

**European Association  
of Establishments for Veterinary Education**

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



**REPORT on the STAGE 1 VISITATION to  
Istanbul University, Faculty of Veterinary Medicine  
12 – 16 October 2015**

by the EXPERT GROUP :

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## **INTRODUCTION**

The Istanbul University, Faculty of Veterinary Medicine in Istanbul is one of 26 veterinary Faculties scattered all over Turkey. A military veterinary academy was established in Istanbul in 1842 and a civilian veterinary academy was founded in Istanbul in 1889. The two veterinary academies were merged in 1920 to form the Higher Education Veterinary Academy which in 1933 was moved to Ankara. A veterinary program was reinitiated in Istanbul in 1972 in the original 1920 buildings. In 1987 the veterinary faculty was moved to the present Avcilar Campus, Istanbul University. Istanbul has around 13 million inhabitants and the FVM is located in an urban area on the European side of Bosphorus and close to the Istanbul international airport.

The Faculty was severely damaged by the 1999 Marmara earthquake but teaching continued under difficult conditions.

The Faculty of Veterinary Medicine, University of Istanbul was evaluated by EAEVE for the first time in 2003 but the faculty was in no-compliance. A second EAEVE visitation was conducted in March 2008 with a number of deficiencies

- inadequacy of the number of bovine clinical cases
- deficiency of the isolation facilities related to bovine
- inadequacy of necropsy cases

The Faculty has rectified the deficiencies and also included changes of the curriculum, renewed equipment to the clinics, restructuring of the emergency clinic, elective courses, increased practical training and night shifts where students participate.

The Faculty graduates veterinarians for the Turkish society.

The Self Evaluation Report was prepared according to the SOP laid down in the guidelines. However, the SER contains a few grave mistakes due to a misinterpretation during the translation from the original report in Turkish into the report in English. In addition the visiting team found there were major omissions within the SER resulting in the identification of major positive areas missing from the SER

The team experienced a well-organized site visit, excellent hospitality and an open door policy, where all requests from the team were professionally fulfilled.

Suggestions have been made to help the Istanbul University, Faculty of Veterinary Medicine in Istanbul to improve even further and to continue to make the best of its potential to fulfill the objectives. This was especially relevant for Istanbul in relation to a Stage 2 evaluation visit

The team found no evidence of major deficiencies and suggests that the Faculty is fully approved at Stage I according to the rules laid down in the SOP.

## **1 OBJECTIVES & STRATEGY**

### **1.1 Findings**

The Faculty of Veterinary Medicine, Istanbul (IU-FVM) is a Faculty within the Istanbul University (IU) with the main campus located in a suburban area of Istanbul with Professor Halil Günes serving as dean.

The Faculty of Veterinary Medicine, Istanbul presents a mission statement

- training competent and researching veterinarians with contemporary educational principles
- produce information and service for animal and public health
- development of national and local (European and Asian) animal husbandry

and a vision statement

- pioneering research and public service, respected and internationally recognized

followed by a statement of objectives which includes (SER, p8)

- education and teaching compliance with main European standards
- increase quantitatively and develop qualitatively the staff at all levels
- increase the academic and the administrative staff's will to work and sense of belonging within a frame of a healthy, hygienic and safe work environment
- to improve the educational and research infrastructure
- to increase the Faculty's international scientific prestige
- to increase the financial support for the Faculty

The education of DVM-graduates is the main goal of the IU-FVM, leading to the DVM title.

### **1.2 Comment**

The IU-FVM objectives indicate a Faculty in transition with a clear focus on increasing its already large research commitment, its budgetary basis, improving its staff management and a strong wish to work according to EAEVE criteria. The research is evaluated nationally as being the strongest amongst all veterinary faculties in Turkey. And within the IU only the medical faculty has a stronger research position.

The Faculty already houses EU-financed research projects, and they have a strong focus on increasing the external research funding to match the existing faculty research potential.

The IU-FVM also mentions the dedicated, young academic staff and appropriate, clinical infrastructure and equipment.

Seven (7) laboratories accepting external tasks have been certified to do so according to Turkish Government regulations.

The IU-FVM lists lack of assisting staff such as laboratory workers, technicians, animal caretakers and skilled labourers as a weakness.

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The 2003 EAEVE site visit resulted in 9 Category I deficiencies. And the 2008 EAEVE revisit resulted in the following conclusion:

*“The faculty has undertaken a considerable effort to improve the shortcomings described in the report of 2003. The category I deficiencies have been rectified to a substantial degree, leading in some instances to a good standard in the respective area, sometimes just passing the borderline and reaching the acceptable level. As for the caseload and the corresponding species coverage, a longer period of time is necessary for evaluating the effect of the changes introduced. This also applies for the evaluation of the new curriculum, which currently is a theoretical document in its first year of application.”*

### **The 2015-team found that all former deficiencies have been rectified.**

It is the opinion of the 2015-team, that the requirements regarding Objectives as they are laid down in Annex I of the SOP are met.

### **1.3 Suggestions**

- A clear and operational to-do list with respect to improving the rather few weaknesses of the Faculty (SER, p 10) and coping with the financial situation might be valuable in the future negotiations for improved infrastructure, and further improvement of financial support for teaching and research.
- More clearly stated objectives based on a clear and stepwise workplan might be advantageous to the IU-FVM in the continuous negotiations for staff allocation within government guidelines.

## **2 ORGANISATION**

### **2.1 Findings**

The Faculty of Veterinary Science, Istanbul (IU-FVM) is a part of the Istanbul University (IU) located in Istanbul at the European side of the Marmarais Strait.

IU-FVM is under the competent authority of the Council of Higher Education (“The Government”) in Turkey located in Ankara.

The IU has 22 faculties each headed by a dean

- The Faculty of Veterinary Science
- 2 Faculties of Medicine, Business Administration, Communication, Dentistry, Theology, Economics, Engineering, Fisheries, Forestry, Health Sciences, Law, Literature, Open & Distance Education, Pharmacy, Political Sciences, Sciences, Florence Nightingale Nursing, Education, Transportation & Logistics, and Sport Science.

A diagram of the IU administrative organization is presented at page 16 of the SER supplemented by a similar diagram of the administration at Faculty level at page 15 (SER).

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The rector is supported by the University Senate (academic affairs) and the University Administrative board (implementation of e.g. activity plans and budgetary drafts).

The IU-FVM is academically governed by the University Senate, a body of 44 persons, chaired by the Rector. The members of the senate are Deans and 1 senator from each Faculty. Within the senate the IU-FVM is represented by professor Seyyal Ak. The Senate meets twice a year.

Professor Halil Günes is dean of the IU-FVM and he has 2 vice deans (Vice Dean for Student Affairs (professor Ismail Kirsan) and Vice Dean for Finances and Organisation (professor Kemal AK)). The Dean is selected by the Council of Higher Education among three professors from the Faculty suggested by the rector. The dean selects a maximum of 2 vice deans. Deans and vice deans serve for a period of three (3) years and may be prolonged once. Dean and vice deans are all substituted at the end of their term(s). Division Heads are not substituted at the same interval to secure continuity in the Faculty administration.

The dean is responsible to the rector for all Faculty activities, their initiation and their follow-up including teaching, security, student social services, research and scientific publication.

The dean is supported by the Faculty Board which meets 4 times a year and decides on educational, research and service matters. The board consists of the 5 division heads, and three academicians elected by and among professors and one academician elected by and among assistant professors (a total of 9 persons). The Faculty Board meets 4 times a year.

Furthermore the dean is supported by the Faculty Administrative Board which meets at the dean's discretion and assists the dean with administrative issues including preparation of the budget. This board consists of 3 professors, 2 associate professors and 1 assistant professor all elected for a three year term.

The IU-FVM is organized into 5 Divisions

- Basic Sciences
- Clinical Sciences
- Preclinical Sciences
- Food Hygiene and Technology
- Animal Nutrition and Breeding

Please refer to the SER (p14) for details on each division. In addition to the divisions the Faculty has 4 "units" connected to the Faculty

- Education and Research Hospital
- Veterinary Diagnosis and Analysis Laboratories
- Slaughterhouse
- Education and Research Farm

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Department heads are elected for a 3 year period by a department board which in its turn supports the department head.

Further to this the Dean and the Faculty Administrative Board have established 27 committees (called Commissions) with various tasks mentioned in the SER (p. 20 - 25).

The profession and the Chamber are not officially partaking in the running of the Faculty.

The Faculty in vague terms expresses (SER p26) the opinion that “the desired level for common usage of available opportunities has not been reached”.

### **2.2 Comments**

The organisation of the IU which is a sovereign university is presented in an overall way somewhat lacking details about line(s) of command.

The organisational diagrams on pages 15 (Faculty level) and 16 (University level) do not fully reflect the university line of command but is more like an array of the various boards and committees constituting the academic, administrative, scientific and educational activities at the IU-FVM.

However, after a fruitful and very open discussion with vice dean Kemal AK it became clear that despite the sometimes vague and unclear statements in the SER the UI-FVM

- has its main focus on teaching the DVM-program
- has adequate autonomy to adapt and develop its structure, organisation and curriculum
- is autonomous in decision making within the allocated budget
- has an effective structure for decision-making within the Faculty
- departments are coordinated amongst themselves in terms of use of resources, coordination and integration
- must be headed by a veterinarian
- does have a clear strategy to describe and obtain the desired level for common usage of available opportunities (due to an unfortunate translation from Turkish into English it appears negatively presented in the SER p26)

A PhD-school (graduate school) is not mentioned as part of the university organisation.

The profession and the Chamber are not officially partaking in the running of the Faculty or being members of any advisory committee(s).

It is the opinion of the team, that the requirements regarding Organisation as they are laid down in Annex I of the SOP are fully met.

### **2.3 Suggestions**

- The IU-FVM should consider a more explicit strategy to prioritize its goals and following this a clear strategy for operationalization and execution
- The IU-FVM should consider reducing the number of boards and committees and create a slim and effective administration with clear lines of command.

### **3 FINANCES**

#### **3.1 Findings**

The financial status is described in the SER (p27 – 30) and the Faculty clearly states (SER p30) that “all the foreseeable expenditures can be paid from the general budget”.

Financial resources stem from

- a. General budget
- b. Revolving Resources budget
- c. Scientific Research Projects Unit budget
- d. Dept. of Health, Culture and Sports budget
- e. Directorate of Construction and Technical Work budget

a. Based on a 5 year strategic plan the Faculty proposes a budget to the Rectorate which adds up budgets from all faculties thereby constituting the overall IU suggested General budget (1). The final budget is approved by the Grand National Assembly of Turkey. Inflation is taken into account and the budget is increased with 6 – 10 % every year.

In general the budget from the preceding fiscal year is prolonged unchanged but with the inflation added.

There is no specific budget at the level of divisions and departments, but the whole Faculty budget is run by the dean’s office. However, division and department heads are invited twice a year to give input to their short- and long term fiscal needs.

In “emergencies”/acute fiscal situations the dean has full autonomy to allocate money to all levels of the Faculty.

b. Income from service activities (animal hospitals, laboratories) constitute the Revolving Resources budget. Five (5) % (called BAP) of the Revolving Resources budget is allocated to the Scientific Research Projects Unit budget and one (1) % tax goes to the university. The net revenue from all these activities goes into a common, separate bank account managed by the dean. Any type of expenditure can be covered by this Faculty bank account. Expenditures include feed, vehicles, laboratories, technician’s salaries, instruments, devices, drugs etc.

c. Five (5) % (called BAP) of the Revolving Resources budget is allocated to the Scientific Research Projects Unit budget. The budget is spent for research and as the IU-FVM has a large research activity the faculty has a net income from this source.

d. The budget is spent on various types of student support.

e. Expenditure is for all types of new building constructions, repair, maintenance of infrastructure etc.

Corrections to Table 3.2.

- Pay – should read Salary
- Non Pay – should read Non Salary

Students do not pay tuition fees, unless they have to study beyond the allocated five years.

Overall the finances are directly managed and supervised by the rectorate and a Faculty budget is prepared by the dean. The Faculty delivers an annual fiscal report to the rectorate.

It is clear from the SER that there is sufficient funding for teaching, salaries, buildings, renovation, and infrastructure.

### **3.2 Comments**

A steady increase in income closely following the rise in expenditures brings the IU-FVM in a fortunate financial situation without reduction in funding.

The IU-FVM does not present its financial situation in an absolutely clear and profound way in the SER. However the Faculty explained in detail and very convincingly the overall structure and necessary details about the financial status and the budgeting procedures.

The IU-FVM states that: “Despite the increase in the revolving resources (income from clinics etc.) incomes every year, the desired level has not been reached”. This is an unfortunate mis-translation from Turkish into English. The intention was to describe that the IU-FVM continuously strives for a better revenue from its clinics etc. And as it is demonstrated in Table 3.1 (SER p29) the income generated from these services has increased considerably over the past few years.

Among the numerous ad hoc committees mentioned in Chapter 2 it is striking that there is no Faculty committee following closely and on a day-to-day basis the financial situation.

The IU-FVM does not reveal a clear strategy to reach its goals with respect to increasing the revolving income and making the farm more efficient (SER p30).

It is the opinion of the team, that the requirements regarding Finances as they are laid down in Annex I of the SOP are met.

### **3.3 Suggestions**

**None.**

## **4 CURRICULUM**

### **4.1 GENERAL ASPECTS**

#### **4.1.1 Findings**

There is currently no national curriculum for veterinary training; it is very much left to the individual faculties. However, there are some national regulations related to minimal requirements as set by the Council of Higher Education; these requirements operate within the framework of the European Union criteria.

In addition, overall aims such as the length and outcomes of veterinary courses, as well as some compulsory subjects, follow proposals from the College of the Deans (Inter-University Council of Veterinary Education Science), which themselves are in line with the overall EAEVE requirements.

A new curriculum was introduced in 2007/2008 and was designed to incorporate the topics requested by EAEVE directives.

The new curriculum was based on a comprehensive concept including elements of integration of different topics, problem-based learning, with room for sufficient practical teaching and self-learning.

A further update of the curriculum came into effect for the first grade students in 2012-2013. This latest modification was to continue fulfilling the educational criteria of both the EAEVE and Bologna process; courses were added to the compulsory courses, the number of internships was increased to three and extensive elective course options were added.

Although the Dean is responsible for the programme, the actual execution of the teaching programme is the responsibility of the Vice Dean. The development of the curriculum is undertaken by the Education Commission following negotiations with individual heads of Departments. Any suggested revisions are sent to the Faculty Board for approval and then onto the University Senate for a final decision.

The overall control of teaching and the curriculum is the responsibility of the Education Commission which meets up to 20 times a year. In order to manage the move to accreditation a separate Accreditation Commission has been established. This group has the responsibility to read the SOP's and related documentation before bringing recommendations to the Education Commission and the Deanery.

A self-directed learning approach to the teaching programme has been introduced. Students within the first four years have regular classes to introduce the concept and then free time is allocated within the timetable. For the final year, students they are encouraged to undertake self-directed learning in the available free hours in their education programme.

There is a scheme in 3<sup>rd</sup>/4<sup>th</sup> years termed external apprenticeships or extramural studies (EMS). This is a comprehensive system where students work in their third year vacation in a wide range of animal-based facilities for a total of 10 working days.

In their 4<sup>th</sup> year, students work in a food science based facility again for a total of 10 working days.

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For both EMS schemes, students themselves select a facility and inform the Faculty. The facility is then contacted by the Faculty to assess its suitability and safety. On some occasions accommodation is provided by the facility. In addition, the Faculty provides insurance for the EMS.

After both EMS's the responsible individual (usually the veterinarian) provides a report and assessment of the student. After return to the Faculty the student is interviewed by two members of staff to discuss the report and their individual experience. The result of this interview is either a pass or failure; in the latter case, the EMS rotation has to be repeated.

### **4.1.2 Comments**

It is the opinion of the 2015-team, that the requirements regarding Curriculum, General Aspects as they are laid down in Annex I of the SOP are met.

### **4.1.3 Suggestions**

**None.**

## **4.2 BASIC SUBJECTS & BASIC SCIENCES**

### **4.2.1 Findings**

The students that have gained entry to the Faculty have graduated from High School or equivalent institution with a sufficient score in the MS-3 area (Science, Maths, Turkish, Social Sciences area) from the central Exam for Transition to Higher Education (YGS) and Exam of Bachelor Placement (LYS). The Faculty considers that the knowledge of the students is generally adequate for them to continue their education in the veterinary curriculum.

The Basic Subjects of Physics, Chemistry, Animal Biology (Medical Biology) and Biomathematics are taught in the curriculum. Plant Biology is not taught as a separate subject but is included in Medical Biology. Introductory examinations are conducted in courses such as Medical Biology to map the knowledge level of students.

The students are informed about the obligatory rules and safety arrangements in the laboratories and facilities during the first classes of each subject.

The Practice halls where the Anatomy courses are given are equipped with stainless steel tables and ventilation system. Skeletons of various animal species, bone materials, cadavers of various animals and models are used during the Anatomy courses. When not in use, the cadavers are stored in the cadaver pool. In 2014 and 2013, the cadavers of 10 dogs, 12 ruminants, 2 equine, 2 swine and 20 chickens were used in teaching.

The Necropsy Hall is located on the ground floor in Block B of the Main Building. The facility was reconstructed and re-equipped in 2007. A cold storage room is available and the facility is able to handle large animal carcasses. Adequate hygienic facilities are available for students. The students are instructed in procedures for entering and leaving the necropsy room and are required to wear appropriate single-use caps, masks, clothes, arm covers, boots, shoe covers and latex gloves. The students receive 70 hours of supervised practical training in Pathology of which 56 hours are allocated to performing necropsies. Necropsy material is available from a range of species including food producing animals, equine, poultry, companion animals, laboratory animals, fish and exotic

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animals. The Necropsy Hall contains 2 steel tables. A necropsy is performed by 3 students and observed by remainder of the student group at a table (ca. 12-17 students). For the next necropsy, a different 3 students are active. Students have to perform necropsy at least once a semester to be eligible to take the examination for a Pathology course. In the 10<sup>th</sup> semester, the students have 42 hours allocated to performing necropsies and histopathology.

Supervised practical training is performed in most of the Basic Sciences including physiology, pharmacology, toxicology and microbiology. The laboratories are adequately equipped and contain safety equipment including eye washes and fire extinguishers.

### **4.2.2 Comments**

For anatomy dissection, the students work in groups of 10 or less and rotate between their dissected specimen and the dissected specimens of other groups. The number of cadavers available for anatomy dissection is small compared with the number of students. For example, one dog cadaver or one sheep cadaver is used by two groups, each working on one side of the cadaver. Large group sizes do not provide sufficient hands-on experience in anatomical dissection.

The numbers of necropsies performed on food producing animals and horses (R18=1.5954; EAEVE min. 1.036) and companion animals (R20=2.284; EAEVE min. 1.589) in the Faculty are adequate. In each semester, necropsies are performed by students in 4<sup>th</sup> grade and in the 10<sup>th</sup> semesters. Large group sizes are not conducive to hands-on experience for the student. A requirement that a student in the 4<sup>th</sup> grade only has to perform one necropsy a semester to be eligible to take the examination in Pathology is minimal. However, students are encouraged to perform more than one necropsy both internally and in external practices. These necropsies are recorded.

It is the opinion of the team, that the requirements regarding Basic Subjects & Sciences as they are laid down in Annex I of the SOP are fully met.

### **4.2.3 Suggestions**

- The size of groups in the Anatomy dissection courses should be reduced to increase hands-on experience for the students.
- The number of cadavers for dissection should be increased
- The number of necropsies required to be performed by students should be increased and group sizes should be reduced.

## **4.3 ANIMAL PRODUCTION**

### **4.3.1 Findings**

On studying the SER there appears to be a total of 350 hours devoted to AP within the curriculum, divided into 266 lectures and 84 laboratory/desk based practicals. As such there was no timetabled non-clinical supervised practical training for AP, unless part of the 154 hours of practical training in Basic Sciences is set aside for AP practicals. During the visitation it became obvious that there had been a misunderstanding and there are actually 63 hours of laboratory/desk based practicals and 21 hours of non-clinical supervised practical training.

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There is also an obligatory extramural course in Animal Husbandry and Nutrition, but again from reading the SER this appears to be unsupervised.

During the visitation details were obtained from both the Husbandry and Nutrition departments to allow a breakdown of the actual subject areas such as:

- a. Animal Behaviour and Welfare
- b. Feed Knowledge and Hygiene
- c. Animal Housing and Hygiene
- d. Animal Science
- e. Animal Nutrition and Nutritional Diseases
- f. Ecology and Veterinary Discipline
- g. Dog and Cat Husbandry
- h. Animal Breeding
- i. Animal Health Economics and Management
- j. Reproduction and Artificial Insemination
- k. Teaching does not appear to cover a herd health approach

### **4.3.2 Comments**

During the visit it became apparent that all the above subjects were covered satisfactorily.

As far as a herd health approach is concerned, this is not covered as an individual course, but is embedded within a number of related courses.

The new farm, which is under construction, is within walking distance of the Faculty and will be an excellent facility with the poultry section already in full operational condition. The rest of the farm will open sectionwise within the next 2 years.

The new farm will have accommodation for the students in order for them to partake effectively in areas such as lambing.

The current Faculty farm is extensively used for AP subjects and although quite an old facility has sufficient livestock and associated equipment to teach the students effectively.

It is the opinion of the team, that the requirements regarding Animal Production as they are laid down in Annex I of the SOP are fully met.

### **4.3.3 Suggestions**

**None.**

## **4.4 CLINICAL SCIENCES**

### **4.4.1 Findings**

The majority of the teaching in clinical sciences is provided by the Department of Pathology, Department of Parasitology, the Animal Hospital housing the Internal Medicine Clinic, the Surgery Clinic, the Obstetrics and Gynecology Clinic, the Reproduction and Artificial Insemination Clinic, the Central Laboratory and the Veterinary Diagnosis and Analysis Laboratory. Clinical teaching also takes place in the Agricultural Farm of the Faculty, in the Jockey Club of Turkey, Municipality

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Animal Shelters and on several private farms through the mobile clinic. A new teaching farm within the campus is under construction, and will be partly opened (for poultry) within a month. The remaining part of the facility will be fully open within 2 years.

The general table of curriculum hours taken by all students indicates in SER (p42, tab. 4.1) the amount of teaching hours in the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year, altogether 730 hours are spent in clinical work. Curriculum hours for Clinical sciences are listed in Table 4.2 (SER, p44), and Table 4.3 (SER, p46 Electives). The 1752 hours are listed in detail for the various disciplines and the type of teaching, except obstetrics (only total hours 112). Lectures amount to 826 hours, lab and desk based work 168 hours, non clinical animal work 28 hours and clinical practical work 730 hours. All reported teaching ratios are within the recommended values.

Annex I describes the curriculum topics for each semester, indicating the discipline oriented curriculum, where the amount of different species is not detailed reported.

During the 3<sup>rd</sup> year clinical examination methods are taught (4 ECTS theoretical, 4 ECTS practical), as well as general pathology. Teaching in the Internal Medicine Clinic is done on small animals and large animals, in the Surgery Clinic on equidae, ruminants, carnivores and poultry.

During year 4 theoretical teaching amount for 17 ECTS (7<sup>th</sup> sem) and 20 ECTS (8<sup>th</sup> sem.). Practical training amounts for 5 and 4 ECTS, respectively. The practices consist of rotations in the different clinics and pathology 5 hours a week in groups of 15-20 persons.

During the 9<sup>th</sup> semester 11 ECTS theoretical and 4 ECTS practical training is offered. Again clinical rotations amount for 5 hours a week.

The 10<sup>th</sup> semester is dedicated to the tracking program with 30 ECTS practical training ("Maturation Practice training (Internship)"). During this semester 3 days (24 hours) are spent for general rotations (within the Internal Medicine (98 hours), Surgery (98 hours)), Obstetrics and Gynaecology Clinics (98 hours), as well as Reproduction and Artificial Insemination Department (42 hours)), plus 224 hours within one of four tracks (areas for poultry and breeding, food hygiene and technology, animal breeding and clinical laboratory diagnostic).

Additionally the students have to perform 100 hours of emergency and ambulatory practice during the 9<sup>th</sup> and 10<sup>th</sup> semester. This is done within the Emergency Department at the faculty, not describing different services for small or large animals.

Ambulatory clinical practices in a mobile clinic are offered during the 4<sup>th</sup> and 5<sup>th</sup> year in groups of 10 persons for 20 hours per student in total. Mobile clinic is working 48 weeks a year. Numbers of animals seen by the mobile clinic in 2014 were 2217 cows, 2310 small ruminants and 230 horses. Students are accompanied by a teacher. They have a logbook (the team was provided with a copy of these) with dedicated tasks to be completed during a semester. These activities can be performed at the faculty clinics or during the farm visits, but the supervisor veterinarian has to sign that the given task was really completed. The logbooks are kept in the clinics.

The mobile clinic is equipped with ultrasound machines and general instrumentation. Two vehicles are operated, depending on the number of participating students. Students, who are on emergency duty, join the mobile clinic team in case of an emergency call.

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Obligatory extramural work ("summer internship") is listed in Tab 4.5, consisting of 10 days each after the 3<sup>rd</sup> year in Animal husbandry and Nutrition as well as Food hygiene and technology; and after the 4<sup>th</sup> year, lasting 20 days in Animal health.

There is a very high level of activity in the small animal clinics, especially in surgery and internal medicine. There is plenty of space for all functions. The clinics were renovated 5 years ago, and the facilities are in excellent condition and kept very clean. The patient flow is well organized and all is computerized. They have excellent equipment for diagnostic work (ultrasound, endoscopy, ECG, digital X-ray, mobile X-ray for horses and other large animals, CT, a central clinical laboratory, etc.), and for treating animals as well. There are some special consultations offered in dermatology neurology, endoscopy, ophthalmology and physiotherapy. Orthopaedic surgery is extremely well equipped, and they are familiar with the most up to date techniques. Exotic pets are taken care of by some vets in the staff, there is not a special department for them. Anaesthesia is performed separately in all clinics, although there is a responsible veterinarian in the surgery, who establishes protocols, and decides which protocol is used in every individual case.

Students are closely involved in clinical work. They watch the registration process, then they take the anamnesis, then follow the animal through the examination process, they actively participate in examinations, watch and even assist in operations. The students have excellent hands on training both in the clinics and during the extramural work. The teachers are highly motivated, dedicated to teaching, and share their knowledge with the students. The support staff in the clinics is well trained and well oriented.

The clinics are open from 8.00 to 16.30. An emergency service is run on a 24/7 basis. One clinician one technician and 6 students are on duty, and further veterinarians from each discipline and another technician are available on call according to a monthly rotation. The emergency unit has a small laboratory and an operation room as well. There are satisfactory quarantine facilities with totally separated entrances for both small and large animals.

Farm animal teaching takes place in the clinics with limited caseload, and in the faculty farm and private farms with a high caseload (*vide* the mobile clinic part). Swine teaching takes place in the faculty clinic only, because of religious causes.

Equine medicine is taught in spacious facilities with examinations rooms, surgical theater, farriery with all necessary equipment for teaching the students. There are at least 10 horses owned by the faculty used for all basic examination procedures. There is a quite low case load at the faculty, therefore there is cooperation with the Turkey Jockey Klub (TJK) at the racetrack. There a new clinic has opened three months ago with splendid facilities including several examination rooms, first class diagnostic imaging facilities, two surgical theaters with adequate preparation rooms, a high patient flow of race horses, and a team of at least 9 equine veterinarians. Students participate together with their faculty teachers at least two days a week in the procedures, where they can see and help with acute and chronic cases. TJK permanently has 1,600 horses in their stables and an average load of 100 new cases every morning.

Besides the obligatory teaching, students have to perform 25 % of total ECTS in elective courses within 5 different areas (listed in annex II of the SER). There are 42 elective courses offered in clinical field, and 15 of them are really run by the clinics.

### **4.4.2 Comments**

The cooperation with the Turkish Jockey Club offers very good opportunities for hands-on learning with a high case load.

Teachers from the various disciplines work closely together in the equine clinic.

The faculty farm offers good opportunities for the various procedures in cattle and sheep.

It is the opinion of the 2015-team, that the requirements regarding Curriculum, Clinical Sciences as they are laid down in Annex I of the SOP are met.

#### **4.4.3 Suggestions**

- An increase of obligatory practical training in the Turkish Jockey Klub and other private clinics might increase the amount of hands on training in horses.
- The students might be involved in the emergency service of the TJK as well.
- The development of research oriented special competencies in the equine services may be an asset to increase the case flow in the equine hospital.

## **4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH**

### **4.5.1 Findings**

It is described in the SER that each student has 140 hours of theoretical classes and 150 hours of compulsory practical classes as follows:

- Food Safety and Food Hygiene (56 hours) during the 5<sup>th</sup> semester.
- Meat Inspection, Meat Hygiene and Technology and Milk Hygiene and Technology (84 hours) during the 6<sup>th</sup> semester.
- Food hygiene practices (42 hours) during the 6<sup>th</sup> semester and food practices (28 hours) during the 7<sup>th</sup> semester. During these 70 hours of compulsory practices students are trained on abattoir environment, legal abattoir conditions, *ante mortem* and *post mortem* evaluations on the different animal species (cattle, small ruminants, pigs and poultry); on food: microbiology, chemistry, safety, toxicology, technologies and controls; on hygiene rules and audit principles in food plants; on fish inspection and egg inspection.
- During the 80 hours of obligatory extramural work (third year) in Food Hygiene and Technology students practice in the related units of the Faculty or outside the Faculty (private abattoirs and food processing plants) where at least one Veterinary Surgeon is working.
- In the 10<sup>th</sup> semester “Food Hygiene and Technology” is given for 14 weeks (224 hours) in the Tracking Program of Food Hygiene and Technology with practices in the abattoir, in the Departments of Food Hygiene and Technology, Parasitology, Microbiology, Pharmacology and Toxicology, Histology and Embryology, Biochemistry and Virology. Students have to

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carry out the production of food products of animal origin (fermented and heat-treated sausage) and their controls; extensive skills are provided regarding the importance of HACCP along the food chain “farm to fork”. All these practices are performed in an intramural licensed training abattoir, accredited laboratories and external institutions (abattoir and food processing plants).

The number of students *per* practical class is 30 and they are divided in subgroups of 10. The extramural abattoirs are 150 km from the faculty.

### **4.5.2 Comments**

The students have a good perception of the relevance of the subject area and they have a competence at basic level in food hygiene and inspection. Animal welfare is an elective in the first semester of the 5<sup>th</sup> year.

The subject of animal welfare is given to the students during obligatory animal welfare lectures. And these lectures include the welfare issues during transport and slaughter. Additionally, these subjects are given during lectures given by the Food Hygiene Department and stunning applications are demonstrated in slaughterhouse of the Faculty.

It is the opinion of the team, that the requirements regarding Curriculum, Food Hygiene as they are laid down in Annex I of the SOP are fully met.

### **4.5.3 Suggestions**

- None.

## **4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS**

### **4.6.1 Findings**

There is an overall amount of electives to be taken of 74 ECTS (25% of the curriculum) (see SER, table 4.3 as well as Annex II) with five different tracks (Exotic animals, Animal breeding, Food, Clinical sciences, Poultry) as well as common elective courses.

The students have to select on elective course area during the 2<sup>nd</sup> or 3<sup>rd</sup> year. Each course is limited to a class quota of 50 students.

Furthermore, during the 10<sup>th</sup> semester the students have to choose one out of four tracking programmes, like

- Poultry breeding and diseases
- Food hygiene and technology
- Animal breeding and husbandry
- Clinical laboratory diagnostics

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During this tracking period the students have to attend 336/560 hours for clinical training in the four clinics as well as their chosen special programme (224 hours).

The tracking programmes do not disturb the omni-competence of the curriculum.

### **4.6.2 Comments**

There is a huge amount and broad variety of elective courses.

It is the opinion of the 2015-team, that the requirements regarding Electives as they are laid down in Annex I of the SOP are met.

### **4.6.3 Suggestions**

- The list of electives might be condensed without significant loss for the students, but with decreased costs for the faculty.
- It might be advantageous to offer more practical electives and seminars rather than lectures to the students.

## **5 TEACHING QUALITY & EVALUATION**

### **5.1 TEACHING METHODOLOGY**

#### **5.1.1 Findings**

In the Basic Sciences, experimental laboratory teaching is performed to support the teaching of theoretical concepts. The students have access to text books, course notes, practical notes and educational CDs. Course notes and practical manuals are prepared and distributed to the students. The students also have access to online educational sources through the WikiVet e-Learning platform. The lecture theatres and seminar rooms are equipped with audio-visual equipment including computers, video and overhead projectors.

Specific learning objectives for courses are published on the Student Panel and on the Website of the Faculty. Learning outcomes were not mapped in relation to Day-One skills.

During the visitation, a modified version of Table 4.1 and Table 4.3 of the SER was provided along with an expanded explanation for not differentiating between Lectures, Seminars and Self-Directed Learning in Table 4.2 (see below in *Italics*):

*“Seminars and self directed learning practices are included in our curriculum. Since the elective classes are taught in small groups of students, lectures can be conducted as a seminar. As we tried to describe it in page 49, lectures (workshop, group work, case summary, student presentation etc.) are given. However, the hours of this type teaching can vary among theoretical classes and therefore we did not want to give misinformation and we preferred to define them all as a lecture. But now we tried to include seminar hours in Table 4.1.*

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*As it can be seen in the lecture curriculum we also provided individual hours for the self-directed learning. All the departments in IU-VFM have a self directed learning unit and the students have an opportunity to use these units. Moreover, during the education of veterinary medicine, using tools including written, visual, animation and video by the students is contributory to the knowledge gained by the students. Therefore, IU-VFM has a link titled **WikiVet e-learning** on its web page. Our lecturers and students can use this portal after getting a user name and password for free. Additionally, we provided a link on our web page named **e-learning** to share our Educational Curriculum, and also some other external educational links.*

**Table 4.1.** General table of curriculum hours taken by all the students.

<i>Year</i>	<i>Hours of Training</i>							<i>Total</i>
	<i>Theoretical Training</i>		<i>Supervised Practical Training</i>				<i>Other</i>	
	<i>Lectures</i>	<i>Seminars</i>	<i>Self Directed Learning</i>	<i>Laboratory and Desk Based Work</i>	<i>Non-Clinical Animal Work</i>	<i>Clinical Work</i>		
(A)	(B)	(C)	(D)	(E)	(F)	(G)		
<i>First</i>	640	4	28	112	140			924
<i>Second</i>	561	13	28	238	28			868
<i>Third</i>	546	28	28	210		112		924
<i>Fourth</i>	567	35	28	84	28	112		854
<i>Fifth</i>	288	6	14	182	84	506		980
<i>Total</i>	2602*	86	126	826	280	730		<b>4650</b>

\* It includes 350 hours elective lectures over the five years that the students are also obligated to accomplish.

**Table 4.2.** Curriculum hours in EU-listed subjects taken by each student.

<i>Subject</i>	<i>Theoretical Training</i>		<i>Supervised Practical Training</i>				<i>Other</i>	<i>Total</i>
	<i>Lectures</i>	<i>Seminars</i>	<i>Self-Directed Learning and Laboratory and Desk Based Work</i>	<i>Non-Clinical Animal Work</i>	<i>Clinical Work</i>			
	A	B	C	D	E	F	G	
<b>1. Basic Subjects</b>								

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a) <i>Physics</i>	28					28
b) <i>Chemistry</i>	28		14			42
c) <i>Animal biology (Medical Biology)</i>	42		28			70
d) <i>Plant biology<sup>1</sup></i>						
e) <i>Biomathematics (including Informatics)</i>	28					28
<b>1-Total Number of Hours</b>	<b>126</b>		<b>42</b>			<b>168</b>
<b>2. Basic Sciences</b>						
a) <i>Anatomy (including Topographic Anatomy, Histology and Embryology)</i>	224		42	154		420
b) <i>Physiology</i>	98		56			154
c) <i>Biochemistry, cellular and molecular biology</i>	84		56			140
d) <i>Genetics</i>	28					28
e) <i>Pharmacology and Pharmacy</i>	84		28			112
f) <i>Toxicology (including environmental pollution)</i>	28		28			56
g) <i>Microbiology (including Virology, Bacteriology and Mycology)</i>	126		84			210
h) <i>Immunology</i>	28		28			56
i) <i>Epidemiology (including scientific and technical information and documentation methods)</i>	28					28
j) <i>Professional ethics<sup>2</sup></i>	14					14
<b>2-Total Number of Hours</b>	<b>742</b>		<b>322</b>	<b>154</b>		<b>1218</b>

\* As all the Departments of the Faculty have Self Directed Learning facilities according to their lessons and as these are shown in the Curriculum (a total of 126 hours) the Self Directed Learning is not included in this Table.

**Table 4.2.** Curriculum hours in EU-listed subjects taken by each student (continued).

<i>Subject</i>	<i>Theoretical Training</i>		<i>Supervised Practical Training</i>				<i>Other</i>	<i>Total</i>
	<i>Lectures</i>	<i>Seminars</i>	<i>Self-Directed Learning</i>	<i>Laboratory and Desk Based</i>	<i>Non-Clinical Animal Work</i>	<i>Clinical Work</i>		

	A	B	C	D	E	F	G
<b>3. Clinical Sciences</b>							
a) <i>Obstetrics (including Gynaecology)</i>							112
b) <i>Pathology (including pathological anatomy)</i>	140			70			210
c) <i>Parasitology</i>	84			84			168
d) <i>Clinical Medicine and Surgery (including Anaesthetics)<sup>3</sup></i>	350			14			364
e) <i>Clinical lectures on various domestic animal, poultry and other animals<sup>4</sup></i>					28	710	738
f) <i>Field Veterinary Medicine (Ambulatory Clinics)</i>						20	20
g) <i>Preventive Medicine<sup>5</sup></i>							
h) <i>Diagnostic Imaging (including Radiology)</i>	14						14
i) <i>Reproduction and Artificial Insemination</i>	56						56
j) <i>Veterinary State Medicine and Public Health<sup>6</sup></i>							
k) <i>Veterinary Legislation and Forensic Medicine</i>	14						14
l) <i>Therapeutics<sup>7</sup></i>							
m) <i>Propaedeutic (including Laboratory Diagnostic Methods)</i>	56						56
<b>3-Total Number of Hours</b>	<b>826</b>			<b>168</b>	<b>28</b>	<b>730</b>	<b>1752</b>
<b>4. Animal Production</b>							
a) <i>Animal Production</i>	84			21	21		126
b) <i>Animal Nutrition</i>	70			42			112
c) <i>Agronomy<sup>8</sup></i>							
d) <i>Rural Economics</i>	28						28
e) <i>Animal Husbandry</i>	28						28
f) <i>Veterinary Hygiene<sup>9</sup></i>							
g) <i>Animal Ethology and Protection</i>	56						56
<b>4-Total Number of Hours</b>	<b>266</b>			<b>63</b>	<b>21</b>		<b>350</b>

**Table 4.2. Curriculum hours in EU-listed subjects taken by each student (continued)**

	<b>Theoretical Training</b>	<b>Supervised Practical Training</b>		

<i>Subject</i>	<i>Lectures</i>	<i>Seminars</i>	<i>Self-Directed Learning Laboratory and</i>	<i>Desk Based</i>	<i>Non-Clinical Animal Work</i>	<i>Clinical Work</i>	<i>Other</i>	<i>Total</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	
<b>5. Food Hygiene / Public Health</b>								
<i>a) Inspection and control of animal foodstuff or foodstuffs if animal origin and the respective feedstuff production unit</i>	56							56
<i>b) Food hygiene and technology</i>	84							84
<i>c) Food science and technology<sup>10</sup></i>								
<i>d) Practical work (including practical work in places where slaughtering and processing of foodstuffs takes places</i>				70				70
<i>5-Total Number of Hours</i>	<b>140</b>			<b>70</b>				<b>210</b>
<b>6. Professional Knowledge</b>								
<i>a) Practice Management<sup>8</sup></i>								
<i>b) Veterinary certification and report writing<sup>11</sup></i>								
<i>c) Career planning and opportunities<sup>12</sup></i>								
<i>6-Total Number of Hours</i>								
<b>TOTAL</b>	<b>1960</b>			<b>665</b>	<b>203</b>	<b>730</b>		<b>3698</b>

<sup>1</sup> : There is no such a separate subject; it is included in the Medical Biology Lectures

<sup>2</sup> : Including Veterinary Legislation

<sup>3</sup> : Including Surgery, Orthopaedics, Internal Medicine and Poultry Diseases Lectures

<sup>4</sup> : Pathology lectures counted as non-clinical

<sup>5</sup> : There is no such a separate subject; it is included in the various lectures

<sup>6</sup> : It is included in various lectures. Also it can be selected as an Elective Lecture

<sup>7</sup> : There is no such a separate subject; it is included in the Pharmacology Lectures

<sup>8</sup> : There is no such a separate subject; it is included in the Rural Economics, Animal Production Lectures

<sup>9</sup> : It is included in various lectures. Also it can be selected as an Elective Lecture

<sup>10</sup> : There is no such a separate subject; it is included in the Food Hygiene and Technology Lectures

<sup>11</sup> : There is no such a separate subject; it is included in the Forensic Lectures

<sup>12</sup> : Even Career Planning and Opportunities subject doesn't exist, various Seminars and Workshops on this subject are organised with sectorial representatives and stakeholders for our students

**Table 4.3.** Curriculum hours in EU-listed subjects offered and to be taken as electives\*.

	<b>Theoretical Training</b>	<b>Supervised Practical Training</b>	
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<i>Subject</i>	<i>Lectures</i>	<i>Seminars</i>	<i>Self-Directed Learning</i>	<i>Laboratory and Desk Based Work</i>	<i>Non-Clinical Animal Work</i>	<i>Clinical Work</i>	<i>Hours to be taken by each student per subject group</i>
	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	<i>F</i>	
<b>1. Basic Subjects</b>							
<i>Fine Arts</i>	28						28
<i>Physical Training</i>	28						28
<i>History of Civilizations</i>	14						14
<i>Communication Techniques</i>	14						14
<i>Disaster Culture</i>	14						14
<i>Scientific Research Techniques</i>	14						14
<i>City Culture and Istanbul</i>	14						14
<i>Sign Language</i>	14						14
<b>2. Basic Sciences</b>							
<i>Terminology of Veterinary Anatomy</i>	14						14
<i>Animal Rights</i>	10	4					14
<i>Biotechnology</i>	11	3					14
<i>Anatomy of Exotic Animals</i>	11	3					14
<i>Physiology of Exotic Animals</i>	11	3					14
<i>Biochemistry of Exotic Animals</i>	11	3					14
<i>Avian Anatomy</i>	14						14
<i>Avian Physiology</i>	14						14
<i>Avian Biochemistry</i>	12	2					14
<i>Exercise Physiology</i>	14						14
<i>The Use of Instruments in Biochemistry Laboratory</i>	14						14
<i>Anatomy of Laboratory Animals</i>	14						14
<i>Biochemical Differences of Animals</i>	14	2					14
<i>Animal Blood Bank</i>	14						14
<i>Biochemistry of Immunology and Tumours</i>	14						14
<i>Viral Vaccine Preparation Techniques</i>	14						14
<i>Viral Zoonoses</i>	10	4					14
<i>Animal Genomes</i>	14						14
<i>Doping</i>	14						14
<i>Clinical Pharmacokinetic</i>	10	4					14
<i>Biochemistry of Metabolic and Hereditary Diseases</i>	14						14
<i>Molecular Diagnosis of Diseases</i>	14						14
<b>3. Clinical Sciences</b>							
<i>Exotic Animal Parasites</i>	12	2					14
<i>Pathology of Exotic Animals</i>	14						14

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<i>Internal Diseases of Exotic Animals</i>	11	3				14
<i>Bacterial and Mycological Diseases of Exotic Animals</i>	12	2				14
<i>Viral Diseases of Exotic Animals</i>	14					14
<i>Exotic Animal Surgery</i>	14					14
<i>Reproduction Diseases of Exotic Animals</i>	14					14
<i>Vector Control</i>	12	2				14
<i>Fluid Electrolyte Therapy</i>	11	3				14
<i>Diagnostic Imaging Methods in Internal Medicine</i>	12	2				14
<i>Antineoplastic Medicines</i>	14					14
<i>Drug Usage in Bee, Fish and Exotic Animals</i>	11	3				14
<i>Behaviour Disorders of Animals</i>	11	3				14
<i>Clinical Oncology and Chemotherapy</i>	14					14
<i>Gynaecological Oncology</i>	14					14
<i>Oncologic Surgery Procedures</i>	14					14
<i>Avian Parasites</i>	14					14
<i>Avian Internal Diseases</i>	12	2				14
<i>Avian Pathology</i>	14					14
<i>Bee Diseases</i>	11	3				14
<i>Laboratory Animals Parasites</i>	14					14
<i>Fish Pathology</i>	14					14
<i>Clinical Bacteriology</i>	14					14
<i>Pathology of Laboratory Animals</i>	14					14
<i>Emergency Surgery Applications</i>	14					14
<i>Zoonotic Parasites</i>	12	2				14
<i>Reproductive Ultrasonography</i>	14					14
<i>Gynaecological Emergency</i>	14					14
<i>Clinical Parasitology</i>	14					14
<i>Reanimation in Newborns and Neonatology</i>	10	4				14
<i>Ophthalmology</i>	14					14
<i>Hemopathology</i>	14					14
<i>Tumor Pathology</i>	14					14
<i>Emergency in Internal Medicine</i>	11	3				14
<i>Physiotherapy</i>	14					14
<i>Neurosurgery</i>	14					14
<i>Geriatric Diseases of Pets</i>	11	3				14
<i>Udder Health and Control Programs</i>	14					14
<i>Advanced Monitoring Systems</i>	14					14
<i>Clinical Endocrinology</i>	14					14
<i>Molecular Identification of Parasitic Diseases</i>	14					14
<i>Small Animal Dentistry</i>	14					14
<b>4. Animal Production</b>						

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<i>Nutrition of Exotic Animals</i>	14					14
<i>Feed Legislation and Quality Control</i>	14					14
<i>Organic Animal Nutrition</i>	12	2				14
<i>Shelter Feasibility and Hygiene</i>	12	2				14
<i>Organic Animal Breeding</i>	11	3				14
<i>Nutrition in Culture-Based Fisheries</i>	12	2				14
<i>Water Buffalo Nutrition</i>	14					14
<i>Nutrition of Pets</i>	14					14
<i>Herd Health and Management</i>	11	3				14
<i>Assisted Reproductive Technologies in Farm Animals</i>	14					14
<i>Nutrition of Avian</i>	12	2				14
<i>Assisted of Reproductive Techniques in Fowl</i>	14					14
<i>Nutrition of Laboratory Animals</i>	14					14
<i>Assisted Reproductive Techniques in Cats and Dogs</i>	14					14
<b>5. Food Hygiene / Public Health</b>						
<i>Food, Environment and Public Health</i>	14					14
<i>Special Food Hygiene and Technology</i>	14					14
<i>Food Chemistry</i>	14					14
<i>Food and Nutrition Culture</i>	14					14
<i>Food Processing and Preservation Techniques</i>	12	2				14
<i>Hygienic Controls in Food Production Facilities</i>	14					14
<i>Food Legislation</i>	14					14
<i>Special Histologic Examination Methods</i>	14					14
<i>Management of Food Establishment</i>	12	2				14
<i>Aquatic Food Products Hygiene and Technology</i>	14					14
<i>Poultry Meat Hygiene and Technology</i>	14					14
<i>Slaughterhouse and Veterinary Medicine</i>	14					14
<i>Food Quality Management Systems</i>	12	2				14
<i>Drug Residues and Public Health</i>	14					14
<b>6. Professional Knowledge</b>						
<i>Material Submission and Reporting</i>	14					14
<i>Veterinarian Services in Municipalities</i>	10	4				14
<i>Practical Entrepreneurship</i>	14					14

\* Although theoretical subjects given in Table 4.2 and Table 4.3 are indicated as lectures, seminars are also performed in various percentages.”

Theoretical training is performed using lectures, seminars and self-directed learning. The Faculty estimates that of the 2814 hours of theoretical training in the veterinary curriculum 86 hours of seminars are given and 126 hours are allocated for self-directed learning (Table 4.1). The Faculty was unable to estimate the allocation of seminar hours and self-directed learning hours used in EU-listed subjects (Table 4.2) as the hours allocated to this type of teaching varied between the subjects. For the EU-listed subjects taken as electives (Table 4.3), the Faculty provided an estimate of the distribution of hours of theoretical training given as lectures and as seminars. No supervised practical training was provided in elective EU-listed subjects.

The Education and Accreditation Commissions determine the main outline of the veterinary curriculum in the Faculty. Suggested changes to the curriculum are adopted by the Faculty Board and are sent to the University Senate for final approval. The curriculum model is continuously published on the Student Panel and on the Website of the Student Affairs Office.

Every year the Faculty conducts face-to-face interviews, correspondences, workshops and surveys on education and teaching with a wide range of interest holders including students and graduates. This received advice is incorporated into the process evaluating and modifying the curriculum. Besides the survey of the Feedback Evaluation Commission each year, the Departments can ask the students for an evaluation of their courses.

For the individual student, the performance of clinical skills and competencies are followed and evaluated by the teacher who signs the student's semester log sheet.

Problem-based learning approach is used in clinical teaching.

The students receive real-life clinical exposure in the 10<sup>th</sup> semester of the curriculum where they engage in Veterinary Medicine Maturation Practice Training (Internship). The students receive courses related to the clinic in the seventh, eighth and ninth semesters. In the 10<sup>th</sup> semester, the students play an active role in the management of cases and have to follow up patients in the clinics. During these activities, students receive support from the teaching staff.

Each student is required to perform 100-hours of "Emergency Clinical Watch" in the period from registration for the "Clinical Practice" course in the 9<sup>th</sup> semester until the end of the Maturation Practice Training (end of 10<sup>th</sup> semester). The Emergency Clinical Watches are performed as a 50-hour watch in each of the 9<sup>th</sup> and 10<sup>th</sup> semester. The students attend patients under the supervision of the on-duty veterinarian and treat hospitalized patients.

As of 2014, it has been compulsory for students to participate in the ambulatory clinical activities. The students are required to attend the ambulatory clinic on at least 3 different times in a semester.

### **5.1.2 Comments**

The veterinary curriculum of the Faculty is under constant assessment and revision with input from many sources including the electronic surveys conducted after each cycle of teaching and the evaluation work of the various teaching committees. An important aspect of quality assurance of teaching is knowledge of teaching that has been conducted. It is also important that students know what teaching they are to receive and what form it will take.

It is the opinion of the team, that the requirements regarding Teaching Methodology as they are laid down in Annex I of the SOP are fully met.

### **5.1.3 Suggestions**

- The Faculty should adopt a system of quality assurance for its teaching.
- The Faculty already maps all its courses with detailed learning outcomes. However, a special focus might be given to Day-One skills.

## **5.2 EXAMINATIONS**

### **5.2.1 Findings**

The Faculty uses a plethora of exam techniques including short-answers, multi-choice, classic essay and image recognition as well as, in some cases, verbal practical exams.

Exams are held both mid-term and end-term. So called “Excuse exams” are held for students who due to no fault of their own were unable to attend the normal exam. Skipping mid-term exams does not constitute an obstacle for taking the end-term exams. The examination programme and detailed instructions are prepared together with the Deanery (including student representatives) at the beginning of the semester and then announced on the Faculty website. The content of the examinations themselves is the responsibility of the individual members of staff involved in teaching that course

In order to partake in the exams students have to have attended at least 70% of the lectures and 80% of the practicals. No external examiners are used.

A somewhat unusual approach is that students can apply for a re-assessment of their exam papers when they don't happen to agree with their original exam grade. The paper is then re-submitted to the student service office and is re-marked by a minimum of three members of academic staff. The student is awarded a new grade accordingly.

There appears to be a high failure rate of between 25% and 50% in many subjects at the first attempt of an exam. This may go some way to explain the high rate of re-take exams. Students who fail the end-term and practical exams are allowed to retake at a later date within another exam period for that particular subject

Due to these generous rules covering the ability to retake exams there is a noticeable increase in the length of time an individual student takes to graduate.

### **5.2.2 Comments**

Using a range of examination techniques contributes to a fair and standardised system as it allows several approaches to assess accurately students' knowledge.

There seem to be no current plans to restrict the number of retakes, which would have the effect of increasing the length of time before graduation. It appears that students can continue *ad infinitum*;

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whilst previously the rules were that you could only carry over a reduced number of failures before having to leave.

The current two-week mid-term exam period results in no teaching within the middle of each semester, and then there are the further two-week end-term and make-up exam periods, again without teaching, at the end of the semester. The suspension of classes for these several weeks for exams could well affect the teaching rhythm, as well as extending the time dedicated to exams.

It is the opinion of the team, that the requirements regarding Examinations as they are laid down in Annex I of the SOP are fully met.

### **5.2.3 Suggestions**

- To reduce the workload for research staff the high level of examinations and retakes should be reduced.
- It should be considered to change the placement of the examination periods.

### **5.3 STUDENT WELFARE**

#### **5.3.1 Findings**

This subject was covered in the SER (SER p76-82) and generally the IU-FVM has an extensive student welfare programme including

- Student Affairs office
- free healthcare service
- free rabies vaccination
- buddy-program
- annual student interviews and students surveys
- career advice
- psychological support eventually prolonged into psychiatric support
- Erasmus (plus Farabi, Mevlana and others) program with a number of veterinary schools
- a welcome program for foreign non-Turkish speaking students including extensive language lessons
- access to canteen
- sports facilities
- free campus bus transportation for all student related activities
- a plethora of student “clubs” organised by the students themselves and open to all students (table SER p79-81)
- canteen
- dormitories
- Eduroam access
- extensive IT-service
- many study and meeting rooms
- safety procedures covering students as well as staff members including an on site ambulance service and the IU’s own hospitals
- guarded entrance to the campus
- no tuition
- liability insurance covered by the university while students are working within the curriculum
- students elect a class representative which attend the Faculty Administration Board

#### **5.3.2 Comments**

During a laboratory visitation a person fainted and first aid was immediately established followed by arrival of an emergency team with an ambulance within 3 minutes.

Cases of sexual harassment or other types of negative student treatment have not been recorded.

Randomly selected students during the inspection expressed a high level of satisfaction with the student involvement.

For further information please refer to the Student's report.

It is the opinion of the 2015-team, that the requirements regarding Student welfare as they are laid down in Annex I of the SOP are met.

### **5.3.3 Suggestions**

**None.**

## **6 PHYSICAL FACILITIES & EQUIPMENT**

### **6.1 GENERAL ASPECTS**

#### **6.1.1 Findings**

The Faculty is located on the Avcilar Campus of Istanbul University, where the Faculties of Engineering, Business Administration, Sport Science and Transport and Logistics and the Vocational School of Technics Science are also situated. The Faculty covers 305,000 m<sup>2</sup> and consists of 3 buildings of in total 44,146 m<sup>2</sup>. The Main building contains lecture theatres, student laboratories, seminar rooms, research laboratories, a slaughterhouse and meat processing unit, IT-hall, Library and canteen. The second building contains the Department of Reproduction and Artificial Insemination and the third building houses the Research and Training Hospital and Clinics. The Hospital and Clinics building has boxes for farm animals, equine, companion and exotic animals. A separate part of this building contains quarantine rooms. An incinerator is located in an adjacent small building. The Faculty has 8 lecture theatres with capacities ranging from 70 – 240 places giving a total capacity of 1,170. There are 13 student laboratories, all with a capacity of 60 places and 16 rooms for group work, all with a capacity of 20 places.

Biosafety measures are explained to students at the start of each course and appropriate protective equipment (laboratory gowns, mask, gloves, head guard, etc.) is used in courses. Students have access to the campus by Metrobus, IETT buses, Private & Public buses, See buses and Student buses. There are ring services available on the Avcilar campus that provide free travel within the campus. The transfer of students to the Faculty's farms and the course requirements for equipment and consumables are met by the Faculty. The Faculty has a bus (for 44 people), 2 buses (for 24 people) and 2 vans (for 13 and 11 people) for transport of students. The students go to the external farms in groups consisting of 10 students together with a trainer team. The Faculty also has a truck with a transportation capacity of 3.5 tonnes that is used for carrying large animals. For the transport of small animals such as pets and exotics, the van with a capacity of 13 people is used.

In the last 6 years, the Faculty has rehabilitated and improved a number of the existing buildings including the clinical buildings, laboratories and other units and the isolation facilities. In this period, the initial buildings of the Zootechnics Training and Research Farm have been completed. These buildings include a poultry unit building (400 m<sup>2</sup>) for broilers and layers, a sheep breeding unit (400 m<sup>2</sup>) and an administration building. The completion of student seminar halls and a guest house building, dairy facilities and additional sheep facilities will enable the Zootechnics farm to

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take over the housing, management and care of the cattle, sheep and poultry of the Training-Teaching-Research and Application Farm when it closes in about 2 years.

There were adequate facilities for training in food hygiene, carcass handling and access to slaughterhouses.

### **6.1.2 Comments**

The Avcilar Campus and its buildings are suitable for the teaching and research purposes of the Faculty. The campus is accessible for students and there is adequate transport available for students to the farms. The student laboratories are suitably equipped for teaching and health and safety equipment and routines are available and implemented for students.

A necropsy cold store facility 4.35 x 3.70 m is readily available in direct relation to the necropsy room.

It is the opinion of the 2015-team, that the requirements regarding Physical Facilities & Equipment as they are laid down in Annex I of the SOP are met.

### **6.1.3 Suggestions**

- **None.**

## **6.2 CLINICAL FACILITIES & ORGANISATION**

### **6.2.1 Findings**

The clinical activities are performed by 4 different departments: Internal Medicine, Surgery Clinic, Obstetrics and Gynaecology Clinic and Reproduction and Artificial Insemination Clinic.

The clinics are open 8.00 -16.30 on weekdays. One academician is on call (upon the disposition of the head veterinarian) thereafter, and on weekends and holidays. Staff and students stay in the clinics in the after hour service.

During the opening hours students are present at the first examination of the patient and they accompany it to the complementary examinations. They have to write a patient flow report that must be signed by a clinician.

The Department for Internal Medicine has facilities for small animals, including 2 examination halls, special rooms and an intensive care unit, separate infectious (with 18 cages for dogs and 20 for cats) and non-infectious units (9 dog cages, 16 cat cages), as well as open-air cages.

The Surgery Clinic serves small animals with 2 examination rooms, 5 surgical theatres, special examination rooms, recovery room, physiotherapy unit and cages for cats (36) and dogs (12). Surgery also includes the diagnostic imaging unit with digital x-ray, sonography and tomography.

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Similarly Department for Obstetrics and Gynaecology offers facilities for small animals including 1 examination room, 2 small animal operation rooms, sonography and laboratories.

Additionally there are units for cattle and two equine examination surgery and in-patient service. For cattle 12 stalls are available, 24 stalls for horses and 9 stalls/pens for sheep/goat or swine. Additionally there are stalls for infectious large animals: horses 2, cattle 2 and small ruminants and pigs 2. 9 boxes are provided for exotic animals. There is one well suited surgical theatre with wake-up box.

Furthermore the Department of Reproduction and Artificial Insemination also offers services for cattle, horses, small ruminants, poultry, as well as dogs, cats and rabbits. There is 1 examination and operation room for small and large animals respectively, 3 rabbit keeping rooms, andrology, in-vitro fertilization and embryo transfer and advanced analysis and biotechnology laboratories. Hospitalisation is possible for horses (2); cattle (6); small ruminants (4), poultry (2), dogs (2) and one cat.

An Emergency Policlinic provides service for 24/7, with one research assistant on site, three senior specialists on call and 5- 6 students. There are two rooms with equipment for intensive care, including all necessary supplies.

An ambulatory (mobile) clinic (p 103) provides service to faculty farms and associated farms and stables. They run 3 buses and 2 vans to enable teaching during the 4<sup>th</sup> and 5<sup>th</sup> year.

A central Veterinary Diagnostic and Analysis Laboratory is available in the main building offering toxicological, pharmacologic, parasitological and pathologic examinations (all general laboratory analyses). A central clinical laboratory helps the clinics analyse blood and urinary samples. The emergency service also has a small laboratory, which can be used during the emergency duty. All departments have additional laboratory devices as listed on pages 91-92.

### **6.2.2 Comments**

There are sufficiently spaced rooms and facilities for the teaching purposes of the faculty, especially in small animals, but also large animal.

The facilities of the TJK are splendid and offer all possibilities of a modern equine clinic.

It is the opinion of the 2015-team, that the requirements regarding Clinical Facilities & Organisation as they are laid down in Annex I of the SOP are met.

### **6.2.3 Suggestions**

- The large animal surgical unit should offer full functioning equipment for arthroscopy and laparoscopy.
- A dedicated room for large animal diagnostic imaging (radiology and ultrasound) should be established.

- Computerized patient management system should be available within the large animal clinic.

## **7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN**

### **7.1 Findings**

#### **7.1.1 Anatomy**

The material used: skeletons, bones, cadavers of various animals including poultry, as well as models. Animal materials are supplied from farms including the faculty farm and animal hospital of the Faculty of Veterinary Medicine. Cadavers for necropsy are obtained from the Faculty clinics, owners, dog shelters, Faculty and private farms, aquariums, animal breeders, Jockey Club and ministries.

Material used in 2014

	Dog	Ruminant	Equine	Other
Cadavers	10	12	2	22 (2 swine and 20 chicken)
Model	1	2	-	3 (1 swine, 1 chicken and 1 cat)
Other models	1	5	4	1 swine

#### **7.1.2 Pathology**

Slaughterhouse materials are used for pathological examinations. In the academic year of 2014 were performed necropsies of 52 cattle, 143 small ruminants, 20 pigs, 35 equine, 213 poultry, 35 rabbits, 120 dogs, 110 cats, 91 exotic pets, 40 wild animals, 136 laboratory animals and 35 fish.

#### **7.1.3 Animal Production**

The teaching farm animal stock consists of 160 heads of cattle and 800 heads of sheep. Animal production practical training in food-producing animals, is performed on live animals at Faculty and private farms (700 heads of dairy cattle) and Jockey Club of Turkey (equines); clinical practices on pets are held in the animal hospital of Istanbul Municipality. Students reach the farms by one of the school bus.

#### **7.1.4 Food Hygiene/Public Health**

Materials for food hygiene training consist in food samples sent for analysis, in animals slaughtered in the faculty abattoir (cattle and sheep) and private abattoir. Training in this subject includes meat and dairy plants visits where they examine fresh or frozen meat products, raw milk, dairy products and conserved food. Students reach the abattoirs and plants by one of the school bus.

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- Wildlife animals are brought from different regions of Turkey to the Wild Life Research and Protection Club and from zoos.
- The average values of denominators established by EAEVE are correct (R11, R12, R13, R14, R15, R16, R17, R18, R19 and R20).

### 7.1.5 Consultations and patient flow

#### 7.1.5.1 Consultation

The Animal Hospital and the Clinical laboratory is open 8.00-16.30. First opinion and referral cases are treated. The ratio is about 50-50%.

#### 7.1.5.2 Patient flow

The patient data are recorded at the reception desk at the emergency entrance. A technician gives a registration number and directs the owner to the special clinic, where the examination and the treatment will occur. The owners of large animals follow the same procedure. The caseload in 2014 was 22 cattle, 138 small ruminants (according to SER, 50-60/year by oral communication during the visit), 20 swine, 116 poultry, 122 equine (according to SER, 50/year according to oral communication during the visit), 9995 dogs and 9076 cats.

#### 7.1.6. Vehicles for animal transportation

There is a sufficient number and quality of vehicles for animal transport and for operating the mobile clinic.

#### 7.1.7. On-call emergency services

The emergency department operates on 24/7 basis, and the mobile clinic is also involved in the emergency duty by on call service.

#### 7.1.8. On farm teaching and outpatient care

##### 7.1.8.1. Ambulatory mobile clinic

The mobile clinic is run for teaching 48 weeks a year. There are 60 (sixty) farm visits planned between September and 18<sup>th</sup> December 2015.

The cases seen by mobile clinic in 2014 were: 2217 cattle, 2310 small ruminants, 230 equine.

##### 7.1.8.2. Other farm services

The faculty provides services by contracts for private farms, the Jockey Club of Turkey and municipal animal shelter establishments.

## **7.2 Comments**

The number of necropsies performed at the Faculty are within the EAEVE limits but food animal and equine necropsy numbers are low (R=1.5954; EAEVE min 1.036), particularly equine necropsies.

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The faculty farm houses about 30 dairy cattle, and the same number of heifers, some calves, and about 500 sheep and lambs. The cows are milked twice a day, the milk is sold. The conditions at the faculty farm were good. This farm will be closed within two years, and will be moved to the new faculty farm within the campus. The number of sheep will be reduced, the cattle will be the same, and poultry will be also added to the species of the new faculty farm. The very modern buildings of the faculty farm are under construction, the fully automatized broiler and egg poultry stables are ready and will be open in one month. The rest of the farm will open within two years.

It is the opinion of the team, that the requirements regarding Animals & Teaching Material of Animal Origin as they are laid down in Annex I of the SOP are fully met.

### **7.3 Suggestions**

- The number of equine in-house patients should be increased offering areas of special competence.

## **8 LIBRARY & EDUCATIONAL RESOURCES**

### **8.1 Findings**

The library is a large, well-lit study area. The library is closed outside of normal working hours but a study space adjacent to the library is open to students at all times. Desk spaces are plentiful, even during exam time.

Students have fully funded access to scanning, printing and photocopying as well as access to a large well-equipped computer room. A fast and effective EDUROAM wi-fi system is in place and the students can access journals and teaching material from laptops at home with a remote desktop.

Extensive veterinary subject specific journals are available on-line and in print.

Textbooks are numerous and include international texts translated into Turkish. The large main campus library is also available to students and is a ten minute walk away.

### **8.2 Comments**

A good variety of journals is provided. They consist of both national and international journals in both Turkish and English, which allows students to keep up to date with current research.

IT-service to staff and students is fast and well functioning.

It is the opinion of the team, that the requirements regarding Library as they are laid down in Annex I of the SOP are fully met.

### **8.3 Suggestions**

None.

## **9 ADMISSION & ENROLMENT**

### **9.1 Findings**

Entrance to the Faculty of Veterinary Medicine at Istanbul is not directly controlled by the Faculty. Graduates from high school have to receive a sufficiently high score in the “MS-3” organized by the central Exam for Transition to Higher Education Board (YGS). Applicants then have to take a second more subject-focused exam termed the “Exam of Bachelor Placement”. This latter exam is designed for applicants wishing to study veterinary science, medicine, nursing and a number of other health related degrees.

The Dean, after consultation with his colleagues, informs the Higher Education Council (HEC) of a number of first year applicants the faculty is willing to take. The HEC (which is an independent body) then informs the faculty of the actual number to be taken, but in practice this is always within 10% of the requested figure.

After their exam results, applicants can then choose which Faculty they wish to attend and a decision on such requests is totally dependent on the achieved scores within the examinations. The HEC then chooses the required number based on these scores and the faculty is obliged to accept them.

This scheme for admissions based on academic achievement avoids any bias on gender or religious grounds. Both Istanbul and Ankara are popular choices for veterinary schools within Turkey and as a result, out of the approximately 10 million high school leavers both schools attract applicants from the top 80,000 cohort.

The Faculty attempts to influence/inform these decisions by running a series of open days over a week for potential applicants.

As a result of all these processes the average intake into first year is running at approximately 140 students. The gender split is about 40% female, 60% male.

Approximately 116 students graduate each year, equating to an approximate 80% success rate. However, a significant number finally graduate after a 1- 4 year delay; in fact less than 50% graduate within the scheduled duration.

One factor in these statistics is that it is not necessary for a student to be successful in all his/her courses in order to continue to the next year. There is a convoluted system of supplementary exams that can eventually allow an individual student to proceed further on the course.

### **9.2 Comments**

The admission process based on academic achievement is beneficial as it avoids bias and any kind of discrimination.

The open days for primary school children allow an informed awareness of the profession from an early age and are a positive and important decision. This will help children and their parents to understand early on about the different competences of a veterinary surgeon in disease control, food hygiene, animal production, clinical medicine and animal welfare.

It is the opinion of the team, that the requirements regarding Admission & Enrolment as they are laid down in Annex I of the SOP are fully met.

### **9.3 Suggestions**

**None.**

## **10 ACADEMIC, TEACHING & SUPPORT STAFF**

### **10.1 Findings**

Total budgeted academic staff is around 160 and total support staff 149 bringing the total staff to 309. There is no information about non-budgeted posts.

The ratio of teaching/research staff versus students is 6.219 and teaching/research staff versus support staff 0.931. All staff appointments are carried out in connection with the Istanbul University Institute of Health Sciences, where student quotas for master and doctoral education are reported. Only these students, after passing language, general ability and science exams, can become research assistants and fill the vacancies of the faculty. The determination of the quotas depends on the rectorate of the university and the central government. Appointment of new staff is the prerogative of the Dean after advice from senior colleagues. Vacancies are advertised nationally among the 26 Turkish veterinary faculties.

Percentage of total staff who are veterinarians is 50.8%. Percentage of academic staff who are veterinarians is 98.1 (157/160). Staff ratios are well over the ratios expressed by the EAEVE.

From the SER there appeared to be insufficient numbers of support staff involved in research projects as well as in teaching laboratories. This finding was confirmed during the visitation.

There was little movement of staff between different departments and when a vacancy occurred it was more likely to be reassigned to the same department rather than a strategic appointment elsewhere in the faculty.

Salaries generally have been improved but are still low for academicians.

### **10.2 Comments**

Generally the Faculty is well staffed.

There is a high number of full professors compared to the number of research assistants.

The increased research commitment of the Faculty raised an issue regarding the need for new positions for technicians. This was confirmed during the session with the junior academic staff. Junior academic staff involved in research laboratory work indicated a need for an increased technical staff size.

The staff, both academic and support, are truly engaged in the pursuit of excellence in the teaching programme.

There is an unusually strong commitment of staff for an open door policy for junior staff and students at all levels.

It is the opinion of the team, that the requirements regarding Academic, Teaching and Support staff as they are laid down in Annex I of the SOP are fully met.

### **10.3 Suggestions**

- Technical staff involved in research laboratory work should be increased.
- More support staff time should be given over to helping in research projects within the faculty
- Clinical staff need to be encouraged to undertake further training abroad in terms of either European or North American diplomate status.

## **11 CONTINUING EDUCATION**

### **11.1 Findings**

The Faculty organizes trainings, seminars and conferences for graduated veterinarians and students. The faculty members are also involved in continuing education events organized by other organizations and companies. The University has a Continuing Education Centre for organizing events and forming cooperation with other organizations. The faculty delegates a member into this committee.

There are **certificated trainings** based on feedbacks of the colleagues dealing with the changing legislation and the organization structure.

**Practical and theoretical training** is mainly given through veterinary chambers of Turkey.

Continuing education is not compulsory for practitioners in Turkey.

There were 21 events throughout Turkey in 2014, with the participation of faculty members. Some meetings were repeated, so altogether 17 subjects were offered in all. Only 4 of them had clinical relationship.

There was participation in the **orientation trainings** organized by the Ministry of Food, Agriculture and Livestock in techniques of animal origin foodstuff production and inspection.

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Educational courses and seminars are also held in the student clubs, which are open for veterinary surgeons as well.

International Veterinary Medicine Students Scientific Research Congress has been hosted by the faculty for 17 years. This event helps students to share and follow scientific information and report their research activities.

The faculty members participated in numerous international events in 2013-2015, but the number of lectures given, is low compared to this. The academic staff is active in giving lectures on national events.

The faculty does not offer any specialization (residencies).

### **11.2 Comments**

Working in consultation with the practitioners associations, the Faculty should aim to establish a clear and structured concept for Continuing Education, for instance consisting of consecutive blocks covering all major disciplines of veterinary science.

It is the opinion of the 2015-team, that the requirements regarding Continuing Education as they are laid down in Annex I of the SOP are met.

### **11.3 Suggestions**

- In collaboration with the veterinary associations, the Faculty should seek to develop its continuing professional education activities. This could add to the income of the Faculty, and the money could be spent on support of participation in international congresses or in European Diplomate specialization for staff members.
- A possibility of postgraduate specialization courses organized by the faculty should be considered.

## **12 POSTGRADUATE EDUCATION**

### **12.1 Findings**

The Faculty participates in two post-graduate programmes that are co-ordinated centrally by the Institute of Health Sciences of Istanbul University. There is a 2-year Master programme and a 4-year Doctoral programme. The first year of the Master programme and the first 2 years of the Doctoral programme are devoted to courses within the field of specialization. Doctoral students undertake a written and oral examination after the two years of courses. Both the Master and Doctoral students prepare a thesis at the end of the programme. The thesis is written in Turkish with an English abstract. The thesis is evaluated by an examination commission with participation from external faculties.

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The faculty also offers a four year doctoral (187 PhD students) and a two year master (46 students) postgraduate education. PhD students can spend a part of their curriculum in a foreign faculty, most frequently in Munich, Germany. It is a requirement that the thesis is published in a journal within the scope of SCI.

There are no post-graduate ECVS-residency programmes conducted at the Faculty. There are no College Diplomates on the staff of the Faculty.

The Faculty does not have a formal rotating internship programme.

### **12.2 Comments**

The final 10<sup>th</sup> semester of the veterinary curriculum is a period of clinical training. The semester is described as Veterinary Medicine Maturation Practice Training (Internship). Other periods in the undergraduate curriculum are also described as internships. After completion of the 3<sup>rd</sup> grade of the curriculum, the students are required to undertake 10-day periods in Animal Breeding and Nutrition (Internship 1) and Food Hygiene and Technology (Internship 2). After completion of the 4<sup>th</sup> grade of the curriculum, the students undertake a 20-day period in Animal Health (Internship 3). These 3 periods are compulsory. All four internships are part of the undergraduate curriculum.

It is the opinion of the team, that the requirements regarding Postgraduate Education as they are laid down in Annex I of the SOP are fully met.

### **12.3 Suggestions**

- The Faculty should encourage its graduates and staff to acquire ECVS Diplomate status.
- In addition to the present training of the teachers in the Faculty, educational quality could be enhanced by a structured medical education programme for the Faculty teaching staff: research assistants, and professors. Such a training program may include several steps encompassing basic and advanced didactic workshops and seminars, and eventually culminate in an educational degree. These qualifications might be additional prerequisites for the internal career and external appointments.

## **13 RESEARCH**

### **13.1 Findings**

The Faculty demonstrated solid research in many departments. The IU is rated among the world's 500 best universities with respect to research and within the university the veterinary faculty is second in international publications only to the medical faculties.

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Participation of students in research is meant to be important, but is voluntary. A Scientific Research Club is operated by students, which organize international conferences and publish a scientific veterinary medicine journal, the "Zoom".

Funding for student research is possible by several Turkish establishments.

Students of the 10<sup>th</sup> -semester have the opportunity to participate in ongoing research projects.

### **13.2 Comments**

There is a high commitment for voluntary research activity in the student's community, as seen in the research club and scientific conference.

It is the opinion of the 2015-team, that the requirements regarding Research as they are laid down in Annex I of the SOP are met.

### **13.3 Suggestions**

- An extended compulsory "research curriculum" (there is an elective "Scientific Research Techniques" lecture given by Deontology and Veterinary History Department. SER, p141) for students might be of high value to induce scientific thinking and understanding of the students. It may include research theory and history, literature search methods and analysis, journal clubs, study design and applied statistics.
- Time for an obligatory research project including a thesis and presentation of the thesis should be included in the curriculum.

## **Student report, Istanbul**

The role of the student representative is to assess the faculty and the student experience from the perspective of the end "consumer". The report below aims to offer an overview of aspects of student life and learning, and sets out observations of good practice and tries to highlight areas which could be enhanced to achieve a better student experience. Suggestions made below do not constitute requirements, and at no point have any major deficiencies been identified. Instead it is hoped that they are viewed as proposals of mechanisms of developing the student experience in the future.

### **1 Objectives**

Istanbul University sets out to train students in preparation for a career in veterinary medicine within Turkey and the rest of Europe. Overall the students are satisfied that these aims are fulfilled and that upon graduation they are well prepared for entering into the veterinary profession.

Students are fully integrated into university and faculty life and are generally very satisfied with the university experience and proud of their faculty. When applying to university students generally selected Istanbul Veterinary School as their first choice. Students are active and engaged in a wide variety of social, political and academic groups and this opportunity is highly valued by the students.

## **2 Teaching**

Courses employ a mixture of lecture and practical classes. Students are provided with course notes and log books to record their progress. Practical class objectives are communicated well to students in written form at the beginning of the semester and also at the beginning of the class verbally. Students feel that teaching groups are generally a good size and that they have enough individual teacher attention. Additionally, there is an internal support system in place wherein students volunteer to help other students who are struggling.

Teachers are seen to be supportive and understanding of student needs, for example in pathology practicals they recognize that not all students have equal opportunity for necropsy and will try and rectify this by contacting individual students and inviting them to extra practice. Problem based learning is introduced in pre-clinical years, a teaching method of growing importance to develop crucial skills in new graduates.

Students are encouraged to be involved in research and are provided with opportunities to conduct various research projects under supervision from academic staff.

The examination process is generally regarded as fair by the students. However, a high failure rate after the initial sitting of the exam was reported (30-50%). This was explained by the students as due to a variation in individual motivation to study, rather than in a failing of teaching or resources.

### Suggestions

- Assessing the reasons for students' variation in motivation to study will allow resources to be allocated in overcoming this problem.

## **3 Student feedback**

Most feedback is verbal and informal and according to the students any issues are normally rectified immediately. There is also an online grading system at the end of every course where the students can give anonymous feedback on the teaching and also score the quality of the teaching. This system is utilised by the students and is reported to work very effectively with teachers reacting promptly to feedback.

### Suggestions

- A feedback system from new graduates could be put into place. This would allow specific gaps in the course to be identified, as new graduates are in a good position to identify any such areas.

## **4 Physical Facilities**

Physical facilities available to the students are suitable and often impressive. Lecture theatres are numerous and equipped with adequate seating, audio and visual technology. A lecture theatre is also available for live demonstrations on bovine animals. The teaching laboratories were numerous and well equipped, for example, individual microscopes and camera guided demonstrations for histology teaching. Study space and library facilities were suitable and well utilised by the students.

Food is available in the canteen at a subsidised price and kept at reasonable prices in direct liaison with and in response to student feedback.

Students have access to numerous offices to act as a base for various extracurricular clubs, and these facilities contribute to the seriousness, effort and pride with which students engage in their chosen activity.

New covered tennis courts are available on campus and students have free access to the university swimming pool and gym.

Students take part in 95 hours of “out of hours” clinical work at the small animal hospital every semester and have a student on-call room close to the emergency clinic in the small animal hospital.

The current farm facility is adequate for student learning in husbandry, handling skills and herd health teaching, but is a significant distance from the faculty and has no overnight accommodation. This makes it difficult for students to be involved in emergency cases on a regular basis with the ambulatory clinic.

A new farm will be completed in 24 months and is an exciting development for students with excellent opportunity to learn about industry conditions and housing for poultry and gain hands-on experience in farm animal husbandry. The farm will include a broiler unit, a layer unit a sheep holding facility and a medium sized herd of dairy cows. The new facility is within walking distance from the campus and has overnight accommodation for “on-call” work.

All year groups have access to the 5 equine teaching mares kept on site, a resource particularly utilised by the equine club. During clinical years students rotate at the Turkish Jockey Klub (TJK), where specialist facilities and expert teaching provide experience that is hugely valued by the students.

#### Suggestions

- Support student EMS (internship) choices so that they complement the available facilities and case-load at the university. This is particularly important until the new farm is completed and/or if students choose NOT to join clubs as there is no standardised or obligatory extra experience within specific clubs.

## **5 Student Welfare**

On numerous occasions, the impression of a strong and cohesive student-teacher working partnerships were made during the visit. The friendly and open nature of the staff and the willingness of students to approach staff informally on all matters is clear and to be commended. This informal structure is underpinned by an official tutor system from first to final year, as well as an unofficial student self-help group. Students expressed satisfaction with the level of support given, especially in terms of career advice, and the overall impression was of an effective and supportive environment for student wellbeing.

Students are provided with free medical care by the faculty during their time at the university and an emergency hospital service is available onsite. Student accommodation, full catering and sports passes are provided free of charge.

Students are encouraged to join clubs from their first year. The clubs range from clinical clubs (e.g. farm, equine and wildlife rehabilitation), research clubs and extracurricular clubs (e.g. computer, music and a large variety of sports clubs). The clubs are extremely active and give students the opportunity to learn more in their chosen field or interest. Internal lectures are arranged for members as well as extra practical classes in addition to the curriculum. Students who join a club committee have the opportunity to develop skills in communication, organisation and teamwork. A prominent event within the faculty for students is the student organised International Congress in April, currently in it's 17th year. Students run this event in small, specialised teams and gain a huge amount socially and practically from this experience, particularly as it is expected that students in all years' work together to run the event.

Students seem to gain significant professional confidence from this event and specific involvement is indeed valued by employers.

An ERASMUS programme and the IVSA are active within the student community. Approximately five students leave on a 2-3 month ERASMUS programme to universities in Poland, Greece, Kosovo, Romania and Spain. Each year around 3 students come to Istanbul. The ERASMUS programme is encouraged by the faculty. Courses are counted as academic credits and in the case of failure the student is required to re-take the semester back at Istanbul University.

Additionally, over 100 bilateral agreement exchanges are made from 2 weeks to 3 months, with the majority of students visiting Bosnia and Herzegovina, Kazakhstan and Kyrgyzstan. A positive and self-reflective move by the faculty has been to limit the number of total incoming students to 150 so as to limit the group size in teaching sessions and therefore ensure adequate quality of practical experience for all students.

The IVSA charter in Istanbul University has been rated as second best globally. Members are extremely active and a very impressive number of students (around 250) attend the 7-15 day exchanges every year. Countries visited include Germany, Bangladesh, Norway, U.S.A and Japan.

## **6 Summary**

Good clinical facilities available for students studying at Istanbul University. Students of Istanbul University are a pro-active, articulate and sociable cohort. They are very well supported financially, pastorally and academically, and appear highly valued by the staff of the faculty. The range of clubs and travel opportunities offered by the University is excellent and allows students to gain professional competencies beyond that of the academic curriculum – an invaluable asset on entering the veterinary profession.

# Executive summary

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The visit to the Istanbul University, Faculty of Veterinary Medicine 12-16 October 2015 was carried out in a cordial and very friendly and professional atmosphere. The team was supplied with all further information that was requested.

The self-evaluation report proved a helpful tool, reflecting the true status of the veterinary school in Istanbul. However, there were omissions generally of a positive character which were rectified during the visit. And a little number of mistakes had been added during the translation from Turkish into English. It is the opinion of the team that the Faculty might have put more emphasis on

- the very high quality of the various clinics
- the very good financial status of the Faculty
- the very good opportunities for research funding
- the very good general farm facilities where the poultry section is already in use and the rest of the farm will be inaugurated stepwise during the next 2 years

## **FINAL REPORT AS ISSUED BY ECOVE ON 23 NOVEMBER 2016**

All over the campus the team noted that the Faculty was clean and tidy. The team saw many examples of excellent teaching. By excellent teaching the team means a process where there is productive and intensive interaction between teachers at different levels and students. But it also includes an environment conducive of teaching where it is obvious that there is mutual respect for each other at all levels from first year students to senior professors.

The Faculty of Veterinary Medicine, Istanbul has its strengths and weaknesses, opportunities and threats. The team has identified several strong points:

1. Stable financial situation
2. Excellent clinical facilities
3. A clear focus on student related activities
4. A good balance between animal species in teaching
5. Access to a huge number of relevant clinical, equine cases at the nearby Turkish Jockey Klub
6. The university has dedicated, enthusiastic and open-minded staff, from professors to support staff. The same is true for students, who are well appreciated within the university as excellent students.
7. The large number of “Clubs” formed by and enthusiastically used by the students
8. Across the university, from basic sciences to the clinics, the team observed many well performing units, with an excellent professional reputation for teaching and research.

The Category I deficiencies pointed out in the 2003 and 2008 visitations has been correctly addressed and the team is of the opinion that these deficiencies have been satisfactorily rectified.

As it often occurs, strengths are accompanied with some weaknesses. Their identification by the team should provide the faculty with incentives for further improvements:

1. Some of the laboratories used for teaching purposes are in need of maintenance and repair
2. There is some variation in the overall level of safety within the University although a newly formed committee (Occupational Health & Safety) has the remit to improve health and safety according to new government legislation
3. Focus on internationalisation of young scientific staff
4. Focus on post graduate education for clinical staff (e.g. diplomate status)
5. Increase the number of or reallocate technical staff
6. Increase the number of necropsies
7. Increase the number of cadavers for dissection
8. The amount of clinical work with farm animals is currently low/borderline

Altogether, it is the opinion of the team’s evaluators that the University of Istanbul, Faculty of Veterinary Medicine fulfils all the standards provided for Stage I

**The team found no major deficiencies for STAGE I.**

**Annex 1 Indicators (ratios)**

**Main indicators (Ratios) to be used for EAEVE in the evaluation the Faculty of Veterinary Medicine, University of Istanbul, 12 – 16 October 2015, Turkey**

		Recommended values (max, min, range)	
R1.	no. undergraduate veterinary students: ----- no. total academic FTE in veterinary training:	995 ----- = 6.219 160	max (8.381)
R2.	no. undergraduate veterinary students: ----- no. FTE total Faculty:	995 ----- = 3.22 309	max (9.377)
R3.	no. undergraduate veterinary students ----- no. VS FTE in veterinary training	995 ----- = 6.338 157	max (11.057)
R4.	no. graduating annually: ----- no. VS FTE in veterinary training:	116 ----- = 0.739 157	max (2.070)
R5.	no. FTE supportive staff in veterinary training: ----- no. FTE academic staff in veterinary training:	149 ----- = 0.931 160	range (0.505-1.907)
R6.	Supervised practical training: ----- Theoretical training (Lectures, Seminars, Self directed work)	1836 ----- = 0.652 2814	min (0.602)
R7.	Laboratory and desk based work + non-clinical animal work: ----- Clinical work	1106 ----- = 1.515 730	max (1.809)
R8.	Teaching load: ----- Self directed learning:	4650 ----- = 36.905 126	range (2.59-46.60)
R9.	Total hours vet curriculum: ----- Total no. curr. hours Food Hygiene / Public Health:	4650 ----- = 22.142 210	range (8.86-31.77)
R10.	Obligatory hours extramural work in Vet inspection: ----- Total no. curr. hours Food Hygiene / Public Health:	80 ----- = 0.381 210	range (0.074-0.556)
R11.	no. of food producing animals seen at Faculty: -----	158 ----- = 1.362	min (0.758)

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no. of students graduating annually:	116	
R12.: no. individual food-producing animal consultations: outside of the Faculty ( <i>indiv. animals examined</i> ) -----	3140	min
no. of students graduating annually	----- = 27.069	(8.325)
R13. no. herd health visits: -----	48	min
no. of students graduating annually:	----- = 0.414	(0.326)
R14. no. equine cases ( <i>indiv. animals in ambulatory equine practice</i> ): -----	317	min
no. of students graduating annually:	----- = 2.733	(2.70)
R15. no. poultry / rabbit cases ( <i>ind.</i> ): -----	113	min
no. of students graduating annually:	----- = 0.974	(0.407)
R16. no. companion animals seen -----	q15,826	min
no of students graduating annually:	----- = 136.431	(48.061)
R17. no. poultry (flocs) and rabbit (producing units) seen: -----	6	min
no. of students graduating annually:	----- = 0.052	(0.035)
R18. no. necropsies food producing animals + equines: -----	185	min
no. of students graduating annually:	----- = 1.595	(1.036)
R19. no. poultry / rabbit necropsies -----	228	min
no. of students graduating annually:	----- = 1.966	(0.601)
R20. no. necropsies companion animals: -----	265	min
no. of students graduating annually:	----- = 2.284	(1.589)

**Annex 2 Decision of ECOVE**

The Committee concluded that the Major Deficiency identified in 2015 had been rectified by the submission of a corrected version of the Self Evaluation Report.

The 'Faculty of Veterinary Medicine, Istanbul University' is classified after Stage 1 Evaluation as holding the status of **APPROVAL**.