

**European Association
of Establishments for Veterinary Education**

**Association Européenne
des Etablissements d'Enseignement Vétérinaire**



**REPORT on the STAGE 1 VISITATION to
The Institute of Veterinary Medicine and Sciences,
Estonian University of Life Sciences, Tartu.**

16–20 November 2015

by the EXPERT GROUP:

Visitor on Training in Basic Sciences:

Prof. Till Ruemenapf, Vienna, Austria

Visitor on Training in Clinical Sciences (Academic):

Prof. Niksa Lemo, Zagreb, Croatia

Visitor on Training in Clinical Sciences (Practitioner):

Dr. Bertil Douw DVM, Cork, Ireland (Chair)

Visitor on Training in Animal Production:

Prof. Wim Kremer, Utrecht, Netherlands

Visitor on Training in Food Safety:

Prof. Maria Fredriksson-Ahomaa, Helsinki, Finland

Student Member:

Pim Polak, Utrecht, Netherlands

EAEVE Coordinator:

Dr. John Williams, Leeds, United Kingdom

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INTRODUCTION

Veterinary surgeons have been trained in Estonia continuously since 1848.

The Estonian University of Life Sciences (EMÜ) is one of 2 Universities situated in Tartu, Estonia's second city. Following a re-structuring of EMÜ in 2005, new academic structural units - Institutes – were established, replacing the former Faculties. The Institute of Veterinary Medicine and Animal Sciences is now one of the 5 Institutes in EMÜ and is the only establishment for veterinary education in Estonia.

The Institute first subjected itself to evaluation in 2004, when a number of major deficiencies were found. These were rectified by 2009 and the Institute achieved Approval in 2010.

A full ESEVT Evaluation Team visited the Institute between 16 and 20 November 2015; the report of the Team on that visit follows.

1. OBJECTIVES & STRATEGY

1.1 Findings

The Mission and Objectives of the Institute are set out in detail on the homepage of its website. They are clear and comprehensive, covering the whole educational programme and state that the aim of the Institute is to ensure continuous and high-quality academic education and lifelong continuous education.

1.2 Comment

Though clear, the mission statement is rather long and includes information about the activities of the Institute.

1.3 Suggestions

Clarity would be improved if the Mission statement were condensed into a more concise form, giving greater emphasis to the provision of veterinary undergraduate education.

2. ORGANISATION

2.1 Findings

The Institute is effectively autonomous in its organisation and staffing and in the development of its curriculum. It can establish new professorships, which need only the formal approval of the Rector of the University and it has the authority to make amendments to its curriculum. Changes are subject to ratification by the Curriculum Development Commission of the University Council, but this process is intended primarily to ensure that any changes proposed do not conflict with the curricula of other Institutes - an unlikely event, given the Veterinary Institute's unique area of study.

The management structure of the Institute is relatively simple. The Director (formerly Dean) is appointed by the Rector of the University by open competition and consideration by an expert committee which must include 2 members from the Institute. An elected chairperson chairs the Council of the Institute, which is its governing body. The management structure also includes a Director of Studies and a Director of Research, both reporting to the Director, each of whom chairs a number of committees.

2.2 Comments

The Institute has an unusually high degree of autonomy in its management, organisation and staffing. Its management team is small and relatively flat, reflecting the size of the unit (244 academic

staff and 325 veterinary students). It would have been helpful to the team for the SER to include a list of the persons responsible for each Department of the Institute.

2.3 Suggestions

A list of the Academic Staff responsible for each Department of the Institute should be provided in the SER for the next visitation.

3. FINANCES

3.1 Findings

The major source of finance for the Estonian University of Life Sciences (EMÜ) is the Ministry of Education and Research, though some funding also comes from the Estonian Research Agency and income from tuition fees. Some years ago, EMÜ initiated proposals which have now resulted in an agreement by the Ministry of Rural Affairs (formerly Ministry of Agriculture) to provide additional finance to the University to cover the operating expenses related to the organisation of clinical studies in veterinary medicine. An extra €280,000 was made available in January 2015; funding is scheduled to continue for 6 years in the first instance.

The University allocates its global budget amongst its various Institutes, broadly based on the number of students in each, but weighted according to a number of other criteria. Tuition fees for Estonian students are paid to EMÜ while fees for English language courses go straight to the Institute; but 35% of undergraduate tuition fees and 13% of fees for research students are then paid back to the University. Funding for capital projects is obtained in response to a bid initiated by the Institute and accepted by EMÜ, so the budget allocated to the Institute of Veterinary Medicine and Animal Sciences covers salaries, running costs and minor maintenance. Major maintenance is dealt with by EMÜ.

3.2 Comments

Although the high cost of training veterinary undergraduates is not directly reflected in the budgetary allocation by the University to the Institute, it is clearly taken into account, as its overall funding seems adequate for its needs. The extra money now to be allocated from the Ministry of Rural Affairs should enable the Institute to further increase its expenditure on clinical training. This will be deployed in facilities which are already excellent.

3.3 Suggestions

The Institute should review its fees for the clinical services it delivers and actively promote to veterinary practitioners its facilities for diagnostic testing, to provide further sources of income.

4. CURRICULUM

4.1 GENERAL ASPECTS

4.1.1 Findings

The study programme in veterinary medicine is set out for six years. 5 years are mandatory for all students, the sixth year allows specialisation into two tracks, large (farm animals + equine) and small (companion) animals. There are two identical curricula both in Estonian and in English language for international students. The curriculum is arranged in the traditional order, covering a base module and the basic sciences (narrow field) within the first 2.5 years. Clinical sciences (wide field module) start in the first and second year but mainly pick up from the 3rd year on.

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The curriculum is laid out as "integrated BA/MSc". Students graduate as Master of Science (MSc) and are additionally granted the title "Degree of Veterinary Medicine" (DVM).

The ratio of teaching hours versus self-directed learning is about equal; the overall workload for the students is appropriate. The curriculum is designed and decided by the Institute and university bodies in agreement with the Estonian government, and conforms to EU-based regulations.

Foreign students are obliged to obtain basic skills in the Estonian language in the first year and have access to higher level language skills in classes offered by the university, while Estonian students are offered English language classes.

4.1.2 Comment

The Curriculum is fully in accordance with 2005/36/EU as amended by 2013/55/EU

4.1.3 Suggestions

Given the importance of research in the Estonian university funding and the responsibility of veterinarians for animal welfare, it would be useful to include teaching in laboratory animal science. At least some of the hours of the elective should become compulsory.

Some other subjects taught as electives (wildlife, exotics) should have some basic teaching in the compulsory part of the study.

An elective in Food Hygiene and VPH could be reinstated to promote the Institute as a centre of excellence and attract investment.

4.2 BASIC SUBJECTS AND SCIENCES

4.2.1 Findings

Incoming students from Estonia are selected by their scholarly success and the results of an aptitude test. There are six applicants for each place, hence the best students can be selected. Self paying students, mostly from neighbouring countries Finland and Sweden are also tested (SAT) but the selection is less stringent. The Institute has cut down the curriculum with regard to physics, chemistry and plant biology and has incorporated relevant topics into physiology, radiology, biochemistry and animal biology. Informatics and biometry are covered by 4 ECTS. The overall concept of basic subjects and basic sciences is appealing and fully meets international standards. Lectures and seminars are held for each language in groups of 30 students. For practicals (anatomy, physiology, epidemiology, biochemistry, microbiology, immunology, pathology, histology and parasitology), the groups are split into 10 -15 students, providing an optimal learning environment. A practical in pharmacology is not provided. All laboratories and classrooms for practical training in the basic sciences were well equipped and extremely clean.

The facilities for anatomy practicals are excellent. Training is provided for by a sufficient number of cadavers (21 dogs, 2 horses, 30 cats, 3 pigs, 6 small ruminants, 4 rabbits and 20 birds in 2014). In addition, ample conserved specimens were available. Fixation is mainly done by freezing/cooling or with ethanol. Formalin is not used any more.

The pathology practical room is in a good shape and is well equipped. The caseload is sufficient with about 150 food producing animals, 22 horses, 149 poultry and rabbits and 126 companion animals (averaged over 3 years).

4.2.2 Comment

Basic science subjects are very well covered.

4.2.3 Suggestions

The expertise of visiting specialists (e.g. veterinary pharmacologist, virologists, bacteriologists) from other institutes should be used to raise knowledge and training in these fields for veterinary students, resident veterinarians and support staff.

4.3 ANIMAL PRODUCTION

4.3.1 Findings

The students have a lot of opportunities to do practical clinical work. There is an adequate and well-equipped experimental farm on the faculty with around 150 dairy cows and 100 young stock with a large teaching room and a lot of facilities for practical training. This farm is intensively used for different teaching for all students, from the 1st until the 6th year. This varies from the first year students that take courses on this farm for animal care taking, to 5th and 6th year students who take part of the regular herd health visits and participate in the clinical work at this farm. Other groups take lessons or practical training on nutrition, reproduction, etc. on this experimental farm.

Apart from this farm the institute has special arrangements with 5 large dairy farms, 2 sheep farms and 2 large pig farms in the close surrounding area of the faculty. With these farms, the Institute has an agreement that not only students from the 5th and 6th year could visit for individual clinical cases, animal husbandry and herd-health visits, but also 1st, 3rd and 4th year students get exposed to handling farm animals at these farms.

The faculty has 4 horses in the clinic for training in horse handling and clinical examination. Also some commercial horse stables in the surrounding area of the faculty offer animals for handling and caretaking practical training.

The clinic at the faculty offers relatively fewer patients (see chapter 6.1); however this was compensated by the excellent arrangements with a number of farms in the neighbourhood of the faculty, the support offered by the faculty to students to spend extra curricular time at farms of veterinary practices and extramural practice.

These excellent clinical training possibilities, in combination with the practicals, theoretical courses in the curriculum and the small working groups, offer an adequate environment for training the application of prophylactic and clinical treatment. This is combined with other relevant aspects, like (farm-) management, nutrition, epidemiology, housing, welfare and reproduction for food animals and horses on individual and herd basis.

These possibilities are also normally available for swine, but because of an outbreak of African swine fever the team was not able to further investigate. Therefore, this cannot be confirmed.

Partly thanks to the close relation with other Institutes of the Estonian University of Life Sciences, all relevant subjects mentioned in the SOP are covered and adequately taught; more explicitly in the theoretical course but also in a more integrated way in the clinical rotations in the 4th, 5th and 6th year.

4.3.2 Comments

The caseload in the clinics for food animals and horses is low; however, adequate and creative alternatives are provided by the Institute (i.e. arrangements with individual farms and horse stables in the close surroundings of the faculty, and the ambulatory clinic).

4.3.3 Suggestions

None

4.4 CLINICAL SCIENCES

4.4.1 Findings

Clinical subjects are distributed from the 4th semester to the 9th semester of the curriculum. Major changes in the clinical part of curriculum were made in 2005. Subjects with a low veterinary relevance from the veterinary curriculum were removed, most of the basic veterinary sciences moved to first two earlier study years. EMÜ started teaching of clinical medicine by animal species. Practical clinical training was increased in the number of clinical hours and a clinical rotation system was introduced as well. Subjects are distributed in the speciality module of curriculum as follows: Animal infectious diseases (6 ECTS), Parasitology and parasitic diseases (5 ECTS), Anaesthesiology and first aid (4 ECTS), Clinical and laboratory diagnostics (6 ECTS), Veterinary radiology (5 ECTS), Surgery (10 ECTS), Dermatology and allergology (2 ECTS), Ophthalmology (2 ECTS), Small animal internal medicine (8 ECTS), Neurology (2 ECTS), Equine clinical medicine (4 ECTS), Swine clinical medicine (3 ECTS), Ruminant clinical medicine (7 ECTS) and Obstetrics and gynaecology (8 ECTS).

Clinical sciences are represented with 13 subjects, which consist of 663 hours of lectures, 278 hours of seminars, 1 447 hours of self-directed learning, 269 hours of laboratory and desk-based work, 88 hours of non-clinical animal work and 791 hours of clinical work.

Students do their clinical training in the Small and Large Animal Clinics as well as in the Ambulatory Clinic. Clinical rotation for the students is a part of the clinical teaching at the Institute. The fourth-year students are involved in the duty on-call service in groups of 1–2 at a time. Students in fifth year do their clinical rotations during 7 weeks at the University Large Animal Clinic and seven weeks at the Small Animal Clinic. Out of the 7 weeks in large animal clinic, students must spend three weeks in the equine clinic and four weeks dealing with ruminants and pigs. After 5 years of study, students can choose between one of the two elective subject modules: farm animals and equine medicine or small animal medicine.

A caseload of 7284 companion animals is recorded in 2014, which is following a trend of increasing case numbers every year (5646 cases in 2013, 5028 cases in 2012). In 2014, there were 824 hospitalized cases in the small animal clinic. In the past 3 years, equine patients' numbers are similar with average of 193 per year. Food producing animals were seen in the ambulatory clinic with an average number of 3957 in past 3 years while hospitalized cases were 14 (average number for 3 years) in faculty clinic.

4.4.2 Comments

The faculty clinics operate an emergency veterinary service for small animals where students (1-2) work with a veterinarian (junior or senior teacher) on site. The service seems adequate to serve society in the southern part of Estonia and numbers of students are enough to take care of hospitalized patients overnight. The Large Animal Clinic is open for consultations on weekdays from 8:00 to 16:00. Outside working hours, it is possible to call an emergency hotline. The Ambulatory Clinic provides on-call outside services to farms and other institutions and is generally operated on a commercial basis with the average visits of 460 farms per year. During the clinical training period (four weeks in the production animal clinic), each student participates in at least four herd health visits. This is a great opportunity for students to meet farm animal cases.

Students studying at the University and the University staff are insured in accordance with the Health Insurance Act. Foreign students coming from the EU must apply for a European Health Insurance Card in their home country. Foreign students coming from non-EU countries must apply for health insurance in Estonia. Liability insurance is signed with the "If P&C Insurance AS" company for the period from 1.12.2014 to 30.11.2015.

Ratio R6 (theoretical training/supervised practical training) is not in range; one of the possible reasons is higher number of hours in Self-directed learning (1447 h in clinical science). Ratio R11 is also

out of range, but this is compensated for by ratio R12 that is above the level. It means that the students are exposed to a sufficient number of food animal patients.

Most of the clinical disciplines are integrated in the curriculum. Internal medicine and all other clinical disciplines are taught over 2 semesters and surgery over 3 semesters.

Clinical diagnostics (propaedeutic) and pharmacology and clinical pharmacology are placed in 3rd year of student education. Students learn about emergency and critical care in different subjects in the actual curriculum. Therapeutics are integrated in the subject of clinical pharmacology.

All students are able to perform an ovariohysterectomy on a cat or a dog without assistance but under supervision of teachers.

4.4.3 Suggestions

Increasing cases from disciplines, which are not well distributed in the case log.

Continuing to work in small groups and work on problem-based and interactive methods of learning. Developing all clinical disciplines and increasing the percentage of referral patients, which can serve for good clinical education of students and collecting materials for clinical research. Increase the number of surgery cases in horses.

Creating an additional position of senior teacher in equine medicine could help the future developing of the horse clinic.

The expertise of visiting specialists (e.g. veterinary pharmacist, radiologist, emergency and critical care specialist) from other Institutes should be utilised to raise knowledge and training in these fields for veterinary students, resident veterinarians and support staff. An anaesthesiology service should be available at all clinical departments that perform anaesthesia (e.g. the equine clinic, ophthalmology).

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1 Findings

The Department of Food Hygiene is one of eight departments of the Institute of Veterinary Medicine and Animal Sciences. This department organises several courses for veterinary students: Basics of veterinary public health and food hygiene (4 ECTS) for 3rd and 5th year students; Food production hygiene (6 ECTS); Technology, safety and quality of meat products (4 ECTS); Quality and safety of milk and dairy products (5 ECTS); and Meat inspection (5 ECTS); in total 24 ECTS. These courses include laboratory work, group work, seminars, case analysis and e-learning. Each autumn in the 5th year, excursions to food industries are also organised. At the moment, all courses in the 5th year are in the Estonian language but in 2 years, these courses will also be organised in English for the foreign students

The course descriptions including objectives of the course, learning outcomes; requirements for the exam and study materials can be found in the web-based study information system (ÕIS) or in Moodle, which is typically used as the main platform for e-learning.

The staff of the department includes 2 full-time professors (one veterinarian responsible for food hygiene and one non-veterinarian responsible for food and environmental toxicology) and 3 full-time associate professors (one veterinarian responsible for meat inspection and two non-veterinarians responsible for milk and environmental hygiene). Additionally, two lecturers are helping with the teaching. In total, 5.8 academic staff and one technical support person has been allocated for the food hygiene teaching. External experts give some lectures.

Primary skills in meat inspection of carcasses, organs and intestinal tract are trained in small groups (10-15 students) in the autopsy room. Laboratory work in food microbiology is organised in a small laboratory, which is not really appropriate for 15 students working with foodborne pathogens and

their own food samples. At the moment, there are no facilities for food technology laboratory work but future plans are to build a small food plant for meat technology work for students.

Practical training in meat inspection/production hygiene (2 weeks) and veterinary control (2 weeks) are extra-mural training obligatory for all students in the 5th spring semester. Two students are doing the 2-weeks training together. The slaughterhouse training is organised in 3 big slaughterhouses slaughtering both pigs and cattle. These slaughterhouses include also meat cutting and processing plants. The practical training is very well organised. During the training, the students learn the whole concept of meat inspection starting from food chain information and ending with labelling and classification of carcasses. Additionally, they learn about food production hygiene including the quality control system of the slaughtering, cutting and processing of meat and by-products. During the 2-weeks practical training in district veterinary offices, the students learn about official veterinary control including control of public health hazards and animal health. All students have to keep a diary about the training. All the tasks to be covered have been listed for students and supervisors. The quality of the extramural training is assessed by a feedback questionnaire for the supervisors and the students.

Special indicators for food hygiene/public health are $R9 (728/9074) = 12.46$ (recommended range: 8.86-31.77) and $R10 (728/104) = 0.14$ (recommended range: 0.074-0.556).

4.5.2 Comments

The facilities for food hygiene laboratory work are too small for a group of 15 students. At the moment, there is also no facility for meat technology laboratory work.

Since 2013, the 6th year students can choose only between two elective modules (tracks) - not including food hygiene and veterinary public health. This may influence the number of students doing a final thesis in this area.

4.5.3 Suggestions

More external lecturers could be used for specific seminars regarding food control, food processing and hygiene.

The laboratory facilities should be improved.

4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS

4.6.1 Findings

There is tracking after the 5th year, where students have the option to choose between a module for farm animals and equine medicine, or a module for pet animal medicine (both 50 ECTS).

Some elective subjects taught in the first 5 years:

- Dog breeding.
- Sport physiology / doping.
- Aquarium fish.
- Terrarium animal healthcare.
- Pain.
- Laboratory Animal Medicine.
- Bee diseases.
- Exotic animal medicine.
- Reproductive biotechnology.
- Wildlife Medicine.

Also, there seems to be an early differentiation in the obligatory extramural work in the first 5 years.

4.6.2 Comments

Omni-competence is still sufficiently covered, but the lack of teaching material of some species (pigs / sheep / rabbits) needs to be addressed.

4.6.3 Suggestions

Efforts should be made to increase the caseload in some species, esp. pigs, sheep, poultry, rabbits and exotic animals. Perhaps the Institute can buy some animals to be used for clinical teaching, research and pathological education.

A track in Food Hygiene and VPH could be reinstated, to enhance the Department of Food Hygiene as a centre of excellence.

5. TEACHING

5.1 TEACHING METHODOLOGY

5.1.1 Findings

During the last 7 years, the university has actively developed learning methods including e-learning courses. Moodle is used as the main platform for study modules and e-learning courses. Several, but not all courses are in Moodle. In addition, the web-based Study Information System (ÖIS) is a platform for course descriptions including learning objects and outcomes, exam requirements and study materials.

Veterinary studies include lectures, seminars, group works, case analysis and practical work starting in the first year. The lectures rely on lecture notes, textbooks and other study materials, which are available for the students on the e-learning platforms. Some technical solutions like clickers have been bought to support teaching. Teachers are encouraged to use more interactive methods. The university has provided training opportunities for teaching staff to develop their teaching skills and methods.

There is a feedback system at the Institute for employees, students, alumni, employers and partners. The employee feedback is conducted during spring term every two years and the student feedback is collected from all students at the end of each term. For students, answering is compulsory. The Student Union collects feedback on teaching as well. Alumni and employers' feedback are collected every three years. Students interrupting their studies are interviewed about the reasons.

5.1.2 Comments

Student learning could greatly be improved by providing the students with adequate (oral and written) feedback on their work and performance in the clinical workplace during their rotations and internships as well as on the several different kinds of written work students have to make.

5.1.3 Suggestions

It is recommended to give more feedback to the students.

5.2 EXAMINATIONS

5.2.1 Findings

The study year includes spring and autumn terms which are both divided into 9-week cycles. The examination period lasts 4 weeks. There are no lectures around Christmas and New Year (2 weeks) or in the summer (8 weeks). The examinations periods are in January and May. Students have up to 6 oral or written examinations during the 4-week examination period. During this period, no teaching activities take place. Various forms of examinations are used depending on the course leader.

Students can take an exam only twice. If the student has not passed the exam at the second time, she/he has to take the whole course again. The student has to leave the university if not passing the course second time or have not collected 75% of the required credit points. Before starting with clinical subjects, students have to pass all prerequisite subjects. External examiners are not used in undergraduate studies but sometimes as the opponent of the final thesis.

Theoretical knowledge is assessed by examinations and different reports. The progress of studies is monitored by pass/fail examinations, reports, final exams and thesis. Every student delivers a diary of clinical skills and performs all listed clinical manipulations (day-one skills), which are verified by their teacher or supervisor. The students also make an oral presentation about a clinical case. Continuous evaluation increases during the clinical training.

Students graduate with a final examination or by defending a final thesis. Day-one skills are demonstrated by a 2-part examination, the first part consisting mainly of multiple choice questions about clinical and food safety/public health issues and the second part a clinical problem that has to be solved.

5.2.2 Comments

Oral examinations are usually conducted by only one examiner. In certain circumstances, this could be an unsafe environment for the students. Additionally, objective judgement of student performance is not always guaranteed when the oral examination is conducted by only one examiner. Most students take a final examination, rather than a thesis.

5.2.3 Suggestions

It is recommended that in oral examinations, 2 examiners participate.

The Institute should encourage students to take the option of writing and defending a thesis.

5.3 STUDENT WELFARE

5.3.1 Findings

In general, the students seem to be quite satisfied about the Institute and the education received. The students address the good atmosphere that they are experiencing. There is room for improvement in the fields of catering facilities and the duration of lunch-breaks. Mingling and cooperation between the Estonian and the international students should be encouraged.

The University has formal arrangements for providing support for students who experience personal problems or problems with their studies – including the availability of counselling by a psychologist – but the peer support system operating within the University is not operational in the Veterinary Institute at present.

Veterinary students are traditionally very active in the Students' Union of the University.

5.3.2 Comments

Since the previous building closed, there is no cafeteria at the Institute where students can buy their lunch. Although the students are used to bringing their own lunch, it is not convenient that there is no specific place where they can eat. If they want to go to the closest lunch facility, then they have to walk for ten minutes. In theory, the lunch break is 30 minutes, but in practice, this duration might even be less, if lectures do not finish on time. Students feel that the duration of the lunch breaks is insufficient.

Since the implementation of the English curriculum, there is a clear separation between the Estonian and the international students by the formation of two different classes, which has enlarged

the gap between these groups. There have been some efforts to close this gap, for example by appointing Estonian-international pairs for practical work. The gap between the students is being experienced as a problem.

In such a small unit, formal mechanisms for staff to identify students who are experiencing problems may not be essential, but they are desirable.

5.3.3 Suggestions

It is recommended that the Institute provide a room where the students can eat their lunch and preferably also can buy some food. Besides the lunch facilities, the duration of the lunch breaks is experienced as too short and should be adjusted.

Cooperation between the Estonian and the international students should be encouraged and every effort should be made to enhance this.

Staff and students should be informed about what they should do if they become aware of a student experiencing personal problems or difficulties with their studies and students should be encouraged to consider volunteering for peer support. The Students' Union should also be encouraged to publicise and make use of these arrangements.

6. PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

The facilities used for veterinary studies, except for the experimental farm, are all located within the University campus on the northern border of the city of Tartu. All buildings are within walking distance of each other. The main building of the Institute is the Zoomedicum, which includes the pharmacy and the animal clinics. A faculty-owned experimental dairy farm, very well equipped for teaching, is located 3 km from the faculty. For more general studies like Animal Nutrition, other facilities of the Institute of Veterinary Medicine and Animal Sciences at the campus are used.

Most of the buildings have been renovated during the past 10 years. In general, the facilities for teaching like lecture rooms, laboratories, facilities for practical teaching, the anatomy and necropsy halls and clinics are relatively new and in a very good condition. These facilities are kept exceptionally clean, and these facilities are very well equipped with state-of-the-art equipment, necessary for the achieving the aims of the curriculum. This, in combination with the small groups during the seminars, lectures and practicals (max 15 students for practicals and max 30 students for lectures) offers an optimal learning environment for the students.

Students are adequately instructed about specific job- or subject-related safety issues, including specific hazards, protective measures and first aid, at the beginning of their practical work. Written instructions are available in the clinics. These instructions are also provided before students visit farms. Protective clothing is required and is provided (e.g. gloves, lab coats, shoe protection, etc.). First aid kits are available on all sites.

All chemicals, medicines and dangerous drugs are properly stored; however, on several occasions in the clinics we found the drug cabinets/rooms were accessible for everyone and the usage of controlled drugs was poorly documented, especially in the small animal clinic.

At some laboratories, eyewashes for staff and students were missing or out of date and emergency showers were absent in some laboratories.

The entrance into the necropsy hall for staff and students is not adequate to safeguard hygiene and prevent contamination. During our visit to the necropsy hall, staff did not insist on the necessary bio-security measures. Additionally, there were no written instructions or protocols on bio-security on entering or leaving the necropsy hall.

There are special agreements with a 5 nearby dairy farms, 2 pig farms and 2 sheep farms for training students and for access to clinical material. The faculty also provides an extramural service using three vehicles available to the Large Animal Clinic (both equine and farm animal sections): an 8+1-seat van, a 5-seat Ford Transit and a 5-seat Toyota Auris. For herd health visits, cars belonging to the personnel are also used and 1–2 students join the practitioner for each visit. Two cars are furnished with veterinary equipment. Additionally, the Institute has a 16-seat bus, which is used for planned farm visits.

The Institute mainly uses the three largest slaughterhouses in Estonia located in Saaremaa (distance from Tartu 375 km), Valga (80 km) and Rakvere (135 km) for the practical training of students in Food Hygiene and VPH. All enterprises are approved by Estonian Veterinary and Food Board as slaughterhouses, meat cutting plants and producers of meat products. The Institute also has micro-dairy facilities, where the students are introduced to the production processes of dairy products. Food processing plants are visited on a regular basis. During the two-week practice, students also spend 2 weeks at District Veterinary Offices of the State Veterinary and Food Board.

6.1.2 Comments

The importance of biosecurity and risk-awareness appeared not to be clear for some staff and students. Some places are in need of improvement; examples are the lack of a proper hygienic barrier for the necropsy hall, the inadequate control of access to and use of drugs, and the improper documentation of the use of controlled drugs.

6.1.3 Suggestions

Hygiene awareness should apply all over the Institute for both staff and students.

Provide an effective hygiene barrier for the necropsy hall.

Take bio-security in the necropsy hall more seriously and provide students and staff with clear instructions and protocols regarding bio-security.

Make a clear protocol for storage and documentation of drugs, especially controlled drugs. Advocate a culture within the staff to apply these protocols, and keep all drugs, especially controlled drugs, locked away at all times. Make one person in the Institute responsible for the application of these protocols, e.g. the staff member responsible for pharmacotherapy or the pharmacist.

Provide adequate eyewashes and consider installing emergency shower(s) at relevant spots in laboratories where students and staffs do practical work. Ensure that posters with clear instructions on what to do in case of emergencies are displayed in all laboratories and clinics.

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1. Findings

The main building of the Institute - the Zoomedicum - is situated on the main campus and includes lecture rooms, basic science departments and support staff, the animal clinics, hospital and pharmacy. The clinics are well laid out, spacious and adequate for the caseload. The hospital offers 17 places for dogs plus 4 in critical care unit, 9 for cats plus 9 in critical care unit, 12 for cattle, 2 for calves, 13 for horses and has some facilities for housing pigs (6), sheep/goats and poultry as well. The isolation facilities offer places for hospitalization of 3 large animals (farm animals and horses) and 4 small animals. Both isolation units are constructed with a proper separately entrance, a place for disinfection and contain a basic ventilation system.

The Joint Clinical Veterinary Laboratory of the Institute supports the clinics with laboratory diagnostics (clinical biochemistry and haematology, microbiology and parasitology, serology (ELISA) and molecular diagnostics (PCR). The Joint Clinical Veterinary Laboratory carries out external work and private practitioners are able to send samples for analysis. There is collaboration with the State

Veterinary Laboratory, which is located on the campus as well. In the clinics, there is a small laboratory for biochemistry, haematology, cytology, microscopic examination of smears and clinical mastitis diagnostics using selective media.

The histo-pathology laboratory and pathologists from the Department of the Basic Veterinary Science and Population Medicine provide routine diagnostic services for the animal clinics – necropsies, cytological and histo-pathological diagnostics.

Sufficient diagnostic equipment is available at the clinic, such as digital X-ray and ultrasound, MRI, electrocardiography, laparoscopy, arthroscopic and video-endoscopes, respiratory anaesthesia equipment.

A 24 hr service is provided in all clinical departments, which are all species-orientated. Students participate in these OOH and emergency services and an ambulatory service is available for both OOH and routine visits. The intensive care unit (SA) is located beside the prep room. Both students and animal technicians are involved in the care for these patients. There are no specialisations present at the moment, but most clinicians do have fields of special interests.

The isolation facilities offer places for the hospitalisation of 3 large animals (farm animals and horses) and 4 small animals. Both units are properly constructed with a separate entrance, a place for disinfection and include a basic ventilation system.

6.2.2 Comments

The numbers of rooms in the clinics are adequate for the clinical work presented and the caseload. Diagnostic equipment present at EMÜ is sufficient for proper diagnostic work, while outside laboratories are commonly used also. Rooms are spacious and well equipped. There is ample disinfection material and waste receptacle boxes for sharps and clinical waste.

The waiting room reception area is excellently equipped and spacious. Examination rooms are close to the reception area. The pharmacy is located beside the reception area and run by a human pharmacist, who is responsible for ordering and dispensing medicines to hospitalised patients, clinics, farm services and out-patients who are prescribed drugs.

The isolation unit could be improved with a new ventilation system and facilities for collection, filtration and disinfection of effluent.

6.2.3 Suggestions

The planned upgrade and improvement of the isolation unit for large animals and equines is strongly advised, especially since it is the only isolation unit in the whole country.

The facilities for the care of wildlife and birds should be improved, as it is an opportunity to enhance this service, which is unique in the region and contributes specialist skills to the Institute.

There should be an improvement in the laboratory in the clinics, to simulate modern 1st line diagnostic practice equipment, which includes haematology.

An effort should be made by the pathology department to acquire necropsies from the farms that are visited by the Institute, in order to teach students the follow-up of clinical cases.

7. ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

The caseload of animals and material of animal origin for anatomy teaching is adequate. Slaughter material has been used for many practicals. Whole cadavers (or parts) originate from animal shelters, the university clinic or are donated by private animal owners or farms.

In the last three years, the numbers of necropsies performed for teaching appears to be adequate. The averages of the last three years are: 150 food producing animals, 22 horses, 149 poultry and rabbits and 126 companion animals and exotics. In conclusion, the caseload offered for pathology

training is ample (see also ratios in table 7.6). However, the number of necropsies could easily be enlarged further if the pathologists accepted more cadavers from the farms visited by the faculty. The Institute has a faculty owned large animal experimental farm at 3 km from the main building of the faculty. This farm holds 130-150 milking cows and approximately 100 young stock. This farm is, as the other facilities, very well equipped, exceptional clean and well maintained. It offers veterinary students, but also other students from the Institute of Veterinary Medicine and Animal Sciences, excellent facilities and exposure to animals for teaching in many different departments, from the first year up to the last year of the curriculum, which fully compensates for the low number (or absence) of cows and calves at the Institute itself.

The University has no pig or small ruminant or poultry farms of its own. At the time of the visitation, the country was suffering an outbreak of African swine fever. As a consequence the faculty was not allowed keep their own experimental pigs or visit swine farms, so neither did the visiting EAEVE-team.

The faculty has an Ambulatory (Mobile) Clinic for production animals as well as for horses. The mobile clinic works on weekdays from 08.00–16.00, and offers 24/7 year-round emergency service. There is always one student on call. The number of food animal consultations outside the faculty (Ratio 12) is 89 consultations per student per year; which fully compensates for the low number of food animals seen at the faculty itself (Ratio 11).

For the 5th and 6th year students the ambulatory clinic offers sufficient herd health cases (Ratio 13). The faculty has special arrangements with five dairy herds (200–800 cows per herd) and two beef herds for these regular herd health visits. These farms also provide opportunities for the 3rd and 4th year students for on-farm clinical training.

The number of cases in the equine section is also more than sufficient (Ratio 14: 13 cases per student per year), but not many complicated or specialist cases are treated at the Institute.

The companion animal clinic is one of the two large clinics in the country, which provides OOH, referral and emergency services. The faculty clinic is market leader in the south of Estonia with 30% referral cases. This very well equipped clinic provides the student of the 3rd, 4th, 5th and 6th years more than sufficient cases for their clinical training (>150 patients per student per year (Ratio 16). The number of poultry flocks and rabbit production units, which can be used for clinical training is too low, partly because of the very low number of these production units in the country.

Students are adequately exposed to the slaughtering of cattle, due to the collaboration with the large slaughterhouses and meat-cutting plants. They also have food hygiene training at the faculty in micro-dairy facilities. Students make regular visits to food producing plants.

The faculty has started to provide facilities for wild animals (birds), especially for the elective course on wild animals.

7.2 Comments

Due to the outbreak of African swine fever, exposure to pigs is unavailable. Small ruminants are not available on the establishment, and a small number of rabbits, chickens and some exotic animals could easily be housed in the clinics for practical lessons.

7.3 Suggestions

Try to increase the number of poultry flocks seen by students.

Acquire a small number of rabbits, chickens and exotic animals.

8. LIBRARY AND LEARNING RESOURCES

8.1 Findings

Library facilities for veterinary students are located in the main administration building of the University, a 5-minute walk across the campus from the Zoomedicum; the refectory and offices of the Students' Union are also located here.

The library is large and has a pleasant reading room, with easy access to current copies of relevant journals. Book racks with copies of standard textbooks - in English and Estonian – are close by and students have free access to them for study in the library, or they can borrow them. Computer terminals with internet access are available in the foyer of the library and students - almost all of whom have their own laptops – have free access to WiFi throughout the campus, therefore having access to all the extensive on-line library and learning facilities.

8.2 Comments

The library and learning facilities are comprehensive and appear to be well used by students. However, the online study material on the Study Information System (ÕIS) is not always easily accessible to students and should be updated more frequently by all lecturers.

8.3 Suggestions

The ÕIS system should be better organised to make it more “student-friendly”.

9. ADMISSION AND ENROLMENT

9.1 Findings

Total number of students in the end of year 2014 was 325, including 173 (53%) Estonian and 152 (47%) foreign students, mostly from Finland and Sweden. Most (89%) of the students were female. The total yearly intake is 60-65 students, almost equally split between Estonian nationals and international applicants per year. The number of Estonian intakes (30) is considered to cover the national need for veterinary professionals and is sponsored by the government. The intake of international students varies between 25 and 31. Non-government sponsored students pay €7800 per year. 35% of the tuition fees remain with the university as fees and overhead costs, 65% go to the Institute. The ratio of applications to intakes is > 6:1 (2014/15) for the Estonian and between 1:1 (2013/14) and 2.5:1 (2014/15) for the international students.

National students are admitted based on a combined system that takes their scholar performance, the results of state examinations and the EMÜ admission test into account. The EMÜ admission test focuses on knowledge and skills in biology and chemistry. Based on proven excellence, outstanding applicants can be taken without further tests.

International students have to provide for admission a recognized foreign educational certificate and are assessed by a mandatory SAT test (with focus on biology) and a letter of motivation. The SAT is offered 6 times a year.

The education is straightforward and the student flow is very good. The average duration until graduation is about 6.5 years. Roughly 70% of the students graduate within the nominal time frame of 6 years. The dropout rate is steadily decreasing and the last value was 13 students in 2013/14 (<5% relative to the total number of students 325).

9.2 Comments

The quality selection at the entry level is very efficient as exemplified by the student flow. The average study time is 6.5 years (13 semesters).

9.3 Suggestions

None

10. ACADEMIC, TEACHING AND SUPPORT STAFF

10.1 Findings

Based on table 10.1, 10.2 and 10.3 the overall academic FTE involved in teaching is 78.2. This makes the ratio student/staff is $(325/78) = 4.1$, which is excellent. All other indicators also meet the required level, so there is no obvious shortage of either academic or support staff. Teaching staff gave the impression that they are really motivated and most staff feel confident and adequately skilled for their tasks and responsibilities. However, due to the relatively small scale of the establishment, many staff members have multiple responsibilities and tasks. With the present small number of staff it is difficult to cover all required subjects in theoretical teaching as well as in the clinic. However, the committee was impressed by how the faculty deals with this problem, in such a way that most of the relevant areas are adequately covered.

Positions for regular teaching and research staff members are filled by a public and open recruitment procedure. In cases where the public recruitment procedure has failed, a fixed term contract is continued until a new candidate has been found through public recruitment, but not for longer than five years. For recruitment of an employee for a fixed time period a non-public recruitment procedure can be used.

The Rector of the University has the right to invite researchers or reputable practitioners and teachers as 'visiting staff' for a maximum period of five years, without public recruitment, based on terms defined by the University Council.

The faculty encourages staff members - academic staff, but also non-academic staff - to acquire additional skills and training. Academic staff are able to attend an international congress or meeting in their field at least once per year, with all expenses paid by the University. Additionally, staff members can try to get additional funding for further additional training.

Overall teaching and support staff appeared content with their positions. The workload is within their expectations and there was almost no complaint during the hearings.

10.2 Comments

Because of the relatively small size of the faculty, staff - especially teaching staff - have multiple tasks and responsibilities. This could lead to less attention to one of the tasks. An example of this situation is that it is not clear who is responsible for the pharmacology and pharmacies storage in the clinic. Proper storage and usage documentation of drugs, especially in the drug storage in the small animal clinic, does not fully meet the standards required by the SOP.

At present, a diploma of the European Board of Veterinary Specialisation (EBVS) cannot be used as a professional qualification when a staff member applies for academic positions such as lecturer or associate professor. With regard to the importance of highly qualified staff for teaching and research, it is important to recognise these diplomas and involve this in career tracks for academic staff.

10.3 Suggestions

Because all the clinical staff is also involved in the theoretical teaching of different subjects, we recommend an increase in the number of clinical teachers in order to guarantee and sustain the quality and availability for the practical teaching of students.

Provide proper job descriptions for the teaching and clinical staff, and check that all teaching, clinical, and management related responsibilities are adequately covered.

Encourage and facilitate young staff members to apply for either an exchange or regular residency abroad thus increasing the number of European Board certified diplomates at the Institute.

11. CONTINUING EDUCATION

11.1 Findings

Continuing Professional Education (CPE) is required for veterinarians only once every 5 years. The general consensus seems to be that there should be a requirement for more CPE for each veterinarian annually.

CPE is in the objectives of the Institute, but a fixed programme does not seem to be in place. The number of courses offered by the Institute is small, but other organisations (breeding groups, veterinary groups, food safety, etc.) are organising courses as well and they seem to be well attended. In some cases, the Institute is cooperating with other organisations in these CPE courses. Some courses for interested lay public are also given through the “Open University” in Tartu and seem to cater for a keen public.

11.2 Comments

Practitioners and other veterinarians are happy with the number and variety of courses on offer at the moment, and with neighbouring countries congresses or courses are organised on mutual interests as well. For specialist courses, foreign congresses and courses are frequently used. The use of e-learning is also starting to be more common.

11.3 Suggestions

The Institute might be able to offer some speciality courses if it develops some “areas of excellence” that might be of some international interest. Funds raised out of these CPE’s can be used to enhance services and/or research.

Some courses given to the lay public could raise the profile of the Institute and might attract more investment.

12. POSTGRADUATE EDUCATION

12.1 Findings

An internship programme does not exist at EMÜ. In the past, a programme was successfully running 3 years (from 2009 to 2012).

Junior veterinary clinician-teacher is a temporary position for young veterinarians. The position is for a period of at least two years, after which the candidate will undergo a review for possible promotion to the position of veterinary clinician-teacher. The maximum duration of appointment is four years. Job responsibilities of a junior veterinary clinician-teacher include provision of referral services and carrying out the tasks of on-duty veterinarian. He/she will also perform general assistance to senior staff members in the delivery of undergraduate teaching activities, and, when appropriate, collaborate on research projects.

One EBVS diplomate is employed at EMÜ from the field of veterinary dermatology and there are no current residency programmes.

The Institute provides a PhD graduate degree programme with two specialisations: Veterinary Medicine and Food Science. A PhD programme covers 240 ECTS, and the nominal length of studies is four years (in some cases it may be up to 8 years). Manuscript of the dissertation and the publication (or at least being accepted for publication) of all the required articles are necessary for being allowed to submit a defence and make a final presentation.

In 2015, 28 full-time research students enrolled in PhD programmes. From 2008 until today, 11 students successfully finished the programme and 17 students withdrew from the programme.

12.2 Comments

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Junior veterinary clinician-teacher is well-designed position for introducing young veterinarians to academic society. Internship as one-year clinical rotation cannot be substituted with junior veterinary clinician-teacher programme/position.

The number of PhD students in 2014/2015 is satisfactory while the number of withdrawals is concerning.

12.3 Suggestions

An internship programme should be reintroduced and integrated as a pre-programme for junior veterinary clinician-teacher programme/position and future residency programme in EMÜ and abroad. Internship is necessary for applying to residency programme in EBVS.

The high percentage of withdrawals of PhD students calls for action; in the past 3 years, the same number of graduates and students withdrew from PhD programme (n=6).

Specializations should be encouraged by cooperation and exchange with other faculties of Veterinary Medicine as, for such a small faculty, it is nearly impossible to do it onsite.

13. RESEARCH

13.1 Findings

Research is an important factor in university funding by the government and for the career of the staff. The Institute has little funds of its own to support research projects. Therefore, all departments are promoting their research output in order to apply for competitive funds. Funding by the national science board is highly competitive and difficult to secure. There are >800 publications for the past 5 years, however not all of them are peer reviewed and of high quality. The research laboratories are very well equipped and hence infrastructure is fully supporting the research efforts. The PhD has become a prerequisite for higher academic positions (full and associate professor, partially lecturer). The PhD education is harmonized between all Estonian universities and requires both admission to the 4 year (240 ECTS) programme and at least 3 publications - two of which have to be published in international peer reviewed journals (ISI listed) - with at least one first authorship. PhD programmes offered by the Institute are "Veterinary medicine" and "Food science". 18–20 ECTS are reserved for a structured education including interim exams.

Research at the undergraduate level is marginally covered in the base module of the curriculum by 1 ECTS (Fundamentals of scientific research) but it is encouraged by the Institute on a voluntary basis. An initiative for promoting undergraduate scientific effort is the possibility to substitute the final exams by an experimental research thesis. In practice, this is rather difficult for the veterinary student because there is no time allocated to it in the curriculum. This track is apparently open to only a few highly motivated students.

13.2 Comments

Writing a thesis instead of a final exam does not appear to be fair, as apples are compared to pears.

13.3 Suggestions

A final thesis should be considered for all students provided that there is sufficient time for the preparation.

EXECUTIVE SUMMARY

Over a period of some years, the Institute of Veterinary Medicine and Animal Sciences in Tartu has enjoyed substantial investment in facilities and equipment, so the institution occupies modern, well-

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equipped premises which provide an excellent environment for veterinary undergraduate training and research. The veterinary hospital and the experimental farm provide good facilities both for the treatment of animals and for the clinical training of undergraduates.

Basic subjects are well taught and the Team saw excellent facilities for practical training in the basic sciences. Animal Production has a low caseload in the clinics, but this is well compensated by the availability of the experimental farm and the ample contacts with surrounding farms and horse stables.

The clinical sciences are taught by a young and enthusiastic staff from the 6th until the 9th semester and are followed by clinical rotations in the 10th semester. The large animal clinics are complemented by an ambulatory service which provides daytime and out of hours services to surrounding farms. The companion animal clinic has a good caseload and offers out of hours and emergency services at the Institute. But the teaching and training of students in the fields of pharmacy, radiology, anaesthesiology and emergency and critical care should be enhanced by contracting specialists from other Institutes.

Food hygiene and veterinary public health are well covered in the curriculum and the practical training, both at the Institute and at slaughterhouses, is well organised and taught.

The elective track in the 6th year offers 2 modules, one for farm animal and equine medicine and one for companion animal medicine. The view of the Team is that an elective or module in food hygiene and veterinary public health should also be introduced.

The Team recommend that some parts of the elective subjects offered to undergraduates should also be taught in the core curriculum.

The teaching is of high quality and, overall, well appreciated by students. But as well as the feedback provided by students after each course, more feedback should be given back to students after submitting exams and papers. And care should be taken to ensure that the presence of two parallel courses does not hinder cooperation and collaboration between Estonian and international students.

The general and clinical facilities are excellent and provided with state of the art equipment. In combination with the small groups in lectures, seminars and practicals, this offers an optimal learning environment for students. But some staff seemed unaware of the importance of bio-security: in some laboratories, eyewashes for staff and students were missing or out of date, and emergency showers were absent in most laboratories; and the entrance into the necropsy hall for staff and students is not adequate to safeguard hygiene and prevent contamination. During our visit to the necropsy hall, staff did not insist on the necessary bio-security measures. The storage and documentation of all drugs – especially controlled drugs – should be improved immediately and be the explicit responsibility of one person. The isolation unit for production animals and equines is the only one in the country and should be upgraded as soon as possible. And the Team recommends that the facilities for the care of wildlife should be improved, as this would offer an opportunity to enhance this unique service and the learning of specialist skills.

The current outbreak of African swine fever hindered exposure of staff and students to pigs, but otherwise, there was adequate availability of animals and animal material for teaching. But efforts should be made to improve exposure of students to pigs, small ruminants, poultry, rabbits and exotic animals at the Institute. The Pathology Department should make greater efforts to obtain material from farms which staff and students of the Institute visit.

All the staff were well qualified and motivated and interacted well on a personal basis with students, colleagues and clients. But perhaps due to the nature of this small Institute, academic posts do not always have a detailed job description. To promote knowledge, the exchange of staff with institutes in other countries should be encouraged and facilitated, to increase the number of board-certified diplomates at the Institute.

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The Institute pursues an ambitious research programme. Regarding postgraduate education, the Team suggests that a new internship programme; the encouragement of specialisation; rewarding and promoting of board-certified diplomates and better support for PhD students are all very desirable for the further development of the Institute.

The preparation of a final thesis should be considered for all students and time created in the curriculum to allow for this.

Overall, the Team wishes to commend the quality of the undergraduate course delivered by the Institute.

The recommendation to ECOVE of the Expert Team is therefore that the Institute of Veterinary Medicine and Animal Sciences of the Estonian University of Life Sciences in Tartu should be

RE-APPROVED

INDICATORS (RATIOS)

ANNEX 1

					GUIDELINES
R1:	$\frac{\text{n}^\circ. \text{ undergraduate veterinary students}}{\text{n}^\circ. \text{ total academic FTE in veterinary training}}$	=		=	4.16 <8.381
					GUIDELINES
R2:	$\frac{\text{n}^\circ. \text{ undergraduate students}}{\text{n}^\circ. \text{ FTE total Faculty}}$	=		=	2.42 <9.377
					GUIDELINES
R3:	$\frac{\text{n}^\circ. \text{ undergraduate veterinary students}}{\text{n}^\circ. \text{ VS FTE in veterinary training}}$	=		=	5.31 <11.057
					GUIDELINES
R4:	$\frac{\text{n}^\circ. \text{ of students graduating annually}}{\text{n}^\circ. \text{ VS FTE in veterinary training}}$	=		=	0.72 <2.070
					GUIDELINES
R5:	$\frac{\text{n}^\circ. \text{ total FTE support staff in veterinary training}}{\text{n}^\circ. \text{ total FTE academic staff in veterinary training}}$	=		=	0.67 0.505-1.907
					GUIDELINES
R6:	$\frac{\text{Supervised practical training}}{\text{theoretical training}}$	=		=	0.49/0.47 <0.602
					GUIDELINES
R7:	$\frac{\text{Laboratory \& non clinical animal work}}{\text{Clinical work}}$	=		=	0.97/0.93 <1.809
					GUIDELINES
R8:	$\frac{\text{Teaching load}}{\text{Self directed learning}}$	=		=	2.36/2.34 2.59-46.60
					GUIDELINES
R9:	$\frac{\text{Total n}^\circ \text{ hours vet curriculum}}{\text{Total n}^\circ \text{ hours FH/VPH}}$	=		=	12.46 8.86-31.77
					GUIDELINES
R10:	$\frac{\text{Hours obligatory extramural work in veterinary inspection}}{\text{Total n}^\circ \text{ hours FH/VPH}}$	=		=	0.14 0.074-0.556

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					GUIDELINES
R11:	$\frac{\text{n}^\circ. \text{ of food-producing animals seen at the Faculty}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	0.31 >0.758
					GUIDELINES
R12:	$\frac{\text{n}^\circ. \text{ of individual food-animals consultations outside the Faculty}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	89.9 >8.325
					GUIDELINES
R13:	$\frac{\text{n}^\circ. \text{ of herd health visits}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	4.13 >0.326
					GUIDELINES
R14:	$\frac{\text{n}^\circ. \text{ of equine cases}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	13.18 >2.700
					GUIDELINES
R15:	$\frac{\text{n}^\circ. \text{ of poultry/rabbit cases}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	0.68 >0.407
					GUIDELINES
R16:	$\frac{\text{n}^\circ. \text{ of companion animals seen at Faculty}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	151.09 >48.06
					GUIDELINES
R17:	$\frac{\text{n}^\circ. \text{ of poultry (flocks)/rabbits (production units) seen}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	0.02 >0.035
					GUIDELINES
R18:	$\frac{\text{n}^\circ. \text{ of necropsies food producing animals + equines}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	3.89 >1.036
					GUIDELINES
R19:	$\frac{\text{n}^\circ. \text{ of poultry/rabbits}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	3.37 >0.601
					GUIDELINES
R20:	$\frac{\text{n}^\circ. \text{ of necropsies of companion animals}}{\text{n}^\circ. \text{ of students graduating annually}}$	=		=	2.86 >1.589

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ANNEX 2 Decision of ECOVE

The Committee concluded that the following Major Deficiency had been identified:

-) Inadequate biosecurity and biosafety procedures in several areas, including control of drug management, necropsy hall.

The 'Institute of Veterinary Medicine and Animal Sciences, Estonian University of Life Sciences, Tartu' is classified after Stage 1 Evaluation as holding the status of: **CONDITIONAL APPROVAL**.