

**European Association  
of Establishments for Veterinary Education**



**VISITATION REPORT**

**To the School of Veterinary Medicine, Faculty of Health Sciences, Aristotle University  
of Thessaloniki, Thessaloniki, Greece**

**On 11 – 15 October 2021**

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## **Introduction**

### **Brief history of the Veterinary Education Establishment (VEE) and of its previous ESEVT Visitations**

The Aristotle University of Thessaloniki (AUTH) (referred to as ‘VEE’ in this Report) is a State institution established in 1925. AUTH is the biggest University in Greece with over 70,000 students studying courses in most scientific disciplines.

The School of Veterinary Medicine (SVMT) of AUTH was founded in 1950. Since 2013 SVMT together with the Schools of Medicine, Dentistry, and Pharmacy form the Faculty of Health Sciences. The School offers a DVM degree in Veterinary Medicine, after the successful completion of 10 semesters of study.

In addition, and as part of its graduate studies programme, SVMT offers both MSc and PhD degrees.

### **Brief history of previous ESEVT Visitations**

In November 2011 the first EAEVE Visitation took place utilising the original Stage 1 evaluation scheme, and subsequently ECOVE delivered their report. As well as several areas of commendation, ECOVE found a number of Major Deficiencies:

1. Insufficient level of hands-on training in small animal medicine and surgery linked to a not fully functioning emergency service
2. Insufficient level of hands-on training in equine medicine and surgery linked to shortage of staff, inappropriate facilities and isolation facilities for horses
3. Lack of reaction and action by the Faculty to poor learning performance associated with long times to graduation and the scarce overall participation of students in any non-compulsory teaching and learning activities. Under these circumstances, the Faculty cannot assure, by the time students graduate, that all students have acquired the knowledge and the first day skills listed in the EAEVE guidelines.

All these deficiencies were addressed by the VEE, and in 2014 after a Re-visitation by an ESEVT team, ECOVE re-instated Thessaloniki as an Approved Establishment. However, the VEE still required a Stage 2 Visitation under the original regulations before full accreditation.

### **Main features of the VEE**

According to the SER from the SVMT, the main and positive features of the VEE are:

- Well trained and highly dedicated academic, support and administrative personnel committed to accomplishing the SVMT's mission
- Reputation for delivery of high-quality teaching, research and clinical/laboratory/consultancy services
- High levels of graduate employability and recognition. Many of our graduates hold important positions in administrative bodies in governmental, academic and private organisations throughout the world. In fact, some hold very senior positions in big international pharmaceutical companies. SVMT graduates are members of the Executive Committees and Research Councils of State Organisations, and/or Presidents or Committee Members of Scientific Associations, European Specialisation Colleges and the European Board of Veterinary Specialisation
- The School has full responsibility in designing its curriculum. Neither the University nor the Ministry may interfere with the actual content of the curriculum
- The operation of the Farm Animal Clinic and the Dairy Sheep Farm in Kolchiko, in combination with the development and maintenance of collaborations with external farms, have significantly improved students' training by providing practical knowledge in the fields of farm animal medicine and production.

### **Main developments since the last Visitation**

Since the last Visitation (2011) a number of developments have occurred in the SVMT including:

- The establishment of the Laboratory of Development-Breeding of Animal Models and Biomedical Research (2017) situated in the ground floor of the SVMT campus building
- Incorporation of the SVMT into the Faculty of Health Sciences
- An old but converted isolation facility for equines
- Implementation of an updated curriculum
- The implementation of a new quality policy for the Clinics, Diagnostic Laboratory and Laboratory of Diagnostic Imaging.

### **The major problems currently encountered by SVMT**

The current major problems at SVMT are:

- Insufficient funds for hiring technical and support staff and also for the appointment of new academic staff. Over the past years many staff members resigned or retired without being replaced. This situation is not expected to change in the near future, at least until the financial situation of the country improves.
- The old buildings of the Department of Clinical Sciences as well as the main SVMT building in the University campus need restoration. However, relevant State funds are not anticipated in the near future. The School should seek ways to increase its funding and income from other sources (See also 1.3. Suggestions).

The ESEVT SOP 2016 is valid for this Visitation.

## **1. Objectives and Organisation**

### **1.1. Findings**

#### **1.1.1. Brief description of the Strategic Plan**

The strategic plan of AUTH for 2019-2022 was developed by the University and confirmed by the Senate. It has 9 objectives closely related to the ESG standards.

The Strategic Plan (10-year period) is available on the homepage of the VEE in English. It contains the mission of the School and general aims, related to education, scientific research, and services. Additional objectives are related to public health and environment. SWOT analysis is part of this Strategic plan. The mission is to maintain the VEE as a centre of excellence for student veterinary education and to provide optimal veterinary service to the public. Data as who has developed the strategic plan, when, and for what timeframe is developed, are missing.

During the on-site visit, it became clear that the VEE also developed a 5-year strategy (2019-2022), according to the template provided by the University. This short-term strategy is evaluated annually and the fulfilled goals are reported to the University through the Informational system.

#### **1.1.2. Brief description of the Operating Plan**

The VEE has provided 3 major goals for the coming 3–5-year period in the SER, related to review of the curriculum, teaching activities (caseloads, farms), staff and relationship with the stakeholders. Timeframes and indicators of achievement of those objectives (goals) are not presented in the 10-year strategic plan.

#### **1.1.3. Brief description of the organisation of the VEE**

The organisational structure of the VEE and University is illustrated in two organisational charts and the list of the departments/units/clinic is provided.

The VEE consists of 5 departments which are further divided into laboratories (from 3 to 5 per department). Departments are led by the head and departmental general assembly. Head of the department is elected for a one-year term. Additionally, there are Companion Animal Clinic, Farm Animal Clinic, Diagnostic Laboratory, Laboratory of Diagnostic Imaging and Pharmacy. The administrative bodies of the VEE are the General Assembly, the Executive Committee and the Chair and Deputy Chair, who are elected by the academic staff, representatives of the undergraduate students and support staff. The Chair of the School heads the General Assembly and the Executive Committee and is responsible for coordination of the administration.

The Executive Committee holds its sessions before the General Assembly and all issues are discussed before the Assembly.

If a committee would like to include a specific topic to be discussed at a General Assembly session, a proposal should be reported to the secretary before the session.

The General Assembly consists of the Chair, the Vice Chair, the Heads of the Departments (5), and representatives of the academic staff from all Departments (30) the students (5), and the support staff (2).

Although the students are mentioned among the members of the General Assembly, it seems that students are very seldom present and do not play an active role in the Assembly as well as members of different committees.

There are several committees operating on the level of the VEE who are responsible for education, strategic planning and research and ethics.

#### **1.1.4. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the Strategic Plan and organisation of the VEE**

The strategic plan of VEE is published on the official web page (10 year strategic plan also available in English).

In SER, chapter 11.1.1, under the PDCA cycle, the “Check” section implies reviewing the strategic plan concerning all VEE’s activities by the pertinent evaluation authorities and the VEE’s Committees.

The Strategic Committee participates in the development of the strategic plans, both for 5 and 10 year-period, and both documents should be accepted by the General Assembly. The VEE’s Quality Assurance Unit (OMEA) is responsible for evaluation of the strategic plan and reporting the achieved goals to the University’s Quality Assurance Unit (MODIP).

The involvement of external stakeholders such as practitioners, veterinary associations in the design, assessment and implementation of the curriculum should be increased.

## **1.2. Comments**

- The objectives described in the ten-year strategic plan is very broad covering almost all topics concerning veterinary training, including research. Specific timeframes and detailed actions are lacking. The indicators are missing, as well as the vision of the VEE.
- The VEE does not take full advantage of the benefits that developing a strategy and planning of Operating plan can bring to the institution; it can also be observed that the VEE regularly sends the necessary data to the university but does not use it to close the PDCA cycle.
- The VEE does not benefit from the involvement of external stakeholders such as practitioners, representatives of veterinary associations, employers of veterinarians, etc., in the design, implementation, assessment and revision of the curriculum.

## **1.3. Suggestions for improvement**

- Short and long period strategic plans could be of benefit, as well as specific action (operating) plans for each specific goal (objective), not only to be designed to meet the requirements of the university, but also to be used to improve the quality system and/or the whole VEE.
- Active role of students in committees as well in the General Assembly should be more strongly encouraged.
- The organizational structure of the VEE should be more precisely presented in public documents such as the SER, especially its committees, as well its roles and members (not depending if they are obligatory according to the national law or of benefit to the VEE).

## **1.4. Decision**

The VEE is compliant with Standard 1.

## **2. Finances**

### **2.1. Findings**

#### **2.1.1. Brief description of the global financial process of the VEE and its autonomy**

The influence of the VEE on the financial process is limited because of the state funding system. The educational budget as part of the operating expenses allocated to the VEE is determined by a fixed algorithm in which the VEE receives a higher proportion in comparison to schools who only provide theoretical teaching. The annual expenditures are around 4.5 million euro per year. Only non-state funding can be used by the VEE fully autonomously. The VEE stresses that it has autonomy in deciding how to spend the allocated money but the procedure is bureaucratic.

Total funding is considered insufficient especially in hiring support staff, replacing and updating equipment and performing research. Planned investments of the school include refurbishing the Companion Animal Clinic and Equine unit, the Farm at Kolchiko, moving the Equine unit to Kolchiko, construction of a new Intensive Care Unit and purchase of MRI equipment. From an external grant 6% is taken off by the Research Committee. Some investments in equipment/facilities are done from this money.

Expenditure on personnel by State funds are done directly by the State and not by the school. The fluctuation in this budget as described in table 2.1.1 is explained by retirement of personnel and starting of new personnel.

Training to write proposals to receive grants is given by the University.

### **2.1.2. Brief description of the budget (expenditures, revenues, balance) of the last 3 years**

Expenditures of the last 3 years are described in table 2.1.1. Revenues come mainly from the clinical/diagnostic services and are around 600.000 euro annually. This is not including the salaries and expenses in utilities paid by the University which is written wrong in the SER.

### **2.1.3. Brief description of the projected budget (expenditures, revenues, balance) of the next 3 years**

Expected expenditures and revenues are foreseen 1,000,000 euros.

### **2.1.4. Brief description of the planned or on-going investments**

The VEE states that it has sufficient autonomy in deciding how to spend money. No detailed strategic plan with budget allocations is provided by the VEE. Only limited information is provided on the financial status of clinical and diagnostic services.

### **2.1.5. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the budget of the VEE**

The General Assembly of the Departments allocates the funds among the Laboratories and/or clinics and makes proposals to the General Assembly of the VEE. Description of the functioning/ election of the General assembly is in section 1.15. Students are represented in the General Assembly. Stakeholders have no place in the General Assembly and therefore no involvement in financial decisions.

## **2.2. Comments**

- The state funding in total is deemed insufficient, but the VEE is hopeful that enough funds can be obtained to do the necessary on-going and planned investment in the coming 3 years.
- External funds have to be increased either by external grants or client services.
- Financial transactions need a lot of paperwork/bureaucracy.

## **2.3. Suggestions for improvement**

- The level of bureaucracy in financial transactions should be reduced. For example, small payments result in excess working hours for the support staff.
- Funding of the VEE should be increased. Both the Ministry and the University should accept that teaching Veterinary Medicine, doing research on Veterinary Subjects and providing Veterinary Services is expensive and that therefore the State budget should be increased or the dividing of budget to the Faculties by the University should change in such a way that the Veterinary School will receive extra budget.

## **2.4. Decision**

The VEE is compliant with Standard 2 except for Substandard 2.1.

The VEE is partially compliant with Substandard 2.1 because of suboptimal financing; the Ministry and the University should accept that teaching Veterinary Medicine, doing research on Veterinary Subjects and providing Veterinary Services is expensive and that therefore the State budget should be increased or the dividing of the budget to the Faculties by the University should change in such a way that the Veterinary School will receive an increased budget.

## **3. Curriculum**

### **3.1. General curriculum**

#### **3.1.1. Findings**

##### **3.1.1.1. Brief description of the educational aims and strategy in order to propose a cohesive framework and to achieve the learning outcome**

Curriculum general goals and design are set by the Education Committee, including the allocation of hours to the different subjects; the Committee proposals are approved by the VEE's Board and the University Senate and ratified by the Greek Ministry of Education.

The teaching staff is responsible for setting the educational objectives and defining the minimum skills to be acquired upon the completion of each course.

Before graduation students must complete 300 ECTS in 5 years of study (10 semesters) which comprises 276 ECTS in core subjects + 18 ECTS in electives + 6 ECTS in EPT.

Each credit is considered equivalent to a range from 5 to 54 working hours, comprising contact hours teaching, supervised self-learning and individual study. The average duration of studies has been in 2019: 5 years (11%), 6 years (54.2%), 7 years (15.3%) and 8 years or more (19.5%). At the time of the Visitation the curriculum in place has been in effect since the academic year 2013-14. According to what is written in the SER, the total amount of hours of training required for graduation is 3,451. Graduates of integral studies are awarded with a qualification of Diplomate in Veterinary Medicine.

By the end of the 3<sup>rd</sup> year students must successfully complete 7 pre-requisite core courses to be allowed to enrol in the 4<sup>th</sup> year: General Histology & Embryology; Anatomy & Histology I, II and III; and Physiology I, II and III. Clinical subjects in the 10<sup>th</sup> semester are offered as whole practical training. All students must follow 3 months of EPT in the summer periods (for further information see 3.6.1.2).

The VEE uses new teaching methods as interactive lectures, seminars and discussions, work in groups, student's presentations, case analyses, and problem-based learning (PBL).

Computer aided or e-learning courses are developed by using the Intranet (Moodle platform) where all teachers publish materials, teaching contents, descriptions of laboratory practicals, recommended bibliographies, etc. Materials used in the lectures are provided to the students in advance or after the lessons.

The VEE addresses 4 hours of training in supervised self-learning as obligatory in table 3.1.2, column C (p.20 of the SER).

##### **3.1.1.2. Brief statement if all EU-listed subjects are taught in the core curriculum to each student (independently of the tracking system)**

All groups of subjects addressed on p.20 of the SOP 2016 and listed in the Annex 5.4.1 of the Directive 36/2005/EC are covered despite the fact that Table 3.1.2 of the SER does not include specific hours of training for some of these subjects because they are integrated in other subjects as follows: contents on *Medical physics* are taught in *Diagnostic Imaging*; contents on *Preventive medicine* are taught in *Infectious Diseases, Parasitic Diseases, Epidemiology and Farm Animal Medicine*; contents on *State veterinary services and public health* are taught in

*Food Hygiene and Inspection*; contents on *Therapy in all common domestic species* are taught in several courses on Medicine and Surgery of Companion and Farm Animals; contents on *Herd Health Management* are taught in *Animal Production* and *Farm Animal Medicine*; contents of *Professional ethics & behaviour* are taught in *Deontology*; contents on *Veterinary certification and report writing* are taught in *Veterinary Legislation, Forensic Medicine and Certification*; contents on *Communication skills* are taught or assessed in several subjects where students have to make public presentations and at the clinics; and contents in *Information literacy & data management* are taught in the *4h Seminar on Informatics and electronic resources*.

**3.1.1.3. Brief description of how curricular overlaps, redundancies, omissions and lack of consistency, transversality and/or integration of the curriculum are identified and corrected.**

The Education Committee monitors the application of the curriculum. This Committee is the body responsible for avoiding overlapping, redundancies, omissions, or lack of consistency and for optimising the balance between theoretical, practical, and clinical training. From 2018 the Education Committee initiated an extensive survey among 5<sup>th</sup> year students to evaluate the timely sequence of subjects in the curriculum, the necessity of midterm exams, the hours of training and contents of the different courses, the balance of theoretical *versus* practical training, etc.

Other Committees that have some input on the Curriculum are the Curriculum Committee, the Committee for Strategic Planning and the Research and Ethics Committee.

**3.1.1.4. Description of the selection procedures of the Electives by the students and the degree of freedom in their choice (e.g. what happens when too many students select one specific track)**

The students choose elective subjects from the 3<sup>rd</sup> to the 10<sup>th</sup> semester of the curriculum. Students must apply to the Secretariat at the beginning of each semester to enrol in electives; when receiving too many applications for a given elective, students' selection is done by the teaching staff and based on her/his performance in relevant courses. The students choose the subjects from various groups; table 3.1.5, p22 of the SER only lists the electives in Clinic. Students may enrol in subjects of other University Schools, not included in the VEE's curriculum, and after the approval of the content, it would be considered as electives.

**3.1.1.5. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment, and revision of the curriculum**

The teaching staff is responsible for setting the educational objectives and defining the minimum skills to be acquired upon the completion of each course.

The VEE revises and amends the curriculum every year, before the end of the academic year, and the updated document is uploaded to the VEE's website to be accessible to staff, students, and stakeholders.

Students contribute to the design and QA of individual courses and the curriculum since representatives are members of the Education Committee and VEE's Board and through their feedback in the evaluation questionnaires of courses and teaching staff.

External stakeholders are not formally involved in the development, implementation, assessment, and revision of the curriculum but they participate in the provision of facilities and animals for the practicals in Animal Production and Clinical training of Food producing Animals, and keep contact regularly with the teaching staff.



### **3.1.2. Comments**

- As verified onsite, all groups of subjects addressed on p.20 of the SOP 2016 and listed in the Annex 5.4.1 of the Directive 36/2005/EC are covered, but the VEE did not map the curriculum properly and did not report the hours of training in several core subjects in Table 3.1.2 of the SER as explained in 3.1.1.2. The VEE has to map the curriculum properly to demonstrate in public documents, as in Table 3.1.2 of the SER, that it covers all groups of subjects addressed on p.20 of the SOP 2016 and listed in the Annex 5.4.1 of the Directive 36/2005/EC.
- The VEE has to recalculate and correct in the SER the total amount of hours of training per student that are required for graduation, that is not 3,451 as verified during the onsite meeting with the responsables of the writing of this Standard, since they did not sum up the number of hours of training in Electives and EPT.
- The Team verified onsite with students and teachers that many subjects at the VEE use the supervised self-learning training of students, which is the base for student-centred learning, even when they did not include the hours in column C of table 3.1.2 of the SER as a result of concept misunderstanding, but most are offered on a voluntary basis to the students.
- The curriculum in general offers a good balance between theoretical (lectures + seminars =1,583hours) and practical work (1,884 hours) in core subjects, with an approximate ratio of 1:1.2, respectively.
- The curriculum conforms to the duration and contents addressed in the EU Directive 36/2005 and covers all domestic species.
- It is worth noting that the curriculum includes many core subjects in uncommon topics like *Farming and Pathology of Aquatic Organisms*, *Apiculture and Bee Diseases*, and *Diseases of Exotic Animals*.
- The use of new teaching methodologies such as case-based teaching, interactive computer-assisted learning, e-learning through Moodle platform, is commendable and used by 100% of subjects at the VEE.
- The range of equivalence of 1 ECTS in hours of working for the student in EU ranges from 25 to 30h, but in the VEE it is too wide (from 5 to 54) which makes it very difficult to harmonise the student workload in between the different semesters. This explains, for instance, that the 5 years of the curriculum do not have a balanced number of hours of training, even when each semester has 30 ECTS, and there is a clear overload in the 4<sup>th</sup> year of studies.

### **3.1.3. Suggestions for improvement**

- The VEE should fix an equivalence of working hours per ECTS equivalent to the range applying in the Higher Education Area of the EU member states.
- The VEE has to propose a more balanced number of hours of training in the 5 years of study and avoid content overload in some given courses and/or subjects.
- The VEE must correct the inaccurate data regarding the hours of training in all groups of subjects addressed on p.20 of the SOP 2016 and listed in the Annex 5.4.1 of the Directive 36/2005/EC, and in supervised self-learning in the SER (table 3.1.2) before it is made public.
- The VEE is suggested to publish accurate Guidelines for graduation, summarising the Total number of ECTS, the number of ECTS in core subjects, in elective subjects and in EPT; including the prerequisites for enrolment in the 4<sup>th</sup> year, for enrolment in EPT, etc.
- The VEE should consider the use of some hours of training in the subjects as obligatory (and not only voluntary) supervised self-learning to promote student-centred learning.

- The VEE should formally involve external stakeholders in the development, implementation, assessment, and revision of the curriculum.

## **3.2. Basic sciences**

### **3.2.1. Findings**

#### **3.2.1.1. Brief description of the theoretical and practical education in basic sciences**

The curriculum includes the major Basic subjects (Physics, Chemistry, Animal Biology, Plant Biology and Biomathematics) and Basic sciences (Anatomy, Histology & Embryology, Physiology, Biochemistry, Genetics, Pharmacology & Pharmacy, Toxicology, Microbiology, Immunology, Epidemiology and Professional Ethics), addressed on p.32 of the SOP 2016 and in Annex 5.4.1 of the Directive 36/2005/EC, required for veterinary training.

All subjects considered as Basic Sciences are taught in the first 9 semesters of the curriculum and Basic Subjects during the first and the third semester. Overall Basic Subjects and Basic Sciences account for 115 ECTS about 38% of the whole curriculum (300 ECTS).

Students are introduced to safety measures before starting activities in laboratories, clinics, and field practice.

The size of the group for Laboratory practicals of Basic Subjects and Basic Sciences is around 20-30 students per group with 1-2 teachers.

For practicals in Anatomy some cadavers are fresh, kept in refrigeration until their use, or fixed in formalin. Also, parts of cadavers, bones, radiographs, plastinated parts of the body, and anatomical and/or computer assisted models are used for teaching.

Groups of 20 students in Pathology are attending practicals at the necropsy room with 1 teacher. Cadavers come from the VEE's Clinics, outside clinics, farms, etc. For performing the necropsy, students wear his/her own surgical pyjamas covered by a lab coat and rubber boots; the service provides surgical gloves.

### **3.2.2. Comments**

- The curriculum includes the major Basic subjects and Basic sciences, addressed on p.32 of the SOP 2016 and in the Directive 36/2005/EC, required for veterinary training so, the most important items of the basic disciplines are taught.
- The Basic Sciences have a good veterinary orientation; both in the content and practical work and are coordinated to avoid overlapping or gaps.
- The number of hours for basic subjects is too high (38% of total ECTS) when compared to other Specific veterinary subjects (Clinical Sciences, Animal Production, Food Safety and Quality)
- For some subjects (*Animal Ethology, Animal Welfare*) Table 3.1.2 of the SER reflects absence of practicals.
- Anatomy uses cadavers preserved in formaldehyde that is a highly toxic systemic poison, very well absorbed by inhalation and the facilities and equipment in the dissection room do not prevent the intoxication of staff and students.
- Even when the students are instructed in the first year on biosafety and biosecurity and before starting practicals in the different subjects, there is not a signature required from the students on their knowledge and compromise of fulfilment of the rules.

### **3.2.3. Suggestions for improvement**

- The curriculum should be adapted to reduce the number of contact hours for Basic Subjects and Sciences and to increase the number of contact hours in other Specific veterinary subjects (Clinical Sciences, Animal Production, Food Safety and Quality).

- The VEE should guarantee hands-on training of students in live animals to secure the acquisition of competencies on evaluation of normal behaviour and animal welfare.
- Anatomy must immediately abandon the use of cadavers preserved in formaldehyde.
- It would be recommendable to get the signature of the students on their knowledge of the biosafety and biosecurity risks and their compromise to fulfil the preventive measures before starting practicals in any subject

### **3.3. Clinical Sciences in companion animals (including equine and exotic pets)**

#### **3.3.1. Findings**

##### **3.3.1.1. Brief description of the theoretical, practical and clinical education in Clinical Sciences in companion animals**

Courses of clinical disciplines in the format of theoretical lectures, practical instructions and clinical rotations are taught from the 3<sup>rd</sup> year on. Successful completion of seven preclinical courses (General Histology-Embryology, Anatomy-Histology I, Anatomy-Histology II, Anatomy-Histology III, Physiology I Physiology II, Physiology III) allows the student to access the 4<sup>th</sup> year, where the clinical rotations start. During the 4<sup>th</sup> and the 5<sup>th</sup> year, students attend the clinical rotations in the mornings as well as theoretical lectures in the afternoon of the clinical disciplines.

##### **3.3.1.2. Description of the core clinical exercises/practicals/seminars in companion animals prior to the start of the clinical rotations**

The clinical training before core clinical rotations starts in the 5<sup>th</sup> semester with the course of 'Propaedeutic of Veterinary Medicine, Surgery and Obstetrics'. There are 31 hours of theoretical lectures and 44 hours of practical sessions. The latter are given to groups of 10 to 12 students and comprise handling and restraint, and clinical and laboratory examination for companion animals, farm animals and equids. Simulators are used for practicing suture techniques. One horse, one dog and one cat are used for demonstration of non-invasive clinical techniques.

No clinical skills lab is available at the VEE.

##### **3.3.1.3. Description of the core clinical rotations and emergency services (*both intramural VTH and ambulatory clinics*) in companion animals and the direct involvement of undergraduate students in it (*responsibilities, hands-on versus observation, report writing...*)**

Core clinical rotations take place in the 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> semester. In every semester, there is a 14-week rotation of which 4.5 are spent in companion animals and horses, 4.5 weeks are spent in farm animals and the rest of the time in food hygiene rotations. During their companion animal rotation, which also includes exotics and equine, students are divided into 3 subgroups of 12 to 14 students. The three subgroups rotate in the following way: one group in surgery (with equine and obstetrics), one group in medicine and one group is further divided to attend either anaesthesia, radiology, ophthalmology or the exotic animal clinics. In the imaging section, students learn how to position the patients to take the radiographs and how to evaluate images. They attend ultrasound examinations and help with the writing of the reports. The students under the supervision of resident/ postgraduate students perform the preparation and monitoring of their patients for anaesthesia. Students attend surgeries and perform cat spays and neuters themselves, while being supervised by a staff member. In medicine, students work in small groups with a staff member, to examine cases admitted to the hospital or patients that are hospitalised, they do ancillary tests and discuss diagnosis and treatment with them.

Fourth year students attend clinics from 9:00 to 13:00, where they are in contact with the patients admitted to the hospital. Fifth year students attend the clinics from 9:00 to 14:00, where they perform the same tasks as the 4<sup>th</sup> year students, but with a higher degree of autonomy. They do ancillary testing, discuss treatment options with the staff and assist during surgeries. On Fridays, all students attend their elective courses from 12:00 on.

Elective courses, counting for 18 ECTS over the whole curriculum, are available from the 3<sup>rd</sup> to the 10<sup>th</sup> semester. The offer includes clinical topics for students of the 9<sup>th</sup> and the 10<sup>th</sup> semester, such as medicine, anaesthesia and intensive care, ophthalmology, dentistry and maxillofacial surgery and avian medicine. Students apply to these courses and are selected by the academic staff based on the previous academic results. For those who are not accepted in their selected disciplines, non-clinical courses are available.

Out-of-hour rotations are organised in the companion animal hospital in the following way: fourth-year students take part in five out-of-hour shifts per semester. During these shifts, they stay in the clinics from 13:00 to 22:00. Fifth-year students attend five out-of-hours services per semester, from 14:00 to 9:00 the next day. These shifts are mandatory during the rotation and voluntary during the examination period. Each shift is served by four students, four postgraduate trainees, three staff members (anaesthetist, surgeon and internal medicine vet) to make the hospital run 24/7, except for the periods where the hospital is closed.

Training in equine medicine and surgery takes place in the clinics and in riding stables under the supervision of an equine clinician or postgraduate trainees. Fourth year students are expected to take the history of the patient and to do a clinical examination. They fill out the papers and learn how to establish a differential diagnosis. Fifth year students, further perform ancillary tests and discuss diagnosis and treatment options with the staff. Equine reproduction is taught within theoretical lectures, and although there are no intramural practicals for this topic, students receive their related practical training during EPT.

A logbook accompanies the student throughout the entire clinical rotation in companion animals and equine. Students fill in clinical acts and patients they have followed and senior teachers sign every single entrance. During the final oral exam, the logbook is presented to the teacher, who revises the clinical cases seen by the student.

### **3.3.2. Comments**

- Each student will do only 8 or 9 half days of practical training in equine medicine and surgery during the whole curriculum. While there are no practicals in equine reproduction, students receive practical training in this area during EPT. One single senior teacher is assuring the entire practical and theoretical teaching which means that this person will do the work in the clinics and the ambulatory clinics, as well as assuring the 24/7 emergency service of his own.
- The clinic owns one horse, two dogs and one cat for clinical teaching of the students in 7<sup>th</sup> semester. Although no invasive procedures are performed for student training, the intense handling of these animals by approximately 120 students may render them less compliant with time. Having more animals would allow more students to practice before starting their clinical rotations. The cat and the two dogs are also used as blood donors. There are dogs from the army that are used for these teaching purposes.
- Students have an average workload of 22.7 hours per week in the first 6 semesters, while the average weekly workload is 32.6 hours in the last 4 semesters.
- The VEE does not have a clinical skills lab to provide students a risk-free hands-on experience in different practical simulated procedures to enhance their abilities before practising with animals.

### **3.3.3. Suggestions for improvement**

- The practical training in equines should ideally be provided by two senior teachers, as it is unlikely that one single person can assure the practical training in clinics, in ambulatory clinics and 24/7 emergency service. Therefore, a second teacher should be hired for this activity. A second teacher would also allow for more practical teaching hours in equine medicine, surgery and reproduction.
- The VEE is encouraged to have more teaching animals and keep them in better conditions (see Standard 4) to allow for more hands-on preclinical training and showing optimal animal welfare practice to the students.
- The VEE is encouraged to establish a permanent clinical skills lab provided with simulators, dummies, etc., to allow students practice on sutures, bandages, acupuncture, intubation, catheterisation, etc. before entering clinical courses.

## **3.4. Clinical Sciences in food-producing animals (including Animal Production)**

### **3.4.1. Findings**

The description of the pre-clinical and clinical activities with farmed animals are described below.

#### **3.4.1.1. Brief description of the theoretical, practical and clinical education in Clinical Sciences in food-producing animals**

Non-clinical animal work totals 528 hours during 5 years, and Clinical Animal Work totals 935 during 3 years (3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year). An additional 30h of lectures with 2h of practical work with animals are provided in Diagnostic Imaging teaching.

Obstetrics, Reproduction and Reproductive Disorders have 110 hours of lectures and Medicine and Surgery including anaesthesiology offers 352 hours of lectures. Total practical clinical animal work sums up to 733 hours per student.

There are no elective courses related to Farm Animal Clinics.

In contrast with Companion Animal Clinics, Farm Animal Clinics does not provide or demand students to have their logbook or record in any way the procedures each student was involved in. Thus, there is no personal register of hands-on activities or skills. Teaching staff, however, keep a record of the clinical activities, including herd health investigation, which the different groups were exposed to. These are retained so that there is a record of which activities or procedures were presented to the groups and can be used as a discussion topic in the final examination.

No reports of clinical cases are asked for, but every Friday there is a session for discussion and analysis of the week's clinical cases. The cases may be presented by the involved students, but this is voluntary. The discussion is coordinated by a faculty member and the rest of the students and any postgraduate veterinarians may comment on the diagnostic or treatment approach. The presentations are not officially graded, but they are part of the continuous evaluation of the students.

There is no written examination for clinical studies. Final evaluation of Farm Animal Clinics consists of an oral exam in which clinical cases (sometimes with images) are presented and discussed.

#### **3.4.1.2. Description of the core clinical exercises/practicals/seminars in food-producing animals prior to the start of the clinical rotations**

In the 3<sup>rd</sup> year students are first introduced to pre-clinical activities - Propedeutics (36 h lectures, 31 practical training) and Farm Animal Medicine (52 h lectures).

**3.4.1.3. Description of the core clinical rotations, emergency services (*both intramural VTH and ambulatory clinics*) and herd health visits in food-producing animals (*i.e. ruminants, pigs and poultry*) and the direct involvement of undergraduate students in it (*responsibilities, hands-on versus observation, report writing, ..*)**

In the 4<sup>th</sup> year students are divided into 3 groups and rotate between Companion Animals Clinics, Farm Animals Clinics and Diagnostic Pathology/Food Science.

Clinical Training in Farm Animals occupies 87 hours (2 ECTS) per semester.

Each group may then be divided into sub-groups according to scientific subjects (e.g. medicine, surgery, obstetrics, reproduction technology, etc.) and species (e.g. ruminants, swine or poultry).

Farm Animal groups are engaged in clinical training 5 mornings of the week along the 13-14 weeks of each semester. Groups' size in the 4<sup>th</sup> year varies: 1 (40 students), 2 (20 students) or 3 (12 students), according to the day of the week. Clinical activities include observation of fetotomy, C-section or laparotomy in sheep, liver biopsy, ruminocentesis and oesophageal intubation, among others in the 7<sup>th</sup> semester; cow laparotomy, udder sutures, claw trimming, ultrasound examination, among others in the 8<sup>th</sup> semester. Claw trimming is practiced by students on hooves brought from the slaughterhouse.

5<sup>th</sup> year students are divided in 4 groups of 10 students that rotate among ambulatory visits to farms (ruminant, swine, poultry and rabbit) and in-clinic activities at the Kolchiko Teaching Hospital (TH), that includes medicine, obstetrics, surgery, hoof trimming and other clinical activities. The groups in Kolchiko TH participate in clinical and surgical work performed on animals brought by farmers to these facilities or on sheep from the sheep farm. Clinical training done in Kolchiko TH include C-section (sometimes replaced by simple laparotomy) in sheep, laparotomy in cows, udder suture and hoof trimming in cattle and fetotomy of dead calves offered by cooperating farms. They are supervised by faculty members, post-graduates or interns.

During the Team's visit to KTH, two very large groups (approx. 15 students each) of 4<sup>th</sup> and 5<sup>th</sup> year students together were being exposed to the clinical examination of one cow and to udder ultrasound of sheep. There was very low hands-on possibility for most of the students.

Ambulatory service is done using two mobile units that leave Thessaloniki for different activities that vary according to week days: poultry farm visit, cattle reproduction farm visit, rabbits farm visit or porcine farm visit.

At farms students are also involved in investigating the most common herd diseases (production medicine).

Two or 3 5<sup>th</sup> year students are on call 4 nights per week for emergencies (mobile clinic). Each student has to be on call for at least 1 day per semester, but they can volunteer for more. In total, students have 1 day per semester in Farm-animal ambulatory clinics.

**3.4.1.4. Brief description of the theoretical and practical education in Animal Production**

According to the SER practical training in animal production is done at a sheep farm near Kolchiko keeping around 150 animals. The visits to this facility and animals start in the 1<sup>st</sup> year of studies. Training includes handling, hoof trimming, vaccination and drenching, welfare evaluation, behaviour assessment, lambing etc.

Students from the 4<sup>th</sup> and 5<sup>th</sup> year also visit cattle-swine farms (15 visits per student per year), and poultry-rabbit farms (7 farms per student per year), as training in Animal Production and Herd Health Management. The Team visited the facilities in the American Farm School where cattle, laying-hens and turkey production is demonstrated.

In elective studies related to Animal Production it is possible to take an extra 46h of lectures and 20h of non-clinical animal work. Courses available are Turkey, Quail, Duck and Goose Production (5<sup>th</sup> semester) and Dairy Herd Management (8<sup>th</sup> semester).

It should also be highlighted that there is training in Aquatic Organisms (26h lectures, 16 practical training), including an elective course on Pathology of farmed aquatic organisms, and in Apiculture (10h lectures, 10 practical training).

Additionally to the above mentioned training in Animal Production there is an External (extramural) practical training (EPT) that is part of the course (6 ECTS). Internal supervision is obligatory. In total it comprises 3 periods of one month and takes place in summer. The period involving Animal Production occurs at the end of the 4<sup>th</sup> semester in farms and animal production units selected by the student. At the end of this period students have to hand in an electronic report and also fill in a survey regarding the activity and features of the farm where they have been staying. This e-report is revised, assessed and approved by a teacher.

### **3.4.2. Comments**

- The VEE's curriculum shows a reasonable distribution within farm animal husbandry, handling, medicine, herd-health and surgery. It is well balanced and includes many food-producing species. Contact with farm animals starts reasonably early, including the EPT at the end of the 2<sup>nd</sup> year and visits to sheep farms in the 1<sup>st</sup> year. This enables students to become at ease with different species, before being involved in clinical work.
- There is no reference of students being presented to farm animal welfare assessment protocols.
- It is also praiseworthy the intense clinical activity both at the hospital as in the ambulatory and emergency work, both in the 4<sup>th</sup> and 5<sup>th</sup> year. All areas of medicine, surgery, obstetrics, nutrition and production are covered for the most important food-producing species. The off-hours emergency and being on call at nights and weekends, offers good opportunities to view and follow interesting and rarer clinical cases.
- The number of sheep and cows submitted to elective C-section and laparotomy should be viewed with concern even if approved by the Ethics Committee.
- The students/teacher ratio is very high, especially if the calculation includes only full-time fully qualified teachers. Students are supervised by post-graduates, PhD students and interns that may not be experienced enough for teaching.
- Having groups of 4<sup>th</sup> and 5<sup>th</sup> year together can be seen as a huge disadvantage to both groups of students, as focalised teaching and hands-on training is very unlikely.
- In addition, the possibility of hands-on training in farm animal clinics is insufficient, taking into account the calendar and the groups' size.
- Although it is not mentioned in the SER, the table in the SER Annexes with the distribution of the various activities shows that students have to participate in a weekly group session in which clinical cases are analysed and discussed. This is an excellent teaching tool but presentation by the students is not mandatory.
- The Elective Courses are a very good way of expanding the knowledge needed for some more specialized work. However, what is offered to the SVMT students does not include many topics related to farm animals (clinics or production).
- The External Practical Training (EPT) is very limited (3 months altogether) and for farm animals it is placed very early in the course. At this stage, students will learn about handling and husbandry, but probably not much on clinical issues (it does not include work with practitioners). The students are evaluated by the farm staff and have to hand in a report and a questionnaire put to the farm staff. This ensures involvement and commitment, which is commendable.
- In contrast to the Companion Animal Clinics and to what is referred to in the SER, there is no record of individual students' hands-on clinical work. Students do not have to demonstrate that they have performed clinical skills or present something like a logbook to be admitted to the final assessment.

- Examination is based on discussion of individual or group clinical cases. However, the scientific/clinical basic knowledge or clinical skills, essential for a competent clinical work, may not be wholly assessed.

### **3.4.3. Suggestions for improvement**

- Hands-on is essential for good clinical training. For this to be possible, students have to be presented to clinical cases in small groups. A fully qualified veterinarian should always be present with the 5<sup>th</sup> year groups numbering no more than 5 or 6 students.
- The EPT in food producing animals is very limited and provided at a very early stage. The VEE could consider a mandatory training period of several months to be established after the 8<sup>th</sup> semester or even as an 11<sup>th</sup> semester.
- Other periods of extracurricular training during holidays (preferentially in a track form) could also be implemented. For example, an extra fortnight per year working with practitioners or at a farm.
- Discussion of weekly clinical cases is a very good way to get students more involved in the clinical training, but this will have better results if a selected group of students have to prepare and deliver a presentation. This should be mandatory, and, if possible, subject to grading.
- The VEE is encouraged to establish a short internship in farms (1 week) in the first year of the course with the objective of raising awareness and motivating students for production animals, which is being lost because of urbanization of society.
- The final exam using clinical cases is a good and practical way of assessing students' knowledge. However, the lack of a written exam may reduce the possibility of truly measuring scientific knowledge. It is suggested that a type of theoretical examination is associated with the current form of evaluation.
- Additionally it is suggested that a logbook, similar to what is used in Companion Animals Clinics, is also filled in Farm Animal Clinics. This logbook should be screened before the final assessment to ensure sufficient hands-on training of every student.
- Teaching farm animal welfare assessment using validated protocols should be considered as there is an increasing demand for food-producing welfare certification.

## **3.5. Food Safety and Quality (FSQ)**

### **3.5.1. Findings**

#### **3.5.1.1. Brief description of the theoretical and practical education in FSQ**

Total curriculum hours related to FSQ is provided in table 3.1.2 consisting of the subject Food Hygiene, Food Microbiology, Food Technology and practical work in slaughtering and food processing plants. In total this is 300 curriculum hours of the total 3.451 curriculum, i.e. around 9% of the curriculum. Practical training starts in the 7<sup>th</sup> semester and ends in the 10<sup>th</sup> semester. All students visit slaughterhouses, food processing plants and food markets. Also EPT is in the curriculum for FSQ and VPH, in total 4 weeks. FSQ and VPH related education starts in the 6<sup>th</sup> semester and then returns every following semester. The topics related to FSQ listed in the SER 3.1.5 are the topics which are important for a veterinary curriculum.

Slaughterhouses are on average 30 km out of Thessaloniki. Students are transported by rented buses (with drivers).

#### **3.5.1.2. Description (*timing, group size per teacher,..*) of the teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin**



Practical training starts in the 7<sup>th</sup> semester. Students are divided in groups of 8-10 and are trained under supervision of a member of staff of the Laboratory of Animal Food Products Hygiene-Veterinary Public Health. The duration of a visit is 3 hours.

### **3.5.2. Comments**

- Students visit slaughterhouses several times (12). AM and PM inspection is taught by enthusiastic teachers of the VEE with expert knowledge of the subject. In the slaughterhouse they are assisted by an Official Veterinarian. Students are taught in small groups (5 students per teacher) and react very positively to this form of teaching. The students explained that they learned a lot. Assessment takes place in the slaughterhouse. There are long lasting relationships between the VEE and the slaughterhouses.
- Students receive training in Hygiene and Technology of Milk and Dairy Products in a course including practicals where students have to use self-learning activities under the supervision of a Professor. The assessment of the course includes an examination but also a Quiz and marking for the lab journal.
- Meat/fish technology is taught in the sixth semester in a well-equipped lab with possibilities for students to produce different kinds of meat products. Also visits to a meat processing plant and a fish market are part of the curriculum.
- No specific courses on FSQ are present in the curriculum in the first 5 semesters, because the VEE is of the opinion that students need first background knowledge to make e.g. the slaughterhouse visits worthwhile.
- The EPT period helps the students to get knowledge on FSQ. Specific learning outcomes for this EPT are not described but long lasting contacts are in place between the VEE and the places where students can do this EPT.
- A resident has started in the residency programme of the ECVPH.

### **3.5.3. Suggestions for improvement**

- The VEE is encouraged to add parts of the learning outcomes in the logbook of the students as is done in the clinics e.g. having done a PM inspection on a pig.
- It is suggested that the VEE introduces already starting students (first semesters) with FSQ.

## **3.6. Professional knowledge**

### **3.6.1. Findings**

#### **3.6.1.1. Brief description of the theoretical and practical education in professional Knowledge**

The subjects regarding Professional Knowledge addressed on p.20 of the SOP 2016 and listed in the Annex 5.4.1 of the Directive 36/2005/EC, are covered despite the fact that Table 3.1.2 of the SER does not include specific hours of training for some of these subjects, because they are integrated in other subjects: *Professional ethics & behaviour* are taught in *Deontology, Ethology and Animal Welfare*; contents on *Veterinary certification and report writing* are taught in *Veterinary Legislation, Forensic Medicine and Certification*; contents on *Communication skills* are taught or assessed in several subjects where students have to make public presentations and at the clinics; and contents in *Information literacy & data management* are taught in the *Seminar on Informatics and electronic resources*.

According to table 3.1.3, students can take 24h of lectures and 4h of laboratory and desk based work on professional knowledge, as electives.

The VEE considers EPT to be an opportunity for students to have contact with “real life professional experience”, contributing to the acquisition of Professional Knowledge.

### **3.6.1.2. Brief description of the organisation, selection procedures and supervision of the EPT**

Training takes place during the summer months after 4<sup>th</sup>, 6<sup>th</sup> and 8<sup>th</sup> semesters and collectively lasts three months, one month each.

In the first session, the students are placed in animal production units, in the second session in companion animal practices, and in the third and last session, the students contact with Food hygiene and the Industry of foods of animal origin.

During EPT the students are supervised by the person in charge of the facility.

Students can choose the location for their EPT from a list of collaborating private enterprises or public units which are checked for their ability to offer successful training. The students evaluate their extramural training and the facilities with the use of electronic questionnaires, and the supervisor also evaluates the students taking the EPT.

### **3.6.1.3. Description of the procedures (e.g. logbooks) used to ascertain the achievement of each core practical/clinical activity (pre-clinical, clinical, ambulatory clinics, EPT) and professional knowledge by each student (independently of the tracking system)**

During the EPT, students have to keep a weekly electronic diary of their activities and complete a questionnaire covering the scientific areas of the practice they attend in that period, which aims to their “directed self-education”. Students are also evaluated by a person in charge of the practice. All these electronic data are kept, analysed and evaluated by the responsible professor of extramural education. External Practical training corresponds to 6 ECTS in total.

The student is required to keep an informed record (student logbook) during small animal clinical rotations. The work is not subjected to grading but confirmation of completion by the supervising faculty member is required for the successful outcome of the studies and access to final examinations.

In food producing animals practicals, the logbook does not apply. Instead, there is an informatic registration system of the cases assisted by students, but no record of the skills practiced individually.

The students are assessed in practical/clinical activity in the faculty by taking practical oral exams.

The logbook does not apply to activities in Food Hygiene.

Verification of attendance of each practical is made by the signature of the faculty member responsible and essential to be accepted to examinations, but it is not graded.

### **3.6.2. Comments**

- The access to EPT is well organized, guaranteeing that every student has contact with different work environments since the second year of studies.
- It is not completely clear if the record of activities performed on EPT respects the same system in the three sessions available for students.
- The logbook for small animal practical skills covers different situations, emergencies, surgeries, follow-up cases, etc., but it is not graded and that could impair the assessment of progression.
- There is insufficient assessment and registration of clinical skills performed by students in Food Producing Animals and Food Hygiene.

### **3.6.3. Suggestions for improvement**

- The VEE should implement a grading system for the logbook.
- The VEE has to create the same graded logbook system for clinics of Food Producing Animals and Food Hygiene.

- The VEE has to extend the opportunity for students to choose EPT on Food Producing Animals later in their studies.
- The record of the activities performed during EPT should be objective and harmonized between the three sessions taken by the students.

### **3.7. Decision**

The VEE is compliant with Standard 3 except for Substandard 3.1.

The VEE is partially compliant with Substandard 3.1 because of the inaccurate data addressed in Table 3.1.2 of the SER regarding the hours of training in all groups of subjects addressed on p.20 of the SOP 2016 and listed in the Annex V.4.1 of the Directive 36/2005/EC in order to demonstrate compliance with the EU Directive.

## **4. Facilities and equipment**

### **4.1. Findings**

#### **4.1.1. Brief description of the location and organisation of the facilities used for the veterinary curriculum**

The SVMT occupies buildings in three distinct locations:

- the main building, which is situated at the main campus of Aristotle University in the city centre of Thessaloniki, with offices, lecture halls, classrooms for group work and rooms for the student organisation.
- the buildings of the clinics, situated 4 km from the main campus close to the Thessaloniki railway station. The main building houses the companion animal and the farm animal clinics, the laboratory of diagnostic imaging, the diagnostic laboratory, the necropsy room, and stables.
- the Kolchiko farm, situated at approximately 35 km north-east of the Thessaloniki city centre, with approximately 55 hectares of exploitable land and buildings for the farm animal clinic, the dairy sheep farm, the goat farm (currently not in use), isolation stables, forage storage halls, offices, lecture halls, and rooms for accommodation of staff and students.

#### **4.1.2. Description of the adequacy for the veterinary training of the premises for:**

- 1. Lecturing, group work and practical work**
- 2. Housing healthy, hospitalised and isolated animals**
- 3. Clinical activities, diagnostic services and necropsy**
- 4. FSQ & VPH**
- 5. Study and self-learning, catering, locker rooms, accommodation for on call students and leisure**

#### **Lecturing, group work and practical work**

There are 9 lecture halls for 24 to 228 students at the main building and 4 lecture halls for 25 to 113 students at the clinics. Numerous rooms are available for practical training in physiology, pharmacology, anatomical dissection and necropsy, animal nutrition and husbandry, histology, food and milk hygiene, microbiology and parasitology and group work. There is a small surgery skills lab and rooms occupied by the services of poultry medicine and fish health. A group work room is also available at the Kolchiko farm (16 students).

#### **Housing healthy, hospitalised and isolated animals**

Housing of healthy animals for teaching purposes: In the basement of the main building, six rooms provide housing for 10 sheep, 2 horses, 50 guinea pigs, 40 rabbits and 30 frogs. The sheep farm at the Kolchiko farm can house up to 300 sheep and is equipped with a state of the

art milking parlour. Three animal breeding institutes accommodate students on a regular basis: 1) the Iona Institute of Reproduction (7 km from city centre) with 41 bulls, 6 horses, 100 rams, 60 bucks, 20 boars and 500 dairy cows; 2) the American Farm School in Pylaia (10 km from city centre) with a hatchery for 100,000 eggs, 21,500 layer hens, 20,000 turkeys, and 3,800 broilers, 130 cows in lactation; 3) the farm of the Agricultural Institute in Giannitsa with 100 cows and 2,000 sheep. Farm animals can be hospitalised at the Kolchiko farm and at the clinics. Overall, there are places for 30 adult cattle, 25 calves and 30 small ruminants. The two clinic-owned dogs and the one clinic-owned cat are housed individually in concrete cages of approximately 1.8 and 0.9 m<sup>2</sup>, respectively. These animals are used as blood donors for client-owned animals and for teaching purposes. No environmental enrichment is present in the cages, no individual records are available for these animals. The information on the use of these animals obtained orally (as no records were available) indicates overuse.

The clinical facilities provide space for the hospitalisation of 10 horses, 38 dogs, 9 cats and 17 exotics animals (small mammals, aquatic and terrestrial turtles, and other animals). Isolation facilities provide space for 33 farm animals and horses, 7 companion animals, and one separate stable for horses. The companion animal clinic has 13 consultation rooms, 4 surgery theatres and 2 rooms for endoscopy and otoscopy, respectively.

The equine isolation unit has three separate stalls (sharing a common airspace) that are accessible through one corridor. A separate room is used as a changing and storage room. The equine isolation unit is in a different building than the ones of the clinic stables. The small animal isolation unit is in an area distant from the area of normal clinical activity and it is accessible through a door from the main corridor of the hospital. A separate door from outside the building facilitates access of potentially infectious animals and evacuation of waste material without the need for trespassing the clean area of the hospital. Several steel cages are located in one single room, which is equipped with a sink, an examination table and cupboard for the storage of drugs and disposables. The entrance area serves as a changing room. SOPs are available for the companion animal isolation unit.

Kolchiko Teaching Hospital (KTH) has 5 dedicated pens with a head locker, feed and water troughs and straw bedding. Here individual cows are kept for clinical examination and training by students visiting the hospital. It is also where cattle are kept for a few days when recovering from surgery. KTH is very close to the sheep farm. Four surgery theatres are available for cattle, one for cows and four tables in one room for the surgery of small ruminants or calves. There is a preparation room for surgery and a room for intensive care. There is a room prepared with 10 to 15 clamps to fix cattle limbs brought from the slaughterhouse for hoof trimming training. A chute for hoof trimming in live animals is also available.

After arriving at KTH, students change into overalls and rubber-boots in a large hall. The clothes and bags are left in this place during the time the students are there.

### **Clinical activities, diagnostic services and necropsy**

The buildings occupied by the clinical services for companion animals and horses are purpose-built, functional and clean. There is enough space to comfortably accommodate staff, students and patients.

There are two noteworthy experimental research facilities at the SVMT: The Department of Microbiology houses a P3 negative pressure lab for necropsy and sampling of pigs, rabbits and poultry with suspected infectious disease, and the Laboratory of Development, located at the ground floor of the main building, houses a recently renovated state of the art rodent and rabbit experimental and breeding facility that at the time of Visitation housed no animals as yet. The Department of Microbiology provides diagnostic service for the clinics and teaching. The ISO9000-approved laboratory for clinical pathology, provides services for the animal hospital on a 24/7 basis.

The necropsy room is located in a building separate from the clinics. It has two entrances, one from inside and one from outside the building, which give access to a preparation room. This preparation room is equipped with a sink, an overhead conveyor for the transport of large animal cadavers and a cold room for the storage of cadavers. The waste removal system of the SVMT is well organised and contracted to private companies.

The necropsy room itself can be accessed through the preparation room and through the corridor coming from the offices of this building. One side of the necropsy room has grandstands for students to observe necropsies performed on 2 tables for small animals. Larger animal necropsies need to be performed on the floor.

### **FSQ & VPH**

Visited lecture rooms were sufficiently equipped for teaching FSQ and VPH. Rooms for preparing teaching samples like fish products and meat samples are present. Students used their own boots and white coats during lessons. During the visit to the slaughterhouse students wear hair nets and plastic gloves supplied by the VEE and their own boots and white coats. The slaughterhouse is spacious and has a separate space where the teacher can explain e.g. PM inspection, not disturbed by noise from the slaughterhouse activities.

### **Study and self-learning, catering, locker rooms, accommodation for on-call students and leisure**

Locker rooms, rooms for accommodation and for catering are available to the students at the Kolchiko farm, at the clinics and at the main building. The apartments at Kolchiko has several bunk beds, a small kitchen and toilet. Another similar apartment is reserved for the postgraduate students that are also on call. Students must bring their own food but can cook in the apartment. The apartments are clean and well kept.

#### **4.1.3. Description of the adequacy for the veterinary training of the vehicles used for student transportation, ambulatory clinic, live animals and cadaver transportation**

Five vehicles (2 x 18 seats, 1 with 5 seats and 2 with 7 seats) are used for farm visits with students, the ambulatory clinic and visits of equine patients. For other excursions (food hygiene, fish diseases, ecology, environmental protection, etc.) a rental bus service is available and paid for by the University. The two horse trailers are not in use anymore. There is no vehicle for the transportation of cadavers but the VEE has a contract with an authorised company to do so.

#### **4.1.4. Description of the adequacy for the veterinary training of the equipment used for teaching purposes and clinical services**

Surgery, anaesthesia and medicine units for companion animals and horses are equipped with anaesthesia machines and monitors, video-endoscopes, electromyography, retinography, laparoscopy, ligasure, surgical microscope, phacoemulsification, and dental surgical equipment. The diagnostic imaging unit has a PACS system, a 16 slices CT scan and machines for ultrasound and radiographic/fluoroscopic examination. There is an ultrasound machine for echocardiography used by the clinicians for companion animal internal medicine. A portable ultrasound system serves in the ambulatory clinic to be used stable-side.

The chute, operating tables and other equipment kept at Kolchiko Farm are well kept. Apart from ultrasound being used on sheep, no other equipment (e.g. portable blood analyzer) was shown to the Team.

#### **4.1.5. Description of the adequacy of the biosecurity rules in the VEE**

A booklet with biosecurity guidelines is available online and consultable by students and staff. At the beginning of every course, the teachers remind the relevant biosecurity rules that are relevant for this particular course, however, this does not guarantee that everybody is complying

with these rules all the time, as verified in practicals at the necropsy room where students wear their own surgical pyjamas covered by a lab coat and rubber boots; the service provides surgical gloves that are not resistant enough to protect from physical or biological hazards during manipulation of the cadaver. No plastic apron, forearm plastic covers or protective glasses are used, despite this dressing code being shown as obligatory in the safety signal posted at the entrance.

A pictorial presentation and a short text related to safety and biosecurity measures can be found on the walls of training rooms, the Kolchiko Farm and laboratories, in Greek.

To work at the Kolchiko Farm students are told to bring clean overalls and go through a footbath before entering the animal housing facilities.

#### **4.1.6. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of facilities, equipment and biosecurity rules of the VEE**

Procedures for the request for renewal of facilities and equipment are described in the SOPs. The university is responsible for the maintenance of the buildings and treats requests from the VEE with different degrees of urgency. For the equipment acquisition, maintenance and replacement, it is the Directors of the Clinics who will decide for smaller investments, while the Department's General assembly will decide for bigger investments.

Only animals belonging to farms free from zoonotic and notifiable diseases and licensed by the government veterinary services, are brought to the Kolchiko farm.

#### **4.2. Comments**

- Limited information is provided related to the VEE's compliance with all relevant legislation to health, safety, biosecurity, accessibility and animal welfare standards.
- The Team considered that storage and handling of hazardous chemical products in some laboratories is not adequate. Eye-washers, first-aid boxes and fire extinguishers were not available, not functional or not serviced in some areas of the buildings.
- Safety requirements regarding facilities with respect to safety at work and health procedures are not met in full (evacuation plan, EXIT signs, vertical and horizontal signalization are not present in all facilities).
- Expired consumables were spotted in some laboratories and clinic facilities.
- The housing of the two dogs and one cat, used for teaching and as blood donors is not compliant with the relevant EU Directive 2010/63 which specifies the minimum housing requirements, and there is no record of their use in practicals to avoid overuse.
- The necropsy room lacks a changing room, the protective clothing of students and teachers is far from adequate to protect from physical and biological hazards, and the system for cleaning and disinfection of the boots is not appropriate. Students get changed in the clinics and bring a white coat and their own rubber boots with them to the necropsy room. After performing necropsies they return to the changing rooms of the clinics where they leave their equipment used in the necropsy room.
- There is no changing room in KTH for the students staying for the clinical training.
- No first-aid boxes were shown to the team in KTH.

#### **4.3 Suggestions for improvement**

- Eye washers, first-aid boxes, and fire distinguishers should be present in all laboratories where hazardous material is being handled. Signs need to be displayed to indicate their location and all these safety equipment needs to be checked/serviced on a regular basis. Evacuation plans, EXIT signs, vertical and horizontal signalization should be present in all facilities where needed.

- For expired consumables that are used for teaching purposes, it is necessary to indicate those with ‘for teaching purpose only’ and to store them in a separate plate. It is also necessary to note the date of first use on the vials and boxes of medical drugs and to discard those that are expired.
- The housing of the two dogs and one cat, used for teaching and as blood donors has to be improved in order for compliance with the relevant EU Directive 2010/63.
- The necropsy room needs to be rebuilt in order to provide a changing room or an anteroom. A properly designed anteroom gives staff and students the opportunity to put on protective clothing before entering the necropsy room and to clean it and leave it there before leaving the building. Special care has to be taken for the cleaning and disinfection of rubber boots before leaving. This will minimise the risk of carrying dirty and potentially contaminated shoes and clothes to the clinics or slaughterhouses.
- The housing of the clinic-owned animals needs to comply with EU Directive 2010/63. The Team wants to stress that not only the housing conditions are not compliant with this EU Directive, but that these animals also need individual life-long records of their use and medical history and treatment. The EU directive should be understood as a minimal requirement and the VEE should be encouraged to outbid these requirements and to show outstanding facilities and care of research and teaching animals to the students.
- A separate and dedicated room for changing with toilets should be provided to students at KTH.

#### **4.4. Decision**

The VEE is compliant with Standard 4 except for Substandard 4.6.

The VEE is not compliant with Substandard 4.6 because of overall insufficient application of the relevant legislation on health, safety, biosecurity and EU animal welfare and care standards.

## **5. Animal resources and teaching material of animal origin**

### **5.1. Findings**

#### **5.1.1. Brief description of the global strategy of the VEE about the use of animals and material of animal origin for the acquisition by each student of Day One Competences**

Live animals, carcasses and other materials of animal origin are used for training from the first to the last year of studies. Some animals or teaching materials of animal origin derive from intramural activities, such as the Clinic of Production Animals, Clinic of Companion Animals, or from extramural sources, due to collaborations with institutes and farms.

#### **5.1.2. Description of the adequacy for the veterinary training:**

##### **-) the number and diversity of cadavers and material of animal origin used in anatomy, necropsy and FSQ**

For anatomical training, in 2020, there were available 3 live dogs, 7 dog cadavers and 4 dog skeletons, 3 live cows, 2 cow skeletons, 10 live sheep, 8 sheep skeletons, 3 pig cadavers and 7 chicken cadavers, for each 100 students. In addition to the live animals, fresh or formalin fixed cadavers (dogs, horse) and full skeletons, cadaver parts, disconnected bones, radiographs and anatomical models, plastinated parts of the body and computer assisted models were also made available to the students.

In the years of 2018, 2019 and 2020 there was a mean total of approximately 1,097 necropsies, 20 of them in cattle, 99 in small ruminants, 30 in pigs, 11 in horses, 577 in poultry, 34 in rabbits, 241 in dogs, 64 in cats, and 20 in exotic animals. The cadavers were obtained from the Clinics

of the VEE, outside clinics, farms, etc., then transported dead from outside to the VEE, or were animals destined to be slaughtered, which were transported and euthanized at the VEE.

The mean number of visits to slaughterhouses and related premises in the last three years was 72 for ruminant and pig abattoirs, 6 for poultry abattoirs, and 12 for Central Fish Market of Thessaloniki, 6 to meat plants and 6 to dairy plants.

There is no record of farm animal necropsies done in the field.

**-) the number and diversity of healthy live animals used for pre-clinical training**

Pre-clinical training in sheep is taken in the dairy sheep farm in Kolchiko, starting in the first year of studies. Practical training on Animal Production in other species of animals is performed in collaboration with various institutes and farms. The Team visited the American Farm School where students visit laying-hens, turkey and dairy cattle farms.

Overall, the animals used for pre-clinical training, in the last 3 years, were, in mean, 15 cattle, 80 small ruminants, 3 pigs, 6 companion animals, 1 equine, 35 poultry and rabbits, 72 Wistar rats and New Zealand rabbits for physiology classes and 25 New Zealand rabbits for pharmacology classes.

One single horse in the equine department is used for the propedeutics teaching.

**-) the number of visits to herds/flocks/units of food-producing animals;**

In 2020 there were 15 visits to ruminant and pig herds, and 7 visits to poultry and rabbit units, per student.

The number of visits to farms by the ambulatory clinic in the past 3 years was, in mean, 59 visits to 19 cattle farms, 22 visits to 13 small ruminant farms, 31 visits to 7 pig farms, 29 visits to 35 equine farms, 87 visits to 10 poultry farms, 13 visits to 3 rabbit farms and 4 visits to 8 aquatic animals' farms.

**-) the number and diversity of patients examined/treated by each student**

The patients seen intramurally were, in average of the last 3 years: 15 cattle, 81 small ruminants, 98 equine, 577 poultry, 2,960 companion animals, 123 exotics and 36 wild animals. Extramurally, the average was 317 cattle, 100 small ruminants, 353 pigs, 242 equine, 10 poultry flocks, 94 rabbit units and 73 aquatic animals.

**-) the balance between species, between clinical disciplines, between first opinion and referral cases, between acute and chronic cases, between consultations and hospitalisations, between individual medicine and population medicine**

In 2020, the percentage of first opinion patients was 90% in cattle, pigs, poultry and rabbits and aquatic animals. Concerning companion animals, there is a larger proportion of second opinion cases, the first opinion being only 30% for small animals and 20% for equine. For exotic animals, the first opinion cases were 80%.

In farm animals, cases referred by local practitioners are frequent. However, most animals brought into the Kolchiko Hospital are cows with left abomasal displacement or low value animals provided by farmers for exploratory laparotomy.

In ambulatory clinics both individual medicine and population medicine are taught, but no reference to the ratio between them was provided in the SER or on site.

Emergency cases in farm animals are limited to obstetrical (dystocia) cases.

**5.1.3. Description of the organisation and management of the VTH and ambulatory clinics**

The Clinic of Companion Animals operates from 9:00 to 17:00, five days a week for new cases and 24 hours/7 days a week for emergencies, and closes during one week for Christmas, one week for Easter and three weeks in the summer. The equine clinic offers 24 hours on-call



emergency service. The Clinic of Production Animals offers services to farms, operating a mobile clinic 5 days a week and an emergency service, 24 hours, 5 days a week, free of charge for the farms that collaborate with the VEE. If an emergency arises, a team of a faculty member, 2-3 students on duty and 1 postgraduate student or intern, will visit the farm using one of the two mobile ambulances available.

There is an agreement between the VEE and animal welfare societies, which has allowed to increase the number of neutering surgeries in dogs and cats.

Besides the VTH and ambulatory clinics, the students have access to a sheep farm in Kolchiko, in which they spend time from the first to last year of studies, gaining competence in production management, husbandry, and production animals' clinics.

#### **5.1.4. Description of the group size for the different types of clinical training and of the hands-on involvement of students in clinical procedures in the different species**

Before the pandemic, groups of 40 students in Anatomy were working at the dissection room with 2 teachers, separated in subgroups of 20 students per teacher, table and corpse. In the current academic year, because of the imposed social distance, the groups in Anatomy are 20 students, divided in subgroups of 10 students/teacher/table/corpse.

During the onsite visit and from the meeting with the students the Team verified that groups of 20 students in Pathology are attending practicals at the necropsy room with 1 teacher and 1 cadaver, but most remain seated in the amphitheatre while only 2 of them voluntarily perform the necropsy.

The mobile clinic is used for emergency cases or cases of great teaching importance, taking 2-3 students in each car. The emergency service in the Companion Animal Clinic receives 4 students each day (see 3.1.5).

In the Kolchiko Farm Animal Clinic, the groups vary from 14 to 40 students in the 4<sup>th</sup> year, depending on the day of the week. In the 5<sup>th</sup> year they are reduced to a maximum of 10 students. The 4<sup>th</sup> year students often join the 5<sup>th</sup> year students in clinical work. This was witnessed by the team in Kolchiko where two groups of 15 to 20 students each, involving students from both years, were doing a clinical examination of a cow and an ultrasound exam of dairy sheep.

In farm animals individual hands-on involvement of students is rare, as permission from farmers has to be obtained before a student can perform more invasive procedures. However, it was said that during laparotomies students may be allowed to do some intra-abdominal exploration.

Students participating in slaughterhouse classes are divided in groups of 8 to 10.

#### **5.1.5. Description of the patient record system and how it is used to efficiently support the teaching, research, and service programmes of the VEE**

The Companion Animal Clinic uses "e-vet" to record the cases seen at the Hospital. The system is accessible to all students for teaching purposes.

In Farm Animals only a list with the description of the individual or herd cases seen by each group is recorded at Kolchiko. For these animals there is no possibility of retrieving information about individual clinical cases or about the involvement of individual students. The e-vet system is not used for these species.

#### **5.1.6. Description of the procedures developed to ensure the welfare of animals used for educational and research activities**

The Ethics and Welfare Committees of the VEE are responsible for welfare of animals used in education. Permission of the Committee is required to execute educational and research activities.

Up to 21 hours of practicals in *Physiology* use live animals (60 rats and 12 rabbits) and 9 hours

in *Pharmacology* (25 rabbits). These are healthy animals that are euthanized after the practicals (ovariectomy, pharmacokinetics).

Regarding the activities in the dairy sheep farm in Kolchiko, special consideration is given to the welfare of animals, by assuring that all actions are performed humanely and competently and by making the students aware of the risks to human health by inappropriate animal approach and handling. However, it may be possible that low value cattle and sheep are submitted to dispensable exploratory laparotomies.

In the SER it is stated that these animals are returned to their herds after the procedure, but there is no data as to pain assessment or management or the prevalence of complications or deaths.

The sheep used for Anatomy come from Kolchiko farm and are killed in Thessaloniki facilities by barbituric injection. It was said that veterinarians inspect these animals on arrival to ensure their well-being.

#### **5.1.7. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the number and variety of animals and material of animal origin for pre-clinical and clinical training, and the clinical services provided by the VEE**

All procedures are published on the website. The Educational Committee and the Department relevant to the matter, propose procedures and the General Assembly makes the decision.

Implementation, assessment and revision are the responsibility of the Education Committee, Department Heads and Clinic Directors. Revisions and amendments of the programme are decided in the General Assembly.

There is no reference to stakeholders (e.g. practitioners, farmers) having a formal involvement in the development, implementation, assessment and revision of the animal use strategy.

#### **5.2. Comments**

- An overall view of the use of animals along the course is comprehensively presented. However, a more systematic and orderly presentation, with distinct separation of topics and species, would increase clarity.
- The use of live animals and cadavers in anatomy is adequate but the group size is too large to guarantee hands-on training of the students.
- As verified during the onsite visit, the groups at the practicals are too large in Pathology to guarantee hands-on training of the students (15 with only 1 cadaver, only 2 students performing the necropsy and sampling). Although in the SER a large number of companion and farm animals are said to be necropsied each year for training in Pathology, this was not verified during the visit as it was said by the students that some practicals are done as PowerPoint demonstration of a necropsy in the absence of a cadaver and that only voluntary students are involved in the hands-on necropsy. Thus, there is insufficient information on the numbers of students involved in these practical training and how each student is involved.
- Apart from live animals and cadavers, Anatomy also uses models and body parts/organs kept in formaldehyde. While the first should be encouraged in a way to reduce the use of live animals and increase the possibility of hand-on training, the second may be seen as a health hazard and thus excluded as soon as possible.
- Since learning outcomes of practicals with laboratory animals in Physiology and Pharmacology can be achieved by other means, the VEE should consider the replacement of these animals by other methods (computer programmes, dummies, cadavers from naturally dead animals) or by healthy animals to perform non-painful or bloodless procedures which do not lead to euthanasia.
- Farm animals used for clinical and surgery demonstrations at Kolchiko come from

farms approved and licensed by government services.

- It is praiseworthy the role the SVMT plays in the region by being available for night-and-day emergency cases. However, this does not include all days of the week for farm animals nor is it available all year round.
- The accomplishment of its community responsibility is evident by cooperating with the municipality in neutering shelter or stray dogs and cats and by providing high quality services in the rescue and recuperation of Greek land and sea wildlife.
- Cadavers and body parts from several species are extensively used for clinical and non-clinical teaching. The use of dead foetuses, claws, udders and other organs (from farms or slaughter houses) is a very good way of training specific procedures, provided biosecurity rules are applied and followed.
- The relationship between the VEE and practitioners, farmers and other institutions is a great asset. Involving these in the education process as well as providing continuous education events (e.g. seminars) to which veterinarians are invited is also highly commendable.
- There is a quite high 2<sup>nd</sup> to 1<sup>st</sup> opinion ratio in both companion animals and equine consultations. This may result from the considerable number of European board-certified specialists in some scientific areas. Although a high proportion of referral cases may reflect the quality of the clinical staff, it may also result in insufficient exposure of students to routine and simple clinical cases or procedures.
- The number of farms visited by the ambulatory service is high, and provides a more holistic approach to farm animal clinics. By doing consultation on-farm, students are more easily introduced to husbandry, management and other herd details that are essential for a correct diagnosis, prognosis and implementation of prevention measures.
- However, the number of animals destined for pre-clinical training, specifically companion animals and equine (one horse), seems very low compared to the number of students and the range of subjects that can benefit from the contact with live animals through innocuous procedures or husbandry practice.
- It is hard to understand the ratio between individual treatment and population medicine, and the balance between acute and chronic cases is not stated, nor is the balance between consultations and hospitalizations.
- According to the extensive description provided in the SER, animal production teaching and training is provided almost exclusively in a dairy sheep farm. However, conversations with the teaching staff and visits to farms revealed that students' contact with other species and production systems is quite extensive.
- In the SER it is wrongly stated that students visit a pig farm in the American Farm School. This farm was closed several years ago.
- Having a special course dedicated to aquaculture is meritorious, due to the need to get more veterinarians involved in this very important and developing industry.
- The number and the way animals are used, as well as the introduction and establishment of alternatives to animal use, is not clearly described. Although the role of the Ethics and Welfare Committee was mentioned, not much information is given on how it acts, how it supervises animal use in teaching and research and who sits in the committee.

### **5.3. Suggestions for improvement**

- The VEE should respect the 3Rs principle and train the students in this regard. Physiology and Pharmacology must replace the use and killing of live healthy laboratory animals for training students, since the learning outcomes proposed could be obtained by other methods.
- The VEE must ensure adequate protection and safety of staff and students in necropsy

and anatomy practicals. Pathology must guarantee that all students perform the necropsy and sampling of cadavers and must provide students with plastic aprons, protective glasses, resistant gloves, forearm plastic covers and rubber boots from the service (or guarantee the cleaning and disinfection of students' boots). Anatomy must phase out the use of formaldehyde in body parts used by students and replace it with other methods such as highly saturated salt solutions or harmless fixatives.

- Anatomy and Pathology must reduce the size of the group for practicals to guarantee the hands-on training of the students.
- The VEE is encouraged to institute a plan to ensure a thorough clinical examination and welfare assessment of all animals purchased for teaching and training.
- The VEE has to increase the number of horses to be used in pre-clinical training.
- The VEE should avoid the transport and surgery of unfit animals in the Kolchiko Hospital.
- The VEE is encouraged to include in the Animal Production scientific area the teaching of farm animal welfare assessment.
- The VEE must implement a record system to ensure a balanced exposure of students to first opinion *vs* referral cases, acute *vs* chronic cases and consultations *vs* hospitalisations.
- The VEE must correct in the SER the inaccuracies on the variety of species and farms used for training in Animal Production.

#### **5.4 Decision**

The VEE is compliant with Standard 5 except for Substandard 5.1 and 5.2.

The VEE is partially compliant with Substandard 5.1 because of insufficient number and variety of cadavers for hands-on training in Pathology and of equines in Propedeutics.

The VEE is not compliant with Substandard 5.2 because of insufficient hands-on training of students in farm animal clinics under the supervision of academic staff.

## **6. Learning resources**

### **6.1 Findings**

#### **6.1.1. Brief description of the main library (facilities, equipment, staff, (e)books and (e)periodicals, software for databases)**

The Central Library of Aristotle University is located at the centre of the main University campus, a 5-minute walk from the VEE. It provides access to approximately 1,127,406 book titles, 490,000 e-books, 25,000 electronic journals and 22 annual subscriptions of printed journals.

The Central Library has a reading room with a capacity of 1,300 seats and a scientific reading room with the capacity of 180 seats.

In the Central Library, the administrative services are available daily from 08:00 to 15:00 and the reading room from 08:00 to 22:00. During examination periods, the reading room opening hours are extended until midnight, while the scientific section is open from 08:00 to 20:00. During the summer months and during Christmas and Easter holidays, the working hours of the reading room are regulated accordingly.

The Library of the VEE, specific to the School of Veterinary Medicine, is open on weekdays only, from 09:00 to 20:00 on Monday and Wednesday and from 08:00 to 16:00 on Tuesday, Thursday and Friday. Adjacent to the library, there is a reading area with 85 student reading places, which remains open on weekdays only, from 09:00 to 20:00, this facility is closed from the 1<sup>st</sup> to the 15<sup>th</sup> August. Due to COVID-19 pandemic, the study room remains closed. The total number of books in the Libraries of the VEE is 18.000 (2.000 are in the main library

and the remaining are in the subsidiary libraries).

In the VEE there are two computer laboratories with 24 computers (in the main building) with internet access.

Each department has a well-resourced library which the students can access with permission of the staff, and borrow books or consult them in place. The books on the department libraries are registered on the library database, making it easy for students to find the necessary publications. The University offers a 24h space for students to study, with a close by canteen which provides breakfast, lunch and dinner, all walking distance from the VEE.

Required course materials (notes and books) are distributed to students free of charge, the students may select one free hardcopy amongst the books recommended by each teacher.

### **6.1.2. Description of the available electronic information and e-learning courses, and their role in supporting student learning and teaching in the core curriculum**

The Aristotle University Central Library System offers access to electronic journals either through direct subscriptions or the HEAL-Link Consortium (HELLENIC ACADEMIC LIBRARIES LINK, [www.heal-link.gr](http://www.heal-link.gr)).

“Psifiothiki” (<http://digital.lib.auth.gr/?ln=en>) is a digital repository, which allows access to rare publications, archived material, manuscripts, books, newspapers, magazines, postcards, maps, photographs, works of art, and more. Also, the Library has acquired access to “Mendeley” and the web-based course management system “Moodle”. AUTH teaching staff also have access to ‘Turnitin’, an online plagiarism detection tool. Printed books are available to students through “EUDOXOS” (<https://eudoxus.gr/>) an integrated book management electronic service responsible for provision of the books of the undergraduate students.

### **6.1.3. Description of the accessibility for staff and students to electronic learning resources both on and off campus**

Wireless Internet access is available throughout the campus. Remote access (from outside the University) is also possible via VPN and users can connect to Scopus, Science Direct (Elsevier) and other publishers/providers.

The course contents are made available by teachers to undergraduate students via Moodle platform, which can be accessed through [elearning.auth.gr](http://elearning.auth.gr) platform, which hosts the digital undergraduate and postgraduate courses of all Schools of AUTH.

### **6.1.4. Description of how the procedures for access to and use of learning resources are taught to students.**

Instruction on using computers and performing bibliographical searches is provided to undergraduate students during the subjects of “Elements of Information Technology” “Introduction to Veterinary Education”, “Biostatistics”, “Economics of Animal Production” and “Epidemiology”.

Students can attend seminars in the main library, which are held regularly, to learn about bibliographical research and the library database system.

### **6.1.5. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of learning resources**

The SVMT Library is managed by the Library Committee. The Supervising Committee of the University Library consists of academic and administrative staff. Students are not members of the Committee.

## **6.2. Comments**

- The learning resources and support staff involved in the management and provision of these resources to students are worthy of praise.
- The library collection of veterinary related titles is extensive and largely complemented by the departmental libraries.
- The e-learning resources are well organized and have been further developed due to the COVID-19 pandemic situation, with these innovations continuing to be put to use.

## **6.3. Suggestions for improvement**

None.

## **6.4. Decision**

The VEE is compliant with Standard 6.

# **7. Student admission, progression and welfare**

## **7.1. Findings**

### **7.1.1. Brief description of the admission procedures for standard and for full-fee students**

The VEE allows admission of students with a minimum requirement of High School Diploma (Greek Lyceum), after doing a national qualification exam. This examination is the responsibility of and is coordinated by the Ministry of Education. Students are ranked according to their overall score obtained in the national exams. Full time students do not pay tuition fees. There is no admission procedure for full-fee students and the VEE does not participate in the selection process by law. As there is no selection process at the VEE level, there is no selection committee. International students must learn the Greek language before enrolment. The number of admitted students is decided not by the VEE but by the Ministry of Education. The number of admitted students fluctuates every year due to the supplementary intake. The latter is also seen as an obstacle by the VEE.

### **7.1.2. Description of how the VEE adapts the number of admitted students to the available educational resources and the biosecurity and welfare requirements**

The number of undergraduate students admitted to the VEE changes every year, depending on the state regulations, and the VEE has no influence on the number of enrolled students. The number of admitted students is about 74-86 annually, with a “supplementary” intake of around 47-67 students. Supplementary intake may include students of Greek origin from foreign countries or from Cyprus, and from the School of Veterinary medicine in Karditsa.

The Education Committee is responsible for the scheduling of the student rotations that depends on the number of admitted students and the available educational resources.

Following enrolment, all students receive information on educational resources, curriculum, progression, etc. in the form of Curriculum Guidebook, available online, on the VEE webpage. Regarding biosafety and biosecurity, information for undergraduate students is provided, based on Biosafety and Biosecurity Standard Operating Procedures (provided in the form of a manual on the website and posted in the facilities of the VEE). Under the supervision of the staff, the students are also educated related to waste management, safety at work and emergency preparedness.

At the University level, there is the Standing Committee for Epidemics Management and the Committee of Social Policy that is related to student safety and welfare issues.

### **7.1.3. Description of the progression criteria and procedures, the available remediation and supports, the rate and main causes of attrition**

Successful completion of seven “pre-requisite” core courses is required for the progression of students to the 4<sup>th</sup> year of studies. These courses are: i) General Histology-Embryology, ii) Anatomy-Histology I, iii) Anatomy-Histology II, iv) Anatomy-Histology III, v) Physiology I, vi) Physiology II and vii) Physiology III.

Students have the opportunity to be assessed in three examination periods (January, June and September), or at the end of the semester they are taught (January or June) and September.

Midterms exams are also available for some of the courses offered by the VEE.

The percentage of students leaving the VEE is about 10-15%, after the re-sitting of the national exams, to be admitted to the other schools in the area of Health Science.

The maximum duration of the study programme is supposed to be 5+2 years, but numerous students do not finish the study in due time. As there is no clear procedure, termination of the study is mostly the students' decision, and exclusion is possible only if students commit a serious breach of duty although the VEE encourages solving the problems (issues) before a student is expelled.

#### **7.1.4. Brief description of the services available for students**

The state and the University provide a set of administrative, financial and other services to students, to facilitate their studies (such as scholarships, free catering and accommodation, health care, counselling and psychological support, access to the Internet, lower fares for public transportation, etc.).

At the VEE, a mentoring system has been developed in such a way that a freshman is assigned a mentor from the academic staff (one teacher can mentor several students at the same time) who accompanies the student until the end of the study.

Students with disabilities or students from low income families can enrol at the VEE through the supplementary intake route.

Student friendly services and areas as listed in SER are: Students club, IVSA, Camping facilities, Counselling and Guidance Service.

Students office (registry) is available at the VEE and it supports students during their enrolment, during taking and registering for the exams, but also later when finding a work position.

Various opportunities for student mobility exist at the VEE, mainly through the ERASMUS, but students rarely use possibilities of longer stay abroad due to the possible loss of a semester at the VEE.

#### **7.1.5. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the admission procedures, the admission criteria, the number of admitted students and the services to students**

The admission procedure, admission criteria, and the number of admitted students are decided and defined by national legislation.

Information about the enrolment to the VEE is available through the web page.

There is no admission procedure for full-fee students and VEE does not participate in the selection process by law.

#### **7.2. Comments**

- The supplementary intake of the students enforced by the government can disable the performance of the VEE, including the educational resources.
- The duration of undergraduate studies is too long, 8 years or more for almost 20% of students, in a curriculum of 5 years, for 19% of graduated students.
- Students have the opportunity to participate in the work of the VEE bodies (General Assembly, Committees) but it seems that they rarely use these options to make a

proposal, express an objection, etc.

### **7.3. Suggestions for improvement**

- The VEE should analyse the reasons behind the long duration of studies and implement corrective measures as soon as possible.
- The VEE should address the variable number of students enrolling in the first year to the relevant stakeholder, as well as the need for a fixed enrolment quota in order to ensure the most favourable and appropriate learning and teaching conditions in a timely manner.
- Mechanism for student suggestions, comments or complaints, as well as for remediation and appropriate support for students who are not performing adequately should be clearly determined and available to all stakeholders.
- The VEE has to encourage the proactive participation of students in the decision bodies and committees.

### **7.4. Decision**

The VEE is compliant with Standard 7.

## **8. Student assessment**

### **8.1. Findings**

#### **8.1.1. Brief description of the student's assessment strategy of the VEE**

The examination periods of each academic year are divided into 3 periods (3 weeks each with no face-to-face teaching: January-February (winter period) to examine the first semester subjects, June (summer period) to examine the second semester subjects, and September (autumn period), for retakes of the first and second semester subjects. For every course, mid-term examinations out of the official examination period are offered to the students enrolled for the first time, on a voluntary basis, upon request on the first week of the courses.

Students must pass pre-requisite courses at the end of the 3<sup>rd</sup> year to be allowed to enrol in the 4<sup>th</sup> year (see 3.1.1.1).

External examiners are not used in the Greek Universities.

Greek law allows students to retake exams as many times as necessary to get the passing mark of a given subject without any limitations. Passing marks for both theoretical and practical examinations is 5 on a scale from zero to 10 in all subjects, and the percentage of each to the final grade of the subject is discretionary of the teacher.

Students keep indefinitely the passing grade of one part of a subject until s/he gets the passing grade of the remnant part.

Attendance at practicals is mandatory for all courses. On the day of practical examinations students must prove no absence and an updated logbook of attendance to practicals as requisite.

#### **8.1.2. Description of the assessment methodology to ensure that every graduate has achieved the minimum level of competence, as prescribed in the ESEVT Day One Competences**

The methods for assessing the students depend on the subjects, being chosen by the teaching staff (this is a right recognised by law) as follows: written exams (essay questions, short answer questions and/or multiple-choice questions) at the end of each semester for most preclinical subjects; oral and/or practical exams mainly in farm animal production, clinical subjects and meat inspection; continuous assessment throughout the semester in some clinical subjects; and small written tests used by some subjects along the semester and outside the exam periods.



In the case of core subjects such as Companion and Farm Animal Clinics only practical examinations take place. To verify the acquisition of Clinical Day-One Skills, students are appointed in the Clinics and asked to handle a clinical case of both animal clinics (SA and LA) and maybe to discuss some reported cases in the student's logbook.

There is a logbook for the assessment of Day One Competences for the Companion Animals; assessment of each individual competence in the logbook is mainly observational and verified by the teacher's signature once the student has performed the given skill properly. There is no scoring in the assessment of clinical skills or assessment of the student's logbook.

In Food Producing Animals Clinics, the cases in which students are involved are recorded as a group activity, not specifying the specific skills performed by individual students.

Assessment of clinical and non-clinical EPT is based on practical training reports submitted at the end of the placements, together with the report of the professional tutor.

### **8.1.3. Description of the processes for providing to students a feedback post-assessment and a guidance for requested improvement**

If a student fails 3 times in a subject, s/he is allowed to apply for re-examination by a group of 2 new examiners plus the initial examiner.

### **8.1.4. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the student's assessment strategy**

Students' assessment strategy is decided by the Faculty Board and designed by the Education Committee which oversees the transparency of the assessment criteria and procedures, and regularly revises the assessment strategy in line with the curriculum and learning outcomes.

All students are aware of the assessment and post-assessment processes in the intranet, including evaluation criteria, grading system and post-assessment feedback.

At the end of each semester students are asked to evaluate the quality of the courses and the teaching staff, including the assessment methods. Day-to-day monitoring of the quality of teaching is also done by the representatives of students in the Education Committee and Faculty Board.

For getting the license to practice graduates must not sit any licensure National Exam.

## **8.2 Comments**

- The regulations and assessment criteria concerning written examinations are transparent, harmonised, and clear.
- The assessment of practical skills to verify the acquisition of Day One competences by the students is not optimal. Considering the individual variation in students' clinical training, there is an evident risk that not all clinical competencies are fulfilled. Confirming the attainment of clinical Day One Skills would require, in addition to the already used logbook and practice reports, direct assessment of the skills. Simulated patients and models could be used to complement the assessment.
- For Food Producing Animals there is a poor control of the acquisition of competencies by the students since there is no logbook with individual assessment, instead there is only a record of the learning outcomes of the group of students as a whole.
- There are no assessment criteria or scoring for the evaluation of student's acquisition of competences in the Companion animal logbook or a follow-up of progression of students in practicals. There is no scoring of clinical skills assessment in the logbook (i.e., 0 not good, 1 average, 2 good, 3 excellent, etc.).
- There is no final OSCE (Objective Structured Clinical Examination) exam based on rubrics to avoid subjectivity of students' assessment of Day-One competencies, and no

Direct Observation of Procedural Skills (DOPs) or mid-term assessments of students after completing every clinical rotation.

- The procedure for students to appeal against assessment must be clear, published and communicated to students.

### **8.3. Suggestions for improvement**

- It is essential that the VEE defines the criteria and methods to evaluate and harmonise the practical training of students in order to guarantee the acquisition of Day One Competences.
- The VEE must design a logbook for Practicals on Food Producing Animals in order to assess their quality and the individual acquisition of competences by the students.
- The VEE should design a system to avoid the “teacher factor” in the assessment of competences in the logbook, for instance having to perform the given skill 3 times with, at least, two different teachers.
- It would be advisable to design a rubric with clear assessment criteria for the scoring of student’s performance of the competences in the logbooks.
- The VEE should develop periodical assessments (biannual or annual) and a final evaluation of the logbook to assess and keep tracking of the progressive acquisition of Day One Competences by the students.
- It would be helpful for the VEE to assess students’ performance of practical skills after the completion of the different rotations, i.e., via DOPs, to an early detection of any underperformance that may allow reinforcement of student’s training.
- The VEE should apply a summative assessment of clinical skills based on predefined criteria (rubrics) in the final year and before graduation by methods such as OSCE, in order to guarantee that all graduates have acquired the expected learning outcomes (Day One Skills).

### **8.4. Decision**

The VEE is compliant with Standard 8 except for Substandard 8.9.

The VEE is partially compliant with Substandard 8.9 because of the lack of a record of the individual skills acquired by the student within a logbook in farm animal clinics.

## **9. Academic and support staff**

### **9.1. Findings**

#### **9.1.1. Brief description of the global strategy in order to ensure that all requested competences for the veterinary programme are covered for both academic and support and that they are properly qualified and prepared for their roles**

The faculty has full autonomy to select and hire its own staff. Needs and opening of vacancies are evaluated and decided by the General Assembly based on suggestions of the Strategic Planning Committee. However, it is the Ministry of Education that determines the number of new positions opened every year. Hiring teaching staff goes through an elaborate process in which a jury of 15 members decides on a candidate based on a report by 3 appointed evaluators. Tenure for an assistant Professor occurs after 3 years. Teaching staff can be hired full or part-time. Part-time professionals have to be present in the University at least three days per week. A quite large proportion of teaching of clinical practical work is done by postgraduate, MSc or PhD students under the supervision of teaching staff. Post-graduate students stay at the faculty for one or, sometimes, two years. There is no reference in the SER on selection criteria for postgraduate students. Some (if not most) of these professionals involved in clinical training of undergraduates are not paid or receive a very small subsidy. Many of these postgraduate

students have part-time jobs outside the university.

The Aristotle University organises and encourages the enrolment of staff in continuing education seminars. Sabbatical leave is possible.

There is very little financial help for participation in scientific meetings, even if research results are being presented.

### **9.1.2. Description of the adequacy of the number of academic and support staff in the different departments/units with the number of students to be taught**

In 2020, there were 84 FTE in permanent academic positions and 6 in temporary academic positions. Recently the faculty has lost several of its teaching staff (12 due to retirement) and only 7 are already in the process of being replaced. The recruitment process of the remaining 5 positions had been delayed due to the difficult financial situation.

Around 90% of full-time staff and 83% of part-time staff are veterinarians.

Thirty one postgraduate students are presented as research staff (Table 9.1.4) although they are very much involved in part-time teaching. Twenty eight of these students are in the companion animal clinics, which reflects the reason they choose to remain as non-paid members of the staff – to continue to learn and enrich their CV.

Fifty five PhD students and three practitioners are also presented as research staff. Just about half (28) of the PhD students are in the Department of Clinical Sciences.

The equine clinical sector is an example as it has only one fully qualified veterinarian. This being a very demanding clinical area, both physically and mentally, it is expected that horse clinical teaching will be affected in the future. Two post graduate students are currently involved in the teaching and clinical work, but it is clearly not an ideal solution.

The School has 27 members of support staff, but no veterinarian nurses or equivalent.

Nineteen members of the teaching staff are European Specialists, but only two are in areas directly connected to companion animals' clinics (dermatology and diagnostic imaging).

### **9.1.3. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the strategy for allocating, recruiting, promoting, supporting and assessing academic and support staff**

Students evaluate the teaching staff through an online system established by the Quality Assurance Unit. Student evaluation is considered for faculty promotion.

A survey in 2018 for 5<sup>th</sup> year students on the curriculum, may indirectly be used to assess teaching staff, but these results were not made available.

## **9.2. Comments**

- The proportion of qualified veterinarians involved in teaching is commendable, as is also the number of European specialists, especially in the areas of food-producing species. In contrast, it is low in companion animal disciplines.
- There is a very high dependence on the work of post graduate students that have no legal bond with the university. This may jeopardize the quality, stability and even continuity of undergraduates' teaching, especially if selection criteria and commitment of this staff to the faculty are not transparent and robust.
- The number of full-time and part-time academic staff for the veterinary programme is balanced according to the number of undergraduate students in indicator I1 (see 12), but considering the list of academic staff provided in Annex 10, and the number of hours of practical training in the curriculum provided in Table 3.1.2 (column D, E and F) it results that there are 28 teachers in basic subjects to teach 523 hours of practicals per student (18.7h per teacher), 31 teachers in Clinical sciences to teach 935h of practicals

per student (30.2h per teacher), 9 teachers in Animal production to teach 146 h of practicals per student (16.2h per teacher) and 8 teachers for Food Safety to teach 174h of practicals per student (21.7h per teacher). This simple calculation shows a clear imbalance in the workload of teachers in Clinical sciences per student that is even worse when considering that the group size is smaller in clinical practicals, which means 2 to 4 times more the number of groups to teach the given hours of practicals than in the other fields of the curriculum. Research and scholarly activities may also be seriously affected from this imbalance. This imbalance has been aggravated by not replacing the full-time teachers that have retired along the last 3 or 4 years. For example, in the Anatomy subject there are at the moment 3 teaching staff after 4 professors retired during the last few years. In the equine clinics only one full time professor is responsible for all clinical and surgical work.

- The number of supporting staff (27) is quite low (see indicator I3 under 12), and there is an absence of veterinary nurses.
- In contrast, the number of postgraduate and PhD students involved in the diverse departments and subjects is very high. Postgraduate students are not paid and even have to pay their own work insurance. Postgraduates perform or supervise many of the practical activities, including being on call or supervising hospitalized animals at nights and weekends, together with undergraduate students.
- Although the university provides and encourages continuous education for the teaching staff, it is not clear how this is delivered and how many teachers enrol in such activities and postgraduate students are not obliged to follow courses on teaching methodologies and assessment of students before they start their supervision of practicals to undergraduates.
- According to the SER, the income and working conditions for teaching staff are considered poor, compared with private practitioners. This may affect stability and continuity of teaching. Likewise, financial help to participate in scientific meetings or to visit other universities is considered insufficient. All these may impact the quality of teaching and in retaining the best professionals.
- Promotions depend on the opening of vacancy and selection of candidates is done by appraisal of the CV. It is praiseworthy that students are called to evaluate teachers through an online system that ensures high participation and transparency. The criteria for the evaluation of the candidate includes experience and teaching quality, research achievements and involvement in services to the faculty. Interestingly, it also takes into account the “personality of the candidates” and their contribution to society.

### **9.3. Suggestions for improvement**

- Being that economic constraints will probably preclude a quick hiring of academic staff, the part-time employment of additional experienced professionals is suggested so as to reduce the overload of hours of practical training per teacher in clinical sciences and to increase high quality students’ contact with clinical cases. This would also avoid overloading and burnout of full time teachers.
- Alternatively, it is suggested that all postgraduate students, after a transparent process of selection based on merit, are taken on as paid interns or be involved in residency programmes. This will bring a much needed solidity to the teaching and clinical staff.
- Whichever is the path chosen to increase the number of teaching staff, it is suggested that every postgraduate student admitted to work in the VEE should go through a transparent selection process that takes into account the grades and previous involvement in the study area in concern.

- Participation in scientific meetings is indispensable to maintain high quality and updated teaching. It is also essential to improve the image of the university and of its research achievements. With this in mind, it is suggested that special funding (with public and private money) is created for this purpose.

#### **9.4. Decision**

The VEE is compliant with Standard 9 except for Substandards 9.2 and 9.3.

The VEE is not compliant with Substandard 9.2 because the number of qualified teaching and support staff is insufficient in Clinical Sciences, especially in equines, to secure a group small enough to guarantee appropriate training of students.

The VEE is partially compliant with Substandard 9.3 because postgraduate students used for training undergraduates do not receive proper training in teaching and assessment methods and they receive nil or small payment for delivering clinical (and other) teaching activities.

## **10. Research programmes, continuing and postgraduate education**

### **10.1. Findings**

#### **10.1.1. Brief description of how the research activities of the VEE and the implication of most academic staff in it contribute to research-based undergraduate veterinary education**

The teaching at the VEE is based on the principles and methods of scientific research and provided by academic staff with research background. In Greece there is no specific University staff dedicated exclusively to research.

Undergraduates are not obliged to perform any research or final degree thesis, not even as a bibliographic review. During the past few years, the Aristotle University of Thessaloniki provides opportunities to finance undergraduate research under the supervision of teaching staff, but the number of granted students is small.

In terms of quantity and quality, the contribution of the VEE to the research of the Aristotle University of Thessaloniki is sound: 39 financed projects have been developed since 2017 at the VEE to drive advancements and excellence in various research fields (listed in Annex 5 of the SER). Research is funded mainly through private (1 project from 2017 amounting 10,000€), regional (3 projects from 2017 amounting 229,948.93€), national (27 projects from 2017 amounting 2,469,479.01€) and European projects (9 projects from 2017 amounting 1,145,678.15€) attracted by the VEE's researchers through competitive programmes. Some non-granted undergraduates may participate, on a voluntary basis, in these multidisciplinary projects by assisting in the experimental work in the various laboratories and Clinics at the VEE.

Teaching staff at the VEE encourage undergraduates' participation in research through the organisation of seminars on their research topics and methods applied. The VEE also allows undergraduates to attend the public presentation and defence of PhD and/or MSc thesis, as well as their participation in research workshops and scientific meetings.

#### **10.1.2. Description of how the postgraduate clinical trainings of the VEE contribute positively to undergraduate veterinary education and how potential conflicts in relation to case management between post- and undergraduate students are avoided**

Graduated students participate in research through PhD and/or MSc programmes. Graduated students at the Companion Animal Clinic are actively involved in the out-of-hours duties and cooperate with undergraduates in the clinical management of cases: undergraduates start with a basic examination of the patient that is completed by the postgraduates, both discuss on the differential diagnosis, and postgraduates help undergraduates to look for further examination

methods and sampling of blood, urine, etc. from the patient. To avoid potential conflicts, the first day in the Clinic undergraduates are informed of the basic management of patients they are going to develop that will be completed by the postgraduates.

There is a similar contribution of postgraduate clinical training to undergraduate veterinary education at the Large Animal Clinic or Master offered at the VEE.

### **10.1.3. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment, and revision of research, continuing and postgraduate education programmes organised by the VEE**

The VEE alone (on average 3-4 continuing education courses per year), or in association with veterinary and medical societies, professional organisations, or pharmaceutical companies, has a long standing contribution to continuing education by organising seminars, wet labs, courses and conferences for veterinary practitioners, state veterinarians and physicians. The VEE also offers its facilities and equipment for third parties organising continuing education courses for the same profile of professionals or participating in the co-organisation of seminars and workshops around Greece together with the Veterinary Association sit in Thessaloniki.

All over Greece, relevant professional bodies and organisations invite staff of the Department of Clinical Sciences and Food Hygiene and Technology as qualified speakers at congresses, seminars, or continuing education courses.

Around 20 new Master students, 23 new Internship students, 2 new Diplomate students and 10 new PhD students are enrolled every year at the VEE.

For the clinical one-year Internship programmes, the specialties offered are: surgery, anaesthesia, critical care, neurosurgery, internal medicine, diagnostic imaging, dentistry, clinical pathology, equine medicine and surgery, farm animal medicine and reproduction. Postgraduate interns following these programmes do not receive any grant or salary. The clinics cover all costs from the training, research and publications of MSc students, residents, interns, and PhD students. In return, PhD students in the clinics do clinical work on their topic and participate in undergraduate training.

Approximately, 25% of the students graduated annually follow some postgraduate training at the VEE.

Some postgraduate students are funded by grants from the State Scholarship Foundation of the Aristotle University of Thessaloniki or by other research grants.

The VEE offers a Master' degree in Companion Animal Medicine, recognised by the RCVS as equivalent to UK Certificate of Advanced Practitioner, with 3 areas of specialisation (2-year programme for a maximum of 6 students per year each) in: Surgery, Internal Medicine and Anaesthesiology and Critical Care. Postgraduates following these Masters must complete a final master thesis.

Graduates must hold a master's degree, or equivalent postgraduate training, as prerequisite for being admitted to PhD programmes and must publish, at least, one publication in a peer-reviewed journal to get the PhD degree.

The VEE offers Diplomate residency EBVS training programmes in 3 specialties: Veterinary anaesthesia and analgesia (1 resident/year), Dermatology (1 resident/year) and Poultry veterinary science (2 residents/year). During the onsite visit, a new Diplomate residency EBVS training programme started in Veterinary Microbiology.

The main research areas and strategies are not regularly discussed, decided, assessed, and revised by the VEE.

The Research and Ethics Committee is the body responsible for the research strategy of the VEE by setting the principles and rules followed by the research groups. This Committee also funds 5 postdoctoral researchers per year at the VEE.

Research, continuing and postgraduate education programmes are published at the website of

the VEE together with the places offered and the selection criteria. Candidates apply through the relevant link of the website and the Selection Committee of Qualifications, composed by staff from the VEE, revise the applications and select the candidates.

### **10.2. Comments**

- The high number of research projects, postgraduate programmes (MSc, PhD, Internships, EBVS Residency) and collaborative works with national and foreign researchers at the VEE, prove the commitment of the VEE to lifelong veterinary education.
- Undergraduate students receive research-based and evidence-based training, but do not have to complete a graduation thesis and have scarce opportunities to participate in a research project.
- The VEE proposes several continuing education programmes and internships.
- The VEE offers several MSc programmes on Companion Animal Medicine, but no such a programme is offered in other fields of veterinary knowledge, even when the VEE has qualified staff, research, and premises to do so.
- The postgraduate students who are enlisted in the MSc programmes or as PhD students perform clinical tasks and are involved in teaching for a large part of their time without being paid and without receiving training in teaching and assessment.
- The VEE has a sound number of Diplomates (19) in 10 EBVS specialties, but offers EBVS Diplomate residency programmes only in 4 specialties (Veterinary anaesthesia and analgesia, Dermatology, Poultry veterinary science and Veterinary Microbiology).

### **10.3. Suggestions for improvement**

- The VEE should make sure that all undergraduate students, from the first semester until the tenth semester are made aware of the importance of evidence-based veterinary medicine.
- The VEE should guarantee that all undergraduates participate in research, i.e., by introducing a final degree thesis as requisite for graduation (maybe in an 11th semester), by promoting visits to the laboratories at the VEE, by offering internships in foreign laboratories, by organising veterinary undergraduate's congresses to publicly present e.g. clinical cases or outcomes of research projects.
- The VEE should have a system of QA to evaluate how research activities provide opportunities for student training and staff promotion, and how research approaches, methods and results are integrated into the veterinary teaching programmes.
- To enhance the funding of research, the VEE could stimulate multidisciplinary research, from basic to clinical sciences. Also the VEE could start a discussion with the Departments to decide which research themes are seen as most successful in attracting research grants, at national or European level. The VEE should invest more money in research especially in the research themes that are seen as very competitive.
- The VEE is encouraged to maintain the MSc in Companion Animal Medicine and to offer MSc programmes in other fields of veterinary knowledge such as Large Animal, Laboratory Animal, Aquatic Animal Medicine or Food Quality and Veterinary Public Health.
- The VEE would benefit from offering EBVS Diplomate residency training programmes in the 6 specialties that have specialised staff but are not covered yet by the VEE.
- The VEE should offer training in teaching methods and assessment to postgraduate students who are involved in teaching undergraduate students.
- The VEE should find a way to pay a standard salary to postgraduate students that contribute to the training of undergraduates.

#### **10.4. Decision**

The VEE is compliant with Standard 10.

### **11. Outcome Assessment and Quality Assurance**

#### **11.1. Findings**

**11.1.1. Description of the global strategy of the VEE for outcome assessment and Quality Assurance (QA), in order to demonstrate that the VEE:**

- ) has a culture of QA and continued enhancement of quality;**
- ) operates *ad hoc*, cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms;**
- ) collect, analyse and use relevant information from internal and external sources for the effective management of their programmes and activities (*teaching, research, services*);**
- ) informs regularly staff, students and stakeholders and involves them in the QA processes;**
- ) closes the loop of the QA Plan-Do-Check-Act (PDCA) cycle;**
- ) is compliant with ESG Standards.**

The university and VEE QA system was established on the basis of national laws (national gazette from 2019). MODIP is the office in charge of the quality systems of universities, faculties and schools. The members of the office are academic staff, students and postgraduates, as well as full-time administrative staff. The effectiveness of MODIP is based on an extremely functional QM information system, in which numerous data called quality indicators are collected and analysed. The same system is a good source of data for the university but also for the faculties and schools themselves.

Each MODIP member is in charge of cooperation and communication with a particular faculty or school. Meetings are held as needed throughout the year, and schools receive information via emails and informational systems. Also, the school may request an additional meeting if such a need exists. At the school level, OMEA is in charge of contacting MODIP.

The Policy for quality assurance is available at the VEE's website in Greek. Additional QA strategy and QA policy of the Clinics are also available on the website, in English. University quality policy emphasises the need for continuous improvement of the quality system.

One of the main documents that deals with the QA are the five-year and the ten-year Strategic Plans, which were written by the Strategic committee.

Some VEE committees are dealing with the QA (Strategic, Educational, OMEA), and the final decisions regarding QA policies and procedure are done by the General Assembly.

National accreditation of the University and VEE was carried out some years ago and it is valid until April 2021 (VEE expects national accreditation to be conducted by the end of this year).

Internal evaluation group (OMEA) is composed of faculty members, preferably with experience in quality assurance procedures. A student representative does not regularly participate in the meetings of the OMEA. OMEA is responsible for internal evaluation procedure, monitoring of inventory forms and questionnaires, analysing of data, writing of internal SER, and collaboration with HQAA.

Following units of VEE are certified according to the ISO 9001:2015, by Q-Cert and TUV Hellas:

- Reception
- Clinical Services
- Special Services
- Hospitalization
- Diagnostic Laboratory
- Operating Theatre



- Anaesthesia
- 24-hour emergency services
- Diagnostic Imaging Laboratory
- Assistance in Veterinary Medicine teaching
- Biosecurity

Regarding ISO 9001 – the directors of the above mentioned units are in charge of implementing this standard. OMEA is not involved in the implementation of this part of the quality system. On an annual basis, documents are audited, and internal audits are conducted. The need for separate ISO 9001 certifications by two different organisations is not clear.

### **11.1.2. Brief description of the specific QA processes for each ESEVT Standards**

The VEE documents (Quality manual, QM Informational system) are valid and used both by University and the VEE.

The strategic plan and quality policy of VEE are published on the website. Some specific QA procedures are in place and can be found online in Greek, available to different stakeholders and staff (procedures on biosafety and biosecurity, ISO related procedures, etc.).

The curriculum is designed to facilitate an understanding of the obligation to meet the intended learning outcomes and Day One Competences although there is no document available that can show an explicit framework of learning outcomes on the curriculum level. On MODIP web site, the syllabus of obligatory and elective subjects can be found (also available to students) that contains course objectives, learning outcomes, exam profile and teachers dedicated to the specific course.

Information and different data are collected by the VEE to fulfil the requirements of the University, and the VEE is using the same data to prepare international audit reports. Those quality indicators are used to analyse and show trends of enrolments, drop-off, passing exams rate and similar.

Internal audits at the VEE level should be conducted on an annual basis, and reports and figures should be sent to MODIP, in online form; the VEE did it in February 2021. MODIP can send feedback on internal audits back to the school, but students and external stakeholders do not see these audit reports, although the school can post it on the website (the VEE did not do so). Student satisfaction with teaching (courses) and/or teachers are conducted annually online, and student participation is optional. MODIP documents show that about 25% of students participate in such surveys although VEE and University have tried to raise this rate by different activities (as campaigns, etc.). The results of the surveys are available to teachers through the informational system, and to members of the OMEA and chair of the VEE. The results and comments are taken into account for promotion to a higher rank. The results of the surveys as a whole are not available to students and other stakeholders. Students state that teachers themselves comment on the results (and given comments by the students) of past surveys and refer to improvements in their work and teaching methods.

### **11.1.3. Brief description of the process and the implication of staff, students and stakeholders in the development, implementation, assessment and revision of the QA strategy of the VEE**

The MODIP on University level and OMEA on VEE level are responsible units for QA at VEE. Staff (academic staff and student representative) are involved in implementation of the QA processes. Both internal (OMEA) and external (MODIP) audits are in place – internal on a yearly basis and external according to the national regulations (it depends on the financial situation and other reasons on national level).

The strategy for QA is decided by the General Assembly, approved by MODIP and ratified by HQAA. The strategy is disseminated following protocols of the VEE committees and the General Assembly and Assemblies of the Departments.

### **11.2. Comments**

- Closed PDCA cycle is not clearly described in the SER. Moreover, the SER, which is going to be an important document collecting all activities and characteristics of the VEE to be published by the VEE, EAEVE and EQAR websites, includes very many inaccuracies (see 1.3, 2.1.2, 2.1.3, 3.1.3, 5.3, Indicators, etc.) which is the result of a poor QA implementation in the process of its preparation and review.
- Relevant data collected on the VEE level are regularly used to inform external sources (MODIP) but are not fully used for the effective management of VEE activities and disseminated to relevant stakeholders.
- The involvement of staff, students and external stakeholders in the QA procedure does not seem complete.
- The National Qualification Frame is not mentioned in the SER, and more detailed information on its application in the education of doctors of veterinary medicine is not available at the VEE level.

### **11.3. Suggestions for improvement**

- PDCA must be used for constant improvement of the VEE on all levels.
- QA at the University level is well organized and the VEE must find a way to raise its own QA system to a higher level and organize it in a similar way (not only in terms of meeting the requirements of the University, but also improving their own system based on their experiences and suggestions).
- It would be appropriate to develop an action plan for poorly assessed teachers, and to regularly review comments and grades given by students to individual teachers, so that they can be resolved and responded to in a timely manner.
- All QA procedures and documents (also ISO related) should be regularly presented to newly employed staff as well as to intern, PhD and postdoc, and their knowledge and use must be regularly checked by internal audits.
- The VEE must implement QA procedures to ensure that the public information about their activities, including programmes is accurate.

### **11.4. Decision**

The VEE is compliant with Standard 11 except for Substandard 11.8.

The VEE is partially compliant with Substandard 11.8 because of the suboptimal SER, which contains a number of inconsistencies and inaccuracies, and requires a substantial revision, since this document will be publicly available.

## 12. ESEVT Indicators

Calculated Indicators from raw data		Establishment	Median	Minimal	Balance <sup>3</sup>
		values	values <sup>1</sup>	values <sup>2</sup>	
I1	n° of FTE academic staff involved in veterinary training / n° of undergraduate students	0,155	0,15	0,13	0,029
I2	n° of FTE veterinarians involved in veterinary training / n° of students graduating annually	1,125	0,84	0,63	0,495
I3	n° of FTE support staff involved in veterinary training / n° of students graduating annually	0,355	0,88	0,54	-0,185
I4	n° of hours of practical (non-clinical) training	851,000	953,50	700,59	150,410
I5	n° of hours of clinical training	1002,000	941,58	704,80	297,200
I6	n° of hours of FSQ & VPH training	300,000	293,50	191,80	108,200
I7	n° of hours of extra-mural practical training in FSQ & VPH	48,000	75,00	31,80	16,200
I8	n° of companion animal patients seen intra-murally / n° of students graduating annually	50,401	62,31	43,58	6,821
I9	n° of ruminant and pig patients seen intra-murally / n° of students graduating annually	1,355	2,49	0,89	0,465
I10	n° of equine patients seen intra-murally / n° of students graduating annually	1,461	4,16	1,53	-0,069
I11	n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually	2,651	3,11	1,16	1,491
I12	n° of companion animal patients seen extra-murally / n° of students graduating annually	0,000	5,06	0,43	-0,430
I13	n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually	9,638	16,26	8,85	0,788
I14	n° of equine patients seen extra-murally / n° of students graduating annually	3,441	1,80	0,62	2,821
I15	n° of visits to ruminant and pig herds / n° of students graduating annually	1,447	1,29	0,54	0,907
I16	n° of visits of poultry and farmed rabbit units / n° of students graduating annually	1,342	0,11	0,04	1,297
I17	n° of companion animal necropsies / n° of students graduating annually	4,349	2,11	1,40	2,949
I18	n° of ruminant and pig necropsies / n° of students graduating annually	2,105	1,36	0,90	1,205
I19	n° of equine necropsies / n° of students graduating annually	0,164	0,18	0,10	0,064
I20	n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually	0,783	2,65	0,88	-0,097
I21*	n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating	0,250	0,27	0,06	0,190
I22*	n° of PhD graduating annually / n° of students graduating annually	0,086	0,15	0,07	0,016
1	Median values defined by data from Establishments with Accreditation/Approval status in May 2019				
2	Recommended minimal values calculated as the 20th percentile of data from Establishments with Accreditation/Approval status in May 2019				
3	A negative balance indicates that the Indicator is below the recommended minimal value				
*	Indicators used only for statistical purpose				

- In the SER, the VEE only provided the raw data but not the automatic calculation of the Indicators that was done by the Team as presented above.
- The number of support staff with respect to the number of students falls close to but below the minimum values, and this will be worse for the future considering the increasing number of incoming students imposed by the Greek government.
- The low number of equine patients seen intramurally (Indicator I10) is compensated by the high number of extramural cases (Indicator I14)
- With the number of companion animals, the low number of extramural cases (Indicator I12) is compensated by the high number of intramural ones (Indicator I8).
- The number of necropsies of rabbit, rodent, bird and exotic pet necropsies falls below the minimum values (Indicator I20), but during the onsite visit it was clear that the VEE miscalculated the raw data on the number of necropsies in these species, since according to the figures provided in Table 5.1.6, the correct numbers are 540 necropsies in 2018 and 728 in 2019. With the corrected raw data, the automatic calculation of the indicator I20 is 7,462 which is a value clearly above the minimum and median values.

**13. ESEVT Rubrics** (summary of the decision on the compliance of the VEE for each ESEVT Standard, i.e. (total or substantial) compliance (C), partial compliance (PC) (Minor Deficiency) or non-compliance (NC) (Major Deficiency))

<b>Standard 1: Objectives and Organisation</b>	<b>C</b>	<b>PC</b>	<b>NC</b>
1.1. The VEE must have as its main objective to provide, in agreement with the EU Directives and ESG recommendations, adequate, ethical, research-based, evidence-based veterinary training that enables the new graduate to perform as a veterinarian capable of entering all commonly recognised branches of the veterinary profession and to be aware of the importance of lifelong learning.	X		
1.2. The VEE must develop and follow its mission statement which must embrace all the ESEVT standards.	X		
1.3. The VEE must be part of a university or a higher education institution providing training recognised as being of an equivalent level and formally recognised as such in the respective country.	X		
1.4. The person responsible for the veterinary curriculum and the person(s) responsible for the professional, ethical, and academic affairs of the Veterinary Teaching Hospital (VTH) must hold a veterinary degree.	X		
1.5. The organisational structure must allow input not only from staff and students but also from external stakeholders.	X		
1.6. The VEE must have a strategic plan, which includes a SWOT analysis of its current activities, a list of objectives, and an operating plan with timeframe and indicators for its implementation.	X		
<b>Standard 2: Finances</b>			
2.1. Finances must be demonstrably adequate to sustain the requirements for the VEE to meet its mission and to achieve its objectives for education, research and services.		X	
2.2. The finance report must include both expenditures and revenues and must separate personnel costs, operating costs, maintenance costs and equipment.	X		
2.3. Resources allocation must be regularly reviewed to ensure that available resources meet the requirements.	X		
2.4. Clinical and field services must function as instructional resources. Instructional integrity of these resources must take priority over financial self-sufficiency of clinical services operations. Clinics must be run as efficiently as possible.	X		
2.5. The VEE must have sufficient autonomy in order to use the resources to implement its strategic plan and to meet the ESEVT Standards.	X		
<b>Standard 3: Curriculum</b>			
3.1. The curriculum must be designed, resourced and managed to ensure all graduates have achieved the graduate attributes expected to be fully compliant with the EU Directive 2005/36/EC as amended by directive 2013/55/EU and its Annex V.4.1.		X	
3.2. The learning outcomes for the programme must be explicitly articulated to form a cohesive framework.	X		
3.3. Programme learning outcomes must be communicated to staff and students and: -) underpin and ensure the effective alignment of all content, teaching, learning and assessment activities of the degree programme; -) form the basis for explicit statements of the objectives and learning outcomes of individual units of study; -) be regularly reviewed, managed and updated to ensure they remain relevant, adequate and are effectively achieved.	X		
3.4. The VEE must have a formally constituted committee structure (which includes effective student representation), with clear and empowered reporting lines, to oversee and manage the curriculum and its delivery. The committee(s) must: -) determine the pedagogical basis, design, delivery methods and assessment methods of the curriculum, -) oversee QA of the curriculum, particularly gathering, evaluating, making change and responding to feedback from stakeholders, peer reviewers and external assessors, and data from examination/assessment outcomes, -) review the curriculum at least every seven years by involving staff, students and stakeholders, -) identify and meet training needs for all types of staff, maintaining and enhancing their competence for the on-going curriculum development.	X		
3.5. The curriculum must include the subjects (input) listed in Annex V of EU Directive 2005/36/EC and must allow the acquisition of the Day One Competences (output) (see Annex 2). This must concern all groups of subjects, i.e. Basic Sciences, Clinical Sciences, Animal Production, Food Safety and Quality, and Professional Knowledge.	X		
3.6. External Practical Training (EPT) are training activities organised outside the VEE, the student being under the direct supervision of a non academic person (e.g. a practitioner). EPT cannot replace the core intramural training nor the extramural training under the close supervision of academic staff (e.g. ambulatory clinics, herds visits, practical training in FSQ).	X		
3.7. Since the veterinary degree is a professional qualification with Day One Competences, EPT must complement and strengthen the academic education by enhancing for the student the handling of all common domestic animals, the understanding of the economics and management of animal units and veterinary practices, the communication skills for all aspects of veterinary work, the hands-on practical and clinical training, the real-life experience, and the employability of the prospective graduate.	X		
3.8. The EPT providers must have an agreement with the VEE and the student (in order to fix their respective rights and duties, including insurance matters), provide a standardised evaluation of the performance of the student during their EPT and be allowed to provide feedback to the VEE on the EPT programme.	X		
3.9. There must be a member of the academic staff responsible for the overall supervision of the EPT, including liaison with EPT providers.	X		
3.10. Students must take responsibility for their own learning during EPT. This includes preparing properly before each placement, keeping a proper record of their experience during EPT by using a logbook provided by the VEE and evaluating the EPT. Students must be allowed to complain officially or anonymously about issues occurring during EPT.	X		
<b>Standard 4: Facilities and equipment</b>			
4.1. All aspects of the physical facilities must provide an environment conducive to learning.	X		
4.2. The veterinary VEE must have a clear strategy and programme for maintaining and upgrading its buildings and equipment.	X		

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4.3. Lecture theatres, teaching laboratories, tutorial rooms, clinical facilities and other teaching spaces must be adequate in number, size and equipped for the instructional purposes and must be well maintained. The facilities must be adapted for the number of students enrolled.	X		
4.4. Students must have ready access to adequate and sufficient study, self-learning, recreation, locker, sanitary and food services facilities.	X		
4.5. Offices, teaching preparation and research laboratories must be sufficient for the needs of the academic and support staff.	X		
4.6. Facilities must comply with all relevant legislation including health, safety, biosecurity and EU animal welfare and care standards.			X
4.7. The VEEs livestock facilities, animal housing, core clinical teaching facilities and equipment must: -) be sufficient in capacity and adapted for the number of students enrolled in order to allow hands-on training for all students -) be of a high standard, well maintained and fit for purpose -) promote best husbandry, welfare and management practices -) ensure relevant biosecurity and bio-containment -) be designed to enhance learning.	X		
4.8. Core clinical teaching facilities must be provided in a VTH with 24/7 emergency services at least for companion animals and equines, where the VEE can unequivocally demonstrate that standard of education and clinical research are compliant with all ESEVT Standards, e.g. research-based and evidence-based clinical training supervised by academic staff trained to teach and to assess, availability for staff and students of facilities and patients for performing clinical research and relevant QA procedures. For ruminants and pigs, on-call service must be available if emergency services do not exist for those species in a VTH. The VEE must ensure state-of-the-art standards of teaching clinics which remain comparable with the best available in the private sector.	X		
4.9. The VTH and any hospitals, practices and facilities (including EPT) which are involved with the curriculum must meet the relevant national Practice Standards.	X		
4.10. All core teaching sites must provide dedicated learning spaces including adequate internet access.	X		
4.11. The VEE must ensure students have access to a broad range of diagnostic and therapeutic facilities, including but not limited to: pharmacy, diagnostic imaging, anaesthesia, clinical pathology, intensive/critical care, surgeries and treatment facilities, ambulatory services and necropsy facilities.	X		
4.12. Operational policies and procedures (including biosecurity, good laboratory practice and good clinical practice) must be taught and posted for students, staff and visitors.	X		
4.13. Appropriate isolation facilities must be provided to meet the need for the isolation and containment of animals with communicable diseases. Such isolation facilities must be properly constructed, ventilated, maintained and operated to provide for animal care in accordance with updated methods for prevention of spread of infectious agents. They must be adapted to all animal types commonly handled in the VTH.	X		
4.14. The VEE must have an ambulatory clinic for production animals or equivalent facilities so that students can practise field veterinary medicine and Herd Health Management under academic supervision.	X		
4.15. The transport of students, live animals, cadavers, materials from animal origin and other teaching materials must be done in agreement with national and EU standards, to ensure the safety of students and staff and to prevent the spread of infectious agents.	X		
<b>Standard 5: Animal resources and teaching material of animal origin</b>			
5.1. The number and variety of healthy and diseased animals, cadavers, and material of animal origin must be adequate for providing the practical training (in the area of Basic Sciences, Clinical Sciences, Pathology, Animal Production, Food Safety and Quality) and adapted to the number of students enrolled.		X	
5.2. It is essential that a diverse and sufficient number of surgical and medical cases in all common domestic animals and exotic pets be available for the students' clinical educational experience and hands-on training.			X
5.3. In addition to the training provided in the VEE, experience can include practical training at external sites, provided this training is organised under direct academic supervision and at the same standards as those applied in the VEE.	X		
5.4. The VTH must provide nursing care skills and instruction in nursing procedures.	X		
5.5. Under all situations students must be active participants in the workup of patients, including physical diagnosis and diagnostic problem oriented decision making.	X		
5.6. Medical records must be comprehensive and maintained in an effective retrieval system (preferably an electronic patient record system) to efficiently support the teaching, research, and service programmes of the VEE.	X		
<b>Standard 6: Learning resources</b>			
6.1. State-of-the-art learning resources must be available to support veterinary education, research, services and continuing education. Timely access to learning resources, whether through print, electronic media or other means, must be available to students and staff and, when appropriate, to stakeholders. State-of-the-art procedures for bibliographical search and for access to databases and learning resources must be taught to undergraduate students.	X		
6.2. Staff and students must have full access on site to an academic library, which is administered by a qualified librarian, an Information Technology (IT) unit, which is managed by an IT expert, an e-learning platform, and the relevant human and physical resources necessary for development by the staff and use by the students of instructional materials.	x		
6.3. The VEE must provide students with unimpeded access to learning resources which include scientific and other relevant literature, internet and internal study resources, and equipment for the development of procedural skills (e.g. models). The use of these resources must be aligned with the pedagogical environment and learning outcomes within the programme, and have mechanisms in place to evaluate the teaching value of innovations in learning resources.	X		
6.4. The relevant electronic information, database and other intranet resources must be easily available for students and staff both in the VEE's core facilities via wireless connection (Wi-Fi) and from outside the VEE via Virtual Private Network (VPN).	X		
<b>Standard 7: Student admission, progression and welfare</b>			
7.1. The selection criteria for admission to the programme must be consistent with the mission of the VEE. The number of students admitted must be consistent with the resources available at the VEE for staff, buildings, equipment, healthy and diseased animals, and materials of animal origin.	X		
7.2. In relation to enrolment, the VEE must provide accurate information in all advertisements regarding the educational programme by providing clear and current information for prospective students. Further, printed catalogue and	X		

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electronic information must state the purpose and goals of the programme, provide admission requirements, criteria and procedures, state degree requirements, present VEE descriptions, clearly state information on tuition and fees along with procedures for withdrawal, give necessary information for financial aid programmes, and provide an accurate academic calendar.			
7.3. The VEE's website must mention the ESEVT VEE's status and its last Self Evaluation Report and Visitation Report must be easily available for the public. Not applicable.	X		
7.4. The selection and progression criteria must be clearly defined, consistent, and defensible, be free of discrimination or bias, and take account of the fact that students are admitted with a view to their entry to the veterinary profession in due course.	X		
7.5. The VEE must regularly review and reflect on the selection processes to ensure they are appropriate for students to complete the programme successfully, including consideration of their potential to meet all the ESEVT Day One Competences in all common domestic species (see Annex 2).	X		
7.6. Adequate training (including periodic refresher training) must be provided for those involved in the selection process to ensure applicants are evaluated fairly and consistently.	X		
7.7. There must be clear policies and procedures on how applicants with disabilities or illnesses will be considered and, if appropriate, accommodated in the programme, taking into account the requirement that all students must be capable of meeting the ESEVT Day One Competences by the time they graduate.	X		
7.8. The basis for decisions on progression (including academic progression and professional fitness to practise) must be explicit and readily available to the students. The VEE must provide evidence that it has mechanisms in place to identify and provide remediation and appropriate support (including termination) for students who are not performing adequately.	X		
7.9. The VEE must have mechanisms in place to monitor attrition and progression and be able to respond and amend admission selection criteria (if permitted by national or university law) and student support if required.	X		
7.10. Mechanisms for the exclusion of students from the programme for any reason must be explicit.	X		
7.11. VEE's policies for managing appeals against decisions, including admissions, academic and progression decisions and exclusion, must be transparent and publicly available.	X		
7.12. Provisions must be made by the VEE to support the physical, emotional and welfare needs of students. This includes, but is not limited to, learning support and counselling services, careers advice, and fair and transparent mechanisms for dealing with student illness, impairment and disability during the programme. This shall include provision of reasonable accommodations/adjustments for disabled students, consistent with all relevant equality and/or human rights legislation.	X		
7.13. There must be effective mechanisms for resolution of student grievances (e.g. interpersonal conflict or harassment).	X		
7.14. Mechanisms must be in place by which students can convey their needs and wants to the VEE.	X		
7.15. The VEE must provide students with a mechanism, anonymously if they wish, to offer suggestions, comments and complaints regarding compliance of the VEE with the ESEVT standards.	X		
<b>Standard 8: Student assessment</b>			
8.1. The VEE must ensure that there is a clearly identified structure within the VEE showing lines of responsibility for the assessment strategy to ensure coherence of the overall assessment regime and to allow the demonstration of progressive development across the programme towards entry level competence.	X		
8.2. The assessment tasks and grading criteria for each unit of study in the programme must be clearly identified and available to students in a timely manner well in advance of the assessment.	X		
8.3. Requirements to pass must be explicit.	X		
8.4. Mechanisms for students to appeal against assessment outcomes must be explicit.	X		
8.5. The VEE must have a process in place to review assessment outcomes and to change assessment strategies when required.	X		
8.6. Programme learning outcomes covering the full range of professional knowledge, skills, competences and attributes must form the basis for assessment design and underpin decisions on progression.	X		
8.7. Students must receive timely feedback on their assessments.	X		
8.8. Assessment strategies must allow the VEE to certify student achievement of learning objectives at the level of the programme and individual units of study.	X		
8.9. Methods of formative and summative assessment must be valid and reliable and comprise a variety of approaches. Direct assessment of clinical skills and Day One Competences (some of which may be on simulated patients), must form a significant component of the overall process of assessment. It must also include the quality control of the students logbooks in order to ensure that all clinical procedures, practical and hands-on training planned in the study programme have been fully completed by each individual student.		X	
<b>Standard 9: Academic and support staff</b>			
9.1. The VEE must ensure that all staff are appropriately qualified and prepared for their roles, in agreement with the national and EU regulations. A formal training (including good teaching and evaluation practices, learning and e-learning resources, biosecurity and QA procedures) must be in place for all staff involved with teaching. Most FTE academic staff involved in veterinary training must be veterinarians. It is expected that greater than 2/3 of the instruction that the students receive, as determined by student teaching hours, is delivered by qualified veterinarians.	X		
9.2. The total number, qualifications and skills of all staff involved with the programme, including teaching staff, 'adjunct' staff, technical, administrative and support staff, must be sufficient and appropriate to deliver the educational programme and fulfil the VEE's mission.			X
9.3. Staff who participate in teaching must have received the relevant training and qualifications and must display competence and effective teaching skills in all relevant aspects of the curriculum that they teach, regardless of whether they are full or part time, residents, interns or other postgraduate students, adjuncts or off-campus contracted teachers.		X	
9.4. Academic positions must offer the security and benefits necessary to maintain stability, continuity, and competence of the academic staff. Academic staff should have a balanced workload of teaching, research and service depending on their role; and should have reasonable opportunity and resources for participation in scholarly activities.	X		
9.5. The VEE must provide evidence that it utilises a well-defined, comprehensive and publicised programme for the professional growth and development of academic and support staff, including formal appraisal and informal	X		

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mentoring procedures. Staff must have the opportunity to contribute to the VEE's direction and decision making processes.			
9.6. Promotion criteria for academic and support staff must be clear and explicit. Promotions for teaching staff must recognise excellence in, and (if permitted by the national or university law) place equal emphasis on all aspects of teaching (including clinical teaching), research, service and other scholarly activities.	X		
<b>Standard 10: Research programmes, continuing and postgraduate education</b>			
10.1. The VEE must demonstrate significant and broad research activities of staff that integrate with and strengthen the veterinary degree programme through research-based teaching.	X		
10.2. All students must be trained in scientific method and research techniques relevant to evidence-based veterinary medicine.	X		
10.3. All students must have opportunities to participate in research programmes.	X		
10.4. The VEE must provide advanced postgraduate degree programmes, e.g. PhD, internships, residencies and continuing education programmes that complement and strengthen the veterinary degree programme and are relevant to the needs of the profession and society.	X		
<b>Standard 11: Outcome Assessment and Quality Assurance</b>			
11.1. The VEE must have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders must develop and implement this policy through appropriate structures and processes, while involving external stakeholders.	X		
11.2. The VEE must have processes for the design and approval of their programmes. The programmes must be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a programme must be clearly specified and communicated, and refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.	X		
11.3. The VEE must ensure that the programmes are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach.	X		
11.4. The VEE must consistently apply pre-defined and published regulations covering all phases of the student "life cycle", e.g. student admission, progression, recognition and certification.	X		
11.5. The VEE must assure themselves of the competence of their teachers. They must apply fair and transparent processes for the recruitment and development of staff.	X		
11.6. The VEE must have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided.	X		
11.7. The VEE must ensure that they collect, analyse and use relevant information for the effective management of their programmes and other activities.	X		
11.8. The VEE must publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible.		X	
11.9. The VEE must monitor and periodically review their programmes to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews must lead to continuous improvement of the programme. Any action planned or taken as a result must be communicated to all those concerned.	X		
11.10. The VEE must undergo external quality assurance in line with the ESG on a cyclical basis.	X		
<i>C: (total or substantial) compliance; PC: partial compliance (Minor Deficiency); NC: non-compliance (Major Deficiency)</i>			

## **Executive Summary**

### **Brief history of the VEE and its previous EAEVE Visitations**

The Aristotle University of Thessaloniki is a State institution established in 1925 and is the biggest University in Greece with over 70,000 students studying courses in most scientific disciplines.

The School of Veterinary Medicine (SVMT) was founded in 1950 and since 2013 has been administered together with the Schools of Medicine, Dentistry, and Pharmacy to form the Faculty of Health Sciences.

In 2011 the first EAEVE Visitation took place utilising the original Stage 1 evaluation scheme, and ECOVE found a number of Major Deficiencies:

- Insufficient level of hands-on training in small animal medicine and surgery linked to a not fully functioning emergency service
- Insufficient level of hands-on training in equine medicine and surgery linked to shortage of staff, inappropriate facilities and isolation facilities for horses
- Lack of reaction and action by the Faculty to poor learning performance associated with long times to graduation and the scarce overall participation of students in any non-compulsory teaching and learning activities. Under these circumstances, the Faculty cannot assure, by the time students graduate, that all students have acquired the knowledge and the first day skills listed in the EAEVE guidelines.

All these deficiencies were addressed by the VEE, and in 2014 after a Re-visitation by an ESEVT team, ECOVE re-instated Thessaloniki as an Approved Establishment. However, the VEE still required a Stage 2 Visitation under the original regulations before full accreditation.

### **Brief comment on the SER**

Although the SER was very well written and comprehensive, the Team identified several gaps in the data provided. Despite a large number of questions sent to the VEE prior to the Visitation, the requested data was provided well before the visit. Additional information was provided on site. Although the Visitation was postponed, the ESEVT Team utilised the original SER with some late updates from the VEE.

### **Brief comment on the Visitation**

The Visitation was well prepared, well organised and carried out in a cordial and professional atmosphere. The Liaison Officer was easily and efficiently available when requested, either in person or by email. The programme of the Visitation was easily adapted when requested by the Visitation Team who had full access to the information, facilities and individuals they asked for.

### **Areas worthy of praise (i.e. Commendations), e.g.:**

- The visited VEE benefits from a strong structuring of the QA approach at university level, which is then applied at the level of faculties, schools and departments with a reasonable set of codified and formalised procedures.
- Despite the financial crisis in the country, the teaching and support staff are highly qualified, enthusiastic and proud of their VEE, and keep a strong commitment to continuous improvement for the benefit of students.
- The use of new teaching methodologies such as case-based teaching, interactive computer-assisted learning, e-learning through Moodle platform, is commendable and used by 100% of subjects at the VEE.



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- The training of students in Food Safety and Quality and Food Technology is excellent, with many active visits to slaughterhouses and training in Hygiene and Technology of Milk and Dairy Products, Meat and Fish technology.
- The VEE has an evident community responsibility by cooperating with the municipality in a neutering shelter, or stray dogs and cats, and by providing high quality services in the rescue and recuperation of Greek land and sea wildlife.
- The proportion of qualified veterinarians involved in teaching is commendable, as is also the number of European specialists, especially in the areas of food-producing animals.

### **Areas of concern (i.e. Minor Deficiencies):**

- Partial compliance with Substandard 2.1 because of suboptimal financing;
- Partial compliance with Substandard 3.1 because of the inaccurate data addressed in Table 3.1.2 of the SER regarding the hours of training in all groups of subjects addressed on p.20 of the SOP 2016 and listed in the Annex V.4.1 of the Directive 36/2005/EC in order to demonstrate compliance with the EU Directive;
- Partial compliance with Substandard 5.1 because of insufficient number and variety of cadavers for hands-on training in Pathology and of equines in Propedeutics;
- Partial compliance with Substandard 8.9 because of the lack of a record of the individual skills acquired by the student within a logbook in farm animal clinics;
- Partial compliance with Substandard 9.3 because postgraduate students used for training undergraduates do not receive proper training in teaching and assessment methods and they receive nil or small payment for delivering clinical (and other) teaching activities;
- Partial compliance with Substandard 11.8 because of the suboptimal SER, which contains a number of inconsistencies and inaccuracies, and requires a substantial revision, since this document will be publicly available.

### **Items of non-compliance with the ESEVT Standards (i.e. Major Deficiencies):**

1. Non-compliance with Substandard 4.6 because of overall insufficient application of the relevant legislation on health, safety, biosecurity and EU animal welfare and care standards.
2. Non-compliance with Substandard 5.2 because of insufficient hands-on training of students in farm animal clinics under the supervision of academic staff.
3. Non-compliance with Substandard 9.2 because the number of qualified teaching and support staff is insufficient in Clinical Sciences, especially in equines, to secure a group small enough to guarantee appropriate training of students.

Additional suggestions for improvement are described in the Visitation Report.

## **Glossary**

DOPs: Direct Observation of Procedural Skills  
EAEVE: European Association of Establishments for Veterinary Education  
EBVS: European Board of Veterinary Specialisation  
ECOVE: European Committee on Veterinary Education  
EPT: External Practical Training  
ESEVT: European System of Evaluation of Veterinary Training  
ESG: Standards and Guidelines for Quality Assurance in the European Higher Education Area  
FSQ: Food Safety and Quality  
FTE: Full-Time Equivalent  
IT: Information Technology  
MODIP: Quality Assurance Unit at the University level  
OMEA: Quality Assurance Unit at the VEE's level  
OSCE: Objective Structured Clinical Examination  
PDCA: Plan-Do-Check-Act  
QA: Quality Assurance  
RCVS: Royal College of Veterinary Surgeons  
SER: Self Evaluation Report  
SOP: Standard Operating Procedure  
VPH: Veterinary Public Health  
VTH: Veterinary Teaching Hospital

## **Decision of ECOVE**

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

1. Non-compliance with Substandard 4.6 because of overall insufficient application of the relevant legislation on health, safety, biosecurity and EU animal welfare and care standards.
2. Non-compliance with Substandard 5.2 because of insufficient hands-on training of students in farm animal clinics under the supervision of academic staff.
3. Non-compliance with Substandard 9.2 because the number of qualified teaching and support staff is insufficient in Clinical Sciences, especially in equines, to secure a group small enough to guarantee appropriate training of students.

The Veterinary Education Establishment (VEE) of the Aristotle University of Thessaloniki is therefore classified as holding the status of: **NON-ACCREDITATION**.