrasound examination next to the patient.	Żurawniki, WIERZCHOWSKI farm
7	Seminar and Repertory. Digestive tract pathology. Laboratory tests in the diagnosis and therapy of the gastrointestinal tract - practical exercises. Laboratory diagnosis of organ and systemic disorders.	Veterinary Clinic of VEE Głęboka 30 street
8	Disorders of energy, carbohydrate and fat metabolism (ketosis of cows and sheep, excessive fat mobilization syndrome). Recognition in the herd.	Uhrusk Experimental Station of ULS – 200 cattle
9	Diseases of the respiratory and circulatory systems. Clinical examination and principles of diagnosing respiratory and circulatory system diseases. Collecting material for laboratory tests. Ultrasound examination of the above-mentioned systems in the field.	Żurawniki, WIERZCHOWSKI farm
10	Disorders of calcium-phosphorus metabolism. Disorders resulting from a deficiency or excess of magnesium and potassium. Presentation and discussion of clinical cases.	Veterinary Clinic of VEE Głęboka 30 street
11	Deficiencies of selected micronutrients in farm animals. The most common disorders of the pituitary, adrenal and thyroid glands. Case presentation and clinical study of patients in the field.	Żurawniki, WIERZCHOWSKI farm
12	Clinical syndromes resulting from the deficiency of fat-soluble vitamins (A, D, E) and water soluble vitamins (C and group B). Presentation of clinical cases.	Veterinary Clinic of VEE Głęboka 30 street
13	General prevention of metabolic diseases. Laboratory diagnosis of organ and systemic disorders - collecting material for examination. Influence of the livestock breeding system on the occurrence of motor organ diseases.	Uhrusk Experimental Station of ULS – 200 cattle
14	Seminar and Repertory. Metabolic and hormonal disorders in ruminants. Assessment of the clinical status of animals staying in the clinic - practical test.	Veterinary Clinic of VEE Głęboka 30 street
15.	The most common internal diseases of pigs - presentation of the rules of medical procedure in a pig herd.	The pigsty of Czeslawice Experimental Station of ULS (after obtaining the approval of the district veterinarian)

prof. dr hab. Krzysztof Lutnicki

CLASS SCHEDULE IN THE SUBJECT OF INFECTIOUS DISEASES OF FARM ANIMALS
in the winter semester of the academic year 2021/2022

Date	Subject
	INFECTIOUS DISEASES OF SHEEP AND GOATS
2021	Multiorgan diseases: Maedi-visna disease, Rift Valley fever and Nairobi sheep and goat disease, Morel disease, Schmallenberg disease, Akabane disease Sepsis diseases: pest of small ruminants Diseases of the nervous system : birthask disease, ankle disease, sheep scrapie Practical classes - goats staying at Veterinary Clinics (1.0 hour) - general clinical examination taking into account the presence of infectious diseases, Tuberculosis in goats - tuberculinization, comparative tuberculinization, methods of reading test results, interpretation of results and course of epizootic procedure
2021	Infectious diseases of sheep and goats - sheep pox and goat pox, infectious ankylosis in sheep and goats, lung adenomatosis in sheep and goats, viral arthritis and goat encephalitis, serous lymphadenitis: etiopathogenesis, epidemiology, diagnostics. Practical classes - goats staying at Veterinary Clinics (1.0 hour) - collecting clinical material for research, Q fever in goats - methods of identification, collecting material for research, interpretation of results and course of epizootic proceedings
2021	Trips to a sheep farm: Chotylub 154 , community Cieszanów, owner Krasoń Krzysztof on October 6 (Wednesday) - trip for 70 students on October 7 (Thursday) – trip for 70 students Each group will have to carry out examination on 450 sheep (the whole herd - 1000 sheep over 2 days). Acquiring practical skills: - sheep clinical examination - collection of blood sampling for examination - collecting scrapings from each sheep (suspected scabies) - deworming of each sheep (administration of drugs in infectious and non-infectious diseases) - performing injections - correction of hooves and hoof cleaning - treating hoof diseases (some sheep are suspected of having whitlow) - debridement of wounds and other body injuries (some sheep with body wounds) - performing necropsy of fallen sheep and collecting material for testing for infectious and non-infectious diseases - monitoring tests of infectious diseases in accordance with the test plan of the District Veterinary Doctor (brucellosis, tuberculosis, Q fever) – tuberculinization
	INFECTIOUS DISEASES OF CATTLE
2021	Practical classes (3 hours each group) - Tuberculosis in cattle Outgoing practical classes (Experimental Station of ULS in Uhrusk – 200 cattle) according to dates for each group, combined with the Clinic of Animal Reproduction and the Clinic of Surgery group I: October 11-15, 2021: clinical examination: examination plan, performing tuberculinization and comparative tuberculinization treatments, interpretation of results, epizootic procedure plan - preparing administrative decisions group II: October,18-22, 2021: clinical examination: examination plan, performing tuberculinization and comparative tuberculinization treatments, interpretation of results, epizootic procedure plan - preparing administrative decisions group III: October, 25-29, 2021: clinical examination: examination plan, performing tuberculinization and comparative tuberculinization treatments, interpretation of results, epizootic procedure plan - preparing administrative decisions group IV: November, 1-5, 2021: clinical examination: examination plan, performing tuberculinization and comparative tuberculinization treatments, interpretation of results, epizootic procedure plan - preparing administrative decisions

	group V: November, 8-12, 2021: clinical examination: examination plan, performing tuberculinization and comparative tuberculinization treatments, interpretation of results, epizootic procedure plan - preparing administrative decisions
2021	Practical classes (3 hours each group) - BVD / MD, Q fever in cattle Outgoing practical classes (Uhrusk Experimental Station – 200 cattle) according to dates for each group, combined with the Clinic of Animal Reproduction and the Clinic of Surgery group I: November 15-19, 2021: Collection of material for testing for infectious diseases, testing of cows for the presence of BVD / MD and Q Fever: preparation of administrative decisions, epizootic procedure in the herd (BVD / MD - recognition and control, Q Fever - recognition and control) group II: November, 22-26, 2021: Collection of material for testing for infectious diseases, testing of cows for the presence of BVD / MD and Q Fever: preparation of administrative decisions, epizootic procedure in the herd (BVD / MD - recognition and control, Q Fever - recognition and control) group III: November, 29 - December, 3, 2021: Collection of material for testing for infectious diseases, testing of cows for the presence of BVD / MD and Q Fever: preparation of administrative decisions, epizootic procedure in the herd (BVD / MD - recognition and control, Q Fever - recognition and control) group IV: December, 6-10, 2021: Collection of material for testing for infectious diseases, testing of cows for the presence of BVD / MD and Q Fever: preparation of administrative decisions, epizootic procedure in the herd (BVD / MD - recognition and control, Q Fever - recognition and control) group V: December, 13-17, 2021: Collection of material for testing for infectious diseases, testing of cows for the presence of BVD / MD and Q Fever: preparation of administrative decisions, epizootic procedure in the herd (BVD / MD - recognition and control, Q Fever - recognition and control)
2021	Cattle plague, pleuropneumonia, infectious ascites of the pericardium. Completion of the classes sheep and goat diseases - written
2021	Bovine enzootic bronchopneumonia of cattle , IBR / IPV, pasteurellosis - diagnosis and control.
2021	Anaerobic diseases (rustling, malignant edema, infectious hemoglobinuria) - diagnosis and treatment.
2021	Enzootic bovine leukemia, paratuberculosis - diagnosis and treatment, Blue tongue disease, Q fever - diagnosis and treatment.
2021	Rabies, anthrax, ,head , bovine spongiform encephalopathy - diagnosis and treatment.
2021	Infectious abortions - cattle mortar disease, bovine trichomoniasis, chlamydiosis, salmonellosis, campylobacteriosis, leptospirosis.
	INFECTIOUS DISEASES OF PIGS
2021	Infectious diseases of the nervous system: picornaviral encephalomyelitis, emetic and wasting disease, diseases caused by Streptococcus spp. Completion of the classes - cattle diseases - written
2021/2022	Infectious diseases causing reproductive disorders: parvovirosis, circovirosis, SMEDI syndrome, brucellosis, leptospirosis, chlamydiosis - occurrence, etiology, pathogenesis, clinical symptoms, autopsy changes, diagnosis, possible control.
2022	Infectious diseases of the respiratory system: swine flu, pasteurellosis, bordetellosis, pleuropneumonia, Haemophilus parasuis infections, infectious atrophic rhinitis, Glässer's disease - occurrence, etiology, pathogenesis, clinical symptoms, autopsy changes, diagnosis, control options.
2022	Pig haemorrhagic infectious enteropathies - etiopathogenesis, epidemiology and control options.
2022	Organ and systemic mycoses of animals. Completion of the classes in infectious diseases of pigs – written

The schedule of classes regarding the dates of classes will not change and is adapted to the organization of the Academic Year 2021/2022

Dr hab. Łukasz Sebastian Jarosz, prof. ULS

CLASS PROGRAMME IN THE SUBJECT OF FARM ANIMALS SURGERY
in the winter semester of the academic year 2021/2022
carried out at the Uhrusk Experimental Station

Date	**FARM ANIMALS SURGERY**
2021	Practical classes (3 hours each group) Outgoing practical classes (Experimental Station of ULS in Uhrusk – 200 cattle) according to dates for each group, combined with the Department of Epizootiology and the Clinic of Infectious Diseases as well as the Department and Clinic of Animal Reproduction group I: October 11-15, 2021: discussion of the orthopedic examination plan; health and safety rules; reminding of the rules of taming, orthopedic examination of cows; getting acquainted with the principles and methods of hoof correction; discussion of local anesthesia and presentation of injection sites group II: October, 18-22, 2021: discussion of the orthopedic examination plan; health and safety rules; reminding of the rules of taming, orthopedic examination of cows; getting acquainted with the principles and methods of hoof correction; discussion of local anesthesia and presentation of injection sites group III: October, 25-29, 2021: discussion of the orthopedic examination plan; health and safety rules; reminding of the rules of taming, orthopedic examination of cows; getting acquainted with the principles and methods of hoof correction; discussion of local anesthesia and presentation of injection sites group IV: November, 1-5, 2021: discussion of the orthopedic examination plan; health and safety rules; reminding of the rules of taming, orthopedic examination of cows; getting acquainted with the principles and methods of hoof correction; discussion of local anesthesia and presentation of injection sites group V: November, 8-12, 2021: discussion of the orthopedic examination plan; health and safety rules; reminding of the rules of taming, orthopedic examination of cows; getting acquainted with the principles and methods of hoof correction; discussion of local anesthesia and presentation of injection sites
2021	Outgoing practical classes (Experimental Station of ULS in Uhrusk – 200 cattle) according to dates for each group, combined with the Department of Epizootiology and the Clinic of Infectious Diseases as well as the Department and Clinic of Animal Reproduction group I: November 15-19, 2021: improvement of orthopedic examination of cows, discussion of cattle toe diseases; performing hoof correction; discussion and demonstration of accesses in the surgical treatment of gastrointestinal diseases, surgical treatment of neck diseases group II: November, 22-26, 2021: improvement of orthopedic examination of cows, discussion of cattle toe diseases; performing hoof correction; discussion and demonstration of accesses in the surgical treatment of gastrointestinal diseases, surgical treatment of neck diseases group III: November, 29-December, 3, 2021 : improvement of orthopedic examination of cows, discussion of cattle toe diseases; performing hoof correction; discussion and demonstration of accesses in the surgical treatment of gastrointestinal diseases, surgical treatment of neck diseases group IV: December, 6-10, 2021: improvement of orthopedic examination of cows, discussion of cattle toe diseases; performing hoof correction; discussion and demonstration of accesses in the surgical treatment of gastrointestinal diseases, surgical treatment of neck diseases group V: December, 13-17, 2021: improvement of orthopedic examination of cows, discussion of cattle toe diseases; performing hoof correction; discussion and demonstration of accesses in the surgical treatment of gastrointestinal diseases, surgical treatment of neck diseases

The schedule of classes regarding the dates of classes will not change and is adapted to the organization of the Academic Year 2021/2022

Dr hab. Adam Brodzki

CLASS PROGRAMME IN THE SUBJECT OF FARM ANIMALS REPRODUCTION
in the winter semester of the academic year 2021/2022
carried out at the Uhrusk Experimental Station

Date	**FARM ANIMALS REPRODUCTION**
2021	Practical classes (3 hours each group) Outgoing practical classes (Experimental Station of ULS in Uhrusk – 200 cattle) according to dates for each group, combined with the Department of Epizootiology and the Clinic of Infectious Diseases as well as the Clinic of Surgery group I: October 11-15, 2021: discussion of the gynecological and obstetric examination plan; health and safety rules; per rectal examination of cows; examination of the udder of cows; milk cowshed inspection; TOK execution; collection of milk for laboratory examination ; demonstration of mechanical milking group II: October, 18-22, 2021: discussion of the gynecological and obstetric examination plan; health and safety rules; per rectal examination of cows; examination of the udder of cows; milk cowshed inspection; TOK execution; collection of milk for laboratory examination ; demonstration of mechanical milking group III: October, 25-29, 2021: discussion of the gynecological and obstetric examination plan; health and safety rules; per rectal examination of cows; examination of the udder of cows; milk cowshed inspection; TOK execution; collection of milk for laboratory examination ; demonstration of mechanical milking group IV: November, 1-5, 2021: discussion of the gynecological and obstetric examination plan; health and safety rules; per rectal examination of cows; examination of the udder of cows; milk cowshed inspection; TOK execution; collection of milk for laboratory examination ; demonstration of mechanical milking group V: November, 8-12, 2021: discussion of the gynecological and obstetric examination plan; health and safety rules; per rectal examination of cows; examination of the udder of cows; milk cowshed inspection; TOK execution; collection of milk for laboratory examination ; demonstration of mechanical milking
2021	Outgoing practical classes (Experimental Station of ULS in Uhrusk – 200 cattle) according to dates for each group, combined with the Department of Epizootiology and the Clinic of Infectious Diseases as well as the Clinic of Surgery group I: November 15-19, 2021: improvement of the rectal examination of cows; pregnancy diagnosis, ultrasound examination of the uterus and ovaries; cows' cervical catheterization; discussion of the plan of female insemination testing; andrological examination of males for fertility; demonstration of mechanical milking; group II: November, 22-26, 2021: improvement of the rectal examination of cows; pregnancy diagnosis, ultrasound examination of the uterus and ovaries; cows' cervical catheterization; discussion of the plan of female insemination testing; andrological examination of males for fertility; demonstration of mechanical milking; group III: November, 29-December, 3, 2021: improvement of the rectal examination of cows; pregnancy diagnosis, ultrasound examination of the uterus and ovaries; cows' cervical catheterization; discussion of the plan of female insemination testing; andrological examination of males for fertility; demonstration of mechanical milking; group IV: December, 6-10, 2021: improvement of the rectal examination of cows; pregnancy diagnosis, ultrasound examination of the uterus and ovaries; cows' cervical catheterization; discussion of the plan of female insemination testing; andrological examination of males for fertility; demonstration of mechanical milking; group V: December, 13-17, 2021: improvement of the rectal examination of cows; pregnancy diagnosis, ultrasound examination of the uterus and ovaries; cows' cervical catheterization; discussion of the plan of female insemination testing; andrological examination of males for fertility; demonstration of mechanical milking;

The schedule of classes regarding the dates of classes will not change and is adapted to the organization of the Academic Year 2021/2022

Dr hab. Roman Dąbrowski, professor ULS

Attachment No 4.

4.1.Syllabus of module "Anaesthesiology"

Code of subject	M_WE SEM6 ANEST
Field of study	Veterinary medicine
Name of the programme module	Anaesthesiology
	Anestezjologia
Language of instruction	Polish/English
Type of the training module	Obligatory
Level of the training module	Master level
Form ofstudies	Full-time/part-time
Location in the programme (year)	III
Location in the programme (semester)	VI
Number of ECTS credits with a division into contact/noncontact	2 (1,56/0,44)
Name and surname of the person in charge	Prof. dr hab. Ireneusz Balicki
Unit offering the subject	Department and Clinic of Animal Surgery, Faculty of Veterinary Medicine, University of Life Sciences in Lublin, Poland
Aim of the module	To learn about the methods for anaesthesia in animals, and anaesthetic apparatus, including the principles for the management of surgical emergency cases
Learning outcomes	Knowledge:
	K1. Student has the knowledge of drugs that are used for premedication and general anaesthesia, the methods for local and general anaesthesia and the management of surgical emergency cases.
	Skills:
	S1. Student is able to apply adequate sedation, perform general and local anesthesia and manage complications of anesthesia
	S2. Student can apply and use anesthetic apparatus
	Social competencies:
	C1. Acts in accordance with the principles of veterinary deontology that pertain to aspects of the management of emergency cases and pain relief.
	C2. Has the understanding of pain in animals, aims to improve animal welfare and to increase the awareness of the subject among animal owners, and cooperates with animal owners as part of the provided therapy
Preliminary and additional requirements	according to the sequence of subjects
Contents of the training module – a compact description	Contents of the lectures (on a 1 hour basis): 1. Premedication. Phenothiazine derivatives 2. Benzodiazepine derivatives 3. α2 agonists 4. Muscle relaxants, painkillers 5. Ketamine 6. Tiletamine, propofol, etomidat 7. Fundamentals of general anaesthesia 8. Inhalation anaesthesia 9. Patients with multi-organ injury 10. Management of emergency cases

<table>
<tr><td></td><td>Contents of the classes (on a 2 hours basis)
1. Local analgesia
2. Epidural anesthesia. Small animal anesthesia schemes
3. Bird anesthesia. Anesthesia of rabbits and rodents
4. Anesthesia of horses.
5. Equipment for inhalation anesthesia. Seminar classes
6. Monitoring of general anesthesia. Inhalation anesthesia, clinical application
7. Completing exercises</td></tr>
<tr><td>Recommended and obligatory reading list</td><td>1. Tranquilli W.J., Thurman J.C., Grimm K.A.: Veterinary anaesthesia and analgesia
2. Seymour c., Gleed R.: Manual of small animal anaesthesia and analgesia</td></tr>
<tr><td>The intended forms/activities/ teaching methods</td><td>1. Multimedia presentations
2. Practical demonstration of premedication, infusion and inhalation anaesthesia
3. Monitoring of an anaesthetic patient in practice
4. Demonstration of anaesthetic apparatus and their application in practice
5. Discussion of the action of particular drugs by students</td></tr>
<tr><td>Methods of verification and documentation forms of the achieved learning outcomes</td><td>Verification of the student's knowledge: discussion, oral test, written test, exam. Students' knowledge acquired during classes is assessed on the basis of two tests - oral or written tests, the score of which above good entitles them to be exempted from the final exam. The exam is conducted in the form of a test or descriptive exam.
During the written or oral test, the student receives three questions. Passing is assessed on the basis of the average of the marks obtained from three questions Final credit is in the form of a descriptive or a test. Written test in the form of open questions is assessed on the basis of the average of the marks obtained from three questions. Exam in the form of a test - 30 questions.
Verification of the student's skills: the ability to use anesthetic equipment and patient intubation Verification of social competences: discussion, analysis of clinical situations, assessment of cooperation and self-education skills
The grading scale is in line with Faculty Book of Education Quality</td></tr>
<tr><td>Balance of ECTS credits</td><td>CONTACT<table><tr><td>Hours</td><td></td><td>ECTS</td></tr><tr><td>lectures</td><td>11</td><td>0,44</td></tr><tr><td>exercises</td><td>14</td><td>0,56</td></tr><tr><td>Consultation</td><td>5</td><td>0,2</td></tr><tr><td>Test</td><td>6</td><td>0,24</td></tr><tr><td>exam</td><td>3</td><td>0,12</td></tr><tr><td>TOTAL</td><td>39</td><td>1,56</td></tr><tr><td colspan="3">NON-CONTACT</td></tr><tr><td>preparation for exercises</td><td>5</td><td>0,2</td></tr><tr><td>preparation for credits</td><td>6</td><td>0,24</td></tr><tr><td>TOTAL</td><td>11</td><td>0,44</td></tr></table></td></tr>
<tr><td>The workload of activities that requires direct participation of an academic teacher</td><td><table><tr><td>Participation in lectures</td><td>11</td><td>0,44</td></tr><tr><td>Participation in exercises</td><td>14</td><td>0,56</td></tr><tr><td>Consultation</td><td>5</td><td>0,2</td></tr><tr><td>Test</td><td>6</td><td>0,24</td></tr><tr><td>exam</td><td>3</td><td>0,12</td></tr><tr><td>TOTAL</td><td>39</td><td>1,56</td></tr></table></td></tr>
</table>

Relationship between subject learning outcomes and veterinary studies learning outcomes	K1 – B.W2.++, B.W5++, B.W6.++ S1 – B.U1.++, B.U2.++, B.U3.++, B.U4.++, B.U11.++, B.U12.++, B.U15.++ S2- B.U7.++ B.U11.++ C1 – K1++ , K2++, K8++, K10++ C2 – K1++, K2++, K8++, K10++
Impact of selected compounds to final grade	In the case of exemption from the final exam on the basis of two exams, of which the grade above good entitles to exemption from the final exam, the result is the average of the grades from these two exams.

4.2. Syllabus of module "General surgey"

Code of subject	M_WE SEM6 CHIR
Field of study	Veterinary medicine
Name of the programme module	General surgery
	Chirurgia ogólna
Language of instruction	Polish/English
Type of the training module	Obligatory
Level of the training module	Master level
Form of studies	Full-time/part-time
Location in the programme (year)	III
Location in the programme (semester)	VI
Number of ECTS credits with a division into contact/noncontact	2 (1,52/0,48)
Name and surname of the person in charge	Prof. dr hab. Ireneusz Balicki
Unit offering the subject	Department and Clinic of Animal Surgery, Faculty of Veterinary Medicine, University of Life Sciences in Lublin, Poland
Aim of the module	To learn about surgical instruments and the principles of asepsis, surgical antiseptics, as well as methods of instrument sterilization; practical teaching of tissue fusion, haemorrhage control, and dressing application.
Learning outcomes	Knowledge:
	K1. student knows the principles of diagnostics and therapy of wounds, closed injuries, abscesses, hematomas, lymphomas
	K2. Student knows the surgical instruments, methods of cutting and fusing tissues, stopping hemorrhages, methods of applying dressings
	Skills:
	S1. Student can provide first aid in cases of hemorrhages, wounds and multi-organ injuries.
	S2. Student can apply and use surgical instruments.
	S3. Student can use asepsis, surgical antiseptics and sterilize instruments
	Social competences:
	C1. Acts in accordance with the principles of veterinary deontology that pertain to aspects of the management of emergency cases and pain relief.

	C2. Has the understanding of pain in animals, aims to improve animal welfare and to increase the awareness of the subject among animal owners, and cooperates with animal owners as part of the provided therapy
Preliminary and additional requirements	according to the sequence of subjects
Contents of the training module	Contents of the lectures (on a 1 hour basis): 1. Closed injuries, 2. Abscesses, haematomas, lymphomas 3. Wounds 4. Wound healing Contents of the classes (on a 2 hours basis) 1. Taming animals. 2. Surgical and wound examination plans 3. Infusions, injections, punctures 4. Dressings and dressing materials 5. Dressings and dressing materials-practical credit 6. Surgical sutures and suturing of tissues 7. Surgical sutures and suturing of tissues 8. Surgical sutures and suturing of tissues. practical credit 9. Preparation of the patient for surgery, asepsis, antiseptics, sterilization of surgical instruments. Surgical instruments 10. Tissue cutting, hemorrhages. Seminar classes 11. Completing exercises
Recommended and obligatory reading list	1. General Animal Surgery and Anesthesiology: With Theory and Practicals by A.K. Gangwar, Naveen Kumar, Kh. Sangeeta Devi October 2009 (Republished in 2020) 2. Veterinary Surgery: Small Animal Karen M. Tobias , Spencer A. Johnston Gandalf.com.pl 3. Tranquilli W.J., Thurman J.C., Grimm K.A.: Veterimary anaesthesia and analgesia 4. Seymour c., Gleed R.: Manual of small animal anaesthesia and analgesia
The intended forms/activities/ teaching methods	1. Multimedia presentations 2. Practical taming of animals 3. Demonstration of surgical instruments and anesthetic apparatus and their practical application 4. Practical learning of methods of chirurgical suturing and tying surgical sutures 5. Applying dressings
Methods of verification and documentation forms of the achieved learning outcomes	Verification of the student's knowledge: discussion, oral test, exam. Students' knowledge acquired during the course is checked on the basis of three tests - oral tests combined with the practical execution of surgical suturing, applying dressings and recognizing surgical instruments. During the test, the student receives three questions. Passing is assessed on the basis of the average of the marks obtained from three questions. The exam is in the form of a written or test. The written exam in the form of open questions is assessed on the basis of the average grade obtained from three questions. Exam in the form of a test - 20 questions. Verification of the student's skills: as part of the exam on dressings, surgical instruments and suturing tissues as well as evaluation of a practical task. Verification of social competences: discussion, analysis of clinical situations, assessment of cooperation and self-education skills The grading scale is in line with Faculty Book of Education Quality

<table>
<tr><td>Balance of ECTS credits
The workload of activities that requires direct participation of an academic teacher</td><td>
CONTACT
<table>
<tr><td>Godziny</td><td></td><td>ECTS</td></tr>
<tr><td>lectures</td><td>4</td><td>0,16</td></tr>
<tr><td>exercises</td><td>21</td><td>0,84</td></tr>
<tr><td>Consultation</td><td>4</td><td>0,16</td></tr>
<tr><td>retake tests</td><td>6</td><td>0,24</td></tr>
<tr><td>exam</td><td>3</td><td>0,12</td></tr>
<tr><td>TOTAL</td><td>38</td><td>1,52</td></tr>
<tr><td colspan="3">NON-CONTACT</td></tr>
<tr><td>preparation for exercises</td><td>6</td><td>0,24</td></tr>
<tr><td>preparation for credits</td><td>6</td><td>0,24</td></tr>
<tr><td>TOTAL</td><td>12</td><td>0,48</td></tr>
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</td></tr>
<tr><td>The workload of activities that requires direct participation of an academic teacher</td><td>
<table>
<tr><td>Participation in lectures</td><td>4</td><td>0,16</td></tr>
<tr><td>Participation in exercises</td><td>21</td><td>0,84</td></tr>
<tr><td>Consultation</td><td>4</td><td>0,16</td></tr>
<tr><td>retake tests</td><td>6</td><td>0,24</td></tr>
<tr><td>exam</td><td>3</td><td>0,12</td></tr>
<tr><td>TOTAL</td><td>38</td><td>1,52</td></tr>
</table>
</td></tr>
<tr><td>Relationship between subject learning outcomes and veterinary studies learning outcomes</td><td>K1 – B.W1.++, B.W4.++, B.W5.++
K2 – B.W4.++,
S1 – B.U1.++, B.U2.++, B.U3.++, B.U4.++, B.U11.++, B.U12.++, B.U15.++
S2- B.U7.++ B.U11.++
S3 – B.U7.++ , B.U10.++, B.U11.++, B.U14++
C1 – K1++ , K2++, K8++, K10++
C2 – K1++, K2++, K8++, K10++</td></tr>
<tr><td>Impact of selected compounds to final grade</td><td>The final grade is influenced by the result of practical tests for dressings, surgical instruments and surgical suturing as well as the result of the exam. They constitute, respectively: 25% - a practical test for dressings, 25% - a practical test for surgical instruments, 25% - a test for surgical suturing and 30% - an exam.</td></tr>
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Attachment No 5.

Book for didactic animals

Date	Department/topic	Group/year/number of students	Animals	Time/Teacher